Prospectus

for the public offering

in Germany and Luxembourg

of

74,604,156 new ordinary registered shares with no par value from the capital increase against contribution in cash resolved by the board of management on June 3, 2018, approved by the supervisory board's presidial committee (*Präsidium*), to which such competence was delegated, on the same day, utilizing the authorized capital resolved by the annual stockholders' meeting on April 29, 2014, with subscription rights for existing shareholders of Bayer Aktiengesellschaft

and

for admission to the regulated market segment (*regulierter Markt*) of the Frankfurt Stock Exchange with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange and for admission to the regulated markets of the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich and Stuttgart

of

74,604,156 new ordinary registered shares with no par value from the above mentioned capital increase

— each such share with a notional value of €2.56
and full dividend rights from January 1, 2018 —

of

Bayer Aktiengesellschaft

Leverkusen, Germany

Subscription price: €81.00

International Securities Identification Number (ISIN): DE000BAY0017

German Securities Code (*Wertpapierkennnummer*, WKN): BAY001

Common Code: 044142961

Ticker Symbol: BAYN

Prospectus Date: June 5, 2018

Joint Global Coordinators and Joint Bookrunners

BofA Merrill Lynch	**Credit Suisse**

Joint Bookrunners

Goldman Sachs International	**HSBC**		**J.P. Morgan**
Barclays	**BNP PARIBAS**		**Citigroup**
COMMERZBANK	**Deutsche Bank**	**Mizuho International plc**	**MUFG**
BBVA	**Crédit Agricole CIB**	**ING**	**Banca IMI**
Banco Santander	**Société Générale**	**SMBC Nikko**	**UniCredit Bank AG**

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I. SUMMARY OF THE PROSPECTUS

*Summaries are made up of disclosure requirements known as elements ("**Elements**"). These Elements are numbered in Sections A – E (A.1 – E.7). This summary contains all the Elements required to be included in a summary for this type of security and issuer. Because some Elements are not required to be addressed, there may be gaps in the numbering sequence of the Elements. Even though an Element may be required to be inserted in the summary because of the type of security and issuer, it is possible that no relevant information can be given regarding the Element. In such cases, the summary includes a short description of the Element with the words "not applicable."*

A – Introduction and Warnings

A.1	**Warnings.**	This summary should be read as an introduction to this prospectus (the "**Prospectus**"). The investor should base any decision to invest in the securities on the review of this Prospectus as a whole. In case a claim relating to the information contained in this Prospectus is brought before a court, the plaintiff investor might, under the national legislation of the member states of the European Economic Area, have to bear the costs of translating this Prospectus before the legal proceedings are initiated. Bayer Aktiengesellschaft, Leverkusen, Federal Republic of Germany ("**Germany**") (hereinafter referred to as the "**Bayer AG**" or the "**Company**" and, together with its subsidiaries, including as of the closing date of the acquisition of Monsanto Company, St. Louis, Missouri, United States ("**Monsanto Company**"), Monsanto Company and its subsidiaries, "**Bayer**," "**we**," "**us**," "**our**," the "**Bayer Group**" or the "**Group**"), along with Credit Suisse Securities (Europe) Limited, London, United Kingdom ("**Credit Suisse**") and Merrill Lynch International, London, United Kingdom ("**BofA Merrill Lynch**" and, together with Credit Suisse, the "**Joint Global Coordinators**"), as well as Goldman Sachs International, London, United Kingdom, HSBC Trinkaus & Burkhardt AG Dusseldorf, Germany ("**HSBC**"), J.P. Morgan Securities plc, London, United Kingdom ("**J.P. Morgan**"), Barclays Bank PLC, London, United Kingdom ("**Barclays**"), BNP PARIBAS, Paris, France, Citigroup Global Markets Limited, London, United Kingdom ("**Citigroup**"), COMMERZBANK Aktiengesellschaft, Frankfurt am Main, Germany ("**COMMERZBANK**"), Deutsche Bank Aktiengesellschaft, Frankfurt am Main, Germany ("**Deutsche Bank**"), Mizuho International plc, London, United Kingdom, MUFG Securities EMEA plc, London, United Kingdom ("**MUFG**"), Banco Bilbao Vizcaya Argentaria, S.A., Bilbao, Spain ("**BBVA**"), Crédit Agricole Corporate and Investment Bank, Montrouge Cedex, France ("**Crédit Agricole CIB**"), ING Bank N.V., Amsterdam, The Netherlands ("**ING**"), Banca IMI S.p.A., Milano, Italy ("**Banca IMI**"), Banco Santander, S.A., Madrid, Spain ("**Banco Santander**"), Société Générale, Paris, France, SMBC Nikko Capital Markets Limited, London, United Kingdom ("**SMBC Nikko**") and UniCredit Bank AG, Munich, Germany (together with Goldman Sachs International, HSBC, J.P. Morgan, Barclays, BNP PARIBAS, Citigroup, COMMERZBANK, Deutsche Bank, Mizuho International plc., MUFG, BBVA, Crédit Agricole CIB, ING, Banca IMI, Banco Santander, Société Générale and SMBC Nikko and the Joint Global Coordinators, the "**Joint Bookrunners**"), have assumed responsibility for the content of this summary and its German translation pursuant to Section 5 para. 2b No. 4 of the German Securities Prospectus Act (*Wertpapierprospektgesetz*). Those persons who have assumed responsibility for the summary, including any translation thereof, or for the issuing (*von denen der Erlass ausgeht*), can be held liable but only if this summary is misleading, inaccurate or inconsistent when read together with the other parts of this Prospectus or if it does not provide, when read together with the other parts of this Prospectus, all necessary key information.
A.2	**Consent regarding the subsequent use of the prospectus.**	Not applicable. Consent by the Company regarding the use of this Prospectus for a subsequent resale or final placement of the Company's shares by financial intermediaries other than as described in this Prospectus has not been granted.

B – Issuer

B.1	**Legal and commercial name.**	The Company's legal name is "Bayer Aktiengesellschaft." The Company primarily operates under the commercial name "Bayer."
B.2	**Domicile, legal form, legislation under which the issuer operates, country of incorporation.**	The Company has its registered office at Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Germany, and is registered in the commercial register of the district court of Cologne, Germany (*Amtsgericht Köln*), under the number HRB 48248. The Company is a stock corporation (*Aktiengesellschaft*) incorporated in Germany and is governed by the laws of Germany.
B.3	**Current operations and principal business activities and principal markets in which the issuer competes.**	The Bayer Group led by Bayer AG as the ultimate holding company is a globally operating life science company with a more than 150-year history and core competencies in the areas of health care and agriculture. With our innovative products, we believe we are helping to find solutions to some of the major challenges of our time. With life expectancy continuing to rise, we are striving to improve quality of life for a growing population by focusing our research and development activities on preventing, alleviating and treating diseases. We are also aiming to make an important contribution to providing a reliable supply of high-quality food, feed and plant-based raw materials. Our goal is to create value for our customers, stockholders and employees, while at the same time strengthening the Group's profitability. We are further committed to operating sustainably and addressing our social and ethical responsibilities. To achieve our goals, we build on our employees as well as our core strengths, which include establishing leading businesses and brands, our ability to deliver continuously successful operating performance, our ability to innovate, our strong track record of value creation through portfolio management, process excellence, as well as our ability to attract, develop and retain talented people. Our operations are currently managed in three divisions, Pharmaceuticals, Consumer Health and Crop Science, and a business unit Animal Health, each of which is also a reportable segment. The operational activities of our three divisions and one business unit may be briefly summarized as follows: • *Pharmaceuticals*: Pharmaceuticals focuses on researching, developing and marketing prescription products, especially for cardiology and women's health care, and on specialty therapeutics in the areas of oncology, hematology and ophthalmology. The division also comprises the radiology business, which markets diagnostic imaging equipment together with the necessary contrast agents. • *Consumer Health:* Consumer Health markets nonprescription (over-the-counter ("**OTC**")) medicines, medical products and cosmetics in the dermatology, nutritional supplement, analgesic, digestive health, allergy, cold, foot care and sun protection categories, to treat and prevent diseases and to improve well-being through self-care solutions. • *Crop Science:* Crop Science is an agriculture enterprise with businesses in crop protection, seeds and nonagricultural pest and weed control. Upon completion of the acquisition of Monsanto Company, which is expected to take place on or about June 7, 2018, described in more detail below, Crop Science will become Bayer's largest division in terms of net sales. Crop Science markets a broad range of high-value seeds and innovative pest management solutions, while at the same time providing extensive customer service for sustainable agriculture. In addition, it provides products and services for professional nonagricultural applications, such as vector control (i.e., methods for the avoidance or targeted control of pathogens transmitting organisms), pest control and forestry.

- *Animal Health:* The Animal Health business unit develops and markets veterinary products and solutions for the prevention and treatment of diseases in farm and companion animals and ranks among the innovators in its field.

Until its deconsolidation at the end of September 2017, Covestro AG ("**Covestro AG**" and, together with its subsidiaries, "**Covestro**"), which is a global provider of high-tech polymer materials and associated application solutions, was an additional reportable segment of Bayer. For further information on the deconsolidation of Covestro, see "*B.7 Selected key historical financial information.*" and "*B.8 Selected key pro forma financial information*."

Over the past years, Bayer has engaged in a number of strategic acquisitions and divestitures, including the acquisition of the consumer care business of the U.S. company Merck & Co., Inc. in October 2014. On September 14, 2016, Bayer entered into an agreement and plan of merger (the "**Merger Agreement**") with Monsanto Company (together with its subsidiaries, "**Monsanto**"), a global provider of agricultural products, including seeds and trait technologies, herbicides, and digital platforms to give farmers agronomic recommendations. The Merger Agreement provides for Bayer's acquisition (through a merger) of all outstanding shares of Monsanto Company against a payment of US$128.00 per share in cash (the "**Transaction**") which corresponded to an expected transaction value of approximately US$66 billion as of May 31, 2016. As of the date of this Prospectus, this corresponds to a transaction value of approximately US$63 billion taking into account Monsanto's debt outstanding as of February 28, 2018. The Transaction, which is subject to customary closing conditions, including the receipt of required antitrust and other regulatory approvals, all of which have been satisfied or waived (other than those conditions that by their nature are to be satisfied at the closing of the Transaction), is expected to be completed on or about June 7, 2018. Upon completion of the Transaction, Crop Science including Monsanto's business will become Bayer's largest division in terms of net sales and, upon this basis, Bayer intends to create a global leader committed to transforming agriculture which offers advanced customized agronomic solutions designed to help farmers achieve the productivity increases needed to feed an ever growing world population.

In connection with obtaining required antitrust approvals to complete the Transaction, Bayer has entered into the following divestment transactions (the "**Transaction-related Divestments**"): On October 13, 2017, Bayer reached an agreement to sell selected Crop Science businesses to BASF SE, Ludwigshafen, Germany ("**BASF**"), for an aggregate base purchase price of approximately €5.9 billion (the "**First BASF Divestiture Package**"). The aggregate base purchase price is subject to customary purchase price adjustment mechanisms and will be reduced by €0.2 billion at closing as a result of the Transaction not closing by January 1, 2018. The businesses to be divested as part of the First BASF Divestiture Package include Bayer's global glufosinate-ammonium herbicide business and the related LibertyLink™ technology for herbicide tolerance, together with essentially all of Bayer's field crop seeds business, and generated total sales of €1.5 billion for the fiscal year ended December 31, 2017 and of €0.7 billion for the three months ended March 31, 2018. On April 26, 2018, Bayer entered into agreements to sell further Crop Science businesses to BASF for an aggregate base purchase price of up to €1.7 billion, which is subject to customary purchase price adjustment mechanisms (the "**Second BASF Divestiture Package**"). The businesses to be divested include in particular Bayer's global vegetable seeds business, certain seed treatment products, Bayer's research platform for wheat hybrids and certain glyphosate-based herbicides in Europe that are predominantly used in industrial applications. In addition, three research projects in the field of total herbicides and Bayer's digital farming business will also be transferred. Bayer may license back, on a non-exclusive basis, technology needed for Bayer to sell certain digital agriculture products outside

North America. The businesses to be divested as part of the Second BASF Divestiture Package generated total sales of €0.7 billion for the fiscal year ended December 31, 2017 and of €0.2 billion for the three months ended March 31, 2018. Bayer will continue to own, operate and maintain the businesses covered by the Transaction-related Divestments until closing of the Transaction-related Divestments.

In addition, until the closing of the Transaction-related Divestments, Bayer and Monsanto will be held separate as required by the U.S. Department of Justice. Bayer currently expects to be able to commence the integration of the two organizations in approximately two months. Following completion of the Transaction and of the Transaction-related Divestments, Bayer will remain active in the areas covered by the Transaction-related Divestments as a result of the programs, products and offerings it will acquire from Monsanto upon the completion of the Transaction.

B.4a **Most significant recent trends affecting the issuer and the industry in which it operates.**

Growth in the global pharmaceuticals market was below the prior-year level at 3% in 2017[1] (2016: 5%[2]). Intensified pricing pressure caused by generic competition and health care reforms led to lower growth in all regions compared with the prior year. The pharmaceuticals market is forecasted to post slightly higher growth in 2018 (4%) than in 2017.[3] In Bayer's view, the main growth drivers are likely to be new product launches. In general, the increase in quality of life and life expectancy is leading to a heightened focus on the medical care needs of elderly patients. There is a risk, however, that growth could be impaired by continuously increasing global cost pressure on health care systems.

Based on Bayer's calculations, growth of the global consumer health market came in at slightly below 4% in 2017 (2016: 4%). Important growth drivers included steady demand for self-care products and a strong cold season in Europe. In contrast, a weaker allergy season, pricing pressure in the e-commerce distribution channel, and intensified competition weighed on growth. Bayer anticipates growth of 3 – 4% in 2018. The market is likely to remain difficult as a result of the rising pricing pressure from e-commerce and consolidation of the retail sector. Consumer Health is presented with opportunities in the area of nonprescription medicines, in line with the growing self-care trend. However, a difficult economic environment has had, and could in the future continue to have, a dampening effect on customer demand.

According to Bayer's calculations, the global seed and crop protection market expanded slightly in 2017, growing by around 1% (2016: 0%). While demand for high-quality seed increased, sales of crop protection products stagnated worldwide. Positive growth momentum in 2017 came from the North America and Eastern Europe regions. Market volumes in Latin America declined as a result of high inventories of crop protection products and unfavorable macroeconomic conditions in Brazil. Stabilizing global stocks-to-use ratios for major broad acre crops corn and soy as well as a recovering Latin American agricultural market, suggest a slight recovery in the market. The Western European market also contracted, primarily as a result of relatively low fungal infestation levels. Bayer expects the global seed and crop protection market to develop positively in 2018 (+3%). In Bayer's view, the principal growth momentum will come from Latin America, mainly due to the expected normalization of inventories of crop protection products in Brazil and a further increase in soybean acreage. Bayer also expects the market to grow in the Asia/Pacific region and in Eastern Europe. The persistently low price of agricultural commodities in North America and Western Europe is likely to be reflected in sluggish growth, which will lag behind the overall global development.

[1] CBI – IQVIA Market Prognosis
[2] Quintiles IMS – Market Prognosis March 2017 Update
[3] CBI – IQVIA Market Prognosis

According to Bayer's calculations, the animal health market expanded by around 2% in 2017 (2016: 5%), with growth significantly lagging behind previous years. Alongside a difficult market environment in the farm animals business in Europe and North America, growth rates in the companion animals business and in the important parasiticides market in particular, were also lower than in previous years. The slight recovery of the farm animals business in the core markets and an upturn in the American companion animals business at the end of the year were unable to offset the weaker market development in the first half of the year. Bayer expects growth to increase to 4% in 2018. In Bayer's view, the main factors here are likely to be an improvement in market conditions in the farm animals sector, along with further robust demand in the companion animals business. Generally, Bayer believes that the animal health market, driven by an increasing world population and higher incomes, remains very attractive.

B.5 **Description of the group and the issuer's position within the group.**

Bayer AG is the parent company of the Bayer Group. Its subsidiaries are companies over which Bayer AG exercises control because it is exposed, or has rights, to variable returns and has the ability to use its power to affect those companies' returns. The most important are Bayer HealthCare LLC, U.S.A., Bayer Pharma Aktiengesellschaft, Germany, Bayer U.S. LLC, U.S.A., Bayer Intellectual Property GmbH, Germany, Bayer Oy, Finland and Bayer CropScience Aktiengesellschaft, Germany. Upon completion of the Transaction, Bayer AG's significant subsidiaries will further include Monsanto Company, U.S.A. as well as Monsanto Technology LLC, U.S.A. As of March 31, 2018, the Bayer Group included 237 consolidated companies worldwide, of which 50 were German companies.

B.6 **Persons who, directly or indirectly, have a (notifiable) interest in the issuer's capital and voting rights.**

To the knowledge of the Company and based on the notifications received by the Company as of the date of this Prospectus in accordance with the German Securities Trading Act (*Wertpapierhandelsgesetz*) and on information provided by shareholders, the following shareholders held an interest (direct or indirect) of at least 3% in the Company's ordinary shares as of the date of this Prospectus. The percentage values shown in the table below are the shares of voting rights last notified to the Company in relation to the Company's share capital as of the date of the respective notification. It should be noted that the number and share of voting rights last notified may have changed since the respective notification was submitted to the Company given that there is no obligation to notify unless notifiable thresholds were reached or crossed:

Shareholders	Stake/Share of Voting Rights[1]
BlackRock, Inc.[2]	7.17%
Government of Singapore[3]	3.97%

(1) The percentage of voting rights has been calculated on the basis of the Company's registered share capital on the date of the respective shareholding notification.

(2) Indirect shareholdings of BlackRock, Inc. as notified for March 26, 2018. BlackRock, Inc. is the ultimate controlling entity of the 42 other companies listed in its group notification. None of these BlackRock, Inc. companies directly held 3.0% or more of the voting rights in the Company at that date.

(3) Indirect shareholdings of Government of Singapore, as notified for April 18, 2018. Government of Singapore is the ultimate controlling shareholder of the 14 companies listed in its group notification. Out of these companies, only Ellington Investments Pte. Ltd. directly held 3.0% or more of the voting rights in the Company, namely 3.96%, at that date.

Different voting rights, if any, of the issuer's major shareholders.

Not applicable. Each share of the Company confers one vote at the stockholders' meeting. Voting rights are the same for all of the Company's shareholders.

Direct or indirect control over the issuer and nature of such control.

Not applicable. The Company is neither directly nor indirectly owned nor controlled by any other company or person. There are no arrangements known to the Company, the operation of which may at a subsequent date result in a change of control of the Company.

B.7	Selected key historical financial information.	**Selected Financial Information of the Bayer Group** The financial information contained in the following sections is extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2016 and December 31, 2017, from the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018 and from the Group's internal and external accounting records, or has been calculated on the basis of figures from the above-mentioned sources, unless otherwise indicated. We lost control of our subsidiary Covestro AG due to the sale of shares in Covestro AG ("**Covestro Shares**") and the signing of a control termination agreement, as part of which we undertook not to exercise certain voting rights at Covestro's annual stockholders' meeting (the "**Loss of Control**"). As a result of the Loss of Control at the end of September 2017, Covestro ceased to be a reportable segment and fulfilled the conditions for presentation as discontinued operations for the first nine months of 2017. As of October 1, 2017 until May 2018, Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method. In May 2018 Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss. The comparative information for fiscal year ended December 31, 2016 (with the exception of the consolidated statement of financial position as of December 31, 2016) as presented in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017 and for the three months ended March 31, 2017 as presented in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018, was restated accordingly to present Covestro as discontinued operations for the full fiscal year ended December 31, 2016 and for the three months ended March 31, 2017. However, the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, including the comparative information for fiscal year ended December 31, 2015, which are presented and discussed in this Prospectus, as well as the audited consolidated financial statements as of and for fiscal year ended December 31, 2015, which are also included in this Prospectus, were not restated to present Covestro as discontinued operations. In order to increase transparency in the following sections, we present the 2016 figures relating to the results of operations of the Bayer Group and the cash flows of the Bayer Group in two columns: one column showing the 2016 figures as presented in the audited consolidated income statement or the audited consolidated statement of cash flows of Bayer, as the case may be, as of and for fiscal year ended December 31, 2016 (with Covestro included in continuing operations) and a second column showing the 2016 figures as presented as comparative figures in the audited consolidated income statement or the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2017 (with Covestro presented as discontinued operations). The audited consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017, included in this Prospectus, were prepared in accordance with International Financial Reporting Standards and as adopted by the European Union ("**IFRS**") and the additional requirements of German commercial law pursuant to Section 315e para. 1 of the German Commercial Code (*Handelsgesetzbuch*) (formerly Section 315a para. 1 of the German Commercial Code). The unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018 were prepared in accordance with IFRS for interim financial reporting (IAS 34). PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (formerly PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft) has audited and issued unqualified auditor's reports with respect to the

consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2015 and December 31, 2016. These financial statements and the auditor's reports thereon are included in this Prospectus.

Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Munich, Germany ("**Deloitte**"), was appointed as the statutory auditor for the consolidated financial statements of Bayer and the unconsolidated financial statements of Bayer AG beginning January 1, 2017. Deloitte has audited and issued an unqualified auditor's report with respect to the consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017 and the audited unconsolidated financial statements of Bayer AG as of and for fiscal year ended December 31, 2017. In addition, Deloitte was appointed to review the unaudited condensed consolidated interim financial statements of Bayer. Deloitte has reviewed and issued a review report with respect to the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018. These financial statements as well as the auditor's reports and review report thereon are included in this Prospectus.

Where financial information in the following tables is labelled "audited," this means that it was extracted from the audited consolidated financial statements (IFRS) of Bayer as of and for the fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017 or from the audited unconsolidated financial statements (HGB) of Bayer AG as of and for the fiscal year ended December 31, 2017.

The label "unaudited" is used in the following tables to indicate financial information that either has been derived from the unaudited condensed consolidated interim financial statements as of and for the three months ended March 31, 2018 or the Group's internal and external accounting records, or has been calculated on the basis of figures extracted from the above-mentioned sources. All financial information presented in the following tables and sections are stated in millions of euro (in € million), except as otherwise stated. Certain financial information in the following tables and sections (including percentages) has been rounded according to established commercial standards. As a result, the aggregate amounts (sum totals or sub-totals or differences or if numbers are put in relation) may not correspond in all cases to the corresponding rounded amounts contained in the following tables and sections. Furthermore, in the following tables, these rounded figures may not add up exactly to the totals contained in the respective tables. The percentage changes that are stated in the following tables and sections have been commercially rounded to one decimal place, unless stated otherwise. Financial information presented in parentheses in the following tables denotes that the presented number is a negative number, unless stated otherwise. In respect of financial information set out below, a zero ("0") signifies that the relevant figure is available but has been rounded to zero, a dash ("–") signifies that an amount truly is zero and/or that the relevant figure is not available.

Bayer Group Consolidated Income Statements

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million, unless otherwise indicated)		(audited) (in € million, unless otherwise indicated)		(unaudited) (in € million, unless otherwise indicated)	
Net sales	**46,085**	**46,769**	**34,943**	**35,015**	**9,680**	**9,138**
Cost of goods sold	(21,040)	(20,295)	(11,756)	(11,382)	(2,987)	(2,909)
Gross profit	**25,045**	**26,474**	**23,187**	**23,633**	**6,693**	**6,229**
Selling expenses	(12,272)	(12,474)	(11,148)	(11,116)	(2,667)	(2,509)
Research and development expenses	(4,274)	(4,666)	(4,405)	(4,504)	(1,094)	(1,040)
General administration expenses	(2,092)	(2,256)	(1,804)	(2,026)	(460)	(427)
Other operating income	1,109	898	787	864	159	152
Other operating expenses	(1,275)	(934)	(879)	(948)	(204)	(95)
EBIT[4]	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
Equity-method income (loss)	(9)	(26)	(6)	20	(7)	71
Financial income	371	151	149	289	32	370
Financial expenses	(1,367)	(1,280)	(1,108)	(1,635)	(321)	(311)
Financial result	**(1,005)**	**(1,155)**	**(965)**	**(1,326)**	**(296)**	**130**
Income before income taxes	**5,236**	**5,887**	**4,773**	**4,577**	**2,131**	**2,440**
Income taxes	(1,223)	(1,329)	(1,017)	(1,329)	(424)	(494)
Income from continuing operations after income taxes	**4,013**	**4,558**	**3,756**	**3,248**	**1,707**	**1,946**
Income from discontinued operations after income taxes	**85**	**268**	**1,070**	**4,846**	**564**	**8**
Income after income taxes	**4,098**	**4,826**	**4,826**	**8,094**	**2,271**	**1,954**
of which attributable to noncontrolling interest	*(12)*	*295*	*295*	*758*	*188*	—
of which attributable to Bayer AG stockholders (net income)	*4,110*	*4,531*	*4,531*	*7,336*	*2,083*	*1,954*
Earnings per share in €						
From continuing operations						
Basic	4.87	5.12	4.50	3.73	1.96	2.23
Diluted	4.87	5.12	4.50	3.73	1.96	2.23
From discontinued operations						
Basic	0.10	0.32	0.94	4.68	0.43	0.01
Diluted	0.10	0.32	0.94	4.68	0.43	0.01
From continuing and discontinued operations						
Basic	4.97	5.44	5.44	8.41	2.39	2.24
Diluted	4.97	5.44	5.44	8.41	2.39	2.24

(1) Figures extracted from the audited consolidated income statement of Bayer for fiscal year ended December 31, 2016, which presents Covestro in continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which presents Covestro as discontinued operations as included in the unaudited condensed consolidated interim income statement of Bayer for the three months ended March 31, 2018.

(4) Alternative Performance Measure used by Bayer, for more information see below "*Additional Key Figures for the Bayer Group*."

Bayer Group Consolidated Statements of Financial Position

	As of December 31,			As of March 31,
	2015[1]	2016[2]	2017[3]	2018
		(audited) (in € million)		(unaudited) (in € million)
Assets				
Noncurrent assets	**50,096**	**51,791**	**45,014**	**42,225**
Goodwill	16,096	16,312	14,751	14,480
Other intangible assets	15,178	13,567	11,674	11,185
Property, plant and equipment	12,375	13,114	7,633	7,330
Investments accounted for using the equity method	246	584	4,007	2,574
Other financial assets	1,092	1,281	1,634	1,737
Other receivables	430	583	400	535
Deferred taxes	4,679	6,350	4,915	4,384
Current assets	**23,821**	**30,447**	**30,073**	**33,169**
Inventories	8,550	8,408	6,550	6,402
Trade accounts receivable	9,933	10,969	8,582	9,498
Other financial assets	756	6,275	3,529	7,315
Other receivables	2,017	2,210	1,276	1,029
Claims for income tax refunds	509	676	474	461
Cash and cash equivalents	1,859	1,899	7,581	5,332
Assets held for sale	197	10	2,081	3,132
Total assets	**73,917**	**82,238**	**75,087**	**75,394**
Equity	**25,445**	**31,897**	**36,861**	**38,384**
Capital stock	2,117	2,117	2,117	2,117
Capital reserves	6,167	9,658	9,658	9,658
Other reserves	15,981	18,558	25,026	26,553
Equity attributable to Bayer AG stockholders	**24,265**	**30,333**	**36,801**	**38,328**
Equity attributable to noncontrolling interest	1,180	1,564	60	56
Noncurrent liabilities	**31,492**	**31,804**	**24,633**	**23,912**
Provisions for pensions and other post-employment benefits	10,873	11,134	8,020	8,096
Other provisions	1,740	1,780	1,366	1,302
Refund liabilities[4]	–	–	–	146
Contract liabilities[4]	–	–	–	799
Financial liabilities	16,513	16,180	12,483	12,273
Income tax liabilities	475	423	495	482
Other liabilities	1,065	957	1,116	228
Deferred taxes	826	1,330	1,153	586
Current liabilities	**16,980**	**18,537**	**13,593**	**13,098**
Other provisions	5,045	5,421	4,344	2,194
Refund liabilities[4]	–	–	–	2,519
Contract liabilities[4]	–	–	–	197
Financial liabilities	3,421	3,401	1,935	1,761
Trade accounts payable	5,945	6,410	5,129	3,943
Income tax liabilities	923	884	422	646
Other liabilities	1,534	2,421	1,652	1,318
Liabilities directly related to assets held for sale	112	–	111	520
Total equity and liabilities	**73,917**	**82,238**	**75,087**	**75,394**

(1) Figures extracted from the audited consolidated statement of financial position of Bayer as of December 31, 2016, in which the assets and liabilities related to Covestro are still recognized within the financial position of the Group. In alignment with IFRS, the information on Bayer's financial position as of December 31, 2015 was not adjusted to reflect the sale of the consumer business of Crop Science's Environmental Science unit (the "**Environmental Science Consumer Business**").

(2) Figures extracted from the audited consolidated statement of financial position of Bayer as of December 31, 2016 in which the assets and liabilities related to Covestro are still recognized within the statement of financial position of the Group. The assets and liabilities related to the Environmental Science Consumer Business are derecognized in the audited consolidated statements of financial position of Bayer as of December 31, 2016. In alignment with IFRS, the information on Bayer's financial position as of December 31, 2016 was not adjusted to reflect the deconsolidation of Covestro.

(3) Figures extracted from the audited consolidated statement of financial position of Bayer as of December 31, 2017 in which the assets and liabilities related to Covestro, including the noncontrolling interest in Covestro, are derecognized. As of October 1, 2017 until May 2018, the remaining interest in Covestro was classified as an associate and accounted for using the equity method. In May 2018 Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss. For more information see "*B.7 Significant changes to the issuer's financial condition and operating results during and subsequent to the period covered by the historical key financial information–Recent Developments*".

(4) The line items Refund liabilities and Contract liabilities were introduced as of January 1, 2018 and reflect accounting changes due to the first-time application of IFRS 15.

Selected Information from Bayer Group's Consolidated Statements of Cash Flows

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million)		(audited) (in € million)		(unaudited) (in € million)	
Net cash provided by (used in) operating activities from continuing operations	**6,836**	**8,259**	**6,435**	**6,611**	**551**	**658**
Net cash provided by (used in) operating activities from discontinued operations	54	830	2,654	1,523	290	–
Net cash provided by (used in) operating activities (total)	**6,890**	**9,089**	**9,089**	**8,134**	**841**	**658**
Net cash provided by (used in) investing activities	**(2,762)**	**(8,729)**	**(8,729)**	**(432)**	**(1,136)**	**(2,058)**
Net cash provided by (used in) financing activities	**(3,974)**	**(350)**	**(350)**	**(1,881)**	**611**	**(581)**
Change in cash and cash equivalents due to business activities	**154**	**10**	**10**	**5,821**	**316**	**(1,981)**
Cash and cash equivalents at beginning of year	**1,853**	**1,859**	**1,859**	**1,899**	**1,899**	**7,436**
Change in cash and cash equivalents due to changes in scope of consolidation	5	3	3	–	–	1
Change in cash and cash equivalents due to exchange rate movements	(153)	27	27	(139)	9	(118)
Cash and cash equivalents at end of the year	**1,859**	**1,899**	**1,899**	**7,581**	**2,224**	**5,338**

(1) Figures extracted from the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2016, which present the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2017, which present the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from discontinued operations separately.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017 as included in the unaudited condensed consolidated interim statement of cash flows of Bayer for the three months ended March 31, 2018, which presents the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from discontinued operations separately.

Additional Key Figures for the Bayer Group

In Bayer's view, the alternative performance measures (the "**Alternative Performance Measures**") described in this section constitute the most important indicators for measuring the operating and financial performance of the Bayer Group's business and, as such, are of use for potential investors. However, the Alternative Performance Measures are not recognized as measures under IFRS and should not be considered as substitutes for figures determined in accordance with IFRS, such as income before income taxes, income after income taxes, net cash provided by (used in) operating activities or other income statement or cash flow data, or as measures of profitability or liquidity. The Alternative Performance Measures do not necessarily indicate whether cash flows will be available and/or sufficient for Bayer's cash requirements, nor whether any such measure is indicative of Bayer's historical operating results. Also, the Alternative Performance Measures are not meant to be indicative of future results. Because not all companies calculate these measures and figures in the same way, Bayer's presentation of the Alternative Performance Measures is not necessarily comparable with similarly titled measures used by other companies. Bayer determines, in particular, the following Alternative Performance Measures:

- Earnings before interest and taxes, which is defined as income before income taxes less financial result ("**EBIT**").
- Earnings before interest, taxes, depreciation and amortization, which is defined as the sum of EBIT plus amortization of intangible assets and the depreciation of property, plant and equipment, plus impairment losses and minus impairment loss reversals, recognized in profit or loss during the reporting period ("**EBITDA**").
- EBIT before special items is defined as the sum of EBIT plus/minus special items, i.e., special charges or special gains, which may include, litigations, restructuring, integration costs, impairment losses and impairment loss reversals ("**EBIT before special items**").
- EBITDA before special items is defined as the sum of EBITDA plus/minus special items, i.e., special charges or special gains, which may include, litigations, restructuring and integration costs ("**EBITDA before special items**").

- Core earnings per share ("**Core EPS**") is based on the earnings per share ("**EPS**") for the Group as defined in IAS 33. Core EPS is defined as EBIT plus/minus amortization and impairment losses/impairment loss reversals on intangible assets, impairment losses/impairment loss reversals on property, plant and equipment and accelerated depreciation included in special items as well as special items (other than accelerated depreciation, amortization and impairment losses / loss reversals) (this sum is referred to as "**Core EBIT**"), plus/minus financial result, special items in the financial result, income taxes, special items in income taxes, tax effects relating to amortization/ impairment losses/impairment loss reversals and special items, income after income taxes attributable to noncontrolling interest and portion of the above-mentioned adjustments attributable to noncontrolling interest (this sum is referred to as "**Core net income from continuing operations**"); divided by the weighted average number of shares.
- Net financial debt is defined as the sum of financial liabilities (bonds and notes/promissory notes, liabilities to banks, liabilities under finance leases, liabilities from derivatives, other financial liabilities and receivables from derivatives) minus cash and cash equivalents and current financial assets.
- Return on capital employed ("**ROCE**") is defined as the ratio of net operating profit after tax ("**NOPAT**") to the average capital employed ("**Capital Employed**"). NOPAT represents the operating result after taxes and is calculated by subtracting income taxes (which are based on a historical average tax of 24%) from EBIT. The Capital Employed by the Group is the total carrying amount of operational assets, minus liabilities that are largely non-interest-bearing in character or would distort the capital base. An average value, calculated from the values at the end of the prior year and of the reporting year, is used to depict the change in Capital Employed during the year.
- Currency-adjusted change in sales is defined as the percentage change in sales excluding the impact of exchange rate effects and currency- and portfolio-adjusted change in sales is defined as the percentage change in sales excluding the impact of exchange rate effects and disregarding the acquisitions and divestitures material to each business entity. Exchange rate effects are generally calculated on the basis of the functional currency valid in the respective country. Exceptions exist in Brazil and Argentina, primarily for Crop Protection, where the respective functional currencies are restated in U.S. dollars for business reasons.

Bayer believes that the Alternative Performance Measures are useful to enable the comparison of performance indicators over time and against those of other companies in its industry. Also, individual Alternative Performance Measures may assist in evaluating Bayer's operating performance, measuring its periodic capital return, or generally assessing its liquidity, capital structure and financial flexibility. Specifically, Bayer uses the Alternative Performance Measures for the following:

- EBIT is used by the Group as an indicator for evaluating the operational performance of the Group. EBIT eliminates the effects differences in local taxation systems and different financing activities have on Bayer's operating result.
- EBITDA is used by the Group as an indicator for evaluating the operational performance of the Group. EBITDA neutralizes the effects of the financial result along with distortions of operational performance that result from divergent depreciation and amortization methods and the exercise of measurement discretion.
- EBIT before special items is used by the Group as an indicator for evaluating the operational performance of the Group. EBIT before special items shows the development of the operational business of the Group irrespective of the effects of special items, i.e. special effects for the Group with regard to their nature and magnitude.
- EBITDA before special items is used by the Group as an indicator for evaluating the operational performance of the Group. EBITDA before special items shows the development of the operational business irrespective of the effects of special items, i.e. special effects for the Group with regard to their nature and magnitude.
- Core EPS is used as an indicator for evaluating the operational performance of the Group as it neutralizes the effects of special items to enable a comparison of performance over time.
- Net financial debt is an important financial management indicator for the Group and is used both internally and externally in assessing its liquidity, capital structure and financial flexibility.
- ROCE measures the Group's economic success in relation to Capital Employed and supplements the operational management indicators. As a strategic indicator, ROCE measures periodic capital return. This can then be compared with the weighted average cost of capital. Monitoring ROCE over time supports the analysis of long-term business development, while the portfolio analysis process includes comparing ROCE between business areas.
- Currency-adjusted change in sales is used as an indicator for evaluating the operational performance of the Group as it shows the Group's net sales performance eliminating the impact exchange rate effects have on our net sales. Currency- and portfolio-adjusted change in sales is also used as an indicator for evaluating the operational performance of the Group as it shows the Group's net sales performance eliminating the impact exchange rate effects and net sales from acquisitions and divestitures have on our net sales.

The following table provides an overview of certain Alternative Performance Measures for the Group for the periods presented:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)		(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)		(unaudited) (in € million, unless otherwise indicated)	
EBIT[4]	6,241	7,042	5,738	5,903	2,427	2,310
EBITDA	9,573	10,785	8,801	8,563	2,999	2,818
EBIT before special items[4]	7,060	8,130	6,826	7,130	2,529	2,388
EBITDA before special items[4]	10,256	11,302	9,318	9,288	3,054	2,896
Core earnings per share from continuing operations (in €)	6.82	7.32	6.67	6.74	2.31	2.28
Net financial debt	17,449	11,778	11,778	3,595	10,400	1,650
Return on Capital Employed (ROCE) (in %)[4]	9.9	11.0	10.3	10.8	–	–

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(4) Audited for the fiscal years ended December 31, 2015, 2016 and 2017.

Reconciliation of EBIT and EBITDA

The following table provides a reconciliation of the Group's Alternative Performance Measures EBIT and EBITDA for the periods presented:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited, unless otherwise indicated) (in € million)		(audited, unless otherwise indicated) (in € million)		(unaudited) (in € million)	
Income before income taxes	5,236	5,887	4,773	4,577	2,131	2,440
Financial result	1,005	1,155	965	1,326	296	(130)
Equity-method (income) loss	*9*	*26*	*6*	*(20)*	*7*	*(71)*
Financial income	*(371)*	*(151)*	*(149)*	*(289)*	*(32)*	*(370)*
Financial expenses	*1,367*	*1,280*	*1,108*	*1,635*	*321*	*311*
EBIT	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
Depreciation, amortization and impairments	3,332	3,743	3,063	2,660	572	508
of which amortization and impairments on intangible assets[4]	*1,802*	*2,235*	*2,192*	*1,679*	*341*	*297*
of which depreciation and impairments on property, plant and equipment[4]	*1,530*	*1,508*	*871*	*981*	*231*	*211*
EBITDA[4]	**9,573**	**10,785**	**8,801**	**8,563**	**2,999**	**2,818**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(4) Unaudited.

Reconciliation of EBIT before Special Items and EBITDA before Special Items

The following table provides a reconciliation of the Group's Alternative Performance Measures EBIT before special items and EBITDA before special items for the periods presented:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million)		(audited) (in € million)		(unaudited) (in € million)	
EBIT	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
of which EBIT of segments	*6,740*	*7,406*	*6,102*	*6,389*	*2,567*	*2,417*
of which EBIT of Corporate Functions and Consolidation	*(499)*	*(364)*	*(364)*	*(486)*	*(140)*	*(107)*
Special items	**819**	**1,088**	**1,088**	**1,227**	**102**	**78**
of which special items of segments	*792*	*1,068*	*1,068*	*1,190*	*100*	*75*
of which special items of Corporate Functions and Consolidation	*27*	*20*	*20*	*37*	*2*	*3*
EBIT before special items	**7,060**	**8,130**	**6,826**	**7,130**	**2,529**	**2,388**
of which EBIT before special items of segments	*7,532*	*8,474*	*7,170*	*7,579*	*2,667*	*2,492*
of which EBIT before special items of Corporate Functions and Consolidation	*(472)*	*(344)*	*(344)*	*(449)*	*(138)*	*(104)*
Depreciation, amortization and impairment losses / loss reversals before special items	**3,196**	**3,172**	**2,492**	**2,158**	**525**	**508**
of which depreciation, amortization and impairment losses / loss reversals before special items of segments	*3,190*	*3,166*	*2,486*	*2,145*	*522*	*504*
of which depreciation, amortization and impairment losses / loss reversals before special items of Corporate Functions and Consolidation	*6*	*6*	*6*	*13*	*3*	*4*
EBITDA before special items	**10,256**	**11,302**	**9,318**	**9,288**	**3,054**	**2,896**
of which EBITDA before special items of segments	*10,722*	*11,640*	*9,656*	*9,724*	*3,189*	*2,996*
of which EBITDA before special items of Corporate Functions and Consolidation	*(466)*	*(338)*	*(338)*	*(436)*	*(135)*	*(100)*

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

Selected Key Data by Segments of the Bayer Group

The following table provides an overview of selected key data by segment for the periods presented. Following the deconsolidation of Covestro, the continuing operations of the Bayer Group consist of the businesses of the Pharmaceuticals, Consumer Health, Crop Science and Animal Health segments as well as Reconciliation. Prior to the deconsolidation of Covestro, these were together referred to as "**Life Sciences**" and the subtotal of Life Sciences was reported separately.

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited, unless otherwise indicated)		(audited, unless otherwise indicated)		(unaudited)	
	(in € million)		(in € million)		(in € million)	
Net sales (external)						
Pharmaceuticals	15,308	16,420	16,420	16,847	4,263	4,075
Consumer Health	6,076	6,037	6,037	5,862	1,601	1,409
Crop Science	10,128	9,915	9,915	9,577	3,120	2,861
Animal Health	1,490	1,523	1,523	1,571	440	414
Reconciliation[4]	1,101	1,048	1,048	1,158	256	379
Life Sciences	**34,103**	**34,943**	–	–	–	–
Covestro	11,982	11,826	–	–	–	–
Group	**46,085**	**46,769**	**34,943**	**35,015**	**9,680**	**9,138**
EBIT[5]						
Pharmaceuticals	3,028	3,389	3,389	4,325	1,219	1,163
Consumer Health	768	695	695	518	278	211
Crop Science	2,094	1,755	1,755	1,235	970	892
Animal Health	254	313	313	307	126	129
Reconciliation[4]	(538)	(414)	(414)	(482)	(166)	(85)
Life Sciences	**5,606**	**5,738**	–	–	–	–
Covestro	635	1,304	–	–	–	–
Group	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
EBITDA before special items[5]						
Pharmaceuticals	4,616	5,251	5,251	5,711	1,502	1,415
Consumer Health	1,456	1,411	1,411	1,231	392	313
Crop Science	2,406	2,421	2,421	2,043	1,115	1,042
Animal Health	347	349	349	381	135	139
Reconciliation[4]	(228)	(114)	(114)	(78)	(90)	(13)
Life Sciences	**8,597**	**9,318**	–	–	–	–
Covestro	1,659	1,984	–	–	–	–
Group	**10,256**	**11,302**	**9,318**	**9,288**	**3,054**	**2,896**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(4) Unaudited. Reconciliation includes business activities that cannot be allocated to any other segment reported under "All Other Segments," including primarily the services provided by Business Services, Technology Services and Currenta. It also includes items reported under "Corporate Functions and Consolidation," which mainly comprises Bayer holding companies and Leaps by Bayer (formerly: Bayer Lifescience Center) as well as the increase or decrease in expenses for Group-wide long-term stock-based compensation arising from fluctuations in the performance of Bayer stock, and the consolidation of intersegment sales.

(5) Alternative Performance Measure used by Bayer, for more information see above "*Additional Key Figures for the Bayer Group*."

Selected Key Data by Region of the Bayer Group

The following table provides an overview of our net sales (external) by region for the periods presented:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million)		(audited) (in € million)		(unaudited) (in € million)	
Net sales (external) – by market						
Europe / Middle East / Africa	17,707	17,823	13,062	13,388	4,000	3,907
North America	12,621	12,806	10,066	10,143	2,994	2,654
Asia / Pacific	10,263	11,032	7,413	7,637	1,974	1,927
Latin America	5,494	5,108	4,402	3,847	712	650
Reconciliation[4]	–	–	–	–	–	–
Group	**46,085**	**46,769**	**34,943**	**35,015**	**9,680**	**9,138**

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(4) Reconciliation eliminates interregional sales and transactions and reflects income and expenses not allocable to geographical areas.

Significant changes to the issuer's financial condition and operating results during and subsequent to the period covered by the historical key financial information.

The following material changes in our financial condition and operating results occurred in the three months ended March 31, 2018 and March 31, 2017 and in the fiscal years 2017, 2016 and 2015:

Three Months Ended March 31, 2018 and March 31, 2017

Net sales of the Bayer Group decreased by €542 million, or 5.6%, from €9,680 million in the three months ended March 31, 2017 to €9,138 million in the three months ended March 31, 2018. The decrease in the Bayer Group's net sales in the three months ended March 31, 2018 was attributable to unfavorable currency effects, a decline in selling prices and portfolio effects which resulted in a 7.5%, 1.2% and 0.1% decrease in net sales, respectively. These effects were partially offset by an increase in sales volume by 3.2%. On a currency- and portfolio-adjusted basis, net sales increased by 2.0% in the three months ended March 31, 2018. EBIT of the Bayer Group decreased by €117 million, or 4.8%, from €2,427 million in the three months ended March 31, 2017 to €2,310 million in the three months ended March 31, 2018. The decrease in Group EBIT in the three months ended March 31, 2018 was attributable to a decrease in EBIT at Consumer Health, Crop Science and Pharmaceuticals. EBIT before special items decreased by €141 million, or 5.6%, from €2,529 million in the three months ended March 31, 2017 to €2,388 million in the three months ended March 31, 2018. Overall, income after income taxes decreased by €317 million, or 14.0%, from €2,271 million in the three months ended March 31, 2017 to €1,954 million in the three months ended March 31, 2018 mostly due to a decrease in income from discontinued operations resulting from the deconsolidation of Covestro.

With respect to our segments, Pharmaceuticals contributed the highest net sales towards the Bayer Group in the three months ended March 31, 2018. Reported net sales of Pharmaceuticals decreased by €188 million, or 4.4%, from €4,263 million in the three months ended March 31, 2017 to €4,075 million in the three months ended March 31, 2018. Total combined net sales of Xarelto™, EYLEA™, Xofigo™, Stivarga™ and Adempas™ delivered a strong performance overall and their combined net sales increased from €1,445 million in the three months ended March 31, 2017 to €1,561 million in the three months ended March 31, 2018. Consumer Health registered the highest percentage change in

net sales on a reported basis, decreasing by €192 million, or 12.0%, from €1,601 million in the three months ended March 31, 2017 to €1,409 million in the three months ended March 31, 2018. Reported net sales of Crop Science and Animal Health decreased by 8.3% and 5.9%, respectively. On a currency- and portfolio-adjusted basis, net sales of Pharmaceuticals and Animal Health increased by 2.9% and 3.0%, while net sales of Consumer Health and Crop Science decreased by 2.2% and 1.0%, respectively. With respect to our segments, EBITDA before special items of Consumer Health decreased significantly by €79 million, or 20.2%, from €392 million in the three months ended March 31, 2017 to €313 million in the three months ended March 31, 2018, driven by lower volumes that mainly resulted from anticipated temporary supply disruptions and with the reclassification of two of Consumer Health's medicated skin care brands from OTC to prescription by the Chinese authorities. EBITDA before special items of Pharmaceuticals and Crop Science decreased by 5.8% and 6.5%, respectively, while EBITDA before special items of Animal Health increased by 3.0% over the same period. With respect to EBIT, Consumer Health also registered the highest percentage change, decreasing by €67 million, or 24.1%, from €278 million in the three months ended March 31, 2017 to €211 million in the three months ended March 31, 2018. EBIT of Pharmaceuticals and Crop Science decreased by 4.6% and 8.0%, respectively, while EBIT of Animal Health increased by 2.4% over the same period.

Total assets as of March 31, 2018 remained level at €75,394 million, compared to €75,087 million as of December 31, 2017. Noncurrent assets decreased by €2,789 million, or 6.2%, from €45,014 million as of December 31, 2017 to €42,225 million as of March 31, 2018. Investments accounted for using the equity method decreased by €1,433 million, or 35.8%, from €4,007 million as of December 31, 2017 to €2,574 million as of March 31, 2018, which was mainly attributable to the sale of further Covestro Shares. Current assets increased by €3,096 million, or 10.3%, from €30,073 million as of December 31, 2017 to €33,169 million as of March 31, 2018. Assets held for sale increased by €1,051 million, or 50.5%, from €2,081 million as of December 31, 2017 to €3,132 million as of March 31, 2018 particularly due to the planned sale of the vegetable seeds business. Equity increased by €1,523 million, or 4.1%, from €36,861 million as of December 31, 2017 to €38,384 million as of March 31, 2018. Income after income taxes of €1,954 million had a positive effect. Currency effects recognized in other comprehensive income reduced equity by €382 million. A further reduction of €176 million came from the increase in pension provisions recognized in other comprehensive income. Total liabilities decreased by €1,216 million, or 3.2%, from €38,226 million as of December 31, 2017 to €37,010 million as of March 31, 2018. Noncurrent liabilities decreased by €721 million, or 2.9%, from €24,633 million as of December 31, 2017 to €23,912 million as of March 31, 2018, mainly due to a decrease in deferred taxes. Current liabilities decreased by €495 million, or 3.6%, from €13,593 million as of December 31, 2017 to €13,098 million as of March 31, 2018, mainly due to a decrease in trade accounts payable that, among others, resulted from the operating business activity. Furthermore, the first-time application of IFRS 15 required amounts to be reclassified within non-current and current liabilities.

Net cash provided by operating activities decreased by €183 million, or 21.8%, from €841 million for the three months ended March 31, 2017 to €658 million for the three months ended March 31, 2018. Net cash provided by operating activities in continuing operations increased by €107 million, or 19.4%, from €551 million for the three months ended March 31, 2017 to €658 million for the three months ended March 31, 2018, mainly due to lower additional cash tied up in working capital. Operating activities from discontinued operations provided €290 million net cash for the three months ended March 31, 2017, compared to no net cash being provided by operating activities from discontinued operations

for the three months ended March 31, 2018. Covestro was still included in the prior-year quarter. Net cash used in investing activities amounted to €2,058 million for the three months ended March 31, 2018 compared to €1,136 million for the three months ended March 31, 2017. Bayer invested €3,712 million in current financial assets in the three months ended March 31, 2018, compared to €583 million in the three months ended March 31, 2017. The sale of further Covestro Shares contributed a net cash inflow of €1,802 million in the three months ended March 31, 2018. At €349 million in the three months ended March 31, 2018, cash outflows for additions to property, plant and equipment and intangible assets were 15.9% lower compared to €415 million in the three months ended March 31, 2017 (which included investments in an amount of €74 million at Covestro). Net cash used in financing activities amounted to €581 million for the three months ended March 31, 2018 compared to net cash provided by financing activities of €611 million for the three months ended March 31, 2017 and which included a net inflow of €1,460 million from the sale of Covestro Shares while that company remained fully consolidated.

Years Ended December 31, 2017 and December 31, 2016

Net sales of the Bayer Group remained level at €35,015 million in fiscal year 2017, compared to €34,943 million in fiscal year 2016. Net sales of the Bayer Group in fiscal year 2017 were impacted by a higher sales volume and a portfolio effect which resulted in a 2.3% and 0.1% increase in net sales, respectively, in particular due to higher sales volumes in Pharmaceuticals. The slight portfolio effect was due to the Cydectin™ product portfolio acquired in January 2017 from Boehringer Ingelheim Vetmedica, Inc., United States. The impact of the increase in sales volume and the portfolio effect on net sales was partially offset by unfavorable currency effects and a slight decline in selling prices, which decreased net sales by 1.4% and 0.8% respectively. On a currency- and portfolio-adjusted basis, net sales increased by 1.5% in fiscal year 2017. EBIT of the Bayer Group increased by €165 million, or 2.9%, from €5,738 million in fiscal year 2016 to €5,903 million in fiscal year 2017. The increase in Group EBIT in fiscal year 2017 was mainly attributable to a substantial increase of EBIT at Pharmaceuticals, which was partly offset by substantial decreases of EBIT at Consumer Health and Crop Science. EBIT before special items increased by €304 million, or 4.5%, from €6,826 million in fiscal year 2016 to €7,130 million in fiscal year 2017. Overall, income after income taxes increased by €3,268 million, or 67.7%, from €4,826 million in fiscal year 2016 to €8,094 million in fiscal year 2017 mostly due to gains resulting from the deconsolidation of Covestro.

With respect to our segments, Pharmaceuticals contributed the highest net sales towards the net sales of the Bayer Group and also registered the highest percentage increase in net sales on a currency- and portfolio-adjusted basis in fiscal year 2017 compared to fiscal year 2016. On a currency- and portfolio-adjusted basis, net sales of Pharmaceuticals increased by 4.3% in fiscal year 2017, mainly driven by its key growth products. Total combined net sales of our key growth products Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™ increased by €783 million from €5,413 million in fiscal year 2016 to €6,196 million in fiscal year 2017. Net sales of Kogenate™ declined considerably due, particularly, to a lower order volume for the active ingredient from a distribution partner ahead of the planned contract termination at the end of 2017. With respect to our segments, Animal Health registered the highest percentage increase in EBITDA before special items in fiscal year 2017 compared to fiscal year 2016. EBITDA before special items of Animal Health increased by €32 million, or 9.2%, from €349 million in fiscal year 2016 to €381 million in fiscal year 2017. With respect to EBIT, Pharmaceuticals registered the highest percentage increase in fiscal year 2017 compared to fiscal year 2016. EBIT of Pharmaceuticals increased by a substantial €936 million, or 27.6%, from €3,389 million in fiscal year 2016 to €4,325 million in fiscal year 2017.

Total assets as of December 31, 2017, declined by €7,151 million from €82,238 million as of December 31, 2016 to €75,087 million as of December 31, 2017, mainly as a result of the deconsolidation of Covestro. Assets held for sale increased by €2,071 million in conjunction with the agreement with BASF concerning the First BASF Divestiture Package. Equity increased by €4,964 million, or 15.6%, from €31,897 million as of December 31, 2016 to €36,861 million as of December 31, 2017. Income after income taxes (total) had a positive effect of €8.1 billion on Bayer's equity including effects from the deconsolidation of Covestro and from the revaluation of the residual shares in the capital stock of Covestro AG accounted for as an associate.

Liabilities as of December 31, 2017, decreased by €12,115 million from €50,341 million as of December 31, 2016 to €38,226 million as of December 31, 2017. Provisions for pensions and other post-employment benefits decreased by €3,114 million, or 28.0%, from €11,134 million as of December 31, 2016 to €8,020 million as of December 31, 2017 with €1.2 billion of the amount resulting from the deconsolidation of Covestro and a further €1.2 billion from actuarial gains and €0.5 billion from the transfer of Covestro Shares to Bayer Pension Trust e. V (the "**Bayer Pension Trust**"). Noncurrent financial liabilities declined by €3,697 million, or 22.8%, from €16,180 million as of December 31, 2016 to €12,483 million, with a reduction of €1.8 billion from divestments mainly due to the deconsolidation of Covestro. This decrease was partially offset by an increase in noncurrent financial liabilities mainly due to the issuance of exchangeable bonds in a nominal amount of €1.0 billion on June 14, 2017 (the "**Exchangeable Bonds**").

Net cash provided by operating activities decreased by €955 million, or 10.5%, from €9,089 million for fiscal year 2016 to €8,134 million for fiscal year 2017. The €9,089 million for fiscal year 2016 included inflows from the divestiture of the Diabetes Care business (the "**Diabetes Care Business**"). Net cash provided by operating activities in continuing operations increased by €176 million, or 2.7%, from €6,435 million in fiscal year 2016 to €6,611 million in fiscal year 2017 due to an improvement in EBIT and a reduction in cash tied up in working capital. Net cash provided by operating activities in continuing operations included the components of payments that fall under operating activities received from Dow Chemical as part of a patent dispute. Net cash provided by operating activities from discontinued operations decreased by €1,131 million, or 42.6%, from €2,654 million for fiscal year 2016 to €1,523 million for fiscal year 2017. Net cash used in investing activities for fiscal year 2017 amounted to €432 million compared to €8,729 million for fiscal year 2016. At €2,366 million for fiscal year 2017, cash outflows for additions to property, plant and equipment and intangible assets were 8.2% lower compared to €2,578 million for fiscal year 2016. Net cash used in financing activities amounted to €1,881 million for fiscal year 2017 compared to €350 million for fiscal year 2016. In fiscal year 2017, we received proceeds of €3,717 million from the sale of Covestro Shares, while net loan repayments amounted to €2,479 million, compared to €730 million in fiscal year 2016.

Years Ended December 31, 2016 and December 31, 2015

Net sales of the Bayer Group increased by €684 million, or 1.5%, from €46,085 million in fiscal year 2015 to €46,769 million in fiscal year 2016. The increase in the Group's net sales in fiscal year 2016 was mainly attributable to a higher sales volume, which resulted in a 4.2% increase, in particular due to higher sales volumes in Pharmaceuticals and Covestro. The impact of the increase in sales volume on net sales was partially offset by unfavorable currency effects and a slight decline in selling prices, which decreased net sales by 2.0% and 0.7% respectively. On a currency- and portfolio-adjusted basis, net sales increased by 3.5% in fiscal year 2016. EBIT of the Bayer Group increased by €801 million, or 12.8%, from €6,241 million in fiscal year 2015 to €7,042 million

in fiscal year 2016. The increase in Group EBIT in fiscal year 2016 was mainly attributable to an increase in EBIT of Pharmaceuticals and Covestro. EBIT before special items of the Bayer Group increased by €1,070 million, or 15.2%, from €7,060 million in fiscal year 2015 to €8,130 million in fiscal year 2016.

With respect to our segments, Pharmaceuticals contributed the highest net sales towards the net sales of the Bayer Group and also registered the highest percentage increase in net sales in fiscal year 2016 compared to fiscal year 2015. On a currency- and portfolio-adjusted basis, net sales of Pharmaceuticals increased by 8.7% in fiscal year 2016, mainly driven by its key growth products. Total combined net sales of Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™ increased by €1,182 million from €4,231 million in fiscal year 2015 to €5,413 million in fiscal year 2016. With respect to our segments, Covestro registered the highest percentage increase in EBITDA before special items in fiscal year 2016 compared to fiscal year 2015. EBITDA before special items of Covestro increased by €325 million, or 19.6%, from €1,659 million in fiscal year 2015 to €1,984 million in fiscal year 2016. This increase was mainly attributable to reductions in raw material prices and higher volumes that outweighed lower selling prices as well as a negative currency effect. With respect to EBIT, Covestro also registered the highest percentage increase in fiscal year 2016 compared to fiscal year 2015. EBIT of Covestro more than doubled compared to the previous year, increasing by €669 million, from €635 million in fiscal year 2015 to €1,304 million in fiscal year 2016.

Equity of the Bayer Group increased by €6,452 million, or 25.4%, from €25,445 million as of December 31, 2015 to €31,897 million as of December 31, 2016. This increase was mainly attributable to an increase in capital reserves due to the issuance of mandatory convertible notes in a nominal amount of €4.0 billion on November 22, 2016 (the "**Mandatory Convertible Notes**"), an increase in other reserves due to positive effects from income after income taxes and currency effects recognized in other comprehensive income that were partly offset by the dividend payment and a negative effect from changes in post-employment benefit obligations recognized in other comprehensive income.

Net cash provided by operating activities increased by €2,199 million, or 31.9%, from €6,890 million for fiscal year 2015 to €9,089 million for fiscal year 2016. Of this, an increase of €1,423 million, or 20.8%, from €6,836 million for fiscal year 2015 to €8,259 million for fiscal year 2016 was provided by continuing operations. Discontinued operations accounted for an increase in net cash flows by €776 million, mainly attributable to the sale of the Diabetes Care Business. The increase in net cash provided by operating activities was mainly attributable to a significant improvement of EBITDA and a decrease in additional cash tied up in working capital as well as the cash inflow from the sale of the Diabetes Care Business. Net cash used in investing activities for fiscal year 2016 amounted to €8,729 million compared to €2,762 million for fiscal year 2015. Cash outflows for noncurrent and current financial assets, especially for the short-term investment of the cash flows from the Mandatory Convertible Notes, amounted to €6,335 million for fiscal year 2016 compared to €370 million for fiscal year 2015.

Recent Developments

In April 2018, a subsidiary of the investment company Temasek Holdings (Private) Limited, Singapore, which is wholly-owned by the Government of Singapore, subscribed to 31 million new shares of Bayer AG issued from the Company's authorized capital, corresponding to approximately 3.6% of Bayer AG's increased share capital, for total gross proceeds of €3.0 billion (the "**Temasek Investment**").

On May 3, 2018, Bayer sold 28.81 million Covestro Shares, representing a 14.2% interest in Covestro AG at a price of €75.50 per share to institutional investors. The net proceeds of the sale amounted to €2.2 billion and were used

		to reduce the commitments under the Loan Facilities Agreement (as defined below in B.8). Following the acquisition of Covestro Shares from Bayer Pension Trust in May 2018, Bayer now holds 6.8% of Covestro Shares, which it intends to use to repay the Exchangeable Bonds that mature in 2020. Following this transaction, Bayer's remaining interest in Covestro is being accounted for at fair value. On May 31, 2018, all closing conditions required to complete the Transaction (other than those conditions, that by their nature are to be satisfied at the closing of the Transaction), including the receipt of required antitrust and other regulatory approvals, were satisfied or waived and the Transaction is expected to be completed on or about June 7, 2018. In connection with obtaining required antitrust approvals to complete the Transaction, Bayer has entered into the Transaction-related Divestments, including the Second BASF Divestiture Package in April 2018. For more information see "*B.3 Current operations and principal business activities and principal markets in which the issuer competes.*" Except as described above, between March 31, 2018 and the date of this Prospectus, there have been no material changes to Bayer's financial position, financial performance or cash flows, or Bayer's trading position.
B.8	**Selected key pro forma financial information.**	Bayer has prepared pro forma financial information in accordance with European Commission Regulation (EC) No. 809/2004 of April 29, 2004 to illustrate certain effects of Bayer's gradual reduction of its direct interest in Covestro AG to currently 6.8% in a series of transactions (the "**Covestro Divestments**") and of the completion of the Transaction including the Transaction-related Divestments and the related financing. The purpose of the pro forma financial information, comprising pro forma income statements for the fiscal year ended December 31, 2017 and for the three months ended March 31, 2018, a pro forma statement of financial position as of March 31, 2018, and the pro forma notes (together the "**Pro Forma Financial Information**"), is to present the material effects that the Covestro Divestments as well as the completion of the Transaction including the Transaction-related Divestments and the related financing would have on a pro forma basis • on the historical consolidated income statement of Bayer for the fiscal year ended December 31, 2017, as if the Covestro Divestments as well as the Transaction including the Transaction-related Divestments and the related financing had occurred on January 1, 2017, • on the historical consolidated income statement of Bayer for the three-months ended March 31, 2018, as if the Covestro Divestments as well as the Transaction including the Transaction-related Divestments and the related financing had occurred on January 1, 2017, • on the historical consolidated statement of financial position of Bayer as of March 31, 2018, as if the Covestro Divestments as well as the Transaction including the Transaction-related Divestments and the related financing had occurred on March 31, 2018 The financing related to the Transaction, in the first instance, consists of a syndicated term loan facilities agreement in an amount of US$56.9 billion (€46.2 billion) (the "**Loan Facilities Agreement**") committed by Bank of America N.A., Credit Suisse AG, London Branch, Goldman Sachs Bank U.S.A., Goldman Sachs Lending Partners LLC, HSBC Bank plc, The Hong Kong and Shanghai Banking Corporation Limited and JP Morgan Chase Bank, N.A., London Branch as original lenders upon the signing of the Merger Agreement. The Loan Facilities Agreement provides, among other matters, that the net proceeds of (i) sales of assets of Bayer that, when aggregated with the net proceeds of all other such disposals, exceed a threshold of €5.0 billion, (ii) capital increases and (iii) debt financings must be used to prepay or cancel the amounts outstanding under the Loan Facilities Agreement. For purposes of the Pro Forma Financial Information, the Transaction is assumed to be financed by the Loan Facilities Agreement as reduced by the following items: net proceeds of €3.96 billion (US$4.2 billion)

from the issuance of the Mandatory Convertible Notes, net proceeds of €1.05 billion (US$1.2 billion) from the issuance of the Exchangeable Bonds, net proceeds of €3.0 billion (US$3.7 billion) from the Temasek Investment, the portion of the expected aggregate net proceeds from the Covestro Divestments and the Transaction-related Divestments (together, the "**Divestments**"), which exceeds the €5.0 billion threshold set forth in the Loan Facilities Agreement and amounts to €9.8 billion (US$12.0 billion) as well as the net proceeds of €6.0 billion (including the related income tax refund) (US$7.4 billion) from this Offering (as defined below in C.1). For purposes of the pro forma financial information, an aggregate amount of US$28.0 billion (€22.7 billion) is assumed to have been drawn down under the Loan Facilities Agreement to finance the purchase price in connection with the closing of the Transaction. For purposes of the Pro Forma Financial Information, the US$ amounts of the Loan Facilities Agreement were translated into € amounts and the € amounts of the proceeds from the Offering were translated into US$ amounts using the March 31, 2018 exchange rate of US$ 1.2319 = €1.0. Also, since the Loan Facilities Agreement is denominated in US$ and cancellations occurred at different times and at different €/US$ exchange rates, the reductions of the Loan Facilities Agreement have been calculated based on the US$ amounts. Subsequently, the residual amount of the Loan Facilities Agreement has been translated to € applying the exchange rate as of March 31, 2018, for purposes of the pro forma financial information. As a result, there may be deviations from the € amounts for the Loan Facilities Agreement and the US$ amounts for the proceeds from the Offering presented elsewhere in the Prospectus, which were translated at a different exchange rate, see *"E.2a Reasons for the offering, use of proceeds, estimated net amount of the proceeds."*

The pro forma adjustments presented in respect of the Covestro Divestments include the recognition of Covestro as an other financial asset applying Bayer's current interest of 6.8% since January 1, 2017. The pro forma adjustments presented in respect of the Transaction including the Transaction-related Divestments and the related financing include (i) the elimination of business transactions between Bayer and Monsanto, (ii) the presentation of the Transaction using the acquisition method of accounting for the business combination in accordance with IFRS 3, (iii) the elimination of the income and expenses as well as the assets and liabilities relating to the Transaction-related Divestments and (iv) the financing of the Transaction by the Loan Facilities Agreement reduced by the net proceeds from the Mandatory Convertible Notes, the Exchangeable Bonds, the Temasek Investment and this Offering (as defined below in C.1) as well as the applicable portion of the net proceeds from the Divestments.

The Pro Forma Financial Information is based on certain pro forma assumptions and is intended for illustrative purposes only. The Pro Forma Financial Information assumes, in particular, that the Covestro Divestments as well as the Transaction including the Transaction-related Divestments and the related financing occurred on January 1, 2017, for purposes of the pro forma income statements and that the Covestro Divestments, the Transaction including the Transaction-related Divestments and the related financing occurred on March 31, 2018, for purposes of the pro forma statement of financial position. Due to its nature, the Pro Forma Financial Information describes only a hypothetical situation and does not reflect the actual net assets, financial position and results of operations of Bayer after the Covestro Divestments and the completion of the Transaction including the Transaction-related Divestments and the related financing nor does it indicate the future development of the net assets, financial position and results of operations of Bayer.

The Pro Forma Financial Information is a combination of certain information derived from the historical consolidated financial statements of Bayer and the historical consolidated financial statements of Monsanto, subject to preliminary estimates and based on various assumptions – all of which are described in the accompanying pro forma notes – which Bayer considers to be reasonable.

The Pro Forma Financial Information has to be read in conjunction with the historical consolidated financial statements of Bayer for the fiscal year ended December 31, 2017, and the historical unaudited interim condensed consolidated financial statements of Bayer for the three months ended March 31, 2018, as well as with the historical consolidated financial statements of Monsanto for the fiscal year ended August 31, 2017, and the historical unaudited interim condensed consolidated financial statements of Monsanto for the quarterly periods ended November 30, 2016, November 30, 2017 and February 28, 2018.

Bayer AG

Pro Forma Income Statement for the fiscal year ended December 31, 2017

	Historical Financials				Pro forma Adjustments		Pro forma Adjustments		Pro forma
	Bayer	Less Covestro[4]	Plus Monsanto	Aggregated	Covestro	Note	Monsanto	Note	Financials
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
Net sales	**35,015**	–	**12,641**	**47,656**	**–**		**(2,507)**	b,d,h	**45,149**
Cost of goods sold	(11,382)	–	(5,469)	(16,851)	–		(2,285)	a,b,d,g,i	(19,136)
Gross profit	**23,633**	–	**7,172**	**30,805**	**–**		**(4,792)**		**26,013**
Selling expenses	(11,116)	–	(1,859)	(12,975)	–		205	a,b,i	(12,770)
Research and development expenses	(4,504)	–	(1,409)	(5,913)	–		169	a,b,i	(5,744)
General administration expenses	(2,026)	–	(1,136)	(3,162)	–		384	b,i	(2,778)
Other operating income	864	–	770	1,634	–		(5)	b	1,629
Other operating expenses	(948)	–	(662)	(1,610)	–		99	i	(1,511)
EBIT	**5,903**	–	**2,875**	**8,778**	**–**		**(3,940)**		**4,838**
Equity-method income (loss)	20	51	(15)	(46)	–		–		(46)
Financial income	289	–	979	1,268	**19**	a	–		1,287
Financial expenses	(1,635)	–	(1,273)	(2,908)	–		(577)	c,e,j,k	(3,485)
Financial result	**(1,326)**	51	**(309)**	**(1,686)**	**19**		**(577)**		**(2,244)**
Income before income taxes	**4,577**	51	**2,567**	**7,093**	**19**		**(4,517)**		**2,595**
Income taxes	(1,329)	(1)	(540)	(1,868)	–		1,120	b,f,g,h,i,j,k	(748)
Income from continuing operations after income taxes	**3,248**	50	**2,027**	**5,225**	**19**		**(3,397)**		**1,847**
of which attributable to noncontrolling interest	(1)	–	12	11	**–**				11
of which attributable to Bayer AG stockholders (net income)	**3,249**	50	**2,014**	**5,213**	**19**		**(3,397)**		**1,835**
Income from discontinued operations after income taxes	**4,846**	**4,468**	–	**378**	–		**–**		**378**
of which attributable to noncontrolling interest	759	759	–	0	–		**–**		–
of which attributable to Bayer AG stockholders (net income)	**4,087**	**3,709**	–	**378**	–		**–**		**378**
Income after income taxes	**8,094**	**4,518**	**2,027**	**5,603**	**19**		**(3,397)**		**2,225**
of which attributable to noncontrolling interest	758	759	12	11	–		–		11
of which attributable to Bayer AG stockholders (net income)	**7,336**	**3,759**	**2,014**	**5,591**	**19**		**(3,397)**		**2,213**

[4] Represents the elimination of the Covestro related Equity-method income (€51 million) and the related tax expense (€1 million) already recorded in Bayer's historical financial information and the elimination of the net income of Covestro of €1,459 million, the gain of €519 million resulting from the derecognition of the assets and liabilities of Covestro, the gain of €2,382 million on the initial recognition of the remaining interest in Covestro as an Equity-method investment and a gain of €187 million from the performance of the shares sold on September 29, 2017, as well as the related tax expense of €79 million presented in Income from discontinued operations after income taxes.

	Historical Financials								
	Bayer	Less Covestro[4]	Plus Monsanto	Aggregated	Pro forma Adjustments Covestro	Note	Pro forma Adjustments Monsanto	Note	Pro forma Financials
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
Earnings per share	€		€		€		€		€
From continuing operations									
Basic	3.73							l	1.88
Diluted	3.73							l	1.88
From discontinued operations									
Basic	4.68								0.38
Diluted	4.68								0.38
From continuing and discontinued operations									
Basic	8.41							l	2.26
Diluted	8.41							l	2.26

The following pro forma adjustment with a recurring effect has been made for the Covestro Divestments:

a) For purposes of the Pro Forma Financial Information, Covestro is accounted for as an other financial asset measured at fair value through OCI applying Bayer's current interest of 6.8% in Covestro since January 1, 2017. Therefore, the change in fair value has no impact on the pro forma income statement for the fiscal year ended December 31, 2017. Dividends received from Covestro of €19 million have been recognized in Financial Income.

The following pro forma adjustments with a recurring effect have been made for the Transaction:

a) Recognition of the impact of the recurring effects of the preliminary purchase price allocation performed. The adjustments made relate to the amortization of intangible assets in the amount of €1,553 million which result from the fair value step ups. Furthermore, depreciation expenses of €77 million associated with the fair value step up of Property, plant and equipment have been considered. These additional amortization and depreciation expenses recognized in connection with the preliminary purchase price allocation are allocated to Cost of goods sold (€1,296 million), Selling expenses (€178 million) and Research and development expenses (€156 million).

b) Represents the elimination of the income and expenses related to the businesses subject to the Transaction-related Divestments. The adjustments consist of the elimination of Net sales (€2,232 million), Cost of goods sold (€905 million), Selling expenses (€369 million), Research and development expenses (€319 million), General administration expenses (€110 million), Other operating income (€5 million) and Income tax expenses (€161 million).

c) Represents the reduction of Financial expenses by €4 million as a result of the amortization of the fair value step up of financial liabilities related to the preliminary purchase price allocation performed.

d) Represents the elimination of inter-company transactions between Bayer and Monsanto (Net sales and Cost of goods sold each €221 million (results in a decrease of Net sales and Cost of goods sold) as well as inter-company profit elimination in the amount of €4 million (results in an increase of Cost of goods sold)).

e) Reflects the interest expenses (including the amortization of debt issuance costs) in respect of the Loan Facilities Agreement in the amount of €919 million as if the Loan Facilities Agreement had been drawn as of January 1, 2017.

f) Recognition of tax effects on the adjustments a) tax income of €416 million and c) tax expense of €1 million as well as e) tax income of €230 million, described above using the tax rates of the affected entities, which range from 23.77% to 29.4% for the deferred tax impacts relating to the purchase price allocation adjustments performed and Bayer's blended tax rate of 25% for the calculation of the income and deferred taxes associated with the financing.

The following pro forma adjustments with a non-recurring effect have been made for the Transaction:

g) The adjustment reflects the increase of Cost of goods sold of €2,121 million related to the subsequent measurement of the fair value step up of the inventories in connection with the preliminary purchase

price allocation. It is assumed that the inventory step up will be fully recognized within one year (based on expected inventory turnover). The related tax income in the amount of €537 million has also been considered. The tax effect has been calculated using an average tax rate of 25.3% for the deferred tax impacts relating to this purchase price allocation adjustment.

h) The adjustment reflects the decrease in Net sales of €54 million related to the subsequent measurement of the fair value step down of deferred revenues. It is assumed that the step down will be fully recognized within one year. The related increase in tax income in the amount of €15 million has also been considered. The tax effect has been calculated using a blended tax rate of 27% for the deferred tax impacts relating to this purchase price allocation adjustment.

i) Represents the elimination of the previously recorded non-recurring acquisition related costs of Bayer of €304 million (thereof €10 million recognized in Cost of goods sold, €6 million recognized in Research and development expenses, €14 million recognized in Selling expenses and €274 million recognized in General administration expenses) and of Monsanto of €99 million (recognized in Other operating expenses) of the Transaction, which would not have been incurred, if the Transaction had already been completed as of January 1, 2017. These acquisition-related costs are assumed to be tax deductible. Applying a tax rate of 31.2% for Bayer's acquisition related costs and a tax rate of 38.25% for Monsanto's acquisition related costs, the respective tax adjustment amounts to an expense of €133 million.

j) Represents the elimination of one time and commitments fees relating to the Loan Facilities Agreement in the amount of €214 million, which are recognized in Bayer´s historical financial information as Financial expenses. Applying an average tax rate of 30.8% the respective tax adjustment amounts to an expense of €66 million.

k) Represents the elimination of the expense of €124 million in respect of the foreign exchange hedges entered into against the EURO / USD exchange rate fluctuations associated with the Monsanto purchase price, which are recognized as Financial expenses. The respective tax adjustment amounts to an expense of €39 million, applying a tax rate of 31.2%.

Earnings per share (EPS) in the Pro forma Financials:

l) The EPS for the Pro Forma Financials have been calculated assuming a theoretical weighted average number of shares of 977,711,964. The Pro Forma Financial Information assumes that the Temasek Investment and the Offering were implemented as of January 1, 2017, and as a result the weighted average number of shares of Bayer AG of 872,107,808 as reported in the consolidated financial statements of Bayer for the fiscal year ended December 31, 2017, has been increased by 31,000,000 shares related to the Temasek Investment and 74,604,156 shares related to the Offering.

Bayer AG

Pro Forma Income Statement for the Three Months ended March 31, 2018

	Historical Financials							
	Bayer	Less Covestro[5]	Plus Monsanto	Aggregated	Pro forma Adjustments Covestro	Note	Pro forma Adjustments Monsanto	Note	Pro forma Financials
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
Net sales	**9,138**	–	**3,895**	**13,033**	**–**		**(960)**	b,d	**12,073**
Cost of goods sold	(2,909)	–	(1,528)	(4,437)	–		59	a,b,d,g	(4,378)
Gross profit	**6,229**	–	**2,366**	**8,595**	**–**		**(901)**		**7,694**
Selling expenses	(2,509)	–	(418)	(2,927)	–		50	a,b,g	(2,877)
Research and development expenses	(1,040)	–	(319)	(1,359)	–		55	a,b,g	(1,304)
General administration expenses	(427)	–	(230)	(657)	–		59	b,g	(598)
Other operating income	152	–	98	250	–		(5)	b	245
Other operating expenses	(95)	–	(89)	(184)	–		20	g	(164)
EBIT	**2,310**	–	**1,408**	**3,718**	**–**		**(722)**		**2,996**
Equity-method income (loss)	71	80	(5)	(14)	–		–		(14)
Financial income	370	275	216	311	–		–		311
Financial expenses	(311)	–	(310)	(621)	(85)	a	(143)	c,e,h	(849)
Financial result	**130**	**355**	**(99)**	**(324)**	**(85)**		**(143)**		**(552)**
Income before income taxes	**2,440**	**355**	**1,309**	**3,394**	**(85)**		**(865)**		**2,444**
Income taxes	(494)	(5)	(254)	(743)	–		206	b,f,g,h	(537)
Income from continuing operations after income taxes	**1,946**	350	**1,054**	**2,650**	**(85)**		**(659)**		**1,906**
of which attributable to noncontrolling interest	–	–	3	3					3
of which attributable to Bayer AG stockholders (net income)	**1,946**	**350**	**1,051**	**2,647**	**(85)**		**(659)**		**1,903**
Income from discontinued operations after income taxes	**8**	**8**	–	**–**	–		**–**		**–**
of which attributable to noncontrolling interest	–	–	–	–	–		**–**		–
of which attributable to Bayer AG stockholders (net income)	**8**	**8**	–	**–**	–		**–**		–
Income after income taxes	**1,954**	**358**	**1,054**	**2,650**	**(85)**		**(659)**		**1,906**
of which attributable to noncontrolling interest	–	–	3	3	–		–		3
of which attributable to Bayer AG stockholders (net income)	**1,954**	**358**	**1,051**	**2,647**	**(85)**		**(659)**		**1,903**
Earnings per share	€		€		€		€		€
From continuing operations									
Basic	2.23		–	**–**	–		–	i	1.95
Diluted	2.23		–	**–**	–		–	i	1.95
From discontinued operations									
Basic	0.01		–	**–**	–		–		–
Diluted	0.01		–	**–**	–		–		–
From continuing and discontinued operations									
Basic	2.24		–	**–**	–		–	i	1.95
Diluted	2.24		–	**–**	–		–	i	1.95

[5] Represents the elimination of the Covestro related Equity-method income (€80 million) and the related tax expense (€1 million) already recorded in Bayer's historical financial information, the elimination of the gain of €10 million from the performance of the shares sold on September 29, 2017, as well as the related tax expense of €2 million presented in Income from discontinued operations after income taxes and the elimination of the gain of €275 million and the related tax expense of €4 million from the sale of Covestro shares in January 2018.

The following pro forma adjustment with a recurring effect has been made for the Covestro Divestments:

a) For purposes of the Pro Forma Financial Information, Covestro is accounted for as an other financial asset measured at fair value through profit or loss applying Bayer's current interest of 6.8% in Covestro since January 1, 2018. Therefore, the change in the fair value of the other financial asset of €85 million has been recognized in Financial expenses.

The following pro forma adjustments with a recurring effect have been made for the Transaction:

a) Recognition of the impact of the recurring effects of the preliminary purchase price allocation performed. The adjustments made relate to the amortization of intangible assets in the amount of €360 million which result from the fair value step ups. Furthermore, depreciation expenses of €18 million associated with the fair value step up of property plant and equipment are considered. These amortization/depreciation adjustments related to purchase price allocation are allocated to Cost of goods sold (€299 million), Selling expenses (€44 million) and Research and development expenses (€35 million).

b) Represents the elimination of the income and expenses related to the businesses subject to the Transaction-related Divestments. The adjustments consist of the elimination of Net sales (€904 million), Cost of goods sold (€301 million), Selling expenses (€90 million), Research and development expenses (€87 million), General administration expenses (€9 million), Other operating income (€5 million) and Income tax expenses (€113 million).

c) Represents the reduction of Financial expenses by €1 million as a result of the amortization of the fair value step up of financial liabilities related to the preliminary purchase price allocation performed.

d) Represents the elimination of inter-company transactions between Bayer and Monsanto (Net sales and Cost of goods sold each €56 million (results in a decrease of Net sales and Cost of goods sold) as well as inter-company profit elimination in the amount of €2 million (results in an increase of Cost of goods sold)).

e) Reflects the interest expenses (including the amortization of debt issuance costs) in respect of the Loan Facilities Agreement in the amount of €209 million as if the Loan Facilities Agreement had been drawn as of January 1, 2017.

f) Recognition of tax effects on the adjustments a) tax income of €85 million and c) tax expense of €0 million as well as e) tax income of €52 million, described above using the tax rates of the affected entities, which range from 23.77% to 29.4% for the deferred tax impacts relating to the purchase price allocation adjustments performed and Bayer's blended tax rate of 25% for the calculation of the income and deferred taxes associated with the financing.

The following pro forma adjustments with a non-recurring effect have been made for the Transaction:

g) Represents the elimination of the previously recorded non-recurring acquisition related costs of Bayer of €58 million (thereof €2 million recognized in Cost of goods sold, €3 million recognized in Research and development expenses, €3 million recognized in Selling expenses and €50 million recognized in General administration expenses) and Monsanto of €20 million (recognized in Other operating expenses) of the Transaction which would not have been incurred, if the Transaction had already been completed as of January 1, 2017. These acquisition-related costs are assumed to be tax deductible. Applying a tax rate of 31.2% for Bayer's acquisition related costs and a tax rate of 29.4% for Monsanto's acquisition related costs, the respective tax adjustment amounts to an expense of €24 million.

h) Represents the elimination of one time and commitments fees relating to the Loan Facilities Agreement in the amount of €65 million which are recognized in Bayer´s historical financial information. Applying a tax rate of 31.2% the respective tax adjustment amounts to an expense of €20 million.

EPS in the Pro forma Financials:

i) The EPS for the Pro Forma Financials have been calculated assuming a theoretical weighted average number of shares of 978,071,964. The Pro Forma Financial Information assumes that the Temasek Investment and the Offering were implemented as of January 1, 2017, and as a result the weighted average number of shares of Bayer AG of 872,467,808 calculated consistently with the principles described in Note 16 of the consolidated financial statements of Bayer for the fiscal year ended December 31, 2017, has been increased by 31,000,000 shares related to the Temasek Investment and 74,604,156 shares related to the Offering.

Bayer AG

Pro Forma Statement of Financial Position as of March 31, 2018

	Historical Financials				Pro forma Adjustments		Pro forma Adjustments		Pro forma
	Bayer	Less Covestro[6]	Monsanto	Aggregated	Covestro	Note	Monsanto	Note	Financials
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
Noncurrent assets									
Goodwill	14,480		3,329	17,809	–		18,857	a	36,665
Other intangible assets	11,185		1,205	12,390	–		24,528	a	36,919
Property, plant and equipment	7,330		4,786	12,116	–		1,080	a	13,197
Investments accounted for using the equity method	2,574	2,169	83	488	–		–		488
Other financial assets	1,737		707	2,444	1,100	a	(62)	g	3,483
Other receivables	535		306	841	–		–		841
Deferred taxes	4,384		537	4,921	–		108	a,f,h	5,029
	42,225	**2,169**	**10,953**	**51,009**	**1,100**		**44,512**		**96,621**
Current assets									
Inventories	6,402		3,389	9,791	–		1,938	a,b	11,729
Trade accounts receivable	9,498		3,368	12,866	–		(40)	b	12,826
Other financial assets	7,315		40	7,355	–		–		7,355
Other receivables	1,029		630	1,659	–		130	c	1,789
Claims for income tax refunds	461		139	600	–		–		600
Cash and cash equivalents	5,332		1,957	7,289	1,042	a	(7,919)	a,c,d,e	412
Assets held for sale	3,132		25	3,157	–		(3,108)	c	49
	33,169	**–**	**9,547**	**42,716**	**1,042**		**(8,999)**		**34,760**
Total assets	**75,394**	**2,169**	**20,500**	**93,725**	**2,142**		**35,513**		**131,381**
Equity									
Capital stock of Bayer AG	2,117		(12,215)	(10,098)	–		12,485	a,d,e	2,387
Capital reserves of Bayer AG	9,658		9,706	19,364	–		(995)	a,d,e	18,369
Other reserves	26,553	(20)	9,473	36,046	(27)	a	(5,786)	a,b,c,e,f,g,h	30,234
Equity attributable to Bayer AG stockholders	**38,328**	**(20)**	**6,964**	**45,312**	**(27)**		**5,704**		**50,990**
Equity attributable to noncontrolling interest	56		17	73	–		–		73
	38,384	**(20)**	**6,982**	**45,386**	**(27)**		**5,704**		**51,063**
Noncurrent liabilities									
Provisions for pensions and other post-employment benefits	8,096		312	8,408	–		–		8,408
Other provisions	1,302		292	1,594	–		257	c	1,851
Refund liabilities	146		–	146	–		–		146
Contract liabilities	799		66	865	–		–		865
Financial liabilities	12,273		5,413	17,686	–		22,832	a,e	40,518
Income tax liabilities	482		53	535	–		–		535
Other liabilities	228		79	307	–		–		307
Deferred taxes	586	20	433	999	–		6,641	a,e	7,640
	23,912	**20**	**6,648**	**30,540**	**–**		**29,731**		**60,271**
Current liabilities									
Other provisions	2,194		494	2,688	–		681	f,h	3,368
Refund liabilities	2,519		2,261	4,780	–		–		4,780
Contract liabilities	197		1,333	1,530	–		(50)	a	1,481
Financial liabilities	1,761		1,071	2,832	–		–		2,832
Trade accounts payable	3,943		794	4,737	–		(40)	b	4,697
Income tax liabilities	646		165	811	–		–		811
Other liabilities	1,318		753	2,071	–		–		2,071
Liabilities directly related to assets held for sale	520		–	520	–		(513)	c	7
	13,098	**–**	**6,871**	**19,969**	**–**		**78**		**20,047**
Total equity and liabilities	**75,394**	**–**	**20,500**	**95,894**	**(27)**		**35,513**		**131,381**

[6] Represents the elimination of the Investments accounted for using the equity method of Covestro in the amount of €2,169 million as well as the related deferred tax liabilities of €20 million for outside basis differences on Covestro with the corresponding decrease in Other reserves.

The following pro forma adjustment has been made for the Covestro Divestments:

a) Represents the recognition of the other financial asset of €1,100 million and the corresponding decrease in Cash and cash equivalents. The increase in Cash and cash equivalents in the amount of €2,142 million is related to the net proceeds from the sale of Covestro Shares in May 2018 and used to finance the Transaction. The related income taxes (€20 million) are assumed to have reduced Cash and cash equivalents. The loss from the sale in the amount of €7 million and the related tax expense of €20 million have been considered in Other reserves.

The following pro forma adjustments have been made for the Transaction:

a) Recognition of the impact of the preliminary purchase price allocation performed. Bayer has estimated the potential fair value step ups and the related charges for selected assets and liabilities. These adjustments relate to the fair value step ups estimated for the intangible assets of €24,528 million (existing technologies of €15,963 million, IPR&D of €3,845 million, marketing- and customer-related intangible assets of €4,501 million and Other intangible assets of €219 million), Property, plant and equipment (€1,080 million), Inventories (€1,940 million), Financial liabilities noncurrent (€93 million), deferred revenues (recognized as a reduction in Contract liabilities current (€50 million)) as well as to the deferred tax assets of €24 million and deferred tax liabilities of €6,607 million related to the adjustments described above. The goodwill to be recorded amounts to €22,185 million. In addition, the elimination of Monsanto's equity (€6,964 million, thereof minus €12,215 million recognized in Capital stock of Bayer AG, €9,706 million recognized in Capital reserves of Bayer AG and €9,473 million recognized in Other reserves) as well as Monsanto's goodwill (€3,329 million) is presented in this adjustment. Furthermore, the retained earnings will be increased for the corresponding foreign exchange rate hedging of the purchase price recognized in OCI in Bayer's historical consolidated statement of financial position in the amount of €312 million, the respective amount was considered in the preliminary total consideration for Monsanto (€46,089 million). An amount of €45,777 million reduced Cash and cash equivalents.

b) Represents the elimination of inter-company transactions between Bayer and Monsanto. Inter-company profits on inventories in the amount of €2 million (Other reserves decreased accordingly) and inter-company trade accounts receivable of €40 million and inter-company trade accounts payable of €40 million have been eliminated.

c) Reflects the elimination of the assets and liabilities related to the Transaction-related Divestments. The assets and liabilities relating to the businesses subject to the Transaction-related Divestments were presented as Assets held for sale of €3,108 million and Liabilities directly related to assets held for sale of €513 million. The assumed net proceeds of €6,138 million have been presented as Cash and cash equivalents (the corresponding Income tax liabilities current assumed to be paid amounted to €1,135 million). The difference between the net proceeds and the assets and liabilities held for sale of €3,543 million resulting from the Transaction-related Divestments was recognized in Other reserves. Furthermore, the milestone payment of €130 million presented as Other receivables current and a contingent consideration presented as Other provisions noncurrent of €257 million have been recognized with the corresponding decrease in Other reserves of €127 million.

d) Reflects the Temasek Investment. The net proceeds received from the Temasek Investment amount to €3,007 million (thereof €79 million recognized in Capital stock of Bayer AG and €2,928 million recognized in Capital reserves of Bayer AG) with the corresponding increase in Cash and cash equivalents. The transaction costs (€0.3 million) of the Temasek Investment have been recognized in Capital reserves of Bayer AG as a reduction.

e) Reflects the Loan Facilities Agreement financing the Transaction in the amount of €22,739 million, presented as Financial liabilities noncurrent as well as the corresponding increase in Cash and cash equivalents. The Loan Facilities Agreement will only be drawn in the amount necessary, i.e., deducting the proceeds of the Divestments, the Temasek Investment, the Offering less the related transaction costs as well as Mandatory Convertible Notes (€3,956 million) and Exchangeable Bonds (€1,048 million) which were already recognized in Bayer's historical statement of financial position. The deferred tax liabilities for the Loan Facilities Agreement financing amounted to €34 million, which relate to the different treatment of one-time and commitment fees. As a result, Other reserves decreased by €34 million. The gross proceeds from the Offering in the amount of €6,043 million have been reduced by the transaction costs, net of tax, in the amount of €69 million, which were recognized directly in equity in accordance with IFRS and have therefore reduced the Capital reserves of Bayer AG. The assumed tax refund in respect of the transaction costs (€31 million) is assumed to have increased

Cash and cash equivalents, applying Bayer´s tax rate of 31.2%. Accordingly, the net proceeds received from the Offering amount to €5,974 million (thereof €191 million recognized in Capital stock of Bayer AG and €5,783 million recognized in Capital reserves of Bayer AG) with the corresponding increase in Cash and cash equivalents.

f) Represents the adjustment of Other provisions current relating to the cash settlement of Monsanto's equity awards as well as payroll taxes (totaling €552 million) and the related deferred tax assets (€51 million). As a result, Other reserves decreased by €501 million. This decrease in Other reserves reduced the net assets acquired and as a result Goodwill (€501 million) as well as Other reserves (€501 million) increased. Recognition of the change of control liabilities related to severance payments and a license agreement in Other provisions current (€114 million) and the related deferred tax assets of €28 million. The above described adjustments were considered in the calculation of the Goodwill (refer to a)).

g) Reflects the step up of shares already held in Monsanto in the amount of €6 million recognized in Other financial assets noncurrent, using a share price of US$128.00. As a result, Other reserves increased by €6 million. Subsequently these shares held in Monsanto presented as Other financial assets noncurrent in the amount of €68 million were derecognized as a result of the consolidation of Monsanto. This adjustment was considered in the calculation of the Goodwill (refer to a)).

h) Recognition of non-recurring acquisition related costs not recorded as of March 31, 2018, of €15 million in Other provisions current (resulting in a decrease of Other reserves by €15 million) and the related increase in deferred tax assets in the amount €5 million and Other reserves in the amount of €5 million, applying Bayer´s tax rate of 31.2%.

B.9	**Profit forecast or estimate.**	Not applicable. No profit forecast or estimate has been made.
B.10	**Qualifications in the audit report on the historical financial information.**	Not applicable. The independent auditor's reports on the historical financial information included in this Prospectus have been issued without qualification.
B.11	**Insufficiency of the issuer's working capital for its present requirements.**	Not applicable. The Company is of the opinion that Bayer is in a position to meet the payment obligations that become due within at least the next 12 months.

C – Securities

C.1	**Type and class of the securities being offered and/or admitted to trading.**	This document relates to a rights offering consisting of 74,604,156 new ordinary registered shares with no par value from the capital increase against cash contribution resolved by the board of management of the Company on June 3, 2018, approved by the supervisory board's presidial committee (*Präsidium*), to which such competence was delegated, on the same day, to increase the Company's registered share capital from €2,196,346,388.48 by €190,986,639.36 to €2,387,333,027.84 on the basis of the Company's authorized capital resolved by the annual stockholders' meeting on April 29, 2014 (the "**Capital Increase**") with indirect subscription rights for shareholders of Bayer AG, each such share representing a notional value of €2.56 and carrying full dividend rights from January 1, 2018 (the "**New Shares**"), which will be offered to the Company's shareholders for subscription at a ratio of 23:2 (i.e., 23 existing shares of the Company entitle their holder to subscribe for two New Shares) at a subscription price of €81.00 per New Share (the "**Subscription Offer**"). Any New Shares that are not subscribed for in the Subscription Offer (the "**Rump Shares**") will be offered by the Joint Bookrunners for sale to eligible investors in Germany and other selected jurisdictions at a price at least as high as the subscription price (the "**Rump Placement**" and together with the Subscription Offer, the "**Offering**"), in the United States in reliance on Rule 144A under the U.S. Securities Act of 1933 (as amended) (the "**Securities Act**") and outside the United States in offshore transactions in reliance on Regulation S under the Securities Act. All shares of the Company, including the New Shares, are issued in the form of ordinary registered shares with no par value (*Stückaktien*), each with a notional value of €2.56 and with full dividend rights from January 1, 2018.

	Security identification number.	International Securities Identification Number (ISIN) • for the existing shares and New Shares: DE000BAY0017 • for the subscription rights to the New Shares: DE000BAY1BR7 German Securities Identification Number (WKN) • for the existing shares and New Shares: BAY001 • for the subscription rights to the New Shares: BAY 1BR Common Code • for the existing shares and New Shares: 044142961 Stock Exchange Symbol of the existing shares and New Shares: BAYN Stock Exchange Symbol of the subscription rights to the New Shares: BAYR
C.2	**Currency.**	Euro.
C.3	**The number of shares issued and fully paid.**	As of the date of this Prospectus, and prior to the Capital Increase pursuant to the Offering, the Company's registered share capital amounts to €2,196,346,388.48 and is divided into 857,947,808 ordinary registered shares with no par value (*Stückaktien*). The share capital has been fully paid up.
	Notional value.	Each of the Company's shares represents a notional value of €2.56 in the share capital of the Company.
C.4	**A description of the rights attached to the securities.**	Each share of the Company, including each of the New Shares, entitles the owner to one vote at the annual stockholders' meeting. There are no restrictions on voting rights. The New Shares will carry full dividend rights from, and including, the fiscal year starting January 1, 2018 and have the same rights as all other shares of the Company.
C.5	**A description of any restrictions on the free transfer-ability of the securities.**	Not applicable. The Company's shares are freely transferable in accordance with the legal requirements.
C.6	**Application for admission to trading on a regulated market and identity of regulated markets where the securities are to be traded.**	The application for admission of the New Shares to trading on the regulated market of the Frankfurt Stock Exchange and the simultaneous admission of the New Shares to the sub-segment of the regulated market of the Frankfurt Stock Exchange with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange and to the regulated market of the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart are expected to be made on June 6, 2018. The decisions approving the admission of the New Shares to exchange trading are expected on June 20, 2018. The New Shares are expected to begin trading on the German stock exchanges and to be included in the existing quotations of the Company's shares on the German stock exchanges on or about June 22, 2018.
C.7	**Dividend policy.**	Bayer AG has continuously paid out dividends to its shareholders since 1952, and plans to continue this practice in the future. Core EPS form the basis of Bayer's dividend policy. Bayer aims to generally distribute dividends at a payout ratio of 30-40%, calculated on Core EPS. However, there can be no assurance with respect to any given year that the Company will pay dividends of a specific amount or at all (for information on Core EPS, see above "*B.7 Additional Key Figures for the Bayer Group*").
D – Risks		
		Investing in the shares of Bayer AG involves risks, including risks relating to the Bayer Group, the global economy, the financial markets, the industries in which the Bayer Group is active, regulatory and political matters, legal and administrative proceedings, the Subscription Offer, the Transaction and, as a result of the Transaction, Monsanto. Prospective investors in the Company's

shares should read this Prospectus in its entirety and carefully consider the risks and considerations relevant to an investment in the Company's shares.

As a global enterprise with a diversified portfolio, the Bayer Group is constantly exposed to a wide range of internal or external developments or events that could significantly impact the achievement of its financial and non-financial objectives. Bayer cannot exclude that it is exposed and, as a result of the Transaction, will be exposed to some or all of the risks described below. Any of the risk factors described below, as well as additional risks of which Bayer is not currently aware, could have a material adverse effect on Bayer's business, financial condition, results of operations and prospects, and cause the value of the Company's shares to decline. Investors could lose all or part of their investment. The additional risks that currently are unknown or deemed immaterial, in particular, risks related to the Transaction and the integration of Monsanto, may also impair Bayer's business, results of operations and financial condition. Moreover, if and to the extent that any of the risks described below materialize, they may occur in combination with other risks, which would compound the adverse effect of such risks on Bayer's business, financial condition, results of operations and prospects. The risks described apply to all business segments of the Bayer Group unless otherwise indicated.

The sequence in which the risks are presented below is not indicative of their likelihood of occurrence or of the potential magnitude of their financial consequences.

D.1 **Key information on the key risks that are specific to the issuer or its industry.**

Risks Related to Bayer

- Sales and growth of the Bayer Group are dependent on the conditions of the global economy in general and of the economies where the Bayer Group operates in particular.
- Continued elevated levels of political and economic uncertainty could have unpredictable consequences for the markets in which Bayer operates and for the greater economy.
- Actual macroeconomic and market developments may deviate from those that Bayer's management expects and may have predicted, which could adversely affect Bayer's results of operations, and if assumptions made in preparing Bayer's financial and operational forecasts or estimates prove inaccurate, Bayer's actual performance may fall materially short of its forecasts or estimates or the expectations of market observers.
- The industries in which Bayer operates are highly competitive, and competitive pressure could increase. Furthermore, disruptive technologies or changes to competitors' business models may adversely affect Bayer's business.
- Patents protecting products that are currently profitable for Bayer are subject to expiration, and there can be no assurance that Bayer will be successful in developing new products that upon market approval will achieve the commercial success to counterbalance the expected decline in revenues generated by such products upon the expiration of their patents.
- There can be no assurance that Bayer will identify a sufficient number of research candidates and that Bayer's products will receive and maintain any necessary regulatory approvals, and any increase in regulatory and legal requirements, including as a result of higher public expectations, could lead to more costly and lengthy registration or approval procedures and could impair or preclude Bayer's product development and commercialization efforts.
- Bayer's business and results of operations may be adversely affected if Bayer is unable to obtain or defend its intellectual property or if the rights associated with its intellectual property do not provide effective protection.

- Bayer may inadvertently infringe on the intellectual property rights of third parties and could be enjoined from using or selling the infringing products or technology and/or required to pay monetary damages or royalties.
- Bayer may be required to recognize significant impairments that reduce the value of the Bayer Group.
- Defects or quality issues associated with Bayer's products or Bayer's failure to respect safety requirements may require it to withdraw products from the market, which could expose Bayer to product liability claims and other litigation, adversely affect its results of operations, including as a result of damage payments being imposed, and negatively impact Bayer's and its brands' reputation.
- Bayer is subject to extensive and increasingly stringent environmental, health and safety laws, regulations and standards, which may result in restrictions on production or marketing of its products, increased costs to ensure compliance, damage to Bayer's reputation, legal liability and remediation efforts.
- Bayer is exposed to material risks from legal disputes and proceedings.
- Bayer's dependence on external partnerships, including with suppliers, could adversely impact Bayer's business, operations and reputation.
- Bayer's production and procurement activities are exposed to various risks, including in connection with technical failures, natural disasters, regulatory action or legislative changes.
- Pharmaceuticals is exposed to pricing pressure resulting from regulation and market conditions, which may negatively impact Bayer's business and results of operations.
- There can be no assurance that Bayer will be able to recruit and retain a sufficient number of qualified employees at all sites in the future and difficulties in recruiting, retaining and further developing specialized employees could have significant adverse consequences for Bayer's future development.
- Bayer is dependent on the uninterrupted operation of its global information technology systems.
- The Bayer Group is exposed to financial risk, including liquidity, credit and market price risks.
- The Bayer Group faces risks from capital market developments in connection with its pension and post-employment benefit obligations.
- There can be no assurance that Bayer's internal control system provides adequate protection against errors in the Group's financial statements or against financial loss resulting from incorrect Group financial statements.
- Bayer is subject to certain anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations with respect to its operations and noncompliance with such laws and regulations may subject Bayer to criminal and/or civil liability and harm its business and reputation.
- Due to a complex multi-level group structure and the extended geographic reach of Bayer's business activities, Bayer could incur greater tax liabilities than expected and be affected by changes to the regulatory framework in particular in relation to the non-deductibility of interest payments, the future tax treatment of dividend payments in various jurisdictions and the introduction of additional taxes.
- Pending and future tax audits and changes to the interpretation of fiscal regulations could lead to additional tax liabilities.
- Bayer may be exposed to potential risks in connection with the recent U.S. tax reform, which cannot be fully assessed at this point in time.

Risks Related to the Transaction

- Certain divestiture actions and other commitments that Bayer was required to undertake in connection with obtaining regulatory approvals to complete the Transaction could negatively impact Bayer's strategic planning and necessitate substantial adjustments to its operational and financial structures. In addition, there is a limited residual risk that additional remedies could be required.
- Bayer's strategic objectives and operational targets for the Transaction are based on certain assumptions and estimates by Bayer's management that may prove inaccurate, including the ability to benefit from Bayer's and Monsanto's combined agriculture business's improved innovation capabilities, as well as future macroeconomic and market developments.
- As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the combined agriculture business of Bayer and Monsanto, some of which may still be unidentified or cannot yet be assessed conclusively.
- As a result of the Transaction, Bayer will assume the litigation risk arising in connection with Monsanto's pending and future litigation. Adverse outcomes in legal proceedings, including environmental remediation matters, could subject the Bayer to substantial damages and adversely affect Bayer's results of operations and profitability.
- The lack of public understanding and acceptance or perceived public acceptance of Monsanto's biotechnology and other agricultural products as well as of the merits of the Transaction could harm Bayer's reputation and, as a consequence, negatively affect Bayer's business, results of operations and share price.
- In connection with the integration of Monsanto's business, Bayer could encounter difficulties that may disrupt its operations or otherwise negatively affect its business, results of operations and share price, and may jeopardize the realization of the expected benefits of the Transaction.
- The size of the Bayer Group after the Transaction, contractual limitations it is subject to, its position in the markets in which it will operate as well as increased levels of indebtedness may decrease Bayer's ability to successfully carry out further acquisitions, investments, joint ventures and business integrations.
- Change of control, prohibition on merger or similar provisions in agreements and instruments to which Monsanto is a party may be triggered or alleged to be triggered by the Transaction and may lead to adverse consequences for the Bayer Group, including the loss of significant contractual rights and benefits, the possible termination of material agreements or the requirement to repay outstanding indebtedness.
- Bayer could be forced to recognize impairment losses on the intangible assets of Monsanto and goodwill of the Crop Science business.
- Bayer faces risks from financing the Transaction, including as a result of increased levels of debt and the potential downgrading of credit ratings.
- Bayer is exposed to risks arising from the necessity to refinance the loans taken out for the Transaction.
- Fluctuations in interest rates could have a significant impact on the results of operations of Bayer following completion of the Transaction.
- Fluctuations in exchange rates could have a significant impact on the amount of debt Bayer incurs and the results of operations of Bayer following completion of the Transaction.

D.3	**Key information on the risks that are specific to the securities.**	**Risks Related to the Shares and the Offering** • The market price and trading volume of the Company's shares is volatile and the subscription price could exceed the market price of the Company's shares. • Subscription rights for the New Shares that form part of the rights offering will expire if they are not exercised prior to expiry of the subscription period. • Active trading in the subscription rights might not develop, and the subscription rights could be subject to greater price fluctuations than the shares of the Company.
E – Offer		
E.1	**The total net proceeds.**	The net proceeds to Bayer from the Offering result from the gross proceeds less the underwriting commissions and other expenses described below.
	Estimate of the total expenses of the offering and listing, including estimated expenses charged to the investor by the issuer.	On the basis of a subscription price of €81.00 and issuance of 74,604,156 New Shares, Bayer is seeking to raise funds of approximately €6.0 billion in this Offering. The overall commissions to be paid by Bayer to the Joint Bookrunners are expected to amount to approximately €96.7 million. Other issue costs to be incurred by Bayer will be approximately €3.3 million. On this basis, Bayer expects net proceeds from this Offering of €5.9 billion. Investors will not be charged with expenses by the Company or the Joint Bookrunners, however, the custodian banks may charge a customary commission in connection with the subscription of the New Shares as well as for the sale and purchase of subscription rights.
E.2a	**Reasons for the offering, use of proceeds, estimated net amount of the proceeds.**	Bayer intends to use the expected net proceeds of €5.9 billion (approximately US$6.9 billion) from the Offering to repay amounts drawn down under the Loan Facilities Agreement in connection with the Transaction, thereby reducing the amounts outstanding under the Loan Facilities Agreement from US$43.4 billion (€37.2 billion) to US$36.5 billion (€31.3 billion). The US$ amounts of the Loan Facilities Agreement were translated into € amounts and the € amounts of the proceeds from the Offering were translated into US$ amounts using the June 1, 2018 exchange rate of US$1.1672 = €1.0. As a result, there may be deviations from the € amounts for the Loan Facilities Agreement and the US$ amounts for the proceeds from the Offering presented in the Pro Forma Financial Information, which were translated at a different exchange rate, see "*B.8 Selected key pro forma financial information.*" In order to refinance further amounts drawn down under the Loan Facilities Agreement, Bayer intends to offer directly or through a finance subsidiary senior unsecured notes denominated in U.S. dollars and/or euros across a market standard range of maturities in an aggregate principal amount of up to €20.0 billion (the "**Bond Offerings**"). The Bond Offerings may be launched, subject to market conditions, at any time, including during or shortly after the subscription period for this Offering. The Bond Offerings are fully independent of this Offering, are not conditional upon one another and may be consummated at different times. In addition, in accordance with the terms of the Loan Facilities Agreement, Bayer expects to repay further amounts drawn down under the Loan Facilities Agreement with the net proceeds from the Transaction-related Divestments.
E.3	**Description of the terms and conditions of the offer**	This Offering relates to 74,604,156 New Shares, which will be offered to the Company's shareholders for subscription at a ratio of 23:2 (i.e., 23 existing shares of the Company entitle their holder to subscribe for two New Shares). The New Shares originate from the Capital Increase through the issue of 74,604,156 New Shares with indirect subscription rights for existing shareholders. The Subscription Offer will include (i) a public offering in Germany and the Grand Duchy of Luxembourg ("**Luxembourg**"), (ii) private placements in the United States to qualified institutional buyers as defined in Rule 144A under the Securities Act, and (iii) private placements to eligible investors outside the United States in offshore transactions in reliance on Regulation S under the Securities Act. Any

		Rump Shares will be offered by the Joint Bookrunners for sale to eligible investors in Germany and other selected jurisdictions at a price at least as high as the subscription price in a Rump Placement, in the United States in reliance on Rule 144A and outside the United States in offshore transactions in reliance on Regulation S under the Securities Act. The Offering is based on the underwriting agreement dated June 3, 2018, among the Company and the Joint Bookrunners (the "**Underwriting Agreement**"), which provides for a firm underwriting of the New Shares not sold in the Offering by the Joint Bookrunners. The Offering is subject to, among other things, registration of the implementation of the Capital Increase in the commercial register of the local court of Cologne, Germany (*Amtsgericht Köln*), which is expected to occur on June 20, 2018. Under certain circumstances, the Offering may be terminated.
	Exercise of Subscription Rights.	Shareholders may exercise their subscription rights for the New Shares through their custodian bank at COMMERZBANK Aktiengesellschaft as the subscription agent during regular banking hours from June 6, 2018 up to and including June 19, 2018. Subscription rights that are not exercised in a timely manner will lapse and be of no value. No compensation will be payable for subscription rights that are not exercised.
	Subscription Price.	The subscription price per New Share is €81.00. The subscription price must be paid at the latest on June 19, 2018.
	Subscription Rights Trading.	In connection with the Subscription Offer of the New Shares, the subscription rights (ISIN DE000BAY1BR7/WKN BAY 1BR) for the New Shares and fractional amounts of subscription rights will be traded on the regulated market (*regulierter Markt*) (Xetra and Xetra Frankfurt Specialist) of the Frankfurt Stock Exchange during the period from June 6, 2018 up to and including June 15, 2018. Neither the Company nor the subscription agent will apply for admission of the subscription rights to trading on any other stock exchange. The market price of the subscription rights depends, *inter alia*, on the development of the price of the Company's shares but it may deviate substantially from the price of the Company's shares. No compensation will be paid for subscription rights not exercised. Upon expiration of the subscription period, subscription rights not exercised will lapse and be of no value. The purchase of 23 subscription rights enables the exercise of the subscription rights for the purchase of two whole New Shares, i.e., two New Shares may be purchased for 23 subscription rights.
	Certification and Delivery of the Subscribed and Acquired New Shares	The New Shares (ISIN DE000BAY0017/WKN BAY001) will be represented by a global share certificate, which is expected to be deposited with Clearstream Banking Aktiengesellschaft on June 20, 2018. Under the Company's articles of incorporation, shareholders are not entitled to have their shares evidenced by individual share certificates. Unless the subscription period is extended or the Subscription Offer is cancelled, the New Shares subscribed in the Subscription Offer are expected to be made available to the collective securities custody as co-ownership proportion in the global share certificate on or about June 22, 2018. In the same way, the New Shares acquired in the Rump Placement are expected to be made available on June 22, 2018, i.e., after the end of the Rump Placement. The New Shares hold the same rights as all other shares of the Company (including full dividend rights from the fiscal year starting January 1, 2018) and do not convey any additional rights or advantages.
E.4	**Interests material to the issue/offer including conflicting interests.**	The Joint Bookrunners have entered into a contractual relationship with the Company in connection with the Offering and admission to trading of the Company's New Shares. In connection with financing the Transaction, affiliates of the Joint Bookrunners BofA Merrill Lynch, Credit Suisse, Goldman Sachs International, HSBC and J.P. Morgan entered into the Loan Facilities Agreement with Bayer. The financing commitments under the Loan Facilities Agreement were syndicated to more than

20 banks, including affiliates of all the other Joint Bookrunners. The Company intends to use the net proceeds from this Offering to repay amounts drawn down under the Loan Facilities Agreement in connection with the Transaction, which will reduce the amounts outstanding under the Loan Facilities Agreement for which the affiliates of the Joint Bookrunners receive interest payments.

The Joint Bookrunners or companies affiliated with them are engaged in securities trading and brokerage activities, as well as providing investment banking, asset management, financing, and financial advisory services and other commercial and investment banking products and services to a wide range of corporations and individuals. They may from time to time enter into business relationships with companies of the Group or perform services on their behalf as part of their normal course of business including such relating to lending and asset-backed securities transactions. In the ordinary course of the Joint Bookrunners' trading, brokerage, asset management, and financing activities, the Joint Bookrunners may at any time deal as principals or agents for more than one party in, or hold long or short positions, and may trade or otherwise effect transactions, for their own account or the accounts of customers, in debt or equity securities or senior loans of the Company, its affiliates or other entities that may be involved in or connected with the transactions contemplated hereby. Accordingly, the Joint Bookrunners and companies affiliated with them may in the future face conflicts of interests with shareholders in the Company.

Several members of the Company's board of management and the supervisory board hold shares of the Company and therefore have a personal interest in the performance of Bayer AG's share price. Several members of the Company's board of management and the supervisory board have further informed the Company that they intend to or may take part in the Offering by exercising their subscription rights.

E.5	**Name of the person or entity offering to sell the security.**	The New Shares will be offered for sale by the Joint Bookrunners (see Element A.1 above).
	Lock-up agreement: the parties involved; and indication of the period of the lock-up.	In the Underwriting Agreement, the Company has agreed with each Joint Bookrunner that, during the period commencing on June 3, 2018, the date of the Underwriting Agreement, and ending 90 days after the second day following the day of the registration of the Capital Increase in the commercial register (currently expected to take place on June 20, 2018), the Company will not, and will not agree, without the prior written consent of the Joint Global Coordinators, which may not to be unreasonably withheld, to:

- offer, sell or otherwise undertake to sell or to dispose of (i) bonds convertible or exchangeable into shares of the Company or (ii) shares of the Company or (iii) other securities which are convertible into or exchangeable for or grant the right to subscribe or receive shares of the Company;
- enter into any swap or other agreement that transfers to another party, in whole or in part, any of the economic consequences of ownership of shares of the Company, whether any such transaction described in this sentence is to be settled by delivery of securities, in cash or otherwise;
- announce or effect an increase of the Company's share capital out of authorized capital;
- propose to the Company's shareholders' meeting an increase of the Company's share capital, other than (i) a proposal to the Company's shareholders' meeting on authorizations for the issuance of new shares pursuant to an authorized capital (*genehmigtes Kapital*), and (ii) a proposal to the Company's shareholders' meeting on authorizations to issue convertible bonds and/or bonds with warrants, as well as participation rights with conversion or option rights (or a combination of these instruments) and the creation of conditional capital (*bedingtes Kapital*); or
- enter into a transaction or perform any action economically similar to those described above.

		The foregoing, however, does not apply to (i) the issuance of the New Shares, (ii) the issuance of any class of shares upon the exercise of stock options that were already issued under an existing stock option plan of the Company and its subsidiaries, (iii) any swaps or other agreements for purposes of hedging the long-term incentive plan of the Company and its subsidiaries and (iv) the delivery of shares under the Mandatory Convertible Notes.
E.6	**Amount and percentage of immediate dilution resulting from the offering. In case of a subscription offer to the existing equity holders, the amount and percentage of immediate dilution if they do not subscribe to the new offer.**	Shareholders who exercise their subscription rights with respect to the New Shares will maintain their percentage ownership of the Company's share capital following the Offering. Any shareholder who does not exercise its subscription rights will have its shareholding diluted by approximately 8%. The net tangible book value (corresponding to total assets less intangible assets less noncurrent liabilities less current liabilities) derived from the Company's unaudited condensed consolidated interim financial statements as of and for the three months ended March 31, 2018, prepared in accordance with IAS 34, amounted to €12,719 million as of March 31, 2018, which resulted in a net tangible book value per share of €14.82 (rounded and based on 857,947,808 shares of the Company outstanding immediately prior to the Offering). Based on a placement of all 74,604,156 New Shares from the Capital Increase, at a subscription price of €81.00 per New Share and after deduction of the estimated Offering expenses in an amount of €100 million, the net tangible book value of the Company as of March 31, 2018, would amount to €20.01 per share (calculated as adjusted for the effects of the Offering assuming that 932,551,964 shares of the Company will be outstanding after completion of the Offering). This corresponds to an increase of the Company's net tangible book value by €5.19 or 35.0% per share for the Company's existing shareholders as a result of this Offering and entails an immediate decrease in net tangible book value per share for the purchasers of the New Shares of €60.99 or 75.3% per share since the net tangible book value per share of the Company is below the subscription price per share by this amount or percentage.
E.7	**Estimated expenses charged to the investor by the issuer.**	Not applicable. Investors will not be charged with expenses by the Company, however, the custodian banks may charge a customary commission in connection with the subscription of the New Shares as well as for the sale and purchase of subscription rights.

II. ZUSAMMENFASSUNG DES PROSPEKTS

*Zusammenfassungen bestehen aus geforderten Angaben, die als Elemente („**Elemente**") bezeichnet werden. Diese Elemente sind in den Abschnitten A – E (A.1 – E.7) fortlaufend nummeriert. Diese Zusammenfassung enthält alle Elemente, die für die vorliegende Art von Wertpapier und Emittent in eine Zusammenfassung aufzunehmen sind. Da einige Elemente nicht behandelt werden müssen, können in der Nummerierungsreihenfolge Lücken auftreten. Selbst wenn ein Element wegen der Art des Wertpapiers und des Emittenten in die Zusammenfassung aufgenommen werden muss, ist es möglich, dass in Bezug auf dieses Element keine relevanten Informationen gegeben werden können. In solchen Fällen enthält die Zusammenfassung eine kurze Beschreibung des Elements mit dem Hinweis „Entfällt".*

A – Einleitung und Warnhinweise

A.1	**Warnhinweise.**	Diese Zusammenfassung sollte als Einleitung zu diesem Prospekt verstanden werden (der „**Prospekt**").
		Der Anleger sollte jede Entscheidung zur Anlage in die Wertpapiere auf die Prüfung des gesamten Prospekts stützen.
		Für den Fall, dass vor einem Gericht Ansprüche auf Grund der in diesem Prospekt enthaltenen Informationen geltend gemacht werden, könnte der als Kläger auftretende Anleger in Anwendung der einzelstaatlichen Rechtsvorschriften der Mitgliedstaaten des Europäischen Wirtschaftsraums die Kosten für die Übersetzung des Prospekts vor Prozessbeginn zu tragen haben.
		Bayer Aktiengesellschaft, Leverkusen, Bundesrepublik Deutschland („**Deutschland**") (im Folgenden die „**Bayer AG**" oder die „**Gesellschaft**" und gemeinsam mit ihren Tochtergesellschaften, einschließlich, ab dem Vollzugstag der Übernahme von Monsanto Company, St. Louis, Missouri, Vereinigte Staaten („**Monsanto Company**"), Monsanto Company und ihre Tochterunternehmen, „**Bayer**", „**wir**", „**uns**", „**unsere**," der „**Bayer-Konzern**" oder der „**Konzern**"), zusammen mit Credit Suisse Securities (Europe) Limited, London, Vereinigtes Königreich („**Credit Suisse**") und Merrill Lynch International, London, Vereinigtes Königreich („**BofA Merrill Lynch**" und zusammen mit Credit Suisse, die „**Joint Global Coordinators**") sowie Goldman Sachs International, London, Vereinigtes Königreich, HSBC Trinkaus & Burkhardt AG Düsseldorf, Deutschland ("**HSBC**"), J.P. Morgan Securities plc, London, Vereinigtes Königreich ("**J.P. Morgan**"), Barclays Bank PLC, London, Vereinigtes Königreich ("**Barclays**"), BNP PARIBAS, Paris, Frankreich, Citigroup Global Markets Limited, London, Vereinigtes Königreich ("**Citigroup**"), COMMERZBANK Aktiengesellschaft, Frankfurt am Main, Deutschland ("**COMMERZBANK**"), Deutsche Bank Aktiengesellschaft, Frankfurt am Main, Deutschland ("**Deutsche Bank**"), Mizuho International plc, London, Vereinigtes Königreich, MUFG Securities EMEA plc, London, Vereinigtes Königreich ("**MUFG**"), Banco Bilbao Vizcaya Argentaria, S.A., Bilbao, Spanien ("**BBVA**"), Crédit Agricole Corporate and Investment Bank, Montrouge Cedex, Frankreich ("**Crédit Agricole CIB**"), ING Bank N.V., Amsterdam, Die Niederlande ("**ING**"), Banca IMI S.p.A., Mailand, Italien ("**Banca IMI**"), Banco Santander, S.A., Madrid, Spanien ("**Banco Santander**"), Société Générale, Paris, Frankreich, SMBC Nikko Capital Markets Limited, London, Vereinigtes Königreich ("**SMBC Nikko**") und UniCredit Bank AG, München, Deutschland (zusammen mit Goldman Sachs International, HSBC, J.P. Morgan, Barclays, BNP PARIBAS, Citigroup, COMMERZBANK, Deutsche Bank, Mizuho International plc., MUFG, BBVA, Crédit Agricole CIB, ING, Banca IMI, Banco Santander, Société Générale und SMBC Nikko und den Joint Global Coordinators, die „**Joint Bookrunners**"), haben nach § 5 Abs. 2b Nr. 4 des Wertpapierprospektgesetzes die Verantwortung für den Inhalt dieser Zusammenfassung und ihrer deutschen Übersetzung übernommen. Diejenigen Personen, die die Verantwortung für die Zusammenfassung einschließlich sämtlicher Übersetzungen hiervon übernommen haben oder von denen der Erlass ausgeht, können haftbar gemacht werden, jedoch nur für den Fall, dass diese Zusammenfassung

		irreführend, unrichtig oder widersprüchlich ist, wenn sie zusammen mit den anderen Teilen dieses Prospekts gelesen wird, oder sie, wenn sie zusammen mit den anderen Teilen dieses Prospekts gelesen wird, nicht alle erforderlichen Schlüsselinformationen vermittelt.
A.2	**Zustimmung zur späteren Verwendung des Prospekts.**	Nicht anwendbar. Eine Zustimmung des Emittenten zur Verwendung dieses Prospekts für eine spätere Weiterveräußerung oder endgültige Platzierung der Aktien des Emittenten durch Finanzintermediäre, soweit nicht in diesem Prospekt beschrieben, wurde nicht erteilt.
B – Emittent		
B.1	**Juristische und kommerzielle Bezeichnung.**	Die juristische Bezeichnung der Gesellschaft lautet „Bayer Aktiengesellschaft". Die Gesellschaft betreibt ihre Geschäfte hauptsächlich unter der kommerziellen Bezeichnung „Bayer".
B.2	**Sitz und Rechtsform des Emittenten, anwendbares Recht, Land der Gründung.**	Die Gesellschaft hat ihren Hauptsitz in der Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Deutschland, und ist im Handelsregister des Amtsgerichts Köln, Deutschland, unter der Registernummer HRB 48248 eingetragen. Die Gesellschaft ist eine Aktiengesellschaft, die in Deutschland gegründet wurde und deutschem Recht unterliegt.
B.3	**Derzeitige Geschäfts- und Haupttätigkeit sowie Hauptmärkte, auf denen der Emittent vertreten ist.**	Der Bayer-Konzern, geleitet durch die Bayer AG als Konzern-Muttergesellschaft, ist ein global agierendes Life-Science-Unternehmen mit einer über 150-jährigen Geschichte und Kernkompetenzen auf den Gebieten Gesundheit und Agrarwirtschaft. Mit unseren innovativen Produkten glauben wir zur Lösung grundlegender Herausforderungen unserer Zeit beizutragen. Wir streben danach, die Lebensqualität von immer mehr Menschen bei weiter steigender Lebenserwartung zu verbessern, indem wir unsere Forschungs- und Entwicklungsaktivitäten auf die Vorbeugung, Linderung und Heilung von Krankheiten konzentrieren. Außerdem zielen wir darauf ab, einen wichtigen Beitrag zu einer zuverlässigen Versorgung mit qualitativ hochwertigen Nahrungs- und Futtermitteln sowie pflanzlichen Rohstoffen zu leisten. Wir wollen Wert für unsere Kunden, Aktionäre und Mitarbeiter schaffen und gleichzeitig die Ertragskraft des Konzerns stärken. Wir arbeiten außerdem nachhaltig und stellen uns der Verantwortung als sozial und ethisch handelndes Unternehmen. Um unsere Ziele zu erreichen, bauen wir auf unsere Mitarbeiter sowie unsere Kernkompetenzen, welche das Aufbauen von führenden Geschäftsfeldern und Marken, unsere Fähigkeit kontinuierlichen wirtschaftlichen Erfolg zu erbringen, unsere Innovationsfähigkeit, unsere starke Wertschöpfungsbilanz durch Portfolio Management, Prozessexzellenz und unsere Fähigkeit, Talente zu gewinnen, zu entwickeln und zu halten, umfassen. Wir führen unser Geschäft derzeit über die drei Divisionen Pharmaceuticals, Consumer Health und Crop Science sowie die Geschäftseinheit Animal Health, von denen jede auch ein berichtspflichtiges Segment ist. Die operativen Aktivitäten unserer drei Divisionen und einer Geschäftseinheit lassen sich wie folgt kurz zusammenfassen: • *Pharmaceuticals*: Pharmaceuticals konzentriert sich auf die Forschung, Entwicklung und Vermarktung verschreibungspflichtiger Produkte, insbesondere in den Bereichen Herz-Kreislauf und Frauengesundheit, sowie auf Spezialtherapeutika in den Bereichen Onkologie, Hämatologie und Augenheilkunde. Zu der Division zählt auch das Geschäftsfeld Radiologie mit Medizingeräten zum Einsatz in der diagnostischen Bildgebung sowie mit hierfür benötigten Kontrastmitteln. • *Consumer Health*: Consumer Health bietet verschreibungsfreie (*Over the Counter* („**OTC**")) Medikamente, Medizinprodukte sowie Kosmetika in den Kategorien Dermatologie, Nahrungsergänzung, Schmerz, Magen-Darm-Gesundheit, Allergie, Erkältung, Fußpflege und Sonnenschutz, zur Behandlung und Prävention von Krankheiten und Verbesserung des Wohlbefindens durch Selbstmedikationslösungen, an.

- *Crop Science*: Crop Science ist ein Agrarwirtschaftsunternehmen und ist auf den Gebieten Pflanzenschutz, Saatgut und nicht-landwirtschaftliche Schädlingsbekämpfung sowie Unkrautbekämpfung tätig. Nach Vollzug der Übernahme von Monsanto Company, welche vorraussichtlich am oder um den 7. Juni 2018 stattfinden wird und im Folgenden ausführlicher dargestellt wird, wird Crop Science Bayers größte Division nach Nettoumsätzen. Crop Science bietet eine breite Produktpalette mit hochwertigem Saatgut, innovativen Pflanzenschutzlösungen sowie einen umfassenden Kundenservice für die nachhaltige Landwirtschaft. Darüber hinaus bietet es Produkte und Dienstleistungen für professionelle Anwender außerhalb der Landwirtschaft an, beispielsweise für die Vektorkontrolle (d.h. Methoden zur Vermeidung oder gezielten Kontrolle von krankheitsübertragenden Organismen), zur Schädlingsbekämpfung oder zum Einsatz in der Forstwirtschaft.
- *Animal Health*: Die Animal Health Geschäftseinheit entwickelt und vertreibt Produkte und Lösungen zur Vorbeugung und Behandlung von Erkrankungen bei Haus- und Nutztieren und zählt zu den innovativen Unternehmen in seinem Bereich.

Bis zur Entkonsolidierung Ende September 2017 der Covestro AG („**Covestro AG**“ und zusammen mit ihren Tochtergesellschaften „**Covestro**“), ein globaler Anbieter hochwertiger Polymer-Werkstoffe und darauf basierender Anwendungslösungen, stellte Covestro ein weiteres berichtspflichtiges Segment von Bayer dar. Für weitere Informationen zur Entkonsolidierung von Covestro siehe „*B.7 Ausgewählte wesentliche historische Finanzinformationen*“ und „*B.8 Ausgewählte wesentliche Pro-forma-Finanzinformationen*“.

Über die letzten Jahre hat Bayer eine Reihe strategischer Akquisitionen und Desinvestitionen getätigt, einschließlich des Erwerbs des Consumer-Care-Geschäfts des U.S. Unternehmens Merck & Co., Inc. im Oktober 2014. Am 14. September 2016 unterzeichnete Bayer eine Übernahme- und Fusionsvereinbarung (die „**Übernahmevereinbarung**“) mit Monsanto Company (zusammen mit ihren Tochterunternehmen „**Monsanto**“), einem weltweiten Anbieter von landwirtschaftlichen Produkten, einschließlich Saatgut und Saatguttechnologien, Herbiziden sowie digitalen Plattformen, um Landwirten agronomische Empfehlungen zu geben. Die Übernahmevereinbarung sieht die Übernahme (durch Verschmelzung) aller ausstehenden Aktien von Monsanto Company gegen Zahlung von US$128,00 je Aktie in bar durch Bayer vor (die „**Transaktion**“), was einem voraussichtlichen Transaktionswert von rund US$66 Milliarden zum Stichtag 31. Mai 2016 entsprach. Zum Datum dieses Prospekts entspricht dies einem Transaktionswert von ungefähr US$63 Milliarden unter Berücksichtigung der ausstehenden Verbindlichkeiten von Monsanto zum 28. Februar 2018. Die Transaktion, welche den üblichen Vollzugsbedingungen unterliegt, einschließlich der erforderlichen Genehmigungen durch Kartell- und anderen Behörden, welche alle erfüllt wurden oder auf sie verzichtet wurde (mit Ausnahme der Bedingungen, die ihrer Art nach erst zum Vollzug der Transaktion erfüllt sein müssen), wird voraussichtlich am oder um den 7. Juni 2018 abgeschlossen werden. Mit Abschluss der Transaktion wird das Segment Crop Science einschließlich des Monsanto Geschäfts das größte Segment von Bayer bezogen auf Umsatzerlöse und, auf dieser Basis, beabsichtigt Bayer, einen der Transformation der Landwirtschaft verpflichteten Weltmarktführer zu schaffen, der fortschrittliche, individuelle agronomische Lösungen anbietet, die Landwirten helfen, die erforderlichen Produktivitätssteigerungen zu erzielen, um eine stetig wachsende Weltbevölkerung mit Nahrungsmitteln zu versorgen.

In Zusammenhang mit dem Erhalt der für den Abschluss der Transaktion erforderlichen kartellrechtlichen Genehmigungen ist Bayer folgende Verkaufstransaktionen eingegangen (die „**Transaktionsbezogenen Verkäufe**“): am 13. Oktober 2017 hat Bayer eine Vereinbarung über den Verkauf von bestimmten Crop-Science-Geschäften an BASF SE, Ludwigshafen, Germany („**BASF**“), für einen Gesamtbasiskaufpreis von ungefähr €5,9 Milliarden, getroffen (das „**Erste BASF Verkaufspaket**“). Der Gesamtbasiskaufpreis unterliegt üblichen Kaufpreisanpassungsmechanismen und wird bei Vollzug um €0.2 Mrd. verringert werden, aufgrund des nicht bis zum 1. Januar 2018 erfolgten Vollzugs der

Transaktion. Die im Ersten BASF Verkaufspaket zu veräußernden Geschäfte umfassen Bayers globales Glufosinate-Ammonium-Herbizid Geschäft und die dazugehörige LibertyLink™-Technologie für Herbizidtoleranz sowie im Wesentlichen Bayer's gesamtes Geschäft mit Saatgut für Ackerbaukulturen, und erwirtschafteten Gesamtumsätze von €1,5 Milliarden für das zum 31. Dezember 2017 endende Geschäftsjahr und von €0,7 Milliarden für den zum 31. März 2018 endenden Dreimonatszeitraum. Am 26. April 2018 unterschrieb Bayer einen Vertrag über den Verkauf weiterer Crop-Science-Geschäfte an BASF für einen Gesamtkaufpreis von bis zu €1,7 Milliarden, welcher üblichen Kaufpreisanpassungsmechanismen unterliegt (das „**Zweite BASF Verkaufspaket**"). Die zu veräußernden Geschäfte umfassen insbesondere Bayers weltweites Gemüsesaatgutgeschäft, bestimmte Saatgutbehandlungsmittel, Bayers Forschungsplattform für Weizen-Hybride sowie bestimmte Glyphosat- basierte Herbizide in Europa, die im Wesentlichen im industriellen Bereich eingesetzt werden. Zusätzlich werden auch drei Forschungsvorhaben im Bereich der Totalherbizide und das Digital-Farming-Geschäft von Bayer übertragen. Bayer wird eventuell Technologien, die von Bayer benötigt werden um bestimmte Digital-Agrarprodukte außerhalb Nordamerikas zu verkaufen, auf einer nicht-exklusiven Basis rücklizensieren. Die im Zweiten BASF Verkaufspaket zu veräußernden Geschäfte erwirtschafteten Gesamtumsätze von €0,7 Milliarden für das zum 31. Dezember 2017 endende Geschäftsjahr und von €0,2 Milliarden für den zum 31. März 2018 endenden Dreimonatszeitraum. Bayer wird die von den Transaktionsbezogenen Verkäufen erfassten Geschäfte weiterhin besitzen, führen und aufrechterhalten, bis zum Vollzug der Transaktionsbezogenen Verkäufe.

Des weiteren werden Bayer und Monsanto bis zum Vollzug der Transaktionsbezogenen Verkäufe getrennt gehalten werden, wie vom Justizministerium der Vereinigten Staaten (*U.S. Department of Justice*) verlangt. Bayer erwartet derzeit, die Integration der beiden Organisationen in ca. zwei Monaten beginnen zu können. Bayer wird in den von den Transaktionsbezogenen Verkäufen erfassten Bereichen aktiv bleiben, aufgrund der Programme, Produkte und Angebote, die es von Monsanto nach Vollzug der Transaktion erhalten wird.

B.4a **Wichtigste jüngste Trends, die sich auf den Emittenten und die Branchen, in denen er tätig ist, auswirken.**

Das Wachstum des Pharmamarktes für 2017 lag unter dem Niveau des Vorjahres bei 3%[1] (2016: 5%[2]). Verstärkter Preisdruck infolge generischen Wettbewerbs sowie Reformen im Gesundheitswesen wirkten sich gegenüber dem Vorjahr in allen Regionen wachstumsmindernd aus. Für 2018 wird für den Pharmamarkt ein etwas höheres Wachstum (4%) als in 2017 prognostiziert.[3] Nach Ansicht von Bayer dürften zu den wichtigsten Wachstumstreibern vor allem Produktneueinführungen zählen. Grundsätzlich rückt, als Folge der steigenden Lebensqualität und -erwartung, zunehmend auch die medizinische Versorgung älterer Patienten in den Vordergrund. Es besteht allerdings die Gefahr, dass das Wachstum durch den fortlaufend zunehmenden weltweiten Kostendruck auf Gesundheitssysteme gebremst wird.

Nach interner Berechnung von Bayer lag die globale Entwicklung des Consumer-Health-Marktes 2017 leicht unter 4% (2016: 4 %). Wichtige Wachstumstreiber waren die anhaltende Nachfrage nach medizinischen Produkten zur Selbstmedikation und eine starke Erkältungssaison in Europa. Dagegen wirkten sich eine schwächere Allergiesaison, der Preisdruck im E-Commerce-Vertrieb und die Wettbewerbsverdichtung negativ auf das Wachstum aus. Bayer erwartet ein Wachstum im Jahr 2018 von 3 – 4%. Der Markt dürfte infolge des zunehmenden Preisdrucks durch E-Commerce sowie einer Konsolidierung des Handels weiter angespannt bleiben. Im Zuge des wachsenden Selbstmedikationstrends ergeben sich für Consumer Health

[1] CBI – IQVIA Market Prognosis
[2] Quintiles IMS – Market Prognosis March 2017 Update
[3] CBI – IQVIA Market Prognosis

Chancen im Bereich verschreibungsfreier Medizin. Allerdings hatte das schwierige wirtschaftliche Umfeld eine dämpfende Wirkung auf die Kundennachfrage, und könnte es auch in Zukunft weiterhin haben.

Gemäß den internen Berechnungen von Bayer entwickelte sich der globale Saatgut- und Pflanzenschutzmarkt im Jahr 2017 mit etwa +1% (Vorjahr: 0%) leicht positiv. Während die Nachfrage nach hochwertigem Saatgut anstieg, stagnierte der weltweite Absatz von Pflanzenschutzmitteln. Positive Wachstumsimpulse kamen 2017 insbesondere aus den Regionen Nordamerika und Osteuropa. In Lateinamerika ging das Marktvolumen durch hohe Lagerbestände an Pflanzenschutzprodukten sowie ungünstige gesamtwirtschaftliche Rahmenbedingungen in Brasilien zurück. Allerdings deutet die Stabilisierung des Verhältnisses von Beständen zum Verbrauch („stocks-to-use-ratio") für die wichtigen Ackerbaukulturen Mais und Soja sowie ein sich erholender lateinamerikanischer Agrarmarkt, auf eine leichte Erholung im Markt hin. In Westeuropa war die Marktentwicklung ebenfalls rückläufig, vorrangig bedingt durch einen relativ geringen Pilzbefall. Bayer erwartet für den weltweiten Saatgut- und Pflanzenschutzmarkt im Jahr 2018 eine positive Entwicklung (+3 %). Nach Ansicht von Bayer werden Wachstumsimpulse insbesondere aus Lateinamerika kommen, vorrangig aufgrund einer zu erwartenden Normalisierung der Pflanzenschutzmittel-Lagerbestände in Brasilien und eines weiteren Ausbaus der Sojabohnenanbauflächen. Auch in der Region Asien/Pazifik sowie in Osteuropa erwartet Bayer ein Marktwachstum. In Nordamerika und Westeuropa dürfte sich das anhaltend niedrige Preisniveau bei Agrarrohstoffen in einem verhaltenen Wachstum widerspiegeln, das insgesamt hinter der weltweiten Entwicklung zurückbleibt.

Nach interner Berechnung von Bayer wuchs der Animal-Health-Markt um rund 2% in 2017 (2016: 5%), einem deutlich schwächeren Wachstum als in den Vorjahren. Neben einem schwierigen Marktumfeld im Nutztiergeschäft in Europa und Nordamerika blieben auch die Wachstumsraten im Haustiergeschäft, und zwar insbesondere im bedeutenden Parasitizidemarkt, hinter den vergangenen Jahren zurück. Die leichte Erholung des Nutztiergeschäfts in den Hauptmärkten und ein Aufschwung im amerikanischen Haustiergeschäft am Jahresende konnten die schwächere Marktentwicklung in der ersten Jahreshälfte nicht ausgleichen. Bayer erwartet für 2018 eine Steigerung des Wachstums auf 4%. Nach Ansicht von Bayer, dürfte dazu in erster Linie eine Verbesserung des Marktklimas im Nutztiersegment beitragen, gestützt von einer weiterhin robusten Nachfrage im Haustiergeschäft. Grundsätzlich ist Bayer der Ansicht, dass der Animal-Health-Markt aufgrund der wachsenden Weltbevölkerung und höherer Einkommen nach wie vor sehr attraktiv ist.

B.5	**Beschreibung des Konzerns und der Stellung des Emittenten innerhalb dieses Konzerns.**	Die Bayer AG ist die Muttergesellschaft des Bayer-Konzerns. Die Tochterunternehmen sind Gesellschaften, welche von der Bayer AG beherrscht werden; dies bedeutet, dass die Bayer AG variablen Rückflüssen ausgesetzt ist oder Ansprüche auf diese variablen Rückflüsse hat und dass sie über die Möglichkeit verfügt mittels ihrer Verfügungsgewalt, die Rückflüsse dieser Gesellschaften zu beeinflussen. Die wichtigsten von ihnen sind Bayer HealthCare LLC, U.S.A., Bayer Pharma Aktiengesellschaft, Deutschland, Bayer U.S. LLC, U.S.A., Bayer Intellectual Property GmbH, Deutschland, Bayer Oy, Finnland und Bayer CropScience Aktiengesellschaft, Deutschland. Mit Abschluss der Transaktion werden Bayer AGs wesentliche Tochtergesellschaften außerdem Monsanto Company, U.S.A. sowie Monsanto Technology LLC, U.S.A. umfassen. Zum 31. März 2018 gehörten weltweit 237 konsolidierte Unternehmen, von denen 50 deutsche Unternehmen waren, zum Bayer-Konzern.

B.6	**Personen, die eine (meldepflichtige) direkte oder indirekte Beteiligung am Eigenkapital des Emittenten und den Stimmrechten halten.**	Nach Wissen der Gesellschaft und gemäß den Mitteilungen, die der Gesellschaft zum Datum dieses Prospekts nach dem Wertpapierhandelsgesetz zugegangen sind und basierend auf Aktionärsinformationen, hielten die nachfolgenden Aktionäre zum Datum des Prospekts (direkt oder indirekt) mindestens 3% der Aktien. Die in der nachstehenden Tabelle enthaltenen Prozentzahlen zeigen die der Gesellschaft zuletzt mitgeteilten Stimmrechtsanteile im Verhältnis zum Grundkapital der Gesellschaft zum Datum der jeweiligen Mitteilung an. Hierbei ist zu beachten, dass sich die zuletzt mitgeteilten Stimmrechte und Stimmrechtsanteile verändert haben könnten, seit sie der Gesellschaft mitgeteilt wurden, da keine Mitteilungsverpflichtung besteht, solange die mitteilungspflichtigen Schwellen nicht erreicht oder überschritten wurden:

Aktionäre	Beteiligung/Anzahl der Stimmrechte[1]
BlackRock, Inc.[2].	7,17%
Government of Singapore (Regierung des Staates Singapur)[3]	3,97%

(1) Der Prozentsatz der Stimmrechte ist auf Grundlage des am Tag der jeweiligen Stimmrechtsmitteilung eingetragenen Grundkapitals der Gesellschaft berechnet.

(2) Indirekte Beteiligung von BlackRock, Inc. laut Mitteilung zum 26. März 2018. BlackRock, Inc. ist das oberste kontrollierende Unternehmen der 42 anderen Gesellschaften, die in der Gruppenmitteilung aufgeführt sind. Keine dieser BlackRock, Inc. Gesellschaften hielt zu diesem Datum direkt 3,0% oder mehr der Stimmrechte der Gesellschaft.

(3) Indirekte Beteiligung von Government of Singapore (Regierung des Staates Singapur) laut Mitteilung zum 18. April 2018. Government of Singapore (Regierung des Staates Singapur) ist der oberste kontrollierende Aktionär der 14 Gesellschaften, die in der Gruppenmitteilung aufgeführt sind. Von diesen Gesellschaften hielt zu diesem Datum nur die Ellington Investments Pte. Ltd. direkt 3,0% oder mehr der Stimmrechte der Gesellschaft, nämlich 3,96%.

	Unterschiedliche Stimmrechte, falls vorhanden, der Hauptanteilseigner des Emittenten.	Entfällt. Jede Aktie der Gesellschaft gewährt in der Hauptversammlung eine Stimme. Es bestehen keine unterschiedlichen Stimmrechte für die Aktionäre der Gesellschaft.
	Direkte oder indirekte Beherrschung des Emittenten und Art der Beherrschung.	Entfällt. Die Gesellschaft steht weder direkt noch indirekt mehrheitlich im Eigentum einer anderen Gesellschaft oder Person, noch wird sie von einer solchen kontrolliert. Nach Wissen der Gesellschaft bestehen keine Vereinbarungen, deren Ausführung zu einem späteren Zeitpunkt eine Veränderung der Kontrollverhältnisse bei der Gesellschaft zur Folge haben könnte.
B.7	**Ausgewählte wesentliche historische Finanzinformationen.**	**Ausgewählte Finanzinformationen des Bayer-Konzerns** Die in den nachfolgenden Abschnitten enthaltenen Finanzinformationen sind den geprüften Konzernabschlüssen von Bayer für die zum 31. Dezember 2016 und 31. Dezember 2017 endenden Geschäftsjahre, dem ungeprüften verkürzten Konzernzwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum sowie dem internen und externen Rechnungswesen des Konzerns entnommen oder aus diesen abgeleitet, oder sind auf Basis der vorgenannten Quellen entnommenen Zahlen errechnet worden, sofern nicht etwas anderes angegeben ist. Wir haben die Kontrolle über unsere Tochtergesellschaft Covestro AG durch den Verkauf von Anteilen an der Covestro AG („**Covestro-Aktien**“) und die Unterzeichnung eines Entherrschungsvertrages, in dem wir uns unter anderem dazu verpflichtet haben, bestimmte Stimmrechte in der Covestro-Hauptversammlung nicht auszuüben, aufgegeben (der „**Kontrollverlust**“). Aufgrund des Kontrollverlusts Ende September 2017 war Covestro nicht länger ein berichtspflichtiges Segment und erfüllte die Voraussetzungen für den Ausweis als nicht fortgeführtes Geschäft für die ersten neun Monate von 2017. Seit dem 1. Oktober 2017 bis Mai 2018 wurde Covestro aufgrund des verbleibenden maßgeblichen Einflusses von Bayer als assoziiertes Unternehmen klassifiziert und nach der Equity-Methode bilanziert. Im Mai 2018 reduzierte Bayer seinen Anteil an der Covestro AG auf 6,8%, welcher seither als sonstiger finanzieller Vermögenswert zum beizulegenden Zeitwert bilanziert wird. Die

Vergleichsinformationen für das zum 31. Dezember 2016 endende Geschäftsjahr (mit Ausnahme der Konzern-Bilanz zum 31. Dezember 2016), wie in dem geprüften Konzernabschlüssen von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr dargestellt und die Vergleichsinformationen für den zum 31. März 2017 endenden Dreimonatszeitraum, die in dem ungeprüften verkürzten Konzernzwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum dargestellt sind, wurden dahingehend angepasst, Covestro für das gesamte zum 31. Dezember 2016 endende Geschäftsjahr und den zum 31. März 2017 endenden Dreimonatszeitraum als nicht fortgeführtes Geschäft darzustellen. Allerdings wurden der geprüfte Konzernabschluss von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr, einschließlich der Vergleichsinformationen für das zum 31. Dezember 2015 endende Geschäftsjahr, welcher in diesem Prospekt präsentiert und diskutiert wird, sowie der geprüfte Konzernabschluss für das zum 31. Dezember 2015 endende Geschäftsjahr, welcher ebenfalls in diesem Prospekt enthalten ist, nicht dahingehend angepasst, Covestro als nicht fortgeführtes Geschäft darzustellen. Zur Erhöhung der Transparenz in den folgenden Abschnitten präsentieren wir die Zahlen für 2016, die mit der Ertragslage und den Cashflows des Bayer-Konzerns verbunden sind, in zwei Spalten: eine Spalte zeigt die Zahlen für 2016 wie sie in der geprüften Gewinn- und Verlustrechnung bzw. der geprüften Kapitalflussrechnung von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr dargestellt sind (mit Covestro als fortzuführendes Geschäft) und eine zweite Spalte zeigt die Zahlen für 2016 wie sie als Vergleichszahlen in der geprüften Gewinn- und Verlustrechnung oder der geprüften Kapitalflussrechnung von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr dargestellt sind (mit Covestro als nicht fortgeführtem Geschäft).

Die geprüften Konzernabschlüsse von Bayer für die zum 31. Dezember 2015, 31. Dezember 2016 und 31. Dezember 2017 endenden Geschäftsjahre, welche in diesem Prospekt enthalten sind, wurden gemäß den Internationalen Rechnungslegungsvorschriften, wie sie in der Europäischen Union anzuwenden sind („**IFRS**“) und den zusätzlichen Anforderungen des deutschen Handelsrechts in § 315e Abs. 1 Handelsgesetzbuch (vormals § 315a Abs. 1 Handelsgesetzbuch) erstellt. Der ungeprüfte verkürzte Konzernzwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum wurde gemäß IFRS für die Zwischenberichterstattung (IAS 34) erstellt.

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (ehemals PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft) hat die Konzernabschlüsse von Bayer für die zum 31. Dezember 2015 und 31. Dezember 2016 endenden Geschäftsjahre geprüft und uneingeschränkte Bestätigungsvermerke erteilt. Diese Abschlüsse und die diesbezüglichen Bestätigungsvermerke sind in diesem Prospekt enthalten.

Deloitte GmbH Wirtschaftsprüfungsgesellschaft, München, Deutschland („**Deloitte**“), wurde zum Abschlussprüfer für die Konzernabschlüsse von Bayer und für die Jahresabschlüsse der Bayer AG ab dem 1. Januar 2017 bestellt. Deloitte hat den Konzernabschluss von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr und den geprüften Jahresabschluss der Bayer AG für das zum 31. Dezember 2017 endende Geschäftsjahr geprüft und uneingeschränkte Bestätigungsvermerke erteilt. Zusätzlich wurde Deloitte zur prüferischen Durchsicht der ungeprüften verkürzten Konzernzwischenabschlüsse von Bayer bestellt. Deloitte hat den ungeprüften verkürzten Konzernzwischenabschluss für den zum 31. März 2018 endenden Dreimonatszeitraum prüferisch durchgesehen und eine Bescheinigung erteilt. Diese Abschlüsse und die diesbezüglichen Bestätigungsvermerke und die Bescheinigung sind in diesem Prospekt enthalten.

Wo Finanzinformationen in den folgenden Tabellen als „geprüft“ gekennzeichnet sind, bedeutet dies, dass sie dem geprüften Konzernabschluss (IFRS) von Bayer für die zum 31. Dezember 2015, 31. Dezember 2016 und 31. Dezember 2017

endenden Geschäftsjahre oder dem geprüften Einzelabschluss (HGB) der Bayer AG für das zum 31. Dezember 2017 endende Geschäftsjahr entnommen wurden.

Die Kennzeichnung „ungeprüft“ wird in den folgenden Tabellen benutzt, um Finanzinformationen auszuweisen, die entweder aus dem ungeprüften verkürzten Konzernzwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum oder dem internen und externen Rechnungswesen des Konzerns abgeleitet worden sind, oder auf Grundlage von Zahlen aus den vorgenannten Quellen berechnet wurden. Alle in den folgenden Tabellen und Abschnitten dargestellten Finanzinformationen sind in Millionen Euro (in € Mio.) angegeben, soweit nicht anderweitig bestimmt. Bestimmte Finanzinformationen in den folgenden Tabellen und Abschnitten (inklusive Prozentzahlen) sind entsprechend üblicher Geschäftspraxis gerundet worden. Demnach entsprechen Gesamtbeträge (Gesamt- oder Zwischensummen oder Differenzen, oder in Verhältnis gesetzte Zahlen) möglicherweise nicht in jedem Fall den entsprechenden gerundeten Summen, die in den folgenden Tabellen und Abschnitten enthalten sind. Außerdem addieren sich die gerundeten Zahlen in den folgenden Tabellen möglicherweise nicht exakt zu den in den jeweiligen Tabellen angegebenen Gesamtsummen. Die prozentualen Veränderungen, die in den folgenden Tabellen und Abschnitten angegeben sind, sind kaufmännisch auf eine Nachkommastelle gerundet, soweit nicht anderweitig bestimmt. Finanzinformationen, die in den folgenden Tabellen in runden Klammern angegeben werden, geben an, dass die jeweilige Zahl eine negative Zahl ist, soweit nicht anderweitig bestimmt. Hinsichtlich der folgenden Finanzinformationen, bedeutet eine Null („0“), dass die jeweilige Zahl verfügbar ist, aber auf null gerundet worden ist; ein Bindestrich („–“) bedeutet, dass die jeweilige Zahl tatsächlich null beträgt bzw. nicht verfügbar ist.

Gewinn- und Verlustrechnung Bayer-Konzern

	Für das Geschäftsjahr endend zum 31. Dezember				Für den Dreimonatszeitraum endend zum 31. März	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(geprüft) (in Mio. €, sofern nicht anders angegeben)		(geprüft) (in Mio. €, sofern nicht anders angegeben)		(ungeprüft) (in Mio. €, sofern nicht anders angegeben)	
Umsatzerlöse	**46.085**	**46.769**	**34.943**	**35.015**	**9.680**	**9.138**
Herstellungskosten	(21.040)	(20.295)	(11.756)	(11.382)	(2.987)	(2.909)
Bruttoergebnis vom Umsatz	**25.045**	**26.474**	**23.187**	**23.633**	**6.693**	**6.229**
Vertriebskosten	(12.272)	(12.474)	(11.148)	(11.116)	(2.667)	(2.509)
Forschungs- und Entwicklungskosten	(4.274)	(4.666)	(4.405)	(4.504)	(1.094)	(1.040)
Allgemeine Verwaltungskosten	(2.092)	(2.256)	(1.804)	(2.026)	(460)	(427)
Sonstige betriebliche Erträge	1.109	898	787	864	159	152
Sonstige betriebliche Aufwendungen	(1.275)	(934)	(879)	(948)	(204)	(95)
EBIT[4]	**6.241**	**7.042**	**5.738**	**5.903**	**2.427**	**2.310**
Ergebnis aus at-equity bewerteten Beteiligungen	(9)	(26)	(6)	20	(7)	71
Finanzielle Erträge	371	151	149	289	32	370
Finanzielle Aufwendungen	(1.367)	(1.280)	(1.108)	(1.635)	(321)	(311)
Finanzergebnis	**(1.005)**	**(1.155)**	**(965)**	**(1.326)**	**(296)**	**130**
Ergebnis vor Ertragsteuern	**5.236**	**5.887**	**4.773**	**4.577**	**2.131**	**2.440**
Ertragsteuern	(1.223)	(1.329)	(1.017)	(1.329)	(424)	(494)
Ergebnis nach Ertragsteuern aus fortzuführendem Geschäft	**4.013**	**4.558**	**3.756**	**3.248**	**1.707**	**1.946**
Ergebnis nach Ertragsteuern aus nicht fortgeführtem Geschäft	**85**	**268**	**1.070**	**4.846**	**564**	**8**
Ergebnis nach Ertragsteuern	**4.098**	**4.826**	**4.826**	**8.094**	**2.271**	**1.954**
davon auf nicht beherrschende Anteile entfallend	*(12)*	*295*	*295*	*758*	*188*	–
davon auf die Aktionäre der Bayer AG entfallend (Konzernergebnis)	*4.110*	*4.531*	*4.531*	*7.336*	*2.083*	*1.954*
Ergebnis je Aktie in €						
aus fortzuführendem Geschäft						
unverwässert	4,87	5,12	4,50	3,73	1,96	2,23
verwässert	4,87	5,12	4,50	3,73	1,96	2,23
aus nicht fortgeführtem Geschäft						
unverwässert	0,10	0,32	0,94	4,68	0,43	0,01
verwässert	0,10	0,32	0,94	4,68	0,43	0,01
aus fortzuführendem und nicht fortgeführtem Geschäft						
unverwässert	4,97	5,44	5,44	8,41	2,39	2,24
verwässert	4,97	5,44	5,44	8,41	2,39	2,24

(1) Zahlen sind der geprüften Gewinn- und Verlustrechnung von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen, welche Covestro als fortzuführendes Geschäft darstellt.

(2) Zahlen sind den angepassten Vergleichszahlen für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen, wie sie in der geprüften Gewinn- und Verlustrechnung von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr enthalten sind, welche Covestro als nicht fortgeführtes Geschäft darstellt.

(3) Zahlen sind aus den angepassten Vergleichszahlen für den zum 31. März 2017 endenden Dreimonatszeitraum abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen, wie sie in der ungeprüften Gewinn- und Verlustrechnung von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum enthalten sind.

(4) Von Bayer verwendete Alternative Leistungskennzahl; weitere Informationen siehe unten „*Zusätzliche Kennzahlen des Bayer-Konzerns*“.

Bilanz Bayer-Konzern

	Zum 31. Dezember			Zum 31. März
	2015[1]	2016[2]	2017[3]	2018
		(geprüft) (in Mio. €)		(ungeprüft) (in Mio. €)
Vermögenswerte				
Langfristige Vermögenswerte	**50.096**	**51.791**	**45.014**	**42.225**
Geschäfts- oder Firmenwerte	16.096	16.312	14.751	14.480
Sonstige immaterielle Vermögenswerte	15.178	13.567	11.674	11.185
Sachanlagen	12.375	13.114	7.633	7.330
Anteile an at-equity bewerteten Beteiligungen	246	584	4.007	2.574
Sonstige finanzielle Vermögenswerte	1.092	1.281	1.634	1.737
Sonstige Forderungen	430	583	400	535
Latente Steuern	4.679	6.350	4.915	4.384
Kurzfristige Vermögenswerte	**23.821**	**30.447**	**30.073**	**33.169**
Vorräte	8.550	8.408	6.550	6.402
Forderungen aus Lieferungen und Leistungen	9.933	10.969	8.582	9.498
Sonstige finanzielle Vermögenswerte	756	6.275	3.529	7.315
Sonstige Forderungen	2.017	2.210	1.276	1.029
Ertragsteuererstattungsansprüche	509	676	474	461
Zahlungsmittel und Zahlungsmitteläquivalente	1.859	1.899	7.581	5.332
Zur Veräußerung gehaltene Vermögenswerte	197	10	2.081	3.132
Gesamtvermögen	**73.917**	**82.238**	**75.087**	**75.394**
Eigenkapital	**25.445**	**31.897**	**36.861**	**38.384**
Gezeichnetes Kapital	2.117	2.117	2.117	2.117
Kapitalrücklagen	6.167	9.658	9.658	9.658
Sonstige Rücklagen	15.981	18.558	25.026	26.553
Aktionären der Bayer AG zurechenbarer Anteil am Eigenkapital	**24.265**	**30.333**	**36.801**	**38.328**
Nicht beherrschende Anteile	1.180	1.564	60	56
Langfristiges Fremdkapital	**31.492**	**31.804**	**24.633**	**23.912**
Pensionsrückstellungen und ähnliche Verpflichtungen	10.873	11.134	8.020	8.096
Andere Rückstellungen	1.740	1.780	1.366	1.302
Rückerstattungsverbindlichkeiten[4]	–	–	–	146
Vertragsverbindlichkeiten[4]	–	–	–	799
Finanzverbindlichkeiten	16.513	16.180	12.483	12.273
Ertragsteuerverbindlichkeiten	475	423	495	482
Sonstige Verbindlichkeiten	1.065	957	1.116	228
Latente Steuern	826	1.330	1.153	586
Kurzfristiges Fremdkapital	**16.980**	**18.537**	**13.593**	**13.098**
Andere Rückstellungen	5.045	5.421	4.344	2.194
Rückerstattungsverbindlichkeiten[4]	–	–	–	2.519
Vertragsverbindlichkeiten[4]	–	–	–	197
Finanzverbindlichkeiten	3.421	3.401	1.935	1.761
Verbindlichkeiten aus Lieferungen und Leistungen	5.945	6.410	5.129	3.943
Ertragsteuerverbindlichkeiten	923	884	422	646
Sonstige Verbindlichkeiten	1.534	2.421	1.652	1.318
Verbindlichkeiten in direktem Zusammenhang mit zur Veräußerung gehaltenen Vermögenswerten	112	–	111	520
Gesamtkapital	**73.917**	**82.238**	**75.087**	**75.394**

(1) Zahlen sind der geprüften Konzern-Bilanz von Bayer zum 31. Dezember 2016 entnommen, in welcher die Vermögenswerte und das Fremdkapital, die Covestro zugeordnet waren, noch in der Bilanz des Konzerns gebucht sind. Gemäß den IFRS Vorgaben wurden die Informationen bezüglich Bayers Bilanz zum 31. Dezember 2015 nicht angepasst um den Verkauf des Konsumentengeschäfts von Crop Sciences Environmental Science Geschäftseinheit („**Konsumentengeschäft Environmental Science**“) zu reflektieren.

(2) Zahlen sind der geprüften Konzern-Bilanz von Bayer zum 31. Dezember 2016 entnommen, in welcher die Vermögenswerte und das Fremdkapital, die Covestro zugeordnet waren, noch in der Bilanz des Konzerns erfasst sind. Die Vermögenswerte und das Fremdkapital, die dem Konsumentengeschäft Environmental Science zugeordnet waren, sind in der geprüften Konzern-Bilanz von Bayer vom 31. Dezember 2016 ausgebucht. Gemäß den IFRS Vorgaben wurden die Informationen zu Bayers Bilanz zum 31. Dezember 2016 nicht angepasst um die Entkonsolidierung von Covestro zu reflektieren.

(3) Zahlen sind der geprüften Konzern-Bilanz von Bayer zum 31. Dezember 2017 entnommen, in welcher die Vermögenswerte und das Fremdkapital, die Covestro zugeordnet waren, inklusive der nichtkontrollierenden Beteiligung an Covestro, ausgebucht sind. Seit dem 1. Oktober 2017 bis Mai 2018 wurde die verbleibende Beteiligung an Covestro als assoziiertes Unternehmen

klassifiziert und nach der Equity-Methode bilanziert. Im Mai 2018 reduzierte Bayer seinen Anteil an der Covestro AG auf 6,8%, welcher seither als sonstiger finanzieller Vermögenswert zum beizulegenden Zeitwert bilanziert wird. Für weitere Informationen, siehe „*B.7 Wesentliche Änderungen der Finanzlage und des Betriebsergebnisses des Emittenten während und nach dem von den historischen Finanzinformationen abgedeckten Zeitraums–Aktuelle Entwicklungen*".

(4) Die Positionen „Rückerstattungsverbindlichkeiten" und „Vertragsverbindlichkeiten" wurden zum 1. Januar 2018 eingeführt und reflektieren Bilanzierungsänderungen aufgrund der erstmaligen Anwendung von IFRS 15.

Ausgewählte Informationen der Kapitalflussrechnung des Bayer-Konzerns

	Für das Geschäftsjahr endend zum 31. Dezember				Für den Dreimonatszeitraum endend zum 31. März	
	2015(1)	2016(1)	2016(2)	2017	2017(3)	2018
	(geprüft)		(geprüft)		(ungeprüft)	
	(in Mio. €)		(in Mio. €)		(in Mio. €)	
Cashflows aus operativer Geschäftstätigkeit im fortzuführenden Geschäft	**6.836**	**8.259**	**6.435**	**6.611**	**551**	**658**
Cashflows aus operativer Geschäftstätigkeit aus nicht fortgeführtem Geschäft	54	830	2.654	1.523	290	–
Cashflows aus operativer Geschäftstätigkeit (Gesamt)	**6.890**	**9.089**	**9.089**	**8.134**	**841**	**658**
Cashflows aus investiver Tätigkeit	**(2.762)**	**(8.729)**	**(8.729)**	**(432)**	**(1.136)**	**(2.058)**
Cashflows aus Finanzierungstätigkeit	**(3.974)**	**(350)**	**(350)**	**(1.881)**	**611**	**(581)**
Zahlungswirksame Veränderung aus Geschäftstätigkeit	**154**	**10**	**10**	**5.821**	**316**	**(1.981)**
Zahlungsmittel und Zahlungsmitteläquivalente am Periodenanfang	**1.853**	**1.859**	**1.859**	**1.899**	**1.899**	**7.436**
Veränderung aus Konzernkreisänderungen	5	3	3	–	–	1
Veränderung aus Wechselkursänderungen	(153)	27	27	(139)	9	(118)
Zahlungsmittel und Zahlungsmitteläquivalente am Periodenende.	**1.859**	**1.899**	**1.899**	**7.581**	**2.224**	**5.338**

(1) Zahlen sind der geprüften Kapitalflussrechnung von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen, welche die Cashflows aus operativer Geschäftstätigkeit, die Covestro zugeordnet werden, als Cashflows aus operativer Tätigkeit aus fortzuführendem Geschäft darstellt.

(2) Zahlen sind den angepassten Vergleichszahlen für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen, wie sie in der geprüften Kapitalflussrechnung von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr enthalten ist, welche die Cashflows aus operativer Geschäftstätigkeit, die Covestro zugeordnet werden, separat als Cashflow aus operativer Geschäftstätigkeit aus nicht fortgeführtem Geschäft ausweist.

(3) Zahlen sind aus den angepassten Vergleichszahlen für den zum 31. März 2017 endenden Dreimonatszeitraum abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen, wie sie in der ungeprüften Kapitalflussrechnung von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum enthalten sind.

Zusätzliche Kennzahlen des Bayer-Konzerns

Nach Bayers Ansicht stellen die in diesem Abschnitt beschriebenen alternativen Leistungskennzahlen („**Alternative Leistungskennzahlen**") die wichtigsten Leistungskennzahlen dar, um die operative und finanzielle Leistung des Geschäfts des Bayer-Konzerns zu bewerten und sind als solche hilfreich für potenzielle Investoren. Allerdings werden die Alternativen Leistungskennzahlen nicht als Kennzahlen nach IFRS anerkannt und dürfen nicht als Ersatz für Zahlen die in Übereinstimmung mit IFRS ermittelt werden, wie z. B. Ergebnis vor Ertragsteuern, Ergebnis nach Ertragsteuern, Cashflow aus operativer Geschäftstätigkeit oder sonstige Kennzahlen der Gewinn- und Verlustrechnung oder der Kapitalflussrechnung oder als Kriterium für Profitabilität oder Liquidität, verstanden werden. Die Alternativen Leistungskennzahlen geben weder Aufschluss darüber, ob der Cashflow für den Liquiditätsbedarf von Bayer ausreichend vorhanden und/oder verfügbar sein wird, noch ob anhand dieser Kennzahlen die in der Vergangenheit erzielten operativen Ergebnisse von Bayer ablesbar sind. Die Alternativen Leistungskennzahlen dienen außerdem nicht der Vorhersage künftiger Ergebnisse. Da nicht alle Unternehmen diese Kennzahlen und Zahlen einheitlich berechnen, ist die von Bayer gewählte Darstellung der Alternativen Leistungskennzahlen nicht notwendigerweise vergleichbar mit ähnlich bezeichneten Kennzahlen anderer Unternehmen. Bayer ermittelt insbesondere folgende Alternative Leistungskennzahlen:

- Ergebnis vor Zinsen und Steuern, wird ermittelt als Ergebnis vor Ertragsteuern abzüglich Finanzergebnis („**EBIT**").
- Ergebnis vor Zinsen, Steuern, Abschreibungen, Wertminderungen und Wertaufholungen (*Earnings before Interest, Taxes, Depreciation and Amortization*), wird ermittelt auf Basis des EBIT zuzüglich der in der Berichtsperiode erfolgswirksam erfassten Abschreibungen und Wertminderungen bzw. abzüglich der Wertaufholungen von immateriellen Vermögenswerten und Sachanlagen („**EBITDA**").

- EBIT vor Sondereinflüssen wird definiert als die Summe des EBIT zuzüglich/abzüglich von Sondereinflüssen, d.h. Sonderaufwendungen oder Sondererträge, u.a. in Zusammenhang mit Rechtsfällen, Restrukturierungen, Integrationskosten, Wertminderungen oder Wertaufholungen („**EBIT vor Sondereinflüssen**").
- EBITDA vor Sondereinflüssen wird definiert als die Summe des EBITDA zuzüglich/abzüglich von Sondereinflüssen, d.h. Sonderaufwendungen oder Sondererträge, u.a. in Zusammenhang mit von Rechtsfällen, Restrukturierungen und Integrationskosten („**EBITDA vor Sondereinflüssen**").
- Bereinigtes Konzernergebnis je Aktie (*core earnings per share*, „**Core EPS**") basiert auf dem nach IAS 33 definierten Konzernergebnis je Aktie (*earnings per share*, EPS). Das bereinigte Konzernergebnis je Aktie (*Core EPS*) wird definiert als EBIT zuzüglich/abzüglich Abschreibungen/Wertminderungen/Wertaufholungen auf immaterielle Vermögenswerte, Wertminderungen/Wertaufholungen von Sachanlagen und in den Sondereinflüssen enthaltene beschleunigte Abschreibungen und Sondereinflüsse (ohne beschleunigte Abschreibungen/Wertminderungen/Wertaufholungen) (diese Summe wird als „**Core EBIT**" bezeichnet), zuzüglich/abzüglich Finanzergebnis, Sondereinflüsse im Finanzergebnis, Ertragsteuern, Sondereinflüsse in Ertragsteuern, Steuereffekte bezogen auf Wertminderungen/Wertaufholungen und Sondereinflüsse, Ergebnis nach Ertragsteuern auf nicht beherrschende Anteile entfallend und auf andere Gesellschafter entfallender Anteil der oben dargestellten Anpassungen (diese Summe wird als „**Bereinigtes Konzernergebnis aus fortzuführendem Geschäft**" bezeichnet); dividiert durch die gewichtete durchschnittliche Anzahl der Aktien.
- Nettofinanzverschuldung wird definiert als die Summe der Finanzverschuldung (Anleihen/Schuldscheindarlehen, Verbindlichkeiten gegenüber Kreditinstituten, Leasingverbindlichkeiten, Verbindlichkeiten aus derivativen Finanzinstrumenten, sonstigen Finanzverbindlichkeiten abzüglich Forderungen aus derivativen Finanzinstrumenten) abzüglich Zahlungsmitteln und Zahlungsmitteläquivalenten und kurzfristigen finanziellen Vermögenswerten.
- Return on Capital Employed („**ROCE**") wird definiert als das Verhältnis des operativen Ergebnisses nach Steuern (*Net Operating Profit After Tax,* „**NOPAT**") zum durchschnittlich eingesetzten Kapital („**Capital Employed**"). NOPAT stellt das operative Ergebnis nach Steuern dar und ist die Differenz zwischen EBIT und Ertragsteuern (basierend auf einem Mittelwert historischer Steuersätze von 24%). Das Capital Employed des Konzerns ist der Gesamtbuchwert des operativen Anlage- und Umlaufvermögens abzüglich Verbindlichkeiten, die im Wesentlichen nicht zinstragender Natur sind oder die operative Kapitalbasis verzerren würden. Zur Abbildung der unterjährigen Veränderung des Capital Employed wird ein Durchschnittswert genutzt, der sich aus den Werten zum Jahresende des Vorjahres sowie des aktuellen Geschäftsjahres ermittelt.
- Währungsbereinigte Umsatzveränderung wird definiert als die prozentuale Veränderung der Umsatzerlöse ohne den Einfluss von Wechselkurseffekten und währungs- und portfoliobereinigte Umsatzveränderung wird definiert als die prozentuale Veränderung der Umsatzerlöse ohne den Einfluss von Wechselkurseffekten und ohne die für die jeweilige Geschäftseinheit wesentlichen Akquisitionen und Desinvestitionen. Bei Wechselkurseffekten wird grundsätzlich die im jeweiligen Land gültige funktionale Währung zur Berechnung herangezogen. Davon abweichend wird in Brasilien und Argentinien, hauptsächlich bei Crop Protection, aus geschäftsbedingten Gründen eine Anpassung der jeweiligen funktionalen Währung an den U.S. Dollar vorgenommen.

Bayer ist der Ansicht, dass die Alternativen Leistungskennzahlen hilfreich sind um die Vergleichbarkeit der Leistungskennzahlen im Zeitablauf bzw. im Branchenvergleich zu ermöglichen. Darüber hinaus könnten einzelne Alternative Leistungskennzahlen dabei nützlich sein, Bayers erwirtschaftete Leistung zu bewerten, seine periodische Kapitalrückführung oder generell seine Liquidität, Kapitalstruktur und finanzielle Flexibilität zu messen. Im Einzelnen verwendet Bayer die Alternativen Leistungskennzahlen folgendermaßen:

- EBIT wird vom Konzern als Indikator für die Bewertung der erwirtschafteten Leistung des Konzerns verwendet. EBIT eliminiert den Einfluss von Effekten aus international uneinheitlichen Besteuerungssystemen und unterschiedlichen Finanzierungsaktivitäten auf Bayers Betriebsergebnis.
- EBITDA wird vom Konzern als Indikator für die Bewertung der erwirtschafteten Leistung des Konzerns verwendet. EBITDA neutralisiert neben dem Finanzergebnis auch verzerrende Effekte auf die operative Geschäftstätigkeit, die aus unterschiedlichen Abschreibungsmethoden und Bewertungsspielräumen resultieren.
- EBIT vor Sondereinflüssen wird vom Konzern als Indikator für die Bewertung der erwirtschafteten Leistung des Konzerns verwendet. EBIT vor Sondereinflüssen zeigt die Entwicklung des operativen Geschäfts des Konzerns ohne die Effekte von Sondereinflüssen, d.h., Sondereinflüssen hinsichtlich ihrer Natur und Bedeutung für den Konzern.

- EBITDA vor Sondereinflüssen wird vom Konzern als Indikator für die Bewertung der erwirtschafteten Leistung des Konzerns verwendet. EBITDA vor Sondereinflüssen zeigt die Entwicklung des operativen Geschäfts des Konzerns ohne die Effekte von Sondereinflüssen, d.h., Sondereinflüsse hinsichtlich ihrer Natur und Bedeutung für den Konzern.
- Bereinigtes Konzernergebnis je Aktie wird als Indikator für die Bewertung der erwirtschafteten Leistung des Konzerns verwendet, da er die Effekte von Sondereinflüssen neutralisiert und damit die Vergleichbarkeit der Leistung im Zeitablauf ermöglicht.
- Die Nettofinanzverschuldung ist eine wichtige Steuerungskennzahl für den Konzern und wird sowohl intern als auch extern zur Bewertung der Liquidität, Kapitalstruktur und finanziellen Flexibilität verwendet.
- ROCE misst den wirtschaftlichen Erfolg des Konzerns im Verhältnis zum Capital Employed und ergänzt die operativen Vorstandsindikatoren. Als strategischer Indikator misst ROCE die periodische Kapitalrentabilität. Diese kann dann mit den gewichteten durchschnittlichen Kapitalkosten verglichen werden. Die Beobachtung von ROCE im Zeitablauf unterstützt die Analyse der langfristigen Geschäftsentwicklung, während der Portfolioanalyseprozess den Vergleich des ROCE von verschiedenen Geschäftsbereichen beinhaltet.
- Währungsbereinigte Umsatzveränderung wird als Indikator für die Bewertung der erwirtschafteten Leistung des Konzerns verwendet, da sie die Leistung des Konzerns in Bezug auf Umsatzerlöse unter Eliminierung des Einflusses von Wechselkurseffekten auf unsere Umsatzerlöse zeigt. Währungs- und portfoliobereinigte Umsatzveränderung wird auch als Indikator für die Bewertung der erwirtschafteten Leistung des Konzerns verwendet, da sie die Leistung des Konzerns in Bezug auf Umsatzerlöse unter Eliminierung des Einflusses von Wechselkurseffekten und Umsatzerlösen aus Akquisitionen und Desinvestitionen auf unsere Umsatzerlöse zeigt.

Die nachfolgende Tabelle zeigt eine Übersicht einiger Alternativer Leistungskennzahlen des Konzerns für die angegebenen Zeiträume:

	Für das Geschäftsjahr endend zum 31. Dezember				Für den Dreimonatszeitraum endend zum 31. März	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(ungeprüft, sofern nicht anders angegeben) (in Mio. €, sofern nicht anders angegeben)		(ungeprüft, sofern nicht anders angegeben) (in Mio. €, sofern nicht anders angegeben)		(ungeprüft) (in € million, unless otherwise indicated)	
EBIT[4]	6.241	7.042	5.738	5.903	2.427	2.310
EBITDA	9.573	10.785	8.801	8.563	2.999	2.818
EBIT vor Sondereinflüssen[4]	7.060	8.130	6.826	7.130	2.529	2.388
EBITDA vor Sondereinflüssen[4]	10.256	11.302	9.318	9.288	3.054	2.896
Bereinigtes Ergebnis je Aktie aus fortzuführendem Geschäft (in €)	6,82	7,32	6,67	6,74	2,31	2,28
Nettofinanzverschuldung	17.449	11.778	11.778	3.595	10.400	1.650
Return on Capital Employed (ROCE) (in %)[4]	9,9	11,0	10,3	10,8	–	–

(1) Zahlen sind dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen oder aus diesem abgeleitet, welcher Covestro als fortzuführendes Geschäft darstellt.

(2) Zahlen sind den angepassten Vergleichszahlen für das zum 31. Dezember 2016 endende Geschäftsjahr, wie in dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr enthalten, entnommen oder aus diesem abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen.

(3) Zahlen sind aus den angepassten Vergleichszahlen für den zum 31. März 2017 endenden Dreimonatszeitraum abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen, wie sie in dem ungeprüften Zwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum enthalten sind.

(4) Geprüft für die Geschäftsjahre endend zum 31. Dezember 2015, 2016 und 2017.

Überleitung von EBIT und EBITDA

Die nachfolgende Tabelle zeigt eine Überleitung der Alternativen Leistungskennzahlen EBIT und EBITDA des Konzerns für die angegebenen Zeiträume:

	Für das Geschäftsjahr endend zum 31. Dezember				Für den Dreimonatszeitraum endend zum 31. März	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(geprüft, sofern nicht anders angegeben) (in Mio. €)		(geprüft, sofern nicht anders angegeben) (in Mio. €)		(ungeprüft) (in Mio. €)	
Ergebnis vor Ertragsteuern	5.236	5.887	4.773	4.577	2.131	2.440
Finanzergebnis	1.005	1.155	965	1.326	296	(130)
Ergebnis aus at-equity bewerteten Beteiligungen	*9*	*26*	*6*	*(20)*	*7*	*(71)*
Finanzielle Erträge	*(371)*	*(151)*	*(149)*	*(289)*	*(32)*	*(370)*
Finanzielle Aufwendungen	*1.367*	*1.280*	*1.108*	*1.635*	*321*	*311*
EBIT	**6.241**	**7.042**	**5.738**	**5.903**	**2.427**	**2.310**
Abschreibungen und Wertminderungen	3.332	3.743	3.063	2.660	572	508
davon Abschreibungen und Wertminderungen auf immaterielle Vermögenswerte[4]	*1.802*	*2.235*	*2.192*	*1.679*	*341*	*297*
davon Abschreibungen und Wertminderungen auf Sachanlagen[4]	*1.530*	*1.508*	*871*	*981*	*231*	*211*
EBITDA[4]	**9.573**	**10.785**	**8.801**	**8.563**	**2.999**	**2.818**

(1) Zahlen sind dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen oder aus diesem abgeleitet, welcher Covestro als fortzuführendes Geschäft darstellt.

(2) Zahlen sind den angepassten Vergleichszahlen für das zum 31. Dezember 2016 endende Geschäftsjahr, wie in dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr enthalten, entnommen oder aus diesem abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen.

(3) Zahlen sind aus den angepassten Vergleichszahlen für den zum 31. März 2017 endenden Dreimonatszeitraum abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen, wie sie in dem ungeprüften Zwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum enthalten sind.

(4) Ungeprüft.

Überleitung von EBIT vor Sondereinflüssen und EBITDA vor Sondereinflüssen

Die nachfolgende Tabelle zeigt die Überleitung der Alternativen Leistungskennzahlen EBIT vor Sondereinflüssen und EBITDA vor Sondereinflüssen des Konzerns für die angegebenen Zeiträume:

	Für das Geschäftsjahr endend zum 31. Dezember				Für den Dreimonatszeitraum endend zum 31. März	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(geprüft) (in Mio. €)		(geprüft) (in Mio. €)		(ungeprüft) (in Mio. €)	
EBIT	**6.241**	**7.042**	**5.738**	**5.903**	**2.427**	**2.310**
davon EBIT der Segmente	*6.740*	*7.406*	*6.102*	*6.389*	*2.567*	*2.417*
davon EBIT von Corporate Functions und Konsolidierung	*(499)*	*(364)*	*(364)*	*(486)*	*(140)*	*(107)*
Sondereinflüsse	**819**	**1.088**	**1.088**	**1.227**	**102**	**78**
davon Sondereinflüsse der Segmente	*792*	*1.068*	*1.068*	*1.190*	*100*	*75*
davon Sondereinflüsse von Corporate Functions und Konsolidierung	*27*	*20*	*20*	*37*	*2*	*3*
EBIT vor Sondereinflüssen	**7.060**	**8.130**	**6.826**	**7.130**	**2.529**	**2.388**
davon EBIT vor Sondereinflüssen der Segmente	*7.532*	*8.474*	*7.170*	*7.579*	*2.667*	*2.492*
davon EBIT vor Sondereinflüssen von Corporate Functions und Konsolidierung	*(472)*	*(344)*	*(344)*	*(449)*	*(138)*	*(104)*
Abschreibungen, Wertminderungen, Wertaufholungen vor Sondereinflüssen	**3.196**	**3.172**	**2.492**	**2.158**	**525**	**508**
davon Abschreibungen, Wertminderungen, Wertaufholungen vor Sondereinflüssen von Segmenten	*3.190*	*3.166*	*2.486*	*2.145*	*522*	*504*
davon Abschreibungen, Wertminderungen, Wertaufholungen vor Sondereinflüssen von Corporate Functions und Konsolidierung	*6*	*6*	*6*	*13*	*3*	*4*
EBITDA vor Sondereinflüssen	**10.256**	**11.302**	**9.318**	**9.288**	**3.054**	**2.896**
davon EBITDA vor Sondereinflüssen der Segmente	*10.722*	*11.640*	*9.656*	*9.724*	*3.189*	*2.996*
davon EBITDA vor Sondereinflüssen von Corporate Functions und Konsolidierung	*(466)*	*(338)*	*(338)*	*(436)*	*(135)*	*(100)*

(1) Zahlen sind dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen, welcher Covestro als fortzuführendes Geschäft darstellt.

(2) Zahlen sind den angepassten Vergleichszahlen für das zum 31. Dezember 2016 endende Geschäftsjahr, wie in dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr enthalten, entnommen, welche Covestro als nicht fortgeführtes Geschäft darstellen.

(3) Zahlen sind aus den angepassten Vergleichszahlen für den zum 31. März 2017 endenden Dreimonatszeitraum abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen, wie sie in dem ungeprüften Zwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum enthalten sind.

Ausgewählte Kennzahlen nach Segmenten des Bayer-Konzerns

Die nachfolgende Tabelle zeigt für die jeweils angegebenen Zeiträume eine Übersicht ausgewählter Kennzahlen geordnet nach Segment. Nach der Entkonsolidierung von Covestro bestehen die fortgeführten Geschäfte des Bayer Konzerns aus den Geschäften der Pharmaceuticals, Consumer Health, Crop Science und Animal Health Segmente sowie aus der Überleitung. Vor der Entkonsolidierung von Covestro wurden diese zusammen als „**Life Sciences**" bezeichnet und die Zwischensumme für Life Sciences wurde separat berichtet.

	Für das Geschäftsjahr endend zum 31. Dezember				Für den Dreimonatszeitraum endend zum 31. März	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(geprüft, sofern nicht anders angegeben)		(geprüft, sofern nicht anders angegeben)		(ungeprüft)	
	(in Mio. €)		(in Mio. €)		(in Mio. €)	
Außenumsatzerlöse						
Pharmaceuticals	15.308	16.420	16.420	16.847	4.263	4.075
Consumer Health	6.076	6.037	6.037	5.862	1.601	1.409
Crop Science	10.128	9.915	9.915	9.577	3.120	2.861
Animal Health	1.490	1.523	1.523	1.571	440	414
Überleitung[4]	1.101	1.048	1.048	1.158	256	379
Life Sciences	**34.103**	**34.943**	–	–	–	–
Covestro	11.982	11.826	–	–	–	–
Konzern	**46.085**	**46.769**	**34.943**	**35.015**	**9.680**	**9.138**
EBIT[5]						
Pharmaceuticals	3.028	3.389	3.389	4.325	1.219	1.163
Consumer Health	768	695	695	518	278	211
Crop Science	2.094	1.755	1.755	1.235	970	892
Animal Health	254	313	313	307	126	129
Überleitung[4]	(538)	(414)	(414)	(482)	(166)	(85)
Life Sciences	**5.606**	**5.738**	–	–	–	–
Covestro	635	1.304	–	–	–	–
Konzern	**6.241**	**7.042**	**5.738**	**5.903**	**2.427**	**2.310**
EBITDA vor Sondereinflüssen[5]						
Pharmaceuticals	4.616	5.251	5.251	5.711	1.502	1.415
Consumer Health	1.456	1.411	1.411	1.231	392	313
Crop Science	2.406	2.421	2.421	2.043	1.115	1.042
Animal Health	347	349	349	381	135	139
Überleitung[4]	(228)	(114)	(114)	(78)	(90)	(13)
Life Sciences	**8.597**	**9.318**	–	–	–	–
Covestro	1.659	1.984	–	–	–	–
Konzern	**10.256**	**11.302**	**9.318**	**9.288**	**3.054**	**2.896**

(1) Zahlen sind dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen oder aus diesem abgeleitet, welcher Covestro als fortzuführendes Geschäft darstellt.

(2) Zahlen sind den angepassten Vergleichszahlen für das zum 31. Dezember 2016 endende Geschäftsjahr, wie in dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr enthalten, entnommen oder aus diesem abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen.

(3) Zahlen sind aus den angepassten Vergleichszahlen für den zum 31. März 2017 endenden Dreimonatszeitraum abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen, wie sie in dem ungeprüften Zwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum enthalten sind.

(4) Ungeprüft. Die Überleitung beinhaltet Geschäftsaktivitäten, die keinem anderen Segment zugeordnet werden können und unter „Alle sonstigen Segmente" ausgewiesen werden. Hierzu zählen vor allem die Dienstleistungen der Servicebereiche Business Services, Technology Services und Currenta. Beinhaltet ebenso Positionen, die in „Corporate Functions und Konsolidierung" ausgewiesen werden; hierzu zählen vor allem Bayer-Holding-Gesellschaften und Leaps by Bayer (ehemals: Bayer Lifescience Center) sowie die Mehr- oder Minderaufwendungen aus einer höheren oder niedrigeren Performance der Bayer-Aktie im Rahmen der konzernweiten langfristigen aktienbasierten Vergütung sowie die Konsolidierung der Intersegment-Umsatzerlöse.

(5) Von Bayer verwendete Alternative Leistungskennzahl; weitere Informationen siehe oben „*Zusätzliche Kennzahlen des Bayer-Konzerns*".

Ausgewählte Kennzahlen nach Regionen des Bayer-Konzerns

Die nachfolgende Tabelle zeigt für die jeweils angegebenen Zeiträume eine Übersicht unserer Außenumsatzerlöse nach Regionen:

	Für das Geschäftsjahr endend zum 31. Dezember				Für den Dreimonatszeitraum endend zum 31. März	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(geprüft) (in Mio. €)		(geprüft) (in Mio. €)		(ungeprüft) (in Mio. €)	
Außenumsatzerlöse (nach Verbleib)						
Europa / Nahost / Afrika	17.707	17.823	13.062	13.388	4.000	3.907
Nordamerika	12.621	12.806	10.066	10.143	2.994	2.654
Asien / Pazifik	10.263	11.032	7.413	7.637	1.974	1.927
Lateinamerika	5.494	5.108	4.402	3.847	712	650
Überleitung[4]	–	–	–	–	–	–
Gesamt	**46.085**	**46.769**	**34.943**	**35.015**	**9.680**	**9.138**

(1) Zahlen sind dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2016 endende Geschäftsjahr entnommen, welcher Covestro als fortzuführendes Geschäft darstellt.

(2) Zahlen sind den angepassten Vergleichszahlen für das zum 31. Dezember 2016 endende Geschäftsjahr, wie in dem geprüften Konzernabschluss von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr enthalten, entnommen, welche Covestro als nicht fortgeführtes Geschäft darstellen.

(3) Zahlen sind aus den angepassten Vergleichszahlen für den zum 31. März 2017 endenden Dreimonatszeitraum abgeleitet, welche Covestro als nicht fortgeführtes Geschäft darstellen, wie sie in dem ungeprüften Zwischenabschluss von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum enthalten sind.

(4) Die Überleitung eliminiert Interregionen-Umsatzerlöse und Transaktionen und reflektiert Erträge und Aufwendungen, die den Regionen nicht direkt zuzuordnen sind.

Wesentliche Änderungen der Finanzlage und des Betriebsergebnisses des Emittenten während und nach dem von den historischen Finanzinformationen abgedeckten Zeitraums.

Die folgenden wesentlichen Veränderungen unserer Finanzlage und Betriebsergebnisse haben sich während des Dreimonatszeitraums endend zum 31. März 2018 und 31. März 2017 und in den Geschäftsjahren 2017, 2016 und 2015, ereignet:

Dreimonatszeiträume endend zum 31. März 2018 und zum 31. März 2017

Der Umsatz des Bayer-Konzerns verminderte sich um €542 Millionen bzw. 5,6% von €9.680 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €9.138 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Der Umsatzrückgang des Bayer-Konzerns für den Dreimonatszeitraums endend zum 31. März 2018 ist bedingt durch negative Währungseffekte, einen Rückgang der Verkaufspreise und Portfolioeffekte, die zu einem Umsatzrückgang von 7,5%, 1,2% bzw. 0,1% beitrugen. Diese Effekte wurden teilweise durch einen Anstieg der Absatzmenge um 3,2% kompensiert. Währungs- und portfoliobereinigt erhöhte sich der Umsatz um 2,0% während des Dreimonatszeitraums endend zum 31. März 2018. Das EBIT des Bayer-Konzerns verminderte sich um €117 Millionen bzw. 4,8 % von €2.427 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €2.310 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Die Verringerung des Konzern EBIT während des Dreimonatszeitraums endend zum 31. März 2018 resultierte aus einem verringerten EBIT von Consumer Health, Crop Science und Pharmaceuticals. Das EBIT vor Sondereinflüssen des Bayer-Konzerns verringerte sich um €141 Millionen bzw. 5,6% von €2.529 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €2.388 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Das Ergebnis nach Ertragsteuern (gesamt) verringerte sich um €317 Millionen bzw. 14,0%, von €2.271 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €1.954 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Dies ging im Wesentlichen auf einen Rückgang des Ergebnisses aus fortzuführendem Geschäft zurück, resultierend aus der Entkonsolidierung von Covestro.

Auf Segmentebene trug Pharmaceuticals den größten Anteil zum Konzernumsatz während des Dreimonatszeitraums endend zum 31. März 2018 bei. Der nominale Umsatz von Pharmaceuticals verminderte sich um €188 Millionen bzw. 4,4% von €4.263 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €4.075 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Der Gesamtumsatz unserer Hauptwachstumsprodukte Xarelto™, EYLEA™, Stivarga™, Xofigo™ und Adempas™ zeigte eine starke Entwicklung und erhöhte sich von €1.445 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €1.561 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Consumer Health verzeichnete nominal die höchste prozentuale Umsatzveränderung; der Umsatz verminderte sich um €192 Millionen bzw. 12,0% von €1.601 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €1.409 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Der nominale Umsatz von Crop Science und Animal Health verminderte sich um 8,3% bzw. 5,9%. Währungs- und portfoliobereinigt erhöhte sich der Umsatz von Pharmaceuticals und Animal Health um 2,9% und 3,0%, während sich der Umsatz von Consumer Health und Crop Science um 2,2% bzw. 1,0% verminderte. Auf Segmentebene verzeichnete Consumer Health eine wesentliche Verringerung des EBITDA vor Sondereinflüssen um €79 Millionen bzw. 20,2% von €392 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €313 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Ausschlaggebend für den Rückgang waren geringere Absatzmengen, die im Wesentlichen aus erwarteten vorübergehende Lieferausfällen resultierten sowie aus der erfolgten Umklassifizierung zweier Marken im Hautgesundheitsbereich von verschreibungsfreien zu rezeptpflichtigen Produkten durch die chinesischen Behörden. Während des gleichen Zeitraums verminderte sich das EBITDA vor Sondereinflüssen von Pharmaceuticals und Crop Science um 5,8% bzw. 6,5% und das EBITDA vor Sondereinflüssen von Animal Health erhöhte sich um 3,0%. Beim EBIT registrierte Consumer Health ebenfalls die größte prozentuale Veränderung. Das EBIT von Consumer Health verminderte sich um €67 Millionen bzw. 24,1% von €278 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €211 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Während des gleichen Zeitraums verminderte sich das EBIT von Pharmaceuticals und Crop Science um 4,6% und 8,0%, während sich das EBIT von Animal Health um 2,4% erhöhte.

Die Bilanzsumme blieb zum 31. März 2018 mit €75.394 Millionen konstant im Vergleich zu €75.087 Millionen zum 31. Dezember 2017. Die langfristigen Vermögenswerte gingen um €2.789 Millionen bzw. 6,2% zurück, von €45.014 Millionen zum 31. Dezember 2017 auf €42.225 Millionen zum 31. März 2018. Die Anteile an at-equity bewerteten Beteiligungen reduzierten sich um €1.433 Millionen bzw. 35,8% von €4.007 Millionen zum 31. Dezember 2017 auf €2.574 Millionen zum 31. März 2018, was im Wesentlichen auf einen Verkauf weiterer Covestro-Aktien zurückzuführen war. Die kurzfristigen Vermögenswerte stiegen um €3.096 Millionen bzw. 10,3% von €30.073 Millionen zum 31. Dezember 2017 auf €33.169 Millionen zum 31. März 2018. Die zur Veräußerung gehaltenen Vermögenswerte stiegen um €1.051 Millionen bzw. 50,5% von €2.081 Millionen zum 31. Dezember 2017 auf €3.132 Millionen zum 31. März 2018, vor allem aufgrund des geplanten Verkaufs des Gemüsesaatgutgeschäfts. Das Eigenkapital erhöhte sich um €1.523 Millionen bzw. 4,1% von €36.861 Millionen zum 31. Dezember 2017 auf €38.384 Millionen zum 31. März 2018. Positiv wirkte sich das Ergebnis nach Ertragsteuern mit €1.954 Millionen aus. Währungsdifferenzen, die im sonstigen Ergebnis erfasst sind, reduzierten das Eigenkapital um €382 Millionen. Eine weitere Verringerung um €176 Millionen resultierte aus der Erhöhung der Pensionsrückstellungen, die im sonstigen Ergebnis erfasst wurde. Die Gesamtverbindlichkeiten gingen um €1.216 Millionen bzw. 3,2% von €38.226 Millionen zum 31. Dezember 2017 auf €37.010 Millionen zum 31. März 2018 zurück. Das langfristige Fremdkapital

verminderte sich um €721 Millionen bzw. 2,9%, von €24.633 Millionen zum 31. Dezember 2017 auf €23.912 Millionen zum 31. März 2018, insbesondere aufgrund einer Reduzierung der latenten Steuern. Das kurzfristige Fremdkapital verminderte sich um €495 Millionen bzw. 3,6%, von €13.593 Millionen zum 31. Dezember 2017 auf €13.098 Millionen zum 31. März 2018, insbesondere aufgrund einer Reduzierung der Verbindlichkeiten aus Lieferungen und Leistungen, die u.a. auf das operative Geschäft zurückzuführen war. Die erstmalige Anwendung von IFRS 15 führte darüber hinaus zu Umklassifizierungen von Beträgen, sowohl innerhalb des lang- als auch des kurzfristigen Fremdkapitals.

Der Cashflow aus operativer Tätigkeit (gesamt) verringerte sich um €183 Millionen bzw. 21,8% von €841 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €658 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Der operative Cashflow aus dem fortzuführenden Geschäft erhöhte sich vor allem aufgrund niedrigerer zusätzlicher Mittelbindung im Working Capital um €107 Millionen bzw. 19,4% von €551 Millionen während des Dreimonatszeitraums endend zum 31. März 2017 auf €658 Millionen während des Dreimonatszeitraums endend zum 31. März 2018. Der operative Cashflow aus nicht fortgeführtem Geschäft betrug €290 Millionen (netto) für den Dreimonatszeitraum endend zum 31. März 2017, während in dem Dreimonatszeitraum endend zum 31. März 2018 nicht fortgeführtes Geschäft keinen Cashflow beitrug. Im Vorjahresquartal war Covestro noch enthalten. Der Cashflow aus investiver Tätigkeit betrug €2.058 Millionen während des Dreimonatszeitraums endend zum 31. März 2018, im Vergleich zu €1.136 Millionen während des Dreimonatszeitraums endend zum 31. März 2017. Bayer investierte €3.712 Millionen in kurzfristige finanzielle Vermögenswerte während des Dreimonatszeitraums endend zum 31. März 2018, im Vergleich zu €583 Millionen während des Dreimonatszeitraums endend zum 31. März 2017. Aus dem Verkauf weiterer Covestro-Aktien flossen netto €1.802 Millionen während des Dreimonatszeitraums endend zum 31. März 2018 zu. Die Ausgaben für Sachanlagen und immaterielle Vermögenswerte lagen mit €349 Millionen während des Dreimonatszeitraums endend zum 31. März 2018 um 15,9% niedriger als die €415 Millionen Ausgaben während des Dreimonatszeitraums endend zum 31. März 2017 (welche Investitionen in Höhe von €74 Millionen bei Covestro enthielten). Der Cashflow aus Finanzierungstätigkeit belief sich auf €581 Millionen während des Dreimonatszeitraums endend zum 31. März 2018, im Vergleich zu €611 Millionen während des Dreimonatszeitraums endend zum 31. März 2017. Dieser Betrag enthielt bei unveränderter Vollkonsolidierung einen Cashflow von €1.460 Millionen aus dem Verkauf von Covestro-Aktien.

Geschäftsjahre endend zum 31. Dezember 2017 und zum 31. Dezember 2016

Der Umsatz des Bayer-Konzerns blieb im Geschäftsjahr 2017 nahezu unverändert bei €35.015 Millionen, im Vergleich zu €34.943 Millionen im Geschäftsjahr 2016. Zu dem Umsatz des Bayer-Konzerns trugen höhere Absatzmengen und Portfolioeffekte von 2,3% bzw. 0,1% bei. Die Steigerung der Absatzmengen war vor allem auf Pharmaceuticals zurückzuführen. Zu dem leichten Portfolioeffekt trug das im Januar 2017 von Boehringer Ingelheim Vetmedica, Inc., U.S.A., erworbene Cydectin™-Produktportfolio bei. Die Effekte aus höheren Absatzmengen sowie die Portfolioeffekte wurden teilweise durch negative Währungseffekte und einen leichten Rückgang der Verkaufspreise kompensiert, die den Umsatz um 1,4% bzw. 0,8% verringerten. Währungs- und portfoliobereinigt erhöhte sich der Umsatz um 1,5% im Geschäftsjahr 2017. Das EBIT des Bayer-Konzerns stieg um €165 Millionen bzw. 2,9%, von €5.738 Millionen im Geschäftsjahr 2016 auf €5.903 Millionen im Geschäftsjahr 2017. Die Steigerung des Konzern-EBIT im Geschäftsjahr 2017 resultierte im

Wesentlichen aus einem Anstieg des EBIT von Pharmaceuticals, das durch einen wesentlichen Rückgang des EBIT bei Consumer Health und Crop Science teilweise kompensiert wurde. Das EBIT vor Sondereinflüssen des Bayer-Konzerns erhöhte sich um €304 Millionen, bzw. 4,5%, von €6.826 Millionen im Geschäftsjahr 2016 auf €7.130 Millionen im Geschäftsjahr 2017. Das Ergebnis nach Ertragsteuern (gesamt) erhöhte sich um €3.268 Millionen, oder 67,7%, von €4.826 Millionen im Geschäftsjahr 2016 auf €8.094 Millionen im Geschäftsjahr 2017. Ein Großteil hiervon entfiel auf Erträge, die aus der Entkonsolidierung von Covestro resultierten.

Auf Segmentebene trug Pharmaceuticals den größten Anteil zum Konzernumsatz bei und verzeichnete außerdem das höchste prozentuale währungs- und portfoliobereinigte Umsatzwachstum im Geschäftsjahr 2017 gegenüber dem Geschäftsjahr 2016. Währungs- und portfoliobereinigt erhöhte sich der Umsatz von Pharmaceuticals um 4,3% im Geschäftsjahr 2017, was maßgeblich auf dessen Hauptwachstumsprodukte zurückzuführen war. Der Gesamtumsatz unserer Hauptwachstumsprodukte Xarelto™, EYLEA™, Stivarga™, Xofigo™ und Adempas™ erhöhte sich um €783 Millionen, von €5.413 Millionen im Geschäftsjahr 2016 auf €6.196 Millionen im Geschäftsjahr 2017. Umsätze von Kogenate™ gingen deutlich zurück, insbesondere aufgrund eines geringeren Bestellvolumens des Wirkstoffs durch einen Vertriebspartner vor dem geplanten Auslauf des Vertrags Ende 2017. Auf Segmentebene verzeichnete Animal Health das höchste prozentuale Wachstum bei EBITDA vor Sondereinflüssen im Geschäftsjahr 2017 im Vergleich zu dem Geschäftsjahr 2016. Das EBITDA vor Sondereinflüssen von Animal Health erhöhte sich um €32 Millionen, bzw. 9,2%, von €349 Millionen im Geschäftsjahr 2016 auf €381 Millionen im Geschäftsjahr 2017. Beim EBIT registrierte Pharmaceuticals das höchste prozentuale Wachstum im Geschäftsjahr 2017 im Vergleich zum Geschäftsjahr 2016. Das EBIT von Pharmaceuticals erhöhte sich um beträchtliche €936 Millionen bzw. 27,6% von €3.389 Millionen im Geschäftsjahr 2016 auf €4.325 Millionen im Geschäftsjahr 2017.

Die Bilanzsumme verminderte sich zum 31. Dezember 2017 – insbesondere durch die Entkonsolidierung von Covestro – um €7.151 Millionen von €82.238 Millionen zum 31. Dezember 2016 auf €75.087 Millionen zum 31. Dezember 2017. In Verbindung mit der Vereinbarung mit BASF bezüglich des Ersten BASF Verkaufspaket stiegen die zur Veräußerung gehaltenen Vermögenswerte um €2.071 Millionen. Das Eigenkapital erhöhte sich um €4.964 Millionen bzw. 15,6%, von €31.897 Millionen zum 31. Dezember 2016 auf €36.861 Millionen zum 31. Dezember 2017. Positiv auf Bayers Eigenkapital wirkte sich das Ergebnis nach Ertragsteuern (gesamt) mit €8,1 Milliarden aus, das Effekte aus der Entkonsolidierung von Covestro beinhaltete sowie Effekte aus der Neubewertung der verbleibenden Anteile an der Covestro AG als assoziiertes Unternehmen.

Das Fremdkapital verringerte sich zum 31. Dezember 2017, um €12.115 Millionen, von €50.341 Millionen zum 31. Dezember 2016 auf €38.226 Millionen zum 31. Dezember 2017. Die Rückstellungen für Pensionen und ähnliche Verpflichtungen verringerten sich um €3.114 Millionen bzw. 28,0%, von €11.134 Millionen zum 31. Dezember 2016 auf €8.020 Millionen zum 31. Dezember 2017, €1,2 Milliarden hiervon resultierten aus der Entkonsolidierung von Covestro, weitere €1,2 Milliarden aus versicherungsmathematischen Gewinnen und €0,5 Milliarden aus der Einbringung von Covestro-Aktien in den Bayer Pension Trust e. V. (der „**Bayer Pension Trust**“). Die langfristigen Finanzverbindlichkeiten reduzierten sich um €3.697 Millionen bzw. 22,8%, von €16.180 Millionen zum 31. Dezember 2016 auf €12.483 Millionen zum 31. Dezember 2017, wobei ein Rückgang von €1,8 Milliarden aus Desinvestitionen im Wesentlichen aus der Entkonsolidierung von Covestro resultierte. Dieser Rückgang wurde teilweise durch einen Anstieg

der langfristigen Finanzverbindlichkeiten kompensiert, insbesondere aufgrund der Emission einer Umtauschanleihe mit einem Nominalwert von €1,0 Milliarden am 14. Juni 2017 (die „**Umtauschanleihe**").

Der Cashflow aus operativer Geschäftstätigkeit (gesamt) verringerte sich um €955 Millionen bzw. 10,5%, von €9.089 Millionen im Geschäftsjahr 2016 auf €8.134 Millionen im Geschäftsjahr 2017. Die €9.089 Millionen im Geschäftsjahr 2016 enthielten einen Zufluss aus dem Verkauf des Diabetes-Care-Geschäfts (das „**Diabetes-Care-Geschäft**"). Ein Anstieg des Cashflow aus operativer Geschäftstätigkeit um €176 Millionen bzw. 2,7%, von €6.435 Millionen im Geschäftsjahr 2016 auf €6.611 Millionen im Geschäftsjahr 2017, entfiel auf das fortzuführende Geschäft dank eines verbesserten EBIT und einer verringerten Mittelbindung im Working Capital. Der Cashflow aus operativer Geschäftstätigkeit aus fortzuführendem Geschäft enthält den operativen Anteil der von Dow Chemical erhaltenen Zahlungen im Rahmen eines Patentrechtsstreites. Der Cashflow aus nicht fortgeführtem Geschäft verringerte sich um €1.131 Millionen bzw. 42,6%, von €2.654 Millionen im Geschäftsjahr 2016 auf €1.523 Millionen im Geschäftsjahr 2017. Im Rahmen der investiven Tätigkeit flossen im Jahr 2017 insgesamt €432 Millionen ab, im Vergleich zu €8.729 Millionen im Geschäftsjahr 2016. Die Ausgaben für Sachanlagen und immaterielle Vermögenswerte sanken um 8,2% auf €2.366 Millionen im Geschäftsjahr 2017 ab, im Vergleich zu €2.578 Millionen im Geschäftsjahr 2016. Im Rahmen der Finanzierungstätigkeit flossen im Jahr 2017 Mittel in Höhe von €1.881 Millionen ab, im Vergleich zu €350 Millionen im Geschäftsjahr 2016. Aus dem Verkauf von Covestro-Aktien flossen uns im Geschäftsjahr 2017 Erlöse von €3.717 Millionen zu, während sich Nettodarlehensrückzahlungen auf €2.479 Millionen beliefen, gegenüber €730 Millionen im Geschäftsjahr 2016.

Geschäftsjahre endend zum 31. Dezember 2016 und zum 31. Dezember 2015

Der Umsatz des Bayer-Konzerns erhöhte sich um €684 Millionen, oder 1,5%, von €46.085 Millionen im Geschäftsjahr 2015 auf €46.769 Millionen im Geschäftsjahr 2016. Das Wachstum des Konzernumsatzes im Geschäftsjahr 2016 basierte im Wesentlichen auf höheren Absatzmengen, die zu einem Umsatzwachstum von 4,2% beitrugen. Die Steigerung der Absatzmengen war vor allem auf Pharmaceuticals und Covestro zurückzuführen. Die positiven Effekte aus höheren Absatzmengen wurden teilweise durch negative Währungseffekte und einen Rückgang der Verkaufspreise kompensiert, die den Umsatz jeweils um 2,0% und 0,7% verringerten. Währungs- und portfoliobereinigt erhöhte sich der Umsatz um 3,5% im Geschäftsjahr 2016. Das EBIT des Bayer-Konzerns stieg um €801 Millionen, oder 12,8%, von €6.241 Millionen im Geschäftsjahr 2015 auf €7.042 Millionen im Geschäftsjahr 2016. Die Steigerung des Konzern-EBIT im Geschäftsjahr 2016 resultierte im Wesentlichen aus einem Anstieg des EBIT von Pharmaceuticals und Covestro. Das EBIT vor Sondereinflüssen des Bayer-Konzerns erhöhte sich um €1.070 Millionen, oder 15,2%, von €7.060 Millionen im Geschäftsjahr 2015 auf €8.130 Millionen im Geschäftsjahr 2016.

Auf Segmentebene trug Pharmaceuticals den größten Anteil zum Konzernumsatz bei und verzeichnete außerdem das höchste prozentuale Umsatzwachstum im Geschäftsjahr 2016 gegenüber 2015. Währungs- und portfoliobereinigt erhöhte sich der Umsatz von Pharmaceuticals um 8,7% im Geschäftsjahr 2016, was maßgeblich auf dessen Hauptwachstumsprodukte zurückzuführen war. Der Gesamtumsatz von Xarelto™, EYLEA™, Stivarga™, Xofigo™ und Adempas™ erhöhte sich um €1.182 Millionen von €4.231 Millionen im Geschäftsjahr 2015 auf €5.413 Millionen im Geschäftsjahr 2016. Auf Segmentebene verzeichnete Covestro das höchste prozentuale Wachstum bei EBITDA vor Sondereinflüssen im Geschäftsjahr 2016 im Vergleich zu dem Geschäftsjahr 2015. Das EBITDA vor Sondereinflüssen von Covestro erhöhte

sich um €325 Millionen, oder 19,6%, von €1.659 Millionen im Geschäftsjahr 2015 auf €1.984 Millionen im Geschäftsjahr 2016. Diese Erhöhung war im Wesentlichen auf niedrigere Rohstoffpreise und höhere Verkaufsmengen zurückzuführen, die niedrigere Verkaufspreise sowie einen negativen Währungseffekt überkompensierten. Beim EBIT registrierte ebenfalls Covestro das höchste prozentuale Wachstum im Geschäftsjahr 2016 im Vergleich zum Geschäftsjahr 2015. Das EBIT von Covestro hat sich im Vergleich zum Vorjahr mehr als verdoppelt. Es erhöhte sich um €669 Millionen, von €635 Millionen im Geschäftsjahr 2015 auf €1.304 Millionen im Geschäftsjahr 2016.

Das Eigenkapital des Bayer-Konzerns erhöhte sich um €6.452 Millionen, oder 25,4%, von €25.445 Millionen zum 31. Dezember 2015 auf €31.897 Millionen zum 31. Dezember 2016. Die Erhöhung war im Wesentlichen zurückzuführen auf eine Erhöhung der Kapitalrücklagen durch die Platzierung einer Pflichtwandelanleihe am 22. November 2016 mit einem Nominalwert von €4,0 Milliarden (die „**Pflichtwandelanleihe**"), auf eine Erhöhung der Sonstigen Rücklagen aufgrund des Ergebnisses nach Ertragsteuern sowie auf Währungsdifferenzen, die im sonstigen Ergebnis erfasst sind, die jedoch teilweise durch die Dividendenausschüttung und negative Effekte aus der Veränderung der Pensionsverpflichtungen im Sonstigen Ergebnis vermindert wurden.

Der Cashflow aus operativer Geschäftstätigkeit (gesamt) erhöhte sich um €2.199 Millionen, oder 31,9%, von €6.890 Millionen im Geschäftsjahr 2015 auf €9.089 Millionen im Geschäftsjahr 2016. Hiervon entfiel ein Anstieg von €1.423 Millionen, oder 20,8%, von €6.836 Millionen im Geschäftsjahr 2015 auf €8.259 Millionen im Geschäftsjahr 2016 auf das fortzuführende Geschäft. Das nicht fortgeführte Geschäft trug zu einer Erhöhung des Cashflows (gesamt) in Höhe von €776 Millionen bei, das im Wesentlichen aus dem Verkauf des Diabetes-Care-Geschäfts stammte. Die Erhöhung des Cashflows aus operativer Geschäftstätigkeit (gesamt) basierte größtenteils auf der signifikanten Verbesserung des EBITDA und einer deutlich verringerten zusätzlichen Mittelbindung im Working Capital und auf dem Mittelzufluss aus dem Verkauf des Diabetes-Care-Geschäfts. Die Ausgaben (gesamt) für investive Tätigkeit im Geschäftsjahr 2016 betrugen €8.729 Millionen, im Vergleich zu €2.762 Millionen im Geschäftsjahr 2015. Der Mittelabfluss für kurz- und langfristige finanzielle Vermögenswerte, vor allem als kurzfristige Geldanlage der Mittelzuflüsse aus der Pflichtwandelanleihe, betrug €6.335 Millionen im Geschäftsjahr 2016, im Vergleich zu €370 Millionen im Geschäftsjahr 2015.

Aktuelle Entwicklungen

Im April 2018 zeichnete eine Tochtergesellschaft der Investmentgesellschaft Temasek Holdings (Private) Limited, Singapur, deren Alleinaktionärin die Regierung von Singapur ist, 31 Millionen neue Aktien von Bayer AG, ausgegeben aus dem genehmigten Kapital der Gesellschaft, was einem Anteil von ca. 3,6% des erhöhten gezeichneten Kapitals der Bayer AG entspricht, für Gesamtbruttoerlöse von €3,0 Milliarden (das „**Temasek Investment**").

Am 3. Mai 2018 verkaufte Bayer 28,81 Millionen Covestro-Aktien und damit einen Anteil von 14,2% an der Covestro AG, zu einem Preis von €75,50 pro Aktie, an institutionelle Investoren. Die Nettoerlöse aus dem Verkauf beliefen sich auf €2,2 Milliarden und wurden verwendet um die Zusagen unter der Syndizierten Kreditlinie (wie unter B.8 definiert) zu reduzieren. Nach dem Kauf von Covestro-Aktien vom Bayer Pension Trust im Mai 2018 hält Bayer nun 6,8% der Covestro-Aktien, welche es zur Bedienung der in 2020 fällig werdenden Umtauschanleihe zu verwenden beabsichtigt. Nach dieser Transaktion wird Bayers verbleibender Anteil an Covestro zum beizulegenden Zeitwert bilanziert.

Am 31. Mai 2018 wurden alle Vollzugsbedingungen, die zur Erfüllung des Vollzugs der Transaktion erforderlich waren (mit Ausnahme der Bedingungen, die ihrer Art nach erst zum Vollzug der Transaktion erfüllt sein müssen), einschließlich des Erhalts der notwendigen kartellrechtlichen und anderen behördlichen

		Freigaben, erfüllt oder auf sie verzichtet, und es wird erwartet, dass die Transaktion am oder um den 7. Juni 2018 abgeschlossen werden wird. In Zusammenhang mit dem Erhalt erforderlicher kartellrechtlicher Genehmigungen für den Abschluss der Transaktion ist Bayer die Transaktionsbezogenen Verkäufe eingegangen, einschließlich dem Zweiten BASF Verkaufspaket im April 2018. Für weitere Informationen, siehe auch „*B.3 Derzeitige Geschäfts- und Haupttätigkeit sowie Hauptmärkte, auf denen der Emittent vertreten ist*“. Soweit nicht zuvor beschrieben, haben sich zwischen dem 31. März 2018 und dem Datum dieses Prospekts keine wesentlichen Änderungen von Bayers Finanzlage, finanzieller Leistung oder Mittelzuflüsse oder von Bayers Handelsposition ergeben.
B.8	**Ausgewählte wesentliche Pro-forma-Finanzinformationen.**	Bayer hat gemäß der Verordnung (EG) Nr. 809/2004 der Europäischen Kommission vom 29. April 2004 Pro-Forma-Finanzinformationen erstellt, um bestimmte Effekte von Bayers schrittweiser Verringerung seines direkten Anteils an Covestro AG über eine Serie von Transaktionen auf derzeit 6,8% (die „**Covestro Verkäufe**“), des Abschlusses der Transaktion einschließlich der Transaktionsbezogenen Verkäufe und der damit verbundenen Finanzierung, aufzuzeigen. Zweck der Pro-Forma-Finanzinformationen, bestehend aus Pro-forma Gewinn- und Verlustrechnungen für das zum 31. Dezember 2017 endende Geschäftsjahr und den zum 31. März 2018 endenden Dreimonatszeitraum, einer Pro-forma Bilanz zum 31. März 2018 und den Pro-forma Erläuterungen (zusammen die „**Pro-forma-Finanzinformationen**“), ist es, die wesentlichen Auswirkungen darzustellen, welche die Covestro Verkäufe sowie Abschluss der Transaktion einschließlich der Transaktionsbezogenen Verkäufe und der damit verbundenen Finanzierung auf Pro-forma Basis hätten • auf die historische Konzern-Gewinn- und Verlustrechnung von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr, wenn die Covestro Verkäufe sowie die Transaktion einschließlich der Transaktionsbezogenen Verkäufe und die verbundene Finanzierung am 1. Januar 2017 stattgefunden hätten, • auf die historische Konzern-Gewinn- und Verlustrechnung von Bayer für den zum 31. März 2018 endenden Dreimonatszeitraum, wenn die Covestro Verkäufe sowie die Transaktion einschließlich der Transaktionsbezogenen Verkäufe und die verbundene Finanzierung am 1. Januar 2017 stattgefunden hätten, • auf die historische Konzern-Bilanz von Bayer zum 31. März 2018, wenn die Covestro Verkäufe sowie die Transaktion einschließlich der Transaktionsbezogenen Verkäufe und die damit verbundene Finanzierung am 31. März 2018 stattgefunden hätten. Die mit der Transaktion verbundene Finanzierung besteht zunächst aus einer syndizierten Kreditlinie in Höhe von US$56,9 Milliarden (€46,2 Milliarden) (die „**Syndizierte Kreditlinie**“), die von Bank of America, N.A., Credit Suisse AG, London Branch, Goldman Sachs Bank U.S.A., Goldman Sachs Lending Partners LLC, HSBC Bank plc, The Hong Kong and Shanghai Banking Corporation Limited und JP Morgan Chase Bank, N.A., London Branch als ursprüngliche Kreditgeber im Zusammenhang mit der Unterzeichnung der Übernahmevereinbarung bereitgestellt wurde. Die Syndizierte Kreditlinie sieht unter anderem vor, dass die Nettoerlöse aus (i) Verkäufen von Vermögenswerten von Bayer, welche zusammen mit den Nettoerlösen aller sonstigen derartigen Veräußerungen, eine Schwelle von €5,0 Milliarden überschreiten, (ii) Kapitalerhöhungen und (iii) Fremdfinanzierungen, für die Vorablösung oder Stornierung der ausstehenden Beträge der Syndizierten Kreditlinie verwendet werden müssen. Für die Zwecke der Pro-forma- Finanzinformationen wird angenommen, dass die Transaktion durch die Syndizierte Kreditlinie, reduziert um die folgenden Positionen, finanziert wird: Nettoerlöse von €3,96 Milliarden (US$4,2 Milliarden) aus der Emission der

Pflichtwandelanleihe, Nettoerlöse von €1,05 Milliarden (US$1,2 Milliarden) aus der Emission der Umtauschanleihe, Nettoerlöse von €3,0 Milliarden (US$3,7 Milliarden) aus dem Temasek Investment, den Anteil der erwarteten Gesamtnettoerlöse aus den Covestro Verkäufen und den Transaktionsbezogenen Verkäufen (zusammen die „**Abverkäufe**"), welcher die in der Syndizierten Kreditlinie festgelegte Schwelle von €5,0 Milliarden überschreitet und €9,8 Milliarden (US$12,0 Milliarden) beträgt sowie Nettoerlöse von €6,0 Milliarden (beinhaltet die dazugehörige Einkommensteuererstattung) (US$7,4 Milliarden) aus diesem Angebot (wie unter C.1 definiert). Für die Zwecke der Pro-forma Finanzinformationen wird angenommen, dass ein Gesamtbetrag von US$28,0 Milliarden (€22,7 Milliarden) unter der Syndizierten Kreditlinie gezogen wurde, um den Kaufpreis in Zusammenhang mit dem Abschluss der Transaktion zu finanzieren. Für die Zwecke der Pro-Forma-Finanzinformationen wurden die US$ Beträge der Syndizierten Kreditlinie in € Beträge und die € Beträge der Erlöse aus dem Angebot in US$ Beträge unter Verwendung des Wechselkurses von US$1,2319 = €1,0 am 31. März 2018 umgerechnet. Da die Nennwährung der Syndizierten Kreditlinie US$ ist und Reduzierungen zu unterschiedlichen Zeiten und €/US$ Wechselkursen erfolgten, wurden die Reduktionen der Syndizierten Kreditlinie auf Basis der US$ Beträge berechnet. In Folge dessen wurde der verbleibende Betrag der Syndizierten Kreditlinie für die Zwecke der Pro-Forma-Finanzinformationen mit einem Wechselkurs am 31. März 2018 in € umgerechnet. Dadurch können sich Abweichungen zu den an anderen Stellen im Prospekt dargestellten Angaben zu den € Beträgen der Syndizierten Kreditlinie bzw. den US$ Beträgen der Erlöse aus dem Angebot ergeben, welche zu einem anderen Wechselkurs umgerechnet wurden, siehe „*E.2a Gründe für das Angebot, Zweckbestimmung der Erlöse, geschätzte Nettoerlöse*".

Die gezeigten Pro-forma Anpassungen im Hinblick auf die Covestro Verkäufe beinhalten die Bilanzierung von Covestro als ein sonstiger finanzieller Vermögenswert, unter Anwendung von Bayers derzeitigem Anteil von 6,8% seit dem 1. Januar 2017. Die gezeigten Pro-forma Anpassungen im Hinblick auf die Transaktion einschließlich der Transaktionsbezogenen Verkäufe und die verbundene Finanzierung beinhalten (i) die Eliminierung von Geschäftstransaktionen zwischen Bayer und Monsanto, (ii) die Darstellung der Transaktion unter Verwendung der Erwerbsmethode für den Unternehmenszusammenschluss gemäß IFRS 3, (iii) die Eliminierung von mit den Transaktionsbezogenen Verkäufen verbundenen Erträgen und Aufwendungen sowie Vermögenswerten und Verbindlichkeiten und (iv) die Finanzierung der Transaktion durch die Syndizierte Kreditlinie, reduziert um die Nettoerlöse aus der Pflichtwandelanleihe, der Umtauschanleihe, dem Temasek Investment und diesem Angebot (wie unter C.1 definiert) sowie dem betreffenden Anteil der Nettoerlöse aus den Abverkäufen.

Die Pro-forma-Finanzinformationen basieren auf bestimmten Pro-forma Annahmen und dienen ausschließlich illustrativen Zwecken. Die Pro-forma-Finanzinformationen wurden insbesondere unter der Annahme erstellt, dass die Covestro Verkäufe sowie die Transaktion einschließlich der Transaktionsbezogenen Verkäufe und die verbundene Finanzierung für die Zwecke der Pro-forma Gewinn- und Verlustrechnungen am 1. Januar 2017 und die Covestro Verkäufe, die Transaktion einschließlich der Transaktionsbezogenen Verkäufe und die verbundene Finanzierung für die Zwecke der Pro-forma Bilanz am 31. März 2018 stattgefunden haben. Aufgrund ihrer Wesensart beschreiben die Pro-forma-Finanzinformationen lediglich eine hypothetische Situation und spiegeln weder die tatsächliche Vermögens-, Finanz- und Ertragslage von Bayer nach den Covestro Verkäufen und dem Abschluss der Transaktion einschließlich der Transaktionsbezogenen Verkäufe und der verbundenen Finanzierung wider, noch prognostizieren sie die künftige Entwicklung der Vermögens-, Finanz- und Ertragslage von Bayer.

Die Pro-forma-Finanzinformationen sind eine Kombination bestimmter Informationen, die aus den historischen Konzernabschlüssen von Bayer und den historischen Konzernabschlüssen von Monsanto abgeleitet wurden und die vorläufigen Schätzungen unterliegen sowie auf verschiedenen Annahmen basieren – welche alle in den dazugehörigen Pro-forma Erläuterungen beschrieben werden – die Bayer als angemessen ansieht.

Die Pro-forma-Finanzinformationen sind gemeinsam mit dem historischen Konzernabschluss von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr und dem historischen ungeprüften verkürzten Konzernzwischenabschluss für den zum 31. März 2018 endenden Dreimonatszeitraum sowie dem historischen Konzernabschluss von Monsanto für das zum 31. August 2017 endende Geschäftsjahr und den historischen ungeprüften verkürzten Konzernzwischenabschlüssen für die zum 30. November 2016 und 30. November 2017 sowie 28. Februar 2018 endenden Quartale von Monsanto zu lesen.

Bayer AG

Pro-forma Gewinn- und Verlustrechnung für das zum 31. Dezember 2017 endende Geschäftsjahr

	Historische Finanzdaten				Pro-forma Anpass-ungen		Pro-forma Anpassungen		Pro-forma
	Bayer	Abzgl. Covestro[4]	Zzgl. Monsanto	Aggregiert	Covestro	Erläut-erungen	Monsanto	Erläut-erungen	Finanzdaten
	€ Millionen	€ Millionen	€ Millionen	€ Millionen	€ Millionen		€ Millionen		€ Millionen
Umsatzerlöse	**35.015**	–	**12.641**	**47.656**	**–**		**(2.507)**	b,d,h	**45.149**
Herstellungskosten	(11.382)	–	(5.469)	(16.851)	–		(2.285)	a,b,d,g,i	(19.136)
Bruttoergebnis vom Umsatz	**23.633**	–	**7.172**	**30.805**	**–**		**(4.792)**		**26.013**
Vertriebskosten	(11.116)	–	(1.859)	(12.975)	–		205	a,b,i	(12.770)
Forschungs- und Entwicklungskosten	(4.504)	–	(1.409)	(5.913)	–		169	a,b,i	(5.744)
Allgemeine Verwaltungskosten	(2.026)	–	(1.136)	(3.162)	**–**		384	b,i	(2.778)
Sonstige betriebliche Erträge	864	–	770	1.634	**–**		(5)	b	1.629
Sonstige betriebliche Aufwendungen	(948)	–	(662)	(1.610)	–		99	i	(1.511)
EBIT	**5.903**	–	**2.875**	**8.778**	**–**		**(3.940)**		**4.838**
Ergebnis aus at-equity bewerteten Beteiligungen	20	51	(15)	(46)	–		–		(46)
Finanzielle Erträge	289	–	979	1.268	**19**	a	–		1.287
Finanzielle Aufwendungen	(1.635)	–	(1.273)	(2.908)	–		(577)	c,e,j,k	(3.485)
Finanzergebnis	**(1.326)**	51	**(309)**	**(1.686)**	**19**		**(577)**		**(2.244)**
Ergebnis vor Ertragsteuern	**4.577**	51	**2.567**	**7.093**	**19**		**(4.517)**		**2.595**
Ertragsteuern	(1.329)	(1)	(540)	(1.868)	–		1.120	b,f,g,h,i,j,k	(748)
Ergebnis nach Ertragsteuern aus fortzuführendem Geschäft	**3.248**	50	**2.027**	**5.225**	**19**		**(3.397)**		**1.847**
davon auf nicht beherrschende Anteile entfallend	(1)	–	12	11	**–**				11
davon auf die Aktionäre der Bayer AG entfallend (Konzernergebnis)	**3.249**	50	**2.014**	**5.213**	**19**		**(3.397)**		**1.835**
Ergebnis nach Ertragsteuern aus nicht fortgeführtem Geschäft	**4.846**	**4.468**	–	**378**	–		**–**		**378**
davon auf nicht beherrschende Anteile entfallend	759	759	–	0	–		**–**		–
davon auf die Aktionäre der Bayer AG entfallend (Konzernergebnis)	**4.087**	**3.709**	–	**378**	–		**–**		**378**
Ergebnis nach Ertragsteuern	**8.094**	**4.518**	**2.027**	**5.603**	**19**		**(3.397)**		**2.225**
davon auf nicht beherrschende Anteile entfallend	758	759	12	11	–		–		11
davon auf die Aktionäre der Bayer AG entfallend (Konzernergebnis)	**7.336**	**3.759**	**2.014**	**5.591**	**19**		**(3.397)**		**2.213**
Ergebnis je Aktie aus fortzuführendem Geschäft	€		€		€		€		€
unverwässert	3,73							l	1,88
verwässert	3,73							l	1,88

[4] Zeigt die Eliminierung des auf Covestro entfallenden Ergebnises aus at-equity bewerteten Beteiligungen (€51 Millionen) sowie den resultierenden Steueraufwand (€1 Million), die bereits in Bayers historischen Finanzinformationen erfasst sind und die Eliminierung des Konzernergebnisses von Covestro von €1.459 Millionen, des Gewinns von €519 Millionen resultierend aus der Ausbuchung der Vermögenswerte und Verbindlichkeiten von Covestro, des Gewinns von €2.382 Millionen aus der erstmaligen Einbuchung des verbleibenden Anteils an Covestro als at-equity Beteiligung und einen Gewinn von €187 Millionen aus der Performance der zum 29. September 2017 veräußerten Anteile, sowie des resultierenden Steueraufwands von €79 Millionen, welche unter Ergebnis nach Ertragsteuern aus nicht fortgeführtem Geschäft dargestellt werden.

	Historische Finanzdaten				Pro-forma Anpass-ungen		Pro-forma Anpassungen		Pro-forma
	Bayer	Abzgl. Covestro[10]	Zzgl. Monsanto	Aggregiert	Covestro	Erläut-erungen	Monsanto	Erläut-erungen	Finanzdaten
	€	€	€	€	€		€		€
aus nicht fortgeführtem Geschäft									
unverwässert	4,68								0,38
verwässert	4,68								0,38
aus fortzuführendem und nicht fortgeführtem Geschäft									
unverwässert	8,41							l	2,26
verwässert	8,41							l	2,26

Um die Covestro Verkäufe darzustellen, wurde die folgenden Pro-forma Anpassung mit einem dauerhaften Einfluss vorgenommen:

a) Für die Zwecke der Pro-forma-Finanzinformationen wird Covestro seit dem 1. Januar 2017 als ein sonstiger finanzieller Vermögenswert zum beizulegenden Zeitwert, der im sonstigen Ergebnis erfasst wird, unter Anwendung von Bayers aktuellem Anteil von 6,8% an Covestro, bilanziert. Demnach hat die Veränderung des Zeitwerts keinen Einfluss auf die Pro-forma Gewinn- und Verlustrechnung für das zum 31. Dezember 2017 endende Geschäftsjahr. Von Covestro erhaltene Dividenden von €19 Millionen wurden in Finanzielle Erträge erfasst.

Um die Transaktion darzustellen, wurden die folgenden Pro-forma Anpassungen mit einem dauerhaften Einfluss vorgenommen:

a) Erfassung der Auswirkung des dauerhaften Einflusses der vorgenommenen vorläufigen Kaufpreisallokation. Die vorgenommenen Anpassungen beziehen sich auf die Abschreibung von immateriellen Vermögenswerten in Höhe von €1,553 Millionen, die aus der Zeitwertanpassung („fair value step up“) resultieren. Darüber hinaus wurden Abschreibungen in Höhe von €77 Millionen in Zusammenhang mit der Zeitwertanpassung von Sachanlagen berücksichtigt. Diese Anpassungen der Abschreibungen auf Sachanlagen und immaterielle Vermögenswerte, die sich aus der vorläufigen Kaufpreisallokation ergeben, sind den Herstellungskosten (€1.296 Millionen), den Vertriebskosten (€178 Millionen) und den Forschungs- und Entwicklungskosten (€156 Millionen) zugeordnet.

b) Zeigt die Eliminierung von Erträgen und Aufwendungen in Zusammenhang mit den Geschäftsbereichen die den Transaktionsbezogenen Verkäufen unterliegen. Die Anpassungen bestehen aus der Eliminierung von Umsatzerlösen (€2.232 Millionen), Herstellungskosten (€905 Millionen), Vertriebskosten (€369 Millionen), Forschungs- und Entwicklungskosten (€319 Millionen), Allgemeinen Verwaltungskosten (€110 Millionen), Sonstigen betrieblichen Erträgen (€5 Millionen) und Ertragsteueraufwendungen (€161 Millionen).

c) Zeigt die Reduzierung der Finanziellen Aufwendungen um €4 Millionen, resultierend aus der Auflösung der Zeitwertanpassung der Finanzverbindlichkeiten in Zusammenhang mit der durchgeführten vorläufigen Kaufpreisallokation.

d) Zeigt die Eliminierung von zwischengesellschaftlichen Transaktionen zwischen Bayer und Monsanto (Umsatzerlöse und Herstellungskosten von jeweils €221 Millionen (führt zu einem Rückgang von Umsatzerlösen und Herstellungskosten) sowie die Zwischengewinneliminierung, in Höhe von €4 Millionen (führt zur Erhöhung von Herstellungskosten)).

e) Zeigt die Zinsaufwendungen (inklusive der Abschreibung von Fremdfinanzierungskosten) für die Syndizierte Kreditlinie in Höhe von €919 Millionen, als wäre die Syndizierte Kreditlinie am 1. Januar 2017 gezogen worden.

f) Bilanzierung von Steuereffekten auf Grund der zuvor beschriebenen Anpassungen in a) Steuererträge von €416 Millionen und c) Steueraufwendungen von €1 Millionen sowie e) Steuererträge von €230 Millionen, berechnet unter Anwendung der Steuersätze der betroffenen Einheiten, die für die latenten Steuereffekte auf die vorgenommenen Anpassungen aus der Kaufpreisallokation 23,77% bis 29,4% betragen und dem Mischsteuersatz für Bayer von 25% für die Berechnung von Ertragsteuern und latenten Steuern in Zusammenhang mit der Finanzierung.

Die folgenden Pro-forma Anpassungen mit einem einmaligen Einfluss wurden für die Transaktion vorgenommen:

g) Die Anpassung zeigt die Erhöhung der Herstellungskosten um €2.121 Millionen in Zusammenhang mit der Folgebewertung aus der Zeitwertanpassung der Vorräte im Rahmen der vorläufigen Kaufpreisallokation. Es wird angenommen, dass sich die Anpassung des Vorratsvermögens innerhalb eines Jahres vollständig realisiert (basierend auf der erwarteten Umschlagshäufigkeit der Vorräte). Der resultierende Steuerertrag in Höhe von €537 Millionen wurde ebenfalls berücksichtigt. Der Steuereffekt wurde unter Verwendung des durchschnittlichen Steuersatzes von 25,3% für die latenten Steuereffekte in Zusammenhang mit dieser Anpassung aus der Kaufpreisallokation berechnet.

h) Die Anpassung zeigt den Rückgang von Umsatzerlösen um €54 Millionen in Zusammenhang mit der Folgebewertung aus der Zeitwertanpassung („fair value step down") der Rechnungsabgrenzungen. Es wird angenommen, dass die Anpassung innerhalb eines Jahres vollständig realisiert wird. Die damit verbundene Erhöhung der Steuererträge in Höhe von €15 Millionen wurde ebenfalls berücksichtigt. Der Steuereffekt wurde unter Anwendung eines Mischsteuersatzes von 27% für die latenten Steuerauswirkungen in Zusammenhang mit dieser Anpassung aus der Kaufpreisallokation berechnet.

i) Zeigt die Eliminierung bereits gebuchter einmaliger erwerbsbezogener Aufwendungen für Bayer in Höhe von €304 Millionen (davon €10 Millionen als Herstellungskosten erfasst, €6 Millionen als Forschungs- und Entwicklungskosten erfasst, €14 Millionen als Vertriebskosten erfasst und €274 Millionen als Allgemeine Verwaltungskosten erfasst) und für Monsanto in Höhe von €99 Millionen (als Sonstige betriebliche Aufwendungen erfasst) hinsichtlich der Transaktion, welche nicht entstanden wären, wäre die Transaktion schon am 1. Januar 2017 abgeschlossen gewesen. Es wird angenommen, dass diese erwerbsbezogenen Aufwendungen steuerlich abzugsfähig sind. Bei Anwendung eines Steuersatzes von 31,2% für Bayers erwerbsbezogene Aufwendungen und eines Steuersatzes von 38,25% für Monsantos erwerbsbezogene Aufwendungen beläuft sich die Anpassung des Steueraufwands auf €133 Millionen.

j) Zeigt die Eliminierung einmaliger Aufwendungen und Bereitstellungsprovisionen für die Syndizierte Kreditlinie in Höhe von €214 Millionen, die in Bayers historischen Finanzinformationen als Finanzielle Aufwendungen erfasst werden. Bei der Anwendung eines durchschnittlichen Steuersatzes von 30,8% beläuft sich die entsprechende Anpassung des Steueraufwandes auf €66 Millionen.

k) Zeigt die Eliminierung eines Aufwands in Höhe von €124 Millionen aus der Devisenabsicherung, die gegen Schwankungen des Euro/US$ Wechselkurses im Zusammenhang mit dem Kaufpreis für Monsanto eingegangen worden ist (*foreign exchange hedges*) und als Finanzielle Aufwendungen erfasst werden. Die damit verbundene Steueranpassung führt zu einem Aufwand in Höhe von €39 Millionen, bei Anwendung eines Steuersatzes von 31,2%.

Pro-Forma Ergebnis je Aktie („**EPS**") in den Pro-forma Finanzinformationen:

l) Das Ergebnis je Aktie in den Pro-forma Finanzinformationen wurde unter der Annahme berechnet, dass die theoretische gewichtete durchschnittliche Anzahl an Aktien 977.711.964 beträgt. Die Pro-forma Finanzinformationen unterstellen, dass das Temasek Investment und das Angebot am 1. Januar 2017 vollzogen wurden und daraus resultierend sich die gewichtete durchschnittliche Anzahl der Aktien der Bayer AG von 872.107.808, wie in dem Konzernabschluss von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr berichtet, um 31.000.000 Aktien durch das Temasek Investment und 74.604.156 Aktien durch das Angebot erhöht hat.

Bayer AG

Pro-forma Gewinn- und Verlustrechnung für den zum 31. März 2018 endenden Dreimonatszeitraum

	Historische Finanzdaten				Pro-forma Anpass-ungen		Pro-forma Anpassungen		Pro-forma
	Bayer	Abzgl. Covestro[5]	Zzgl. Monsanto	Aggregiert	Covestro	Erläut-erungen	Monsanto	Erläut-erungen	Finanzdaten
	€ Millionen	€ Millionen	€ Millionen	€ Millionen	€ Millionen		€ Millionen		€ Millionen
Umsatzerlöse	**9.138**	–	**3.895**	**13.033**	**–**		**(960)**	b,d	**12.073**
Herstellungskosten	(2.909)	–	(1.528)	(4.437)	–		59	a,b,d,g	(4.378)
Bruttoergebnis vom Umsatz	**6.229**	–	**2.366**	**8.595**	**–**		**(901)**		**7.694**
Vertriebskosten	(2.509)	–	(418)	(2.927)	–		50	a,b,g	(2.877)
Forschungs- und Entwicklungskosten	(1.040)	–	(319)	(1.359)	–		55	a,b,g	(1.304)
Allgemeine Verwaltungskosten	(427)	–	(230)	(657)	**–**		59	b,g	(598)
Sonstige betriebliche Erträge	152	–	98	250	**–**		(5)	b	245
Sonstige betriebliche Aufwendungen	(95)	–	(89)	(184)	–		20	g	(164)
EBIT	**2.310**	–	**1.408**	**3.718**	**–**		**(722)**		**2.996**
Ergebnis aus at-equity bewerteten Beteiligungen	71	80	(5)	(14)	–		–		(14)
Finanzielle Erträge	370	275	216	311	**–**		–		311
Finanzielle Aufwendungen	(311)	–	(310)	(621)	(85)	a	(143)	c,e,h	(849)
Finanzergebnis	**130**	**355**	**(99)**	**(324)**	**(85)**		**(143)**		**(552)**
Ergebnis vor Ertragsteuern	**2.440**	**355**	**1.309**	**3.394**	**(85)**		**(865)**		**2.444**
Ertragsteuern	(494)	(5)	(254)	(743)	–		206	b,f,g,h	(537)
Ergebnis nach Ertragsteuern aus fortzuführendem Geschäft	**1.946**	350	**1.054**	**2.650**	**(85)**		**(659)**		**1.906**
davon auf nicht beherrschende Anteile entfallend	–	–	3	3					3
davon auf die Aktionäre der Bayer AG entfallend (Konzernergebnis)	**1.946**	**350**	**1.051**	**2.647**	**(85)**		**(659)**		**1.903**
Ergebnis nach Ertragsteuern aus nicht fortgeführtem Geschäft	**8**	**8**	–	**–**	–		**–**		**–**
davon auf nicht beherrschende Anteile entfallend	–	–	–	–	–		**–**		–
davon auf die Aktionäre der Bayer AG entfallend (Konzernergebnis)	**8**	**8**	–	**–**	–		**–**		**–**
Ergebnis nach Ertragsteuern	**1.954**	**358**	**1.054**	**2.650**	**(85)**		**(659)**		**1.906**
davon auf nicht beherrschende Anteile entfallend	–	–	3	3	–		–		3
davon auf die Aktionäre der Bayer AG entfallend (Konzernergebnis)	**1.954**	**358**	**1.051**	**2.647**	**(85)**		**(659)**		**1.903**
	€		€		€		€		€
Ergebnis je Aktie	€		€		€		€		€
aus fortzuführendem Geschäft									
unverwässert	2,23		–	**–**	–		–	i	1,95
verwässert	2,23		–	**–**	–		–	i	1,95
aus nicht fortgeführtem Geschäft									
unverwässert	0,01		–	**–**	–		–		–
verwässert	0,01		–	**–**	–		–		–

[5] Zeigt die Eliminierung des auf Covestro entfallenden Ergebnisses aus at-equity bewerteten Beteiligungen (€80 Millionen) sowie den resultierenden Steueraufwand (€1 Million), die bereits in Bayers historischen Finanzinformationen erfasst sind, die Eliminierung des Gewinns von €10 Millionen aus der Performance der zum 29. September 2017 veräußerten Anteile, sowie den resultierenden Steueraufwand von €2 Millionen, welche im Ergebnis nach Ertragsteuern aus nicht fortgeführtem Geschäft dargestellt sind und die Eliminierung des Gewinns von €275 Millionen sowie den resultierenden Steueraufwand von €4 Millionen aus dem Verkauf von Covestro-Aktien in Januar 2018.

	Historische Finanzdaten				Pro-forma Anpass-ungen		Pro-forma Anpassungen		
	Bayer	Abzgl. Covestro	Zzgl. Monsanto	Aggregiert	Covestro	Erläut-erungen	Monsanto	Erläut-erungen	Pro-forma Finanzdaten
	€	€	€	€	€		€		€
aus fortzuführendem und nicht fortgeführtem Geschäft									
unverwässert	2,24		–	–	–		–	i	1,95
verwässert	2,24		–	–	–		–	i	1,95

Um die Covestro Verkäufe darzustellen, wurde die folgende Pro-forma Anpassung mit einem dauerhaften Einfluss vorgenommen:

a) Für die Zwecke der Pro-forma-Finanzinformationen wird Covestro seit dem 1. Januar 2018 als ein sonstiger finanzieller Vermögenswert erfolgswirksam zum beizulegenden Zeitwert („fair value through profit or loss"), unter Anwendung von Bayers aktuellem Anteil von 6,8% an Covestro, bilanziert. Folglich wurde die Veränderung im Zeitwert des sonstigen finanziellen Vermögenswert um €85 Millionen in Finanziellen Aufwendungen erfasst.

Die folgenden Pro-forma Anpassungen mit einem dauerhaften Einfluss wurden für die Transaktion vorgenommen:

a) Erfassung der Auswirkung der dauerhaften Einflüsse der durchgeführten vorläufigen Kaufpreisallokation. Die vorgenommenen Anpassungen beziehen sich auf die Abschreibung von immateriellen Vermögenswerten in Höhe von €360 Millionen, welche aus der Zeitwertanpassung („fair value step up") resultieren. Des Weiteren sind Abschreibungen in Höhe von €18 Millionen in Zusammenhang mit der Zeitwertanpassung von Sachanlagen berücksichtigt. Diese Anpassungen der Abschreibungen auf Sachanlagen und immaterielle Vermögenswerte, die sich aus der Kaufpreisallokation ergeben, sind den Herstellungskosten (€299 Millionen), den Vertriebskosten (€44 Millionen) und den Forschungs- und Entwicklungskosten (€35 Millionen) zugeordnet.

b) Zeigt die Eliminierung von Erträgen und Aufwendungen in Zusammenhang mit den Geschäftsbereichen die den Transaktionsbezogenen Verkäufen unterliegen. Die Anpassungen bestehen aus der Eliminierung von Umsatzerlösen (€904 Millionen), Herstellungskosten (€301 Millionen), Vertriebskosten (€90 Millionen), Forschungs- und Entwicklungskosten (€87 Millionen), Allgemeinen Verwaltungskosten (€9 Millionen), Sonstigen betrieblichen Erträgen (€5 Millionen) und Ertragsteueraufwendungen (€113 Millionen).

c) Zeigt die Reduzierung der Finanziellen Aufwendungen um €1 Million, resultierend aus der Abschreibung auf die Zeitwertanpassung der Finanzverbindlichkeiten in Zusammenhang mit der durchgeführten vorläufigen Kaufpreisallokation.

d) Zeigt die Eliminierung von zwischengesellschaftlichen Transaktionen zwischen Bayer und Monsanto (Umsatzerlöse und Herstellungskosten von jeweils €56 Millionen (führt zu einem Rückgang von Umsatzerlösen und Herstellungskosten) sowie die Zwischengewinneliminierung, in Höhe von €2 Millionen (führt zur Erhöhung von Herstellungskosten)).

e) Zeigt die Zinsaufwendungen (inklusive der Abschreibung von Fremdfinanzierungskosten) für die Syndizierte Kreditlinie in Höhe von €209 Millionen, als wäre die Syndizierte Kreditlinie am 1. Januar 2017 gezogen worden.

f) Bilanzierung von Steuereffekten auf Grund der zuvor beschriebenen Anpassungen in a) Steuererträge von €85 Millionen und c) Steueraufwendungen von €0 Millionen sowie e) Steuererträge von €52 Millionen, berechnet unter Anwendung der Steuersätze der betroffenen Einheiten, die für die latenten Steuereffekte auf die vorgenommenen Anpassungen aus der Kaufpreisallokation 23,77% bis 29,4% betragen und dem Mischsteuersatz für Bayer von 25% für die Berechnung von Ertragsteuern und latenten Steuern in Zusammenhang mit der Finanzierung.

Die folgenden Pro-forma Anpassungen mit einem einmaligen Einfluss wurden für die Transaktion vorgenommen:

g) Zeigt die Eliminierung bereits gebuchter einmaliger erwerbsbezogener Aufwendungen für Bayer in Höhe von €58 Millionen (davon €2 Millionen als Herstellungskosten erfasst, €3 Millionen als Forschungs- und Entwicklungskosten erfasst, €3 Millionen als Vertriebskosten erfasst und €50 Millionen als Allgemeine Verwaltungskosten erfasst) und für Monsanto in Höhe von €20 Millionen (als Sonstige betriebliche Aufwendungen erfasst) hinsichtlich der Transaktion, welche nicht entstanden wären, wäre die Transaktion schon am 1. Januar 2017 abgeschlossen gewesen. Es wird angenommen, dass diese erwerbsbezogenen

Aufwendungen steuerlich abzugsfähig sind. Bei Anwendung eines Steuersatzes von 31,2% für Bayers erwerbsbezogene Aufwendungen und eines Steuersatzes von 29,4% für Monsantos erwerbsbezogene Aufwendungen beläuft sich die Anpassung des Steueraufwands auf €24 Millionen.

h) Zeigt die Eliminierung einmaliger Aufwendungen und Bereitstellungsprovisionen für die Syndizierte Kreditlinie in Höhe von €65 Millionen, die in Bayers historischen Finanzinformationen erfasst werden. Bei der Anwendung eines Steuersatzes von 31,2% beläuft sich die entsprechende Anpassung des Steueraufwandes auf €20 Millionen.

Pro-Forma Ergebnis je Aktie (EPS) in den Pro-forma Finanzinformationen:

i) Das Ergebnis je Aktie in den Pro-forma Finanzinformationen wurde unter der Annahme berechnet, dass die theoretische gewichtete durchschnittliche Anzahl an Aktien 978.071.964 beträgt. Die Pro-forma Finanzinformationen unterstellen, dass das Temasek Investment und das Angebot am 1. Januar 2017 vollzogen wurden und daraus resultierend sich die gewichtete durchschnitliche Anzahl der Aktien der Bayer AG von 872.467.808, konsistent berechnet auf Basis der Prinzipien wie in Anmerkung 16 des Konzernabschlusses von Bayer für das zum 31. Dezember 2017 endende Geschäftsjahr beschrieben, um 31.000.000 Aktien durch das Temasek Investment und 74.604.156 Aktien durch das Angebot erhöht hat.

Bayer AG
Pro-forma Bilanz zum 31. März 2018

	Historische Finanzdaten				Pro-forma Covestro Anpassungen	Erläuterungen	Pro-forma Monsanto Anpassungen	Erläuterungen	Pro-forma Finanzdaten
	Bayer	Abzüglich Covestro[6]	Monsanto	Aggregiert					
	€ Millionen	€ Millionen	€ Millionen	€ Millionen			€ Millionen		€ Millionen
Langfristige Vermögenswerte									
Geschäfts- oder Firmenwerte	14.480		3.329	17.809	–		18.857	a	36.665
Sonstige immaterielle Vermögenswerte	11.185		1.205	12.390	–		24.528	a	36.919
Sachanlagen	7.330		4.786	12.116	–		1.080	a	13.197
Anteile an at-equity bewerteten Beteiligungen	2.574	2.169	83	488	–		–		488
Sonstige finanzielle Vermögenswerte	1.737		707	2.444	1.100	a	(62)	g	3.483
Sonstige Forderungen	535		306	841	–		–		841
Latente Steuern	4.384		537	4.921	–		108	a,f,h	5.029
	42.225	**2.169**	**10.953**	**51.009**	**1.100**		**44.512**		**96.621**
Kurzfristige Vermögenswerte									
Vorräte	6.402		3.389	9.791	–		1.938	a,b	11.729
Forderungen aus Lieferungen und Leistungen	9.498		3.368	12.866	–		(40)	b	12.826
Sonstige finanzielle Vermögenswerte	7.315		40	7.355	–		–		7.355
Sonstige Forderungen	1.029		630	1.659	–		130	c	1.789
Ertragsteuererstattungsansprüche	461		139	600	–		–		600
Zahlungsmittel und Zahlungsmitteläquivalente	5.332		1.957	7.289	1.042	a	(7.919)	a,c,d,e	412
Zur Veräußerung gehaltene Vermögenswerte	3.132		25	3.157	–		(3.108)	c	49
	33.169	**–**	**9.547**	**42.716**	**1.042**		**(8.999)**		**34.760**
Gesamtvermögen	**75.394**	**2.169**	**20.500**	**93.725**	**2.142**		**35.513**		**131.381**
Eigenkapital									
Gezeichnetes Kapital	2.117		(12.215)	(10.098)	–		12.485	a,d,e	2.387
Kapitalrücklagen	9.658		9.706	19.364	–		(995)	a,d,e	18.369
Sonstige Rücklagen	26.553	(20)	9.473	36.046	(27)	a	(5.786)	a,b,c,e,f,g,h	30.234
Aktionären zurechenbarer Anteil am Eigenkapital	**38.328**	**(20)**	**6.964**	**45.312**	**(27)**		**5.704**		**50.990**
Nicht beherrschende Anteile	56		17	73	–		–		73
	38.384	**(20)**	**6.982**	**45.386**	**(27)**		**5.704**		**51.063**
Langfristiges Fremdkapital									
Provisionsrückstellungen und ähnliche Verpflichtungen	8.096		312	8.408	–		–		8.408
Andere Rückstellungen	1.302		292	1.594	–		257	c	1.851
Rückerstattungsverbindlichkeiten	146		–	146	–		–		146
Vertragsverbindlichkeiten	799		66	865	–		–		865
Finanzverbindlichkeiten	12.273		5.413	17.686	–		22.832	a,e	40.518
Ertragsteuerverbindlichkeiten	482		53	535	–		–		535
Sonstige Verbindlichkeiten	228		79	307	–		–		307
Latente Steuern	586	20	433	999	–		6.641	a,e	7.640
	23.912	**20**	**6.648**	**30.540**	**–**		**29.731**		**60.271**

[6] Zeigt die Eliminierung der Anteile an at-equity bewerteten Beteiligungen von Covestro in Höhe von €2.169 Millionen sowie die damit verbundenen latenten Steuerverbindlichkeiten von €20 Millionen auf sog. Outside Basis Differences auf Covestro mit dem entsprechenden Rückgang in Sonstigen Rücklagen.

	Historische Finanzdaten								
	Bayer	Abzüglich Covestro[12]	Monsanto	Aggregiert	Pro-forma Covestro Anpassungen	Erläuterungen	Pro-forma Monsanto Anpassungen	Erläuterungen	Pro-forma Finanzdaten
	€ Millionen	€ Millionen	€ Millionen	€ Millionen			€ Millionen		€ Millionen
Kurzfristiges Fremdkapital									
Andere Rückstellungen	2.194		494	2.688	–		681	f,h	3.368
Rückerstattungsverbindlichkeiten	2.519		2.261	4.780	–		–		4.780
Vertragsverbindlichkeiten	197		1.333	1.530	–		(50)	a	1.481
Finanzverbindlichkeiten	1.761		1.071	2.832	–		–		2.832
Verbindlichkeiten aus Lieferungen und Leistungen	3.943		794	4.737	–		(40)	b	4.697
Ertragsteuerverbindlichkeiten	646		165	811	–		–		811
Sonstige Verbindlichkeiten	1.318		753	2.071	–		–		2.071
Verbindlichkeiten in direktem Zusammenhang mit zur Veräußerung gehaltenen Vermögenswerten	520		–	520	–		(513)	c	7
	13.098	**–**	**6.871**	**19.969**	**–**		**78**		**20.047**
Gesamtkapital	**75.394**	**–**	**20.500**	**95.894**	**(27)**		**35.513**		**131.381**

Die folgenden Pro-forma Anpassung ist für die Covestro Verkäufe vorgenommen worden:

a) Zeigt die Erfassung des sonstigen finanziellen Vermögenswerts von €1.100 Millionen mit dem entsprechenden Rückgang der Zahlungsmittel und Zahlungsmitteläquivalente. Die Erhöhung der Zahlungsmittel und Zahlungsmitteläquivalente in Höhe von €2.142 Millionen steht in Zusammenhang mit den Nettoerlösen aus dem Verkauf von Covestro-Aktien im Mai 2018 und wurde zur Finanzierung der Transaktion verwendet. Es wird angenommen, dass die damit verbundenen Einkommenssteuern (€20 Millionen) Zahlungsmittel und Zahlungsmitteläquivalente reduziert haben. Der Verlust aus dem Verkauf in Höhe von €7 Millionen sowie der daraus resultierende Steueraufwand in Höhe von €20 Millionen wurden in Sonstigen Rücklagen berücksichtigt.

Die folgenden Pro-forma Anpassungen sind für die Transaktion vorgenommen worden:

a) Erfassung der Auswirkung der durchgeführten vorläufigen Kaufpreisallokation. Bayer hat die potentiellen Zeitwertanpassungen („fair value step ups“) und die damit verbundenen Aufwendungen für ausgewählte Vermögenswerte und Verbindlichkeiten geschätzt. Diese Anpassungen beziehen sich auf geschätzte Zeitwertanpassungen für die immateriellen Vermögenswerte in Höhe von €24.528 Millionen (bestehende Technologien von €15.963 Millionen, sog. In-Process Forschung und Entwicklung von €3.845 Millionen, marketing- und kundenbezogene immaterielle Vermögenswerte von €4.501 Millionen und Sonstige immaterielle Vermögenswerte von €219 Millionen), Sachanlagen (€1.080 Millionen), Vorräte (€1.940 Millionen), Finanzverbindlichkeiten (langfristig €93 Millionen), Rechnungsabgrenzungen (erfasst als eine Reduzierung in kurzfristigen Vertragsverbindlichkeiten (€50 Millionen) sowie auf aktive latente Steuern von €24 Millionen und passive latente Steuern von €6.607 Millionen auf die oben beschriebenen Anpassungen. Der zu erfassende Geschäfts- oder Firmenwert beläuft sich auf €22.185 Millionen. Zusätzlich ist die Eliminierung von Monsantos Eigenkapital (€6.964 Millionen, davon werden minus €12.215 Millionen im Gezeichneten Kapital, €9.706 Millionen in Kapitalrücklagen der Bayer AG und €9.473 Millionen in Sonstige Rücklagen erfasst) sowie Monsantos Geschäfts- oder Firmenwert (€3.329 Millionen) in dieser Anpassung berücksichtigt. Darüber hinaus werden die Sonstigen Rücklagen um die entsprechende Devisenabsicherung des Kaufpreises um €312 Millionen erhöht, die in Bayers historischer Konzern-Bilanz im Sonstigen Ergebnis erfasst wurde. Der jeweilige Betrag wurde im Rahmen der gesamten vorläufigen Gegenleistung für Monsanto (€46.089 Millionen) berücksichtigt. Ein Betrag von €45.777 Millionen reduzierte Zahlungsmittel und Zahlungsmitteläquivalente.

b) Zeigt die Eliminierung zwischengesellschaftlicher Transaktionen zwischen Bayer und Monsanto. Zwischengesellschaftliche Gewinne auf Vorräte in Höhe von €2 Millionen (Sonstige Rücklagen verringerten sich entsprechend) und zwischengesellschaftliche Forderungen aus Lieferungen und Leistungen in Höhe von €40 Millionen sowie zwischengesellschaftliche Verbindlichkeiten aus Lieferungen und Leistungen in Höhe von €40 Millionen sind eliminiert worden.

c) Zeigt die Eliminierung von Vermögenswerten und Verbindlichkeiten in Zusammenhang mit den Transaktionsbezogenen Verkäufen. Die Vermögenswerte und Verbindlichkeiten bezogen auf die Geschäftsbereiche, die mit den Transaktionsbezogenen Verkäufen in Zusammenhang stehen, wurden als

zur Veräußerung gehaltene Vermögenswerte in Höhe von €3.108 Millionen und Verbindlichkeiten in direktem Zusammenhang mit zur Veräußerung gehaltenen Vermögenswerten in Höhe von €513 Millionen erfasst. Die erwarteten Nettoerlöse in Höhe von €6.138 Millionen sind in Zahlungsmittel und Zahlungsmitteläquivalente erfasst worden (die dazugehörigen, annahmegemäß beglichenen, kurzfristigen Ertragsteuerverbindlichkeiten beliefen sich auf €1.135 Millionen). Die Differenz zwischen den Nettoerlösen und den zur Veräußerung gehaltenen Vermögenswerten und Verbindlichkeiten in Höhe von €3.543 Millionen, die aus den Transaktionsbezogenen Verkäufen resultierten, wurde in den Sonstigen Rücklagen erfasst. Außerdem wurden die als Sonstige kurzfristige Forderung ausgewiesene Meilensteinzahlung von €130 Millionen und eine als Andere langfristige Rückstellung ausgewiesene bedingte Gegenleistung von €257 Millionen mit dem entsprechenden Rückgang in Sonstigen Rücklagen von €127 Millionen erfasst.

d) Zeigt das Temasek Investment. Die durch das Temasek Investment erhaltenen Nettoerlöse belaufen sich auf €3.007 Millionen (davon €79 Millionen im Gezeichneten Kapital erfasst und €2.928 Millionen in Kapitalrücklagen der Bayer AG erfasst) und erhöhen entsprechend die Zahlungsmittel und Zahlungsmitteläquivalente. Die Transaktionskosten (€0,3 Millionen) des Temasek Investments wurden in den Kapitalrücklagen der Bayer AG als eine Reduzierung erfasst.

e) Zeigt die Syndizierte Kreditlinie in Höhe von €22.739 Millionen, mit der die Transaktion finanziert wird, und die als langfristige Finanzverbindlichkeit ausgewiesen wird sowie den entsprechenden Anstieg der Zahlungsmittel und Zahlungsmitteläquivalente. Die Syndizierte Kreditlinie wird nur im erforderlichen Umfang gezogen, d.h., abzüglich der Erlöse aus den Abverkäufen, aus dem Temasek Investment, aus dem Angebot abzüglich der damit zusammenhängenden Transaktionskosten und abzüglich der Pflichtwandelanleihe (€3.956 Millionen) und der Umtauschanleihe (€1.048 Millionen) welche bereits in Bayers historischer Konzern-Bilanz erfasst wurden. Die latenten Steuerverbindlichkeiten für die Finanzierung aus der Syndizierten Kreditlinie beliefen sich auf €34 Millionen, welche in Zusammenhang mit der unterschiedlichen Behandlung einmaliger Aufwendungen und Bereitstellungsprovisionen stehen. Als Folge hieraus verringerten sich Sonstige Rücklagen um €34 Millionen. Die Bruttoemissionserlöse aus dem Angebot in Höhe von €6.043 Millionen sind um die Transaktionskosten, netto nach Steuern, in Höhe von €69 Millionen reduziert worden, welche gemäß den IFRS direkt im Eigenkapital erfasst wurden und damit die Kapitalrücklagen der Bayer AG reduzierten. Es wird angenommen, dass die erwartete Steuererstattung hinsichtlich der Transaktionskosten (€31 Millionen), unter Verwendung von Bayers Steuersatz von 31,2%, die Zahlungsmittel und Zahlungsmitteläquivalente erhöht hat. Die Nettoerlöse aus dem Angebot belaufen sich demnach auf €5.974 Millionen (davon werden €191 Millionen im Gezeichneten Kapital der Bayer AG und €5.783 Millionen in Kapitalrücklagen der Bayer AG erfasst) und erhöhen entsprechend die Zahlungsmittel und Zahlungsmitteläquivalente.

f) Anpassung von Anderen kurzfristigen Rückstellungen hinsichtlich des Barausgleichs für Monsantos Aktienoptionsprogramm sowie Lohnsteuer (gesamt €552 Millionen) inklusive aktiver latenter Steuern (€51 Millionen). Als Folge hieraus, verringerten sich Sonstige Rücklagen um €501 Millionen. Dieser Rückgang Sonstiger Rücklagen reduzierte die erworbenen Netto-Vermögenswerte, weshalb sich Geschäfts- oder Firmenwerte (€501 Millionen) sowie Sonstige Rücklagen (€501 Millionen) erhöhten. Erfassung der Verbindlichkeiten für Abfindungen in Zusammenhang mit Kontrollwechseln und einem Lizenzvertrag in Andere kurzfristige Rückstellungen (€114 Millionen) und die damit verbundenen aktiven latenten Steuern von €28 Millionen. Diese zuvor beschriebenen Anpassungen wurden in der Berechnung der Geschäfts- oder Firmenwerte berücksichtigt (siehe a)).

g) Zeigt die in Sonstigen langfristigen finanziellen Vermögenswerten erfasste Anpassung aufgrund der bereits an Monsanto gehaltenen Aktien in Höhe von €6 Millionen unter Verwendung eines Aktienpreises von US$128,00. Als Folge hieraus, erhöhten sich Sonstige Rücklagen um €6 Millionen. In einem weiteren Schritt wurden die bereits an Monsanto gehaltenen Aktien in Höhe von €68 Millionen, die in Sonstigen langfristigen finanziellen Vermögenswerten erfasst wurden, aufgrund der Konsolidierung von Monsanto, ausgebucht. Diese Anpassung wurde in der Berechnung der Geschäfts- oder Firmenwerte berücksichtigt (siehe a)).

h) Erfassung einmaliger erwerbsbezogener Aufwendungen von €15 Millionen in Anderen kurzfristigen Rückstellungen (resultierend in einem Rückgang der Sonstigen Rücklagen um €15 Millionen) die zum 31. März 2018 nicht erfasst waren, und der damit verbundenen Erhöhung der aktiven latenten Steuern um €5 Millionen und der Sonstigen Rücklagen in Höhe von €5 Millionen, unter Verwendung von Bayers Steuersatz von 31,2%.

B.9	**Gewinnprognosen oder -schätzungen**	Entfällt. Es wurde keine Gewinnprognose oder -schätzung vorgenommen.
B.10	**Beschränkungen im Bestätigungsvermerk zu den historischen Finanzinformationen.**	Entfällt. Die in diesem Prospekt enthaltenen historischen Finanzinformationen wurden mit uneingeschränkten Bestätigungsvermerken versehen.
B.11	**Nichtausreichen des Geschäftskapitals des Emittenten zur Erfüllung bestehender Anforderungen.**	Entfällt. Die Gesellschaft ist der Ansicht, dass Bayer sämtliche Zahlungsverpflichtungen erfüllen kann, die mindestens in den nächsten zwölf Monaten fällig werden.
C – Wertpapiere		
C.1	**Art und Gattung der angebotenen und/oder zum Handel zuzulassenden Wertpapiere.**	Dieser Prospekt bezieht sich auf ein Bezugsangebot bestehend aus 74.604.156 neuen auf den Namen lautenden Stammaktien ohne Nennbetrag (Stückaktien) aus einer Kapitalerhöhung gegen Bareinlage, die am 3. Juni 2018 vom Vorstand der Gesellschaft, mit Zustimmung des Präsidiums des Aufsichtsrats der Gesellschaft, an das die Beschlusszuständigkeit delegiert worden war, vom selben Tag, beschlossen wurde, um das eingetragene Grundkapital der Gesellschaft von €2.196.346.388,48 um €190.986.639,36 auf €2.387.333.027,84, unter Ausnutzung des von der ordentlichen Hauptversammlung der Gesellschaft am 29. April 2014 beschlossenen genehmigten Kapitals, gegen Bareinlagen zu erhöhen (die „**Kapitalerhöhung**"), mit mittelbaren Bezugsrechten der bestehenden Aktionäre der Bayer AG, jede solcher Aktien mit einem Nominalwert von €2,56 und mit voller Gewinnanteilberechtigung ab 1. Januar 2018 (die „**Neuen Aktien**"), die den Aktionären der Gesellschaft zu einem Bezugsverhältnis von 23:2 (d.h. 23 bestehende Aktien der Aktionäre berechtigen deren Inhaber zwei Neue Aktien zu beziehen) und zu einem Bezugspreis von €81,00 pro Neuer Aktie angeboten werden (das „**Bezugsangebot**"). Die Neuen Aktien, die in dem Bezugsangebot nicht gezeichnet werden (die „**Restaktien**") werden von den Joint Bookrunners qualifizierten Investoren in Deutschland und anderen ausgewählten Jurisdiktionen zu einem Preis mindestens in Höhe des Bezugspreis zum Kauf angeboten (die „**Restaktienplatzierung**" und zusammen mit dem Bezugsangebot, das „**Angebot**"), in den Vereinigten Staaten gemäß Rule 144A des U.S. Securities Act von 1933 (in der jeweils gültigen Fassung) (der „**Securities Act**") und außerhalb der Vereinigten Staaten in Offshore-Transaktionen gemäß Regulation S des Securities Act. Sämtliche Aktien der Gesellschaft, einschließlich der Neuen Aktien, werden als auf den Namen lautende Stammaktien ohne Nennbetrag (Stückaktien) mit einem Nominalwert von €2,56 und mit voller Gewinnanteilberechtigung ab 1. Januar 2018 ausgegeben.
	Wertpapierkennung.	International Securities Identification Number (ISIN) • Für die bestehenden Aktien und Neuen Aktien: DE000BAY0017 • Für die Bezugsrechte für die Neuen Aktien: DE000BAY1BR7 Wertpapier-Kenn-Nummer (WKN) • Für die bestehenden Aktien und Neuen Aktien: BAY001 • Für die Bezugsrechte für die Neuen Aktien: BAY 1BR Common Code • Für die bestehenden Aktien und Neuen Aktien: 044142961 Ticker-Symbol für die bestehenden Aktien und Neuen Aktien: BAYN Ticker-Symbol für die Bezugsrechte auf die Neuen Aktien: BAYR

C.2	**Währung der Wertpapieremission.**	Euro.
C.3	**Zahl der ausgegebenen und voll eingezahlten Aktien.**	Das Grundkapital der Gesellschaft beträgt zum Datum dieses Prospekts und vor der Kapitalerhöhung entsprechend dem Angebot €2.196.346.388,48 und ist in 857.947.808 auf den Namen lautende Stammaktien ohne Nennbetrag (Stückaktien) eingeteilt. Sämtliche Aktien sind vollständig eingezahlt.
	Nennwert.	Jede auf den Namen lautende Stammaktie ohne Nennbetrag (Stückaktie) hat einen anteiligen Betrag am Grundkapital der Gesellschaft von €2,56 je Stückaktie.
C.4	**Beschreibung der mit den Wertpapieren verbundenen Rechte.**	Jede Aktie der Gesellschaft, einschließlich der Neuen Aktien, gewährt dem Eigentümer in der jährlichen Hauptversammlung der Gesellschaft eine Stimme. Beschränkungen des Stimmrechts bestehen nicht. Die Neuen Aktien sind mit voller Gewinnanteilberechtigung ab und einschließlich des Geschäftsjahres beginnend am 1. Januar 2018 ausgestattet und besitzen dieselben Berechtigungen wie jede andere Aktie der Gesellschaft.
C.5	**Beschreibung aller etwaigen Beschränkungen für die freie Übertragbarkeit der Wertpapiere.**	Entfällt. Die Aktien der Gesellschaft sind gemäß den gesetzlichen Bestimmungen frei übertragbar.
C.6	**Antrag auf Zulassung der Wertpapiere zum Handel an einem geregelten Markt, und Nennung aller geregelten Märkte, an denen die Wertpapiere gehandelt werden sollen.**	Die Zulassung der Neuen Aktien zum regulierten Markt der Frankfurter Wertpapierbörse mit gleichzeitiger Zulassung zum Teilbereich des regulierten Markts mit weiteren Zulassungsfolgepflichten (Prime Standard) an der Frankfurter Wertpapierbörse sowie zum regulierten Markt der Wertpapierbörsen Berlin, Düsseldorf, Hamburg, Hannover, München und Stuttgart wird voraussichtlich am 6. Juni 2018 beantragt werden. Die Entscheidungen zur Zulassung der Neuen Aktien zum Börsenhandel werden am 20. Juni 2018 erwartet. Die Aufnahme des Börsenhandels und die Einbeziehung der Neuen Aktien in die bestehende Notierung an den deutschen Wertpapierbörsen wird am oder um den 22. Juni 2018 erwartet.
C.7	**Beschreibung der Dividendenpolitik.**	Die Bayer AG hat seit 1952 durchgehend Dividenden an ihre Aktionäre gezahlt und beabsichtigt dies auch in Zukunft weiterhin zu tun. Das bereinigte Ergebnis je Aktie bildet die Grundlage von Bayers Dividendenpolitik. Bayer strebt eine Auszahlung von 30-40% basierend auf dem bereinigten Ergebnis je Aktie an. Es besteht jedoch keine Garantie, dass die Gesellschaft für jedes Jahr eine Dividende von einem gewissen Betrag oder überhaupt zahlen wird (für Informationen zum bereinigten Ergebnis, siehe oben „*B.7 Zusätzliche Kennzahlen des Bayer-Konzerns*“).
D – Risiken		
		Die Investition in Aktien der Bayer AG birgt Risiken, darunter Risiken betreffend den Bayer-Konzern, die weltweite Wirtschaft, die Finanzmärkte, die Branchen, in denen der Bayer-Konzern tätig ist, regulatorische und politische Angelegenheiten, rechtliche und verwaltungsmäßige Verfahren, das Bezugsangebot, die Transaktion und, aufgrund der Transaktion, Monsanto. Potenzielle Anleger sollten den gesamten vorliegenden Prospekt lesen und die Risiken und Erwägungen sorgfältig prüfen, die bei einer Anlage in die Aktien der Gesellschaft relevant sind. Als global tätiges Unternehmen mit einem heterogenen Portfolio ist der Bayer-Konzern einer Vielzahl von internen und externen Entwicklungen und Ereignissen ausgesetzt, die wesentliche Auswirkungen auf die Erreichung von finanziellen und nicht-finanziellen Zielen haben könnten. Bayer kann nicht ausschließen, dass das Unternehmen einigen bzw. sämtlichen unten beschriebenen Risiken ausgesetzt ist bzw. aufgrund der Transaktion sein wird.

Jegliche der unten beschriebenen Risiken sowie weitere Risiken, denen sich Bayer derzeit nicht bewusst ist, könnten wesentliche negative Auswirkungen auf das Geschäft, die Vermögens- und Ertragslage und die Entwicklungsperspektiven von Bayer haben und den Aktienkurs des Unternehmens sinken lassen. Investoren könnten ihre Vermögensanlage vollständig oder teilweise verlieren. Zusätzliche Risiken, die zur Zeit nicht bekannt sind oder als unwesentlich erachtet werden, insbesondere Risiken im Zusammenhang mit der Transaktion und der Integration von Monsanto, könnten ebenfalls negative Auswirkungen auf das Geschäft sowie die Ertrags- und Vermögenslage von Bayer haben. Wenn und soweit eines der unten beschriebenen Risiken eintritt, tritt es gegebenenfalls zusammen mit anderen Risiken ein, was die negativen Auswirkungen auf das Geschäft, die Finanz- und Ertragslage sowie die Zukunftsaussichten von Bayer noch verstärken würde. Die beschriebenen Risiken betreffen sämtliche Segmente des Bayer-Konzerns, sofern nicht etwas anderes angegeben ist.

Die Reihenfolge, in der die Risiken aufgelistet sind, stellt keinen Anhaltspunkt für Eintrittswahrscheinlichkeit oder potenzielles Ausmaß der finanziellen Folgen dar.

D.1 **Zentrale Angaben zu den zentralen Risiken, die dem Emittenten oder seiner Branche eigen sind.**

Risiken im Zusammenhang mit Bayer

- Der Umsatz und das Wachstum des Bayer-Konzerns hängen von der globalen Wirtschaft im Allgemeinen und besonders von den Binnenmärkten ab, in denen der Bayer-Konzern tätig ist.
- Anhaltend hohe politische und wirtschaftliche Unsicherheiten könnten unvorhersehbare Folgen für die Märkte, in denen Bayer tätig ist, und für die Weltwirtschaft haben.
- Die tatsächlichen gesamtwirtschaftlichen Entwicklungen und Marktentwicklungen könnten von den Erwartungen und Prognosen der Geschäftsführung von Bayer abweichen, was sich nachteilig auf das Geschäftsergebnis von Bayer auswirken könnte, und sofern sich die bei der Erstellung der finanziellen und operativen Prognosen oder Schätzungen gemachten Annahmen als falsch erweisen, könnte das Ergebnis weit unter den eigenen Prognosen bzw. Schätzungen oder denen der Marktbeobachter liegen.
- Die Branchen, in denen Bayer tätig ist, sind sehr wettbewerbsintensiv und der Wettbewerbsdruck könnte sich weiter verstärken. Außerdem könnten disruptive Technologien oder Veränderungen der Geschäftsmodelle von Wettbewerbern Bayers Geschäft negativ beeinflussen.
- Patente, die für Bayer zur Zeit profitable Produkte schützen, unterliegen einer begrenzten Laufzeit und es gibt keine Garantie dafür, dass Bayer erfolgreich neue Produkte entwickelt, die bei Markteintritt wirtschaftlich so erfolgreich sein werden, dass sie den erwarteten Umsatzrückgang nach den Patentabläufen ausgleichen könnten.
- Es kann nicht garantiert werden, dass Bayer eine hinreichende Anzahl von Forschungskandidaten identifizieren wird und das die Produkte von Bayer die nötigen regulatorischen Zulassungen erhalten und diese aufrechterhalten werden können. Eine Verschärfung behördlicher und gesetzlicher Vorgaben, einschließlich aufgrund von erhöhten öffentlichen Erwartungen, könnte zu kostenintensiveren und längeren Registrierungs- und Genehmigungsverfahren führen und die Produktentwicklung und Vermarktung der Produkte von Bayer beeinträchtigen oder verhindern.
- Sollte es Bayer nicht gelingen, sein geistiges Eigentum zu schützen oder sollten damit verbundene Rechte keinen effektiven Schutz bieten, so könnte sich dies nachteilig auf das Geschäft und die Ertragslage von Bayer auswirken.

- Bayer könnte unbeabsichtigt die Schutzrechte Dritter verletzen und dem Unternehmen könnte untersagt werden, Produkte oder Technologien zu nutzen oder zu verkaufen und/oder das Unternehmen muss gegebenenfalls finanziellen Schadensersatz oder Lizenzgebühren zahlen.
- Bayer könnte gezwungen sein, wesentliche Wertminderungen hinzunehmen, welche den Wert des Bayer-Konzerns mindern.
- Mängel oder Qualitätsprobleme im Zusammenhang mit den Produkten von Bayer oder der Verstoß gegen Sicherheitsbestimmungen können zur Folge haben, dass Produkte vom Markt genommen werden müssen, was Bayer Produkthaftungsansprüchen und anderen Rechtsstreitigkeiten aussetzen und sich einschließlich möglicher Schadensersatzleistungen nachteilig auf das Geschäftsergebnis auswirken sowie einen negativen Einfluss auf die Reputation von Bayer und seine Marken haben könnte.
- Bayer unterliegt umfassenden und immer strikteren Gesetzen hinsichtlich Umweltschutz, Gesundheit und Sicherheit, sowie Regulierungen und Standards, was Beschränkungen hinsichtlich der Produktion und Vermarktung bestimmter Produkte, gestiegene Kosten zur Einhaltung der Compliance, Schaden für Bayers Reputation, gesetzliche Haftung und Sanierungsmaßnahmen zur Folge haben könnte.
- Bayer ist wesentlichen Risiken im Zusammenhang mit Rechtsstreitigkeiten und -verfahren ausgesetzt.
- Bayer ist abhängig von Geschäftsbeziehungen mit Dritten, u. a. mit Lieferanten, was die Geschäfts- und Ertragslage sowie die Reputation negativ beeinflussen könnte.
- Bayer ist verschiedenen Risiken im Zusammenhang mit dem Produktions- und Beschaffungswesen ausgesetzt, einschließlich in Verbindung mit technischen Störungen, Naturkatastrophen, Regulierungsmaßnahmen oder Gesetzesänderungen.
- Pharmaceuticals ist aufgrund von Regulierungen und Marktbedingungen Preisdruck ausgesetzt, was sich negativ auf das Geschäft und die Ertragslage von Bayer auswirken kann.
- Es kann nicht garantiert werden, dass Bayer an allen Standorten zukünftig eine hinreichende Anzahl qualifizierter Mitarbeiter einstellen und halten kann und Schwierigkeiten bei der Rekrutierung, Bindung und Weiterentwicklung von Fachkräften könnten erheblich negative Konsequenzen für Bayers künftige Entwicklung haben.
- Bayer ist von einem störungsfreien Betrieb seiner weltweiten IT-Systeme abhängig.
- Der Bayer-Konzern ist finanziellen Risiken, einschließlich Liquiditäts-, Kredit- und Marktpreisrisiken ausgesetzt.
- Der Bayer-Konzern ist im Zusammenhang mit Pensionsverpflichtungen und anderen pensionsähnlichen Leistungszusagen den Risiken der Entwicklung des Kapitalmarkts ausgesetzt.
- Es kann nicht garantiert werden, dass die internen Kontrollsysteme bei Bayer ausreichenden Schutz vor Fehlern im Konzernabschluss oder gegen finanzielle Verluste durch einen fehlerhaften Konzernabschluss bieten.
- Das Geschäft von Bayer unterliegt bestimmten Anti-Korruptions-, Anti-Geldwäsche- und Exportkontrollgesetzen sowie Sanktionen und weiteren Handelsgesetzen und Vorschriften, und die Nichtbefolgung solcher Gesetze und Vorschriften könnte Bayer straf- und/oder zivilrechtlicher Haftung aussetzen sowie Geschäft und Reputation schaden.

- Aufgrund einer komplexen mehrstufigen Konzernstruktur und der globalen Reichweite der Geschäftsaktivitäten von Bayer, könnte Bayer höheren Steuerverpflichtungen ausgesetzt sein als erwartet und von rechtlichen Änderungen im Zusammenhang mit nicht-abzugsfähigen Zinsaufwendungen, der zukünftigen steuerlichen Behandlung von Dividendenzahlungen in verschiedenen Jurisdiktionen und der Einführung von zusätzlichen Steuern betroffen sein.
- Anhängige und zukünftige Steuerprüfungen und Änderungen in der Auslegung von steuerlichen Vorschriften könnten zu weiteren Steuerverpflichtungen führen.
- Im Zusammenhang mit der jüngsten US-Steuerreform könnte Bayer möglichen Risiken ausgesetzt sein, die sich zum gegenwärtigen Zeitpunkt noch nicht vollständig abwägen lassen.

Risiken im Zusammenhang mit der Transaktion

- Bestimmte Verkaufshandlungen sowie weitere Verpflichtungen, die Bayer in Zusammenhang mit dem Erhalt regulatorischer Genehmigungen für den Abschluss der Transaktion eingehen musste, könnten Bayers strategische Planung negativ beeinflussen und wesentliche Anpassungen seiner operativen und finanziellen Strukturen erforderlich machen. Des Weiteren besteht ein geringes Restrisiko, dass zusätzliche Maßnahmen erforderlich sein könnten.
- Die strategischen und operativen Ziele von Bayer in Bezug auf die Transaktion basieren auf bestimmten Annahmen und Schätzungen seitens des Vorstands von Bayer welche sich als unzutreffend herausstellen könnten, einschließlich hinsichtlich der Fähigkeit, von den verbesserten Innovationskapazitäten des kombinierten Landwirtschaftsgeschäfts von Bayer und Monsanto, sowie künftigen makroökonomischen Entwicklungen und Marktentwicklungen profitieren zu können.
- Aufgrund der Transaktion könnte sich das Risikoprofil von Bayer verändern und das Unternehmen könnte zusätzlichen Risiken in Zusammenhang mit dem kombinierten Landwirtschaftsgeschäft von Bayer und Monsanto ausgesetzt sein, die möglicherweise teilweise noch nicht erkannt wurden oder noch nicht abschließend zu beurteilen sind.
- Aufgrund der Transaktion wird Bayer das Risiko aus Rechtsstreitigkeiten im Zusammenhang mit anhängigen und zukünftigen Verfahren von Monsanto übernehmen. Ein nachteiliger Ausgang von Rechtsstreitigkeiten, einschließlich Verfahren in Bezug auf die Sanierung von Altlasten, könnte Bayer erheblichen Schaden zufügen und die Vermögens-, Finanz- und Ertragslage und Rentabilität von Bayer negativ beeinflussen.
- Mangelndes öffentliches Verständnis und Akzeptanz oder vermeintliche Akzeptanz für Biotechnologie und andere landwirtschaftliche Produkte von Monsanto sowie für die Vorteile der Transaktion könnten die Reputation von Bayer schädigen und als Konsequenz, das Geschäft, die Ertragslage und den Aktienkurs von Bayer negativ beeinflussen.
- Im Zusammenhang mit der Integration des Geschäfts von Monsanto könnte Bayer auf Schwierigkeiten stoßen, die sein operatives Geschäft behindern könnten oder anderweitig sein Geschäft, die Ertragslage und Aktienkurs negativ beeinflussen und die Realisierung der zu erwarteten Vorteile der Transaktion gefährden könnten.
- Die Größe von Bayer nach der Transaktion, vertragliche Beschränkungen, denen Bayer unterliegt, die Positionierung auf den Märkten, in denen Bayer tätig sein wird, sowie eine Erhöhung der Verbindlichkeiten, könnten Bayer bei der Durchführung weiterer Akquisitionen, Investitionen, Joint Ventures und Geschäftsintegrationen behindern.

		• Durch die Transaktion könnten Klauseln zu Kontrollwechsel, Untersagung einer Fusion oder ähnliche Bestimmungen in Verträgen und Abkommen von Monsanto wirksam werden oder vermeintlich wirksam werden und nachteilige Folgen für den Bayer Konzern haben, einschließlich des Verlusts bedeutender vertraglicher Rechte und Vorteile, der etwaigen Kündigung von wichtigen Verträgen oder der Rückzahlungsverpflichtung von ausstehenden Verbindlichkeiten. • Bayer könnte gezwungen sein, Wertminderungen auf Sachanlagen von Monsanto sowie auf die Geschäfts- und Firmenwerte des Geschäftsbereichs Crop Science anzuerkennen. • Bayer ist mit Risiken konfrontiert, die sich aus der Finanzierung der Transaktion ergeben, einschließlich eines höheren Verschuldungsgrades und einer potentiellen Herabstufung der Kreditwürdigkeit. • Bayer ist mit Risiken konfrontiert, die sich aus der Notwendigkeit ergeben, die für die Transaktion aufgenommenen Kredite zu refinanzieren. • Nach Vollzug der Transaktion könnten Zinsschwankungen erhebliche Auswirkungen auf die Ertragslage von Bayer haben. • Nach Vollzug der Transaktion könnten Wechselkursschwankungen erhebliche Auswirkungen auf die Höhe der Verbindlichkeiten, die Bayer eingeht, und auf die Ertragslage von Bayer haben.
D.3	Zentrale Angaben zu den zentralen Risiken, die den Wertpapieren eigen sind	**Risiken im Zusammenhang mit den Wertpapieren und dem Angebot** • Der Marktwert und das Handelsvolumen der Aktien des Unternehmens schwanken und der Bezugspreis könnte den Marktwert der Aktien des Unternehmens übersteigen. • Bezugsrechte für die Neuen Aktien, die Teil des Bezugsangebots sind, verfallen, sofern das Recht nicht vor Ablauf der Bezugsfrist ausgeübt wird. • Ein aktiver Bezugsrechtshandel entwickelt sich gegebenenfalls nicht und die Bezugsrechte könnten höheren Preisschwankungen unterliegen als die Aktien des Unternehmens.
E – Angebot		
E.1	Gesamtnettoerlöse.	Die Bayer zufließenden Nettoerlöse aus dem Angebot resultieren aus dem Bruttoemissionserlös abzüglich Übernahmeprovisionen und anderen im Folgenden beschriebenen Kosten.
	Geschätzte Gesamtkosten der Emission/des Angebots, einschließlich der geschätzten Kosten, die dem Anleger vom Emittenten oder Anbieter in Rechnung gestellt werden.	Auf Basis eines Bezugspreises von €81,00 und einer Begebung von 74.604.156 Neuen Aktien, beabsichtigt Bayer durch das Angebot Mittel in Höhe von ca. €6,0 Milliarden einzunehmen. Die gesamten von Bayer an die Joint Bookrunners zu zahlenden Provisionen werden sich voraussichtlich auf ca. €96,7 Millionen belaufen. Weitere auf Bayer entfallende Angebotskosten werden ca. €3,3 Millionen betragen. Auf dieser Basis erwartet Bayer Nettoerlöse aus diesem Angebot in Höhe von €5,9 Milliarden. Investoren werden von der Gesellschaft oder den Joint Bookrunners nicht mit Kosten belastet, wobei Depotbanken übliche Provisionen in Zusammenhang mit dem Bezug der Neuen Aktien sowie dem Verkauf und Kauf von Bezugsrechten berechnen können.
E.2a	Gründe für das Angebot, Zweckbestimmung der Erlöse, geschätzte Nettoerlöse.	Bayer beabsichtigt die erwarteten Nettoerlöse von €5,9 Milliarden (ca. US$6,9 Milliarden) aus dem Angebot dazu zu verwenden die im Rahmen der Syndizierten Kreditlinie in Zusammenhang mit der Transaktion gezogenen Beträge zurückzuzahlen und dabei die noch ausstehenden Beträge unter der Syndizierten Kreditlinie von US$43,4 Milliarden (€37,2 Milliarden) auf US$36,5 Milliarden zu reduzieren (€31,3 Milliarden). Die Umrechnung der US$ Beträge der Syndizierten Kreditlinie in € Beträge und der € Beträge der Erlöse aus dem Angebot in US$ Beträge erfolgte unter Verwendung des Wechselkurses

		von US$1,1672 = €1,0 am 1. Juni 2018. Dadurch können sich Abweichungen zu den in den Pro Forma-Finanzinformationen dargestellten Angaben unter zu den € Beträgen der Syndizierten Kreditlinie bzw. den US$ Beträgen der Erlöse aus dem Angebot ergeben, welche zu einem anderen Wechselkurs umgerechnet wurden siehe „*B.8 Ausgewählte wesentliche Pro-forma-Finanzinformationen*“. Um die im Rahmen der Syndizierten Kreditlinie gezogenen Beträgen zu refinanzieren, beabsichtigt Bayer direkt oder durch eine Finanzierungstochter vorrangige unbesicherte auf U.S. Dollar und/oder Euro lautende Anleihen, mit Laufzeiten über ein übliches Marktspektrum, mit einem Gesamtnennbetrag von bis zu €20,0 Milliarden (die „**Anleihenangebote**“), anzubieten. Die Anleihenangebote können, abhängig von Marktbedingungen, zu jedem Zeitpunkt, einschließlich während oder kurz nach der Bezugsperiode für dieses Angebot, begeben werden. Die Anleihenangebote sind gänzlich unabhängig von diesem Angebot, bedingen sich nicht gegenseitig und können zu verschiedenen Zeiten vollzogen werden. Zusätzlich beabsichtigt Bayer, gemäß den Bestimmungen der Syndizierten Kreditlinie, weitere unter der Syndizierten Kreditlinie abgerufene Beträge mittels der Nettoerlöse aus den Transaktionsbezogenen Verkäufen zurückzuzahlen.
E.3	**Beschreibung der Angebotskonditionen.**	Gegenstand des Angebots sind 74.604.156 Neue Aktien, die den Aktionären der Gesellschaft zu einem Bezugsverhältnis von 23:2 angeboten werden (d.h. 23 bestehende Aktien der Gesellschaft berechtigen deren Inhaber zwei Neue Aktien zu beziehen). Die Neuen Aktien stammen aus der Kapitalerhöhung durch Begebung von 74.604.156 Neuen Aktien mit indirekten Bezugsrechten der bestehenden Aktionäre. Das Bezugsangebot wird (i) ein öffentliches Angebot in Deutschland und dem Großherzogtum Luxemburg („**Luxemburg**“), (ii) Privatplatzierungen in den Vereinigten Staaten von Amerika an qualifizierte institutionelle Investoren, wie sie in Rule 144A des Securities Act definiert sind, sowie (iii) Privatplatzierungen an qualifizierte Investoren außerhalb der Vereinigten Staaten in Offshore-Transaktionen gemäß Regulation S des Securities Act, beinhalten. Die Restaktien werden von den Joint Bookrunners qualifizierten Investoren in Deutschland und anderen ausgewählten Jurisdiktionen zu einem Preis mindestens in Höhe des Bezugspreis in einer Restaktienplatzierung, in den Vereinigten Staaten gemäß Rule 144A und außerhalb der Vereinigten Staaten in Offshore-Transaktionen gemäß Regulation S des Securities Act, zum Kauf angeboten. Das Angebot basiert auf dem Übernahmevertrag vom 3. Juni 2018, zwischen der Gesellschaft und den Joint Bookrunners, der eine feste Übernahmeerklärung der nicht im Zuge des Angebots platzierten Neuen Aktien durch die Joint Bookrunners vorsieht. Das Angebot unterliegt, unter anderem, der Bedingung der Eintragung der Kapitalerhöhung im Handelsregister des Amtsgerichts Köln, Deutschland, welche für den 20. Juni 2018 erwartet wird. Unter bestimmten Voraussetzungen kann das Angebot beendet werden.
	Ausübung von Bezugsrechten.	Aktionäre können ihre Bezugsrechte auf die Neuen Aktien während der üblichen Banköffnungszeiten vom 6. Juni 2018 bis zum und einschließlich des 19. Juni 2018 durch ihre Depotbank bei der als Zeichnungsstelle handelnden COMMERZBANK Aktiengesellschaft ausüben. Bezugsrechte, die nicht rechtzeitig ausgeübt werden, verfallen und verlieren ihren Wert. Für nicht ausgeübte Bezugsrechte wird kein Ausgleich gezahlt.
	Bezugspreis.	Der Bezugspreis pro Neuer Aktie beträgt €81,00. Der Bezugspreis ist bis spätestens dem 19. Juni 2018 zu zahlen.
	Bezugsrechtshandel.	In Zusammenhang mit dem Bezugsangebot der Neuen Aktien werden die Bezugsrechte (ISIN DE000BAY1BR7/WKN BAY 1BR) auf die Neuen Aktien und Bruchteile der Bezugsrechte im regulierten Markt (Xetra und Xetra Frankfurt Specialist) der Frankfurter Wertpapierbörse, in der Zeit vom 6. Juni 2018 bis zum

		und einschließlich des 15. Juni 2018 gehandelt. Weder die Gesellschaft noch der Bezugsagent wird die Zulassung der Bezugsrechte zum Handel an einer anderen Wertpapierbörse beantragen. Der Börsenkurs der Bezugsrechte hängt, unter anderem, von der Entwicklung des Kurses der Aktie der Gesellschaft ab, er kann aber wesentlich vom Kurs der Aktien der Gesellschaft abweichen. Für nicht ausgeübte Bezugsrechte wird kein Ausgleich gezahlt. Mit Ablauf der Bezugsfrist werden nicht ausgeübte Bezugsrecht verfallen und ihren Wert verlieren. Der Kauf von 23 Bezugsrechten ermöglicht die Ausübung der Bezugsrechte für den Kauf von zwei ganzen Neuen Aktien, d.h., zwei Neue Aktien können für 23 Bezugsrechte gekauft werden.
	Zertifizierung und Zustellung der bezogenen und erworbenen Neuen Aktien.	Die Neuen Aktien (ISIN DE000BAY0017/WKN BAY001) werden in einer Globalurkunde verbrieft, die voraussichtlich bei der Clearstream Banking Aktiengesellschaft am 20. Juni 2018 hinterlegt wird. Nach der Satzung der Gesellschaft haben die Aktionäre nicht das Recht, ihre Aktien durch individuelle Urkunden verbrieft zu bekommen. Soweit die Bezugsfrist nicht verlängert oder das Bezugsangebot zurückgezogen wird, werden die im Rahmen des Bezugsangebots bezogenen Neuen Aktien voraussichtlich am oder um den 22. Juni 2018 als Miteigentumsanteil an der Globalurkunde durch Girosammeldepotgutschrift zur Verfügung gestellt. Die im Rahmen der Restaktienplatzierung erworbenen Neuen Aktien werden auf die gleiche Weise, voraussichtlich am 22. Juni 2018, d.h. nach dem Ende der Restaktienplatzierung, zur Verfügung gestellt. Die Neuen Aktien sind mit den gleichen Rechten ausgestattet wie alle anderen Aktien der Gesellschaft (einschließlich voller Gewinnanteilberechtigung ab dem Geschäftsjahr beginnend am 1. Januar 2018) und gewähren keine darüberhinausgehenden Rechte oder Vorteile.
E.4	**Beschreibung aller für die Emission/das Angebot wesentlichen, auch kollidierenden Interessen.**	Die Joint Bookrunners sind in Zusammenhang mit dem Angebot und der Zulassung der Neuen Aktien der Gesellschaft zum Handel eine Vertragsbeziehung mit der Gesellschaft eingegangen. In Zusammenhang mit der Finanzierung der Transaktion haben verbundene Unternehmen der Joint Bookrunner BofA Merrill Lynch, Credit Suisse, Goldman Sachs International, HSBC und J.P. Morgan mit Bayer eine Syndizierte Kreditlinie abgeschlossen. Die Finanzierungszusagen unter der Syndizierten Kreditlinie wurden an mehr als 20 Banken syndiziert, einschließlich an verbundene Unternehmen aller anderen Joint Bookrunners. Die Gesellschaft beabsichtigt die Nettoerlöse aus dem Angebot zur Rückzahlung der in Zusammenhang mit der Transaktion im Rahmen der Syndizierten Kreditlinie gezogenen Beträge zu verwenden, wodurch sich die ausstehenden Beträge aus der Syndizierten Kreditlinie reduzieren werden, für die die verbundenen Unternehmen der Joint Bookrunners Zinszahlungen erhalten. Die Joint Bookrunners oder mit ihnen verbundene Unternehmen beteiligen sich an Wertpapierhandel und Maklertätigkeiten und erbringen Dienstleistungen im Investmentbanking, der Vermögensverwaltung, der Finanzierung und Finanzierungsberatung, und erbringen weitere Investmentbanking-Produkte und Dienstleistungen gegenüber einem breiten Spektrum von Unternehmen und Personen. Möglicherweise gehen sie von Zeit zu Zeit Geschäftsbeziehungen mit Gesellschaften des Konzerns ein oder erfüllen für diese im Rahmen des normalen Geschäftsverkehrs Dienstleistungen einschließlich solcher, die sich auf die Kreditvergabe und Asset-Backed-Securities-Geschäfte beziehen. Im Rahmen des gewöhnlichen Handels, der Maklertätigkeit, Vermögensverwaltung und Finanzierungsgeschäften der Joint Bookrunners, können diese jederzeit als Auftraggeber oder Vertreter für mehr als eine Partei auftreten, Long oder Short Positionen halten und für eigene oder fremde Rechnung Handel treiben oder anderweitig Transaktionen bewirken, jeweils in Fremd- oder Eigenkapitalwertpapieren oder vorrangigen Darlehen der Gesellschaft, mit ihr verbundenen Unternehmen oder anderen juristischen Personen, die

möglicherweise in die hier angedachten Transaktionen involviert oder mit dieser verbunden sind. Demnach könnten künftig Interessenkonflikte zwischen den Joint Bookrunners und mit ihnen verbundenen Unternehmen und den Aktionären der Gesellschaft entstehen.

Mehrere Mitglieder des Vorstands und des Aufsichtsrats der Gesellschaft halten Aktien der Gesellschaft und haben daher ein persönliches Interesse an der Entwicklung des Bayer AG Börsenkurses. Mehrere Mitglieder des Vorstands und des Aufsichtsrats der Gesellschaft haben der Gesellschaft außerdem mitgeteilt, dass sie vorhaben bzw. möglicherweise vorhaben am Angebot teilzunehmen, indem sie Ihre Bezugsrechte ausüben.

E.5	**Name der Person/des Unternehmens, die/das das Wertpapier zum Verkauf anbietet.**	Die Neuen Aktien werden von den Joint Bookrunners zum Verkauf angeboten (siehe Element A.1 oben).
	Bei Lock-up-Vereinbarungen die beteiligten Parteien und die Lock-up-Frist.	In dem Übernahmevertrag hat die Gesellschaft mit jeder der Joint Bookrunners vereinbart, innerhalb des Zeitraums beginnend am 3. Juni 2018, dem Tag des Übernahmevertrags, und endend 90 Tage nach dem zweiten Tag nach dem Tag der Eintragung der Kapitalerhöhung im Handelsregister (derzeit für den 20. Juni 2018 erwartet), ohne die vorherige schriftliche Zustimmung der Joint Global Coordinators, welche nicht unbillig verweigert werden darf, keine der folgenden Maßnahmen vorzunehmen oder solchen Maßnahmen zuzustimmen:

- (i) Anleihen, die in Aktien der Gesellschaft wandel- oder umtauschbar sind oder (ii) Aktien der Gesellschaft oder (iii) andere Wertpapiere, die in ein Zeichnungs- oder Bezugsrecht auf Aktien der Gesellschaft wandel- oder umtauschbar sind oder ein solches Recht gewähren, anzubieten, zu verkaufen oder anderweitig zu vertreiben oder zu veräußern;
- eine Swap-Vereinbarung oder sonstige Vereinbarung abzuschließen, die irgendwelche der wirtschaftlichen Konsequenzen des Eigentums an Aktien der Gesellschaft ganz oder zum Teil auf eine andere Partei überträgt, ungeachtet der Frage, ob eine der in diesem Satz beschriebenen Transaktionen durch Lieferung von Wertpapieren, durch Barzahlung oder anderweitig vollzogen wird;
- eine Erhöhung des Aktienkapitals der Gesellschaft aus genehmigtem Kapital zu verkünden oder auszuführen;
- der Hauptversammlung der Gesellschaft eine Erhöhung des Aktienkapitals der Gesellschaft vorzuschlagen, mit Ausnahme (i) eines Vorschlags an die Hauptversammlung der Gesellschaft neue Aktien aus genehmigtem Kapital auszugeben und (ii) eines Vorschlags an die Hauptversammlung der Gesellschaft über Ermächtigungen zur Ausgabe von Wandelschuldverschreibungen und/oder Optionsschuldverschreibungen sowie Genussrechten mit Wandel- oder Optionsrechten (bzw. Kombinationen dieser Instrumente) sowie über die Schaffung eines bedingten Kapitals; oder
- eine Transaktion abzuschließen oder Handlung durchzuführen, die jeweils den vorstehend beschriebenen Fällen wirtschaftlich ähnlich ist.

Das Vorstehende gilt jedoch nicht für (i) die Ausgabe der Neuen Aktien, (ii) die Ausgabe irgendeiner Gattung von Aktien auf die Ausübung von Aktienoptionen hin, die nach einem existierenden Aktienoptionsplan der Gesellschaft und deren Tochterunternehmen bereits ausgegeben waren, (iii) Swaps oder andere Vereinbarungen zum Zweck der Absicherung (*hedging*) der langfristigen variablen Barvergütung der Gesellschaft und deren Tochtergesellschaften, und (iv) die Lieferung von Aktien unter der Pflichtwandelanleihe.

E.6	**Betrag und Prozentsatz der aus dem Angebot resultierenden unmittelbaren Verwässerung. Im Falle eines Zeichnungsangebots an die existierenden Anteilseigner Betrag und Prozentsatz der unmittelbaren Verwässerung für den Fall, dass sie das Angebot nicht zeichnen.**	Aktionäre, die ihre Bezugsrechte auf die Neuen Aktien ausüben, behalten ihren prozentualen Anteil am Grundkapital der Gesellschaft im Anschluss an das Angebot. Der Anteil am Grundkapital eines jeden Aktionärs, der seine Bezugsrechte nicht ausübt, wird um ca. 8% verwässert. Der Nettobuchwert (der den gesamten Vermögenswerten abzüglich der immateriellen Vermögenswerte, der langfristigen und der kurzfristigen Verbindlichkeiten entspricht), abgeleitet aus dem ungeprüften verkürzten Konzernzwischenabschluss der Gesellschaft für den zum 31. März 2018 endenden Dreimonatszeitraum, erstellt nach IAS 34, betrug zum 31. März 2018 €12.719 Millionen, was einen Nettobuchwert pro Aktie von €14,82 ergibt (gerundet und basierend auf 857.947.808 ausstehenden Aktien der Gesellschaft unmittelbar vor dem Angebot). Basierend auf einer vollständigen Platzierung aller 74.604.156 Neuen Aktien aus der Kapitalerhöhung, zu einem Bezugspreis von €81,00 pro Neuer Aktie und nach Abzug der erwarteten Angebotskosten in Höhe von €100 Millionen, würde der Nettobuchwert der Gesellschaft zum 31. März 2018 €20,01 pro Aktie (berechnet unter Berücksichtigung der Effekte des Angebots unter der Annahme, dass 932.551.964 Aktien der Gesellschaft nach Abschluss des Angebots ausstehend sein werden) betragen. Dies entspricht einem Anstieg des Nettobuchwerts der Gesellschaft um €5,19 bzw. 35,0% pro Aktie für die bestehenden Aktionäre der Gesellschaft als Ergebnis dieses Angebots und bedeutet eine unmittelbare Reduzierung des Nettobuchwerts pro Aktie für die Erwerber der Neuen Aktien von €60,99 bzw. 75,3% pro Aktie, weil der Nettobuchwert pro Aktie der Gesellschaft um diesen Betrag bzw. Prozentsatz unter dem Bezugspreis pro Aktie liegt.
E.7	**Schätzung der Ausgaben, die dem Anleger vom Emittenten oder Anbieter in Rechnung gestellt werden.**	Entfällt. Investoren werden nicht mit den Kosten der Gesellschaft belastet, wobei Depotbanken übliche Provisionen in Zusammenhang mit dem Bezug der Neuen Aktien sowie dem Verkauf und Kauf von Bezugsrechten berechnen können.

1. RISK FACTORS

*Investing in the shares of Bayer Aktiengesellschaft (hereinafter referred to as the "**Bayer AG**" or the "**Company**" and, together with its subsidiaries, including as of the closing date of the acquisition of Monsanto Company, St. Louis, Missouri, United States ("**Monsanto Company**"), Monsanto Company and its subsidiaries, "**Bayer**," "**we**," "**us**," "**our**," the "**Bayer Group**" or the "**Group**") involves risks, including risks relating to the Bayer Group, the global economy, the financial markets, the industries in which the Bayer Group is active, regulatory and political matters, legal and administrative proceedings, the subscription offer, the acquisition of Monsanto Company (together with its consolidated subsidiaries, "**Monsanto**") by Bayer (the "**Transaction**"), described below in "1.1.1 Sales and growth of the Bayer Group are dependent on the conditions of the global economy in general and of the economies where the Bayer Group operates in particular." and, as a result of the Transaction, Monsanto. Prospective investors in the Company's shares should read this prospectus (the "**Prospectus**") in its entirety, including the section entitled "23. Monsanto Information," and carefully consider the risks and considerations relevant to an investment in the Company's shares.*

As a global life science company, the Bayer Group is constantly exposed to a wide range of internal or external developments or events that could significantly impact the achievement of its financial and non-financial objectives. Bayer cannot exclude that it is exposed and, as a result of the Transaction, will be exposed, to some or all of the risks described below. Any of the risk factors described below, as well as additional risks of which Bayer or Monsanto are not currently aware, could have a material adverse effect on Bayer's business, financial condition, results of operations and prospects, and cause the value of the Company's shares to decline. Investors could lose all or part of their investment. The additional risks that currently are unknown or deemed immaterial, in particular, risks related to the Transaction and the integration of Monsanto, may also impair Bayer's business, results of operations and financial condition. Moreover, if and to the extent that any of the risks described below materialize, they may occur in combination with other risks, which would compound the adverse effect of such risks on Bayer's business, financial condition, results of operations and prospects. The risks described apply to all business segments of the Bayer Group unless otherwise indicated.

The sequence in which the risk factors are presented below is not indicative of their likelihood of occurrence or of the potential magnitude of their financial consequences.

1.1 Risks Related to Bayer

1.1.1 Sales and growth of the Bayer Group are dependent on the conditions of the global economy in general and of the economies where the Bayer Group operates in particular.

The Bayer Group is a global life science company with core competencies in the fields of health care and agriculture and conducts operations worldwide. It develops new molecules for use in innovative products and solutions to improve the health of humans, animals and plants through its Pharmaceuticals, Consumer Health and Crop Science divisions as well as through its Animal Health business unit.

On September 14, 2016, Bayer entered into an agreement and plan of merger (the "**Merger Agreement**") with Monsanto Company, a global provider of agricultural products, including seeds and trait technologies, herbicides, and digital platforms to give farmers agronomic recommendations. On May 31, 2018, all closing conditions required to complete the Transaction (other than those conditions that by their nature are to be satisfied at the closing of the Transaction), including the receipt of required antitrust and other regulatory approvals, were satisfied or waived and the Transaction is expected to be completed on or about June 7, 2018. As a result of the Transaction, Crop Science including Monsanto's business will become Bayer's largest division in terms of net sales.

General economic conditions, including, but not limited to, interest rate levels, inflation, unemployment rates, demographic trends, gross domestic product and consumer confidence, influence the growth of the markets where Bayer's products are widely used or applied. Economic conditions around the world, and in the industries in which Bayer does business, may also have a direct impact on sales prices and volume. As a result, a downturn in general economic conditions or market uncertainty in the geographic areas or industries in which Bayer operates could put pressure on prices and volumes and negatively impact Bayer's sales and margins achieved or achievable in the future. A decline in demand or shift to replacement products resulting from deteriorating economic conditions could materially adversely affect Bayer's business, financial condition, results of operations and prospects.

For Pharmaceuticals, an economic downturn could potentially put regulators under pressure to reduce patient and/or public health insurance costs for drugs and might lead regulators to impose mandatory rebates or discounts or other pricing restrictions, see also "*1.1.17 Pharmaceuticals is exposed to pricing pressure resulting from regulation and market conditions, which may negatively impact Bayer's business and results of operations.*" For Crop Science, risks may arise from market volatility for agricultural products and the impact of economic conditions on its customers' financial situations, especially in Latin America. Crop Science's exposure to these risks is expected to

increase as a result of the Transaction, given that Monsanto generates a significant part of its total net sales in South America, see also "*1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.*" For Consumer Health, product demand may be significantly impacted by economic conditions in key markets, such as the United States, Consumer Health's most important market in terms of single-country sales, and emerging markets, such as China, Brazil and Russia. Due to Consumer Health's focus on key emerging markets, Bayer's results of operations may also become more volatile since the economic development in these markets, be it positive or negative, is often characterized by a greater sensitivity to trends in the global economy.

1.1.2 Continued elevated levels of political and economic uncertainty could have unpredictable consequences for the markets in which Bayer operates and for the greater economy.

Although economic prospects overall improved in 2017, the last several years have been characterized by increased political and economic uncertainty in some of the core markets Bayer operates in, including Europe, the United States of America ("**United States**" or "**U.S.**") and Latin America, and numerous factors continue to contribute to the considerable uncertainty going forward. In Europe, potential future changes to monetary policy, continued doubts about the future of the Eurozone (as well as questions about the European Union more generally in the wake of the United Kingdom's "Brexit" referendum), insufficient deleveraging in the private and public sectors, a halt in implementing structural and financial reforms and an elevated level of political uncertainty could adversely affect the Group's operations. In the United States, uncertainties associated with the policies pursued by the current U.S. administration, both nationally and internationally, have led to market volatility and political uncertainty, including most recently in connection with the implementation of trade tariffs. In Latin America, political and economic conditions in a number of countries, including Argentina, Brazil and Venezuela, have recently deteriorated, leading to economic problems, including in the public sectors of these countries. Furthermore, events in recent years in other developing markets have placed pressures on the stability of the currencies in a number of countries in Latin America, in which the Group operates, including Brazil. Against this backdrop, persistent economic weakness, especially in the emerging economies but also in Europe, could negatively impact global trade and the markets in which Bayer operates. These trends could also be exacerbated by geopolitical crises, resulting, for example, from terrorist attacks, the inflow of large numbers of refugees into Europe, continued instability in the Middle East, heightened political tension with respect to North Korea, Turkey or Russia, or increased political uncertainty arising from populist movements in European countries and the United States.

Bayer's customers, especially in Pharmaceuticals, include sovereign countries and state-owned entities such as hospitals and public health services and there is a risk that the trends described above could result in material reductions in Bayer's business levels as customers in affected countries rein in their spending in light of decreased economic output, currency volatility and increased uncertainty. In particular, cost pressure on health systems could increase further thereby increasing pricing pressure for the Group. See also "*1.1.17 Pharmaceuticals is exposed to pricing pressure resulting from regulation and market conditions, which may negatively impact Bayer's business and results of operations.*" Furthermore, in some cases affected countries or state-owned entities in such countries might partially or totally cease payments to Bayer for goods and services delivered in order to balance their budgets or to avoid even higher levels of sovereign debt. Starting in 2015, market volumes in the seed and crop protection market in Latin America have decreased, particularly in Argentina and Brazil, including, among other factors, due to political uncertainties, including with respect to agricultural policies, such as farming subsidies, and an ongoing difficult macroeconomic environment with crop commodity prices remaining at a rather low level. There can be no assurance that this trend will reverse in the near term. Any of the developments described could potentially materially adversely affect the Group's sales, earnings and cash flows.

1.1.3 Actual macroeconomic and market developments may deviate from those that Bayer's management expects and may have predicted, which could adversely affect Bayer's results of operations, and if assumptions made in preparing Bayer's financial and operational forecasts or estimates prove inaccurate, Bayer's actual performance may fall materially short of its forecasts or estimates or the expectations of market observers.

Where actual macroeconomic and market developments vary from those predicted by Bayer in its economic outlook, this may negatively impact Bayer's sales and earnings expectations and may prevent Bayer from successfully adjusting its business strategy to changed economic conditions. In addition, the financial forecasts regarding sales and earnings (including, but not limited to, Group sales, EBITDA before special items and core earnings per share) and the operational projections (including, but not limited to, those relating to potential peak sales of drugs and drug and/or product candidates) provided in this Prospectus and in Bayer's on-going financial reporting reflect numerous assumptions made by Bayer's management, including assumptions with respect to the Bayer Group's specific as well as general business, regulatory, economic, market and financial conditions and other matters, all of which are difficult to predict and many of which are beyond Bayer's control. Accordingly, there is a risk that the assumptions made in

preparing the financial forecasts, estimates or operational projections, or the forecasts, estimates and projections themselves, could prove inaccurate. As a result, there may be differences between Bayer's projected and actual results, which could be material in nature and impact Bayer's share price. The inclusion of certain financial forecasts, estimates and operational projections in this Prospectus should not be regarded as an indication that Bayer, its management or representatives considered or consider such forecasts, estimates and projections to be a guaranteed prediction of future events, and the forecasts and projections should not be relied upon as such.

For example, following an ad hoc announcement on June 30, 2017, Bayer on July 27, 2017, revised its forecast for fiscal year 2017 downward due to current business and currency developments, including unexpected business developments impacting the forecasts for sales and earnings at Crop Science and Consumer Health. Specifically, Crop Science experienced problems in 2017 relating to sales to distributors and wholesalers in Brazil, when low demand due to adverse weather conditions and macroeconomic factors prevented inventory levels of crop protection products from following seasonal variations as expected but instead, in conjunction with further sell-in, led to a situation of overstocking. Crop Science initiated measures aimed at normalizing the situation in Brazil (e.g., such as returns of products, selective price adjustments, campaigns to drive demand), requiring it to record significant provisions. Consumer Health experienced substantial declines in sales in North America, especially in the United States, due to the difficult market environment, which was characterized by U.S. market softness in seasonal categories like allergy, intensified competitive pressure, and a changing distribution landscape, with a negative impact on Consumer Health's operating performance.

Crop Science, in particular, is exposed to uncertainties associated with the fact that Bayer's fiscal year is not aligned with the planting seasons in some of its important markets, e.g., in Latin America. This renders the predictability of earnings and cash flows for the business at the beginning of Bayer's fiscal year particularly difficult.

1.1.4 The industries in which Bayer operates are highly competitive, and competitive pressure could increase. Furthermore, disruptive technologies or changes to competitors' business models may adversely affect Bayer's business.

The Bayer Group sells its broad range of products in a competitive environment, and competes with other companies for sales on the basis of quality, price, technology and customer service. As a result, Bayer's products face intense competition across all of Bayer's business segments. This competition may increase as new products enter the market. Competitors' new products may be safer, technically more advanced or more effective, more convenient to use or more effectively marketed and sold than Bayer's products. Ongoing industry and distribution channel consolidation along with business practices such as aggressive marketing and pricing strategies, not only in the field of generic competition, may adversely affect our earnings. Furthermore, disruptive technologies or changes to competitors' business models may adversely affect Bayer's business.

Particularly in Pharmaceuticals, Animal Health and Crop Science, Bayer faces competition from generic products, including the generic availability of competitors' branded products, which may be equally safe and effective products that are sold at a substantially lower price than Bayer's products. Bayer's competitors may have greater access to financial resources, more experience in resource allocation or better ability in product innovation. In fiscal year 2017, for example, Consumer Health has been exposed to intensifying competitive pressure with respect to some of its key products in the United States, its most important market, which among other factors had a significant negative impact on Consumer Health's financial performance and will require significant investments in product innovation and geographical expansion, i.e., the launch of existing products in new markets. Overall, competitive pressure could increase further as a result of recent and future consolidation efforts in the markets in which Bayer operates. The current global consolidation process in the seeds and crop protection industry is also altering the future competitive environment for Crop Science.

There is also a risk in Crop Science that digitalization could fundamentally change markets for seeds and crop protection products, and have an impact on value creation and access to markets and customers. Should we be unable to profit from or counteract these developments through suitable initiatives, this could lead to a loss of customers, market share or business value and necessitate higher subsequent investments. The risk of existing business models being disrupted by digitalization or new digital products is also present for Consumer Health. Digitalization is a key factor in gaining a competitive advantage. If Bayer fails to adequately integrate this development into our existing business models, we could lose customers or market share.

1.1.5 Patents protecting products that are currently profitable for Bayer are subject to expiration, and there can be no assurance that Bayer will be successful in developing new products that upon market approval will achieve the commercial success to counterbalance the expected decline in revenues generated by such products upon the expiration of their patents.

Patents protect Bayer's intellectual property and Bayer has a portfolio that contains a considerable amount of patent protected products. In the event of successful commercialization of a product protected by patents, profits

can be invested to enable Bayer's continued, sustainable research and development ("**R&D**"). Due to the long period of time between the patent application and the market launch of a product, Bayer generally only has a few years in which to earn an adequate return on its intellectual property. Upon patent expiration, drug prices usually decrease due to competition from generics as well as potentially new and better drugs for the same indication. As patents protecting commercially successful products become subject to expiration, Bayer has to continue its R&D activities to create new, commercially viable products in order to counterbalance the expected decline in revenues generated by currently commercially successful products upon the expiration of their patents. For example, Bayer's bestselling drugs Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, and EYLEA™, an eye medicine, in the medium term will both gradually become subject to patent expiration in key markets, which, if not counterbalanced by the timely development and market launch of new commercially successful drugs, could lead to a decline in Bayer's revenues.

Despite a continuous increase in expenditure for R&D over the past years and other efforts to boost innovation, such as the establishment of Leaps by Bayer (formerly Bayer LifeScience Center), a strategic innovation unit, and despite significant expenditures that Bayer may invest in R&D in the future, there can be no assurance that Bayer will be successful in developing commercially promising intellectual property. Risks associated with the R&D process include, among others, disappointing results in preclinical trials for drug candidates, negative study results (e.g., regarding the toxicological profile of active ingredients or metabolites), clinical trials for drug candidates failing to meet trial endpoints, the need for additional studies, delays of product launches, limitations on product scope (e.g., regional limitations, application limitations), failure to obtain adequate patent protection, competitors bringing a product to market first, regulatory approval for a product not being granted for intended use and failure to identify and obtain approval for new indications or applications of successful existing products. Failure to develop commercially successful new products in a continuous manner may negatively impact the Bayer Group's competitiveness and results of operations.

1.1.6 There can be no assurance that Bayer will identify a sufficient number of research candidates and that Bayer's products will receive and maintain any necessary regulatory approvals, and any increase in regulatory and legal requirements, including as a result of higher public expectations, could lead to more costly and lengthy registration or approval procedures and could impair or preclude Bayer's product development and commercialization efforts.

While Bayer focuses on continuously developing and successfully commercializing innovative products and solutions based on scientific knowledge, it cannot, despite all efforts, assure that it will identify a sufficient number of research candidates and that all of the products it is currently developing or will develop in the future will achieve planned approval, registration or commercial success. Among other factors, this may be due to the failure to meet technical, capacity- and time-related requirements or the inability to meet trial objectives in product developments. The performance of research partners could also have a limiting effect in this respect. Delays or cost overruns could occur during product registration or launch.

In addition to regulatory requirements covering the testing, approval, manufacturing, labeling and marketing of products, the expectations of the public and the regulatory authorities with regard to the safety and efficacy of chemical, biological and pharmaceutical products are constantly rising. Regulatory authorities have substantial discretion to require additional testing, to delay or withhold registration or re-registration and marketing approval and to otherwise preclude the manufacture, distribution and sale of a product. Against this background, Bayer, for example, continues to anticipate considerably more stringent regulatory requirements, for example for clinical studies or production processes in the area of health or at Crop Science in the monitoring of genetically modified organisms, particularly at country level. These factors may negatively affect product development costs and the time it takes to obtain registration or marketing approval for Bayer's products and may lead to necessary adjustments of the product portfolio.

In addition, modern agricultural methods, the application of certain classes of crop protection products and the use of genetic engineering are repeatedly the subject of intense public debate. This political opinion-forming may yield legislative and regulatory decisions that significantly limit the use of Bayer's products or may even result in voluntary or mandated product withdrawals. In addition, decisions, for example restrictions imposed by the European Union ("**EU**"), also affect agricultural imports from other parts of the world and therefore Bayer's business in those regions. In addition, public perception of actual or perceived adverse effects on human health and the environment could result in the adoption of more stringent legislation and regulation that may negatively affect the markets for Bayer's products. Potential issues involve topics such as pollinators, biodiversity, water quality (ecological status), active ingredients in the environment, reproductive toxicity, endocrine effects, genetically modified organisms and perceived lack of benefits. For example, there is an ongoing regulatory and public debate fueled materially by non-governmental organizations and political parties attacking neonicotinoids, a class of insecticides. Despite favorable scientific research on neonicotinoids, this public debate has led and may in the future lead to legal and regulatory restrictions on the use of neonicotinoids in a number of jurisdictions, including the EU, France, Canada, the

United States and Brazil, in a variety of contexts (proposed and adopted legislation, challenges to product registrations, action by regulatory authorities, litigation). Such developments could impair the Bayer Group's competitiveness and results of operations. See also "*1.1.11 Defects or quality issues associated with Bayer's products or Bayer's failure to respect safety requirements may require it to withdraw products from the market, which could expose Bayer to product liability claims and other litigation, adversely affect its results of operations, including as a result of damage payments being imposed, and negatively impact Bayer's and its brands' reputation.*," "*1.1.12 Bayer is subject to extensive and increasingly stringent environmental, health and safety laws, regulations and standards, which may result in restrictions on production or marketing of its products, increased costs to ensure compliance, damage to Bayer's reputation, legal liability and remediation efforts*." and "*1.1.19 Consumer resistance to plant biotechnology may negatively affect Bayer's public image and impact Bayer's sales volumes and revenues*."

As a result of the Transaction, Bayer expects to become exposed to additional regulatory and legal requirements and risks, see "*1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.*"

1.1.7 Bayer's business and results of operations may be adversely affected if Bayer is unable to obtain or defend its intellectual property or if the rights associated with its intellectual property do not provide effective protection.

A considerable amount of Bayer's products is protected by patents. Bayer's success depends to a significant degree upon its ability to obtain and defend those patents as well as other intellectual property and proprietary information of the Group. The patent application process is time intensive and expensive. There can be no assurance that Bayer may continue to succeed in applying for and being granted patents to protect its intellectual property.

Even if Bayer succeeds in obtaining patents covering its products, third parties or government authorities may challenge or seek to invalidate or circumvent its patents and patent applications. Generic manufacturers and others may attempt to contest patents prior to their expiration. Sometimes a generic version of a product may even be launched "at-risk" prior to the issuance of a final patent decision. When a patent defense is unsuccessful, or if one of Bayer's patents expires, prices are likely to come under pressure because of increased competition from generic products entering the market.

Furthermore, Bayer may be unable to prevent third parties from using its intellectual property and other proprietary information without its authorization or independently developing intellectual property that is similar to or competes with Bayer's products, particularly in those countries where the laws do not protect proprietary rights to the same degree as in Germany, the European Union or the United States. Statutory differences in patentable subject matter may limit the protection Bayer can obtain on certain products it has developed. Complicated factual and legal issues can also introduce uncertainty as to the validity, scope and enforceability of its patents and other intellectual property rights. Moreover, there can be no assurance that Bayer will be able to identify infringements by third parties of Bayer's patents in time to take the necessary legal action.

Bayer is currently involved in a number of legal proceedings to enforce patent rights relating to its products, which it considers to entail material risks. For example, Bayer and its collaboration partner Janssen Pharmaceuticals, Inc. have filed patent infringement suits in a U.S. federal court in 2015 and 2016 against a number of pharmaceutical companies with respect to the generic use of Xarelto™, Bayer's bestselling drug, an oral anticoagulant for the treatment and prevention of blood clots. Legal proceedings initiated by Bayer to protect its proprietary rights can be expensive and time-consuming, regardless of the merits of any claim, and there can be no assurance that Bayer will prevail. See also "*1.1.13 Bayer is exposed to material risks from legal disputes and proceedings*." If Bayer fails to prevail in any of these legal proceedings, Bayer may be deprived of market exclusivity for the affected patented product or, in some cases, third-party patents may prevent the Company from marketing and selling the affected product in a particular geographic area or globally.

For information relating to risks that may impact Bayer's ability to realize the full value of the intellectual property of the combined agriculture business of Bayer and Monsanto (the "**Combined Agriculture Business**") following completion of the Transaction, see "*1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.*"

1.1.8 Bayer may inadvertently infringe on the intellectual property rights of third parties and could be enjoined from using or selling the infringing products or technology and/or required to pay monetary damages or royalties.

Many of Bayer's competitors have a substantial amount of intellectual property that Bayer must continually strive to avoid infringing. In this context, there can be no assurances that Bayer's processes and products and other

activities do not and will not infringe issued patents (whether present or future) or other intellectual property rights belonging to others. As a result, Bayer could become liable for infringement of intellectual property rights of third parties or could experience supply and production restrictions and disruptions as a result of actual or alleged infringements of intellectual property rights.

Legal action by third parties for alleged infringement of patent or proprietary rights by Bayer may impede or even halt the development, manufacturing or sale of certain products or require Bayer to pay monetary damages or royalties to third parties. In addition, as is often the case for intellectual property litigation, any legal proceedings may prove to be burdensome and costly.

Furthermore, Bayer may have to obtain third-party licenses to gain access to technology, which could entail considerable costs, including in terms of royalties to be paid. Bayer may be unable to acquire licenses that it will need for its future business with the appropriate scope, under acceptable conditions or at all. In addition, licenses Bayer currently holds may not continue to be effective, and Bayer may be prevented from making or marketing products.

1.1.9 Bayer is exposed to risks in connection with its acquisitions of companies and businesses, which could jeopardize its achievement of targets, lead to impairments and negatively impact its results of operations.

Where it appears strategically advantageous, Bayer may supplement its organic growth through acquisitions of companies or businesses. Failure to successfully integrate a newly acquired business or unexpectedly high integration costs could jeopardize the achievement of qualitative or quantitative targets, including those relating to cost and revenue synergies, and adversely impact earnings. Bayer's due diligence processes conducted prior to acquisitions may fail to identify risk-relevant factors at the acquired company. For example, with respect to the acquisition of the consumer care business of the U.S. company Merck & Co., Inc., Whitehouse Station, New Jersey, United States ("**Merck & Co., Inc.**"), completed in October 2014, Bayer has had to lower expectations with respect to the financial performance of certain products and groups of products acquired and has been required to make and will continue to make significant investments in relation to the acquired business and certain products, particularly in the United States. Such developments could eventually negatively affect Bayer's business, financial condition and results of operations, also through the recognition of impairment losses on intangible assets acquired. See also "*1.1.10 Bayer may be required to recognize significant impairments that reduce the value of the Bayer Group.*" For information on risks associated with the Transaction, see "*1.2 Risks Related to the Acquisition of Monsanto.*"

1.1.10 Bayer may be required to recognize significant impairments that reduce the value of the Bayer Group.

Bayer has a significant amount of intangible assets, including goodwill, on its consolidated statements of financial position, including as a result of the Transaction, and if it continues to acquire businesses in the future, may record significant additional intangible assets and goodwill. Apart from goodwill, Bayer's intangible assets consist mainly of trademarks and patents and technologies. Bayer tests goodwill and other intangible assets with an indefinite useful life or not yet available for use (such as research and development projects) for impairment if there is an indication of possible impairment or at least annually in the fourth quarter. Other intangible assets with a determinable useful life are amortized on a straightline basis over the period of their useful life, except where their actual depletion demands a different amortization pattern. Determination of the expected useful lives of such assets and the amortization patterns is based on estimates of the period for which they will generate cash flows. An impairment test is performed if there is an indication of possible impairment. Since Bayer utilizes a discounted cash flow methodology to calculate the fair value of its cash-generating units and groups of cash-generating units (i.e., strategic business entities or groups of strategic business entities, as well as certain product families), continued weak demand for a specific product line or business could result in an impairment.

Although Bayer believes the estimates of the useful lives of certain assets, assumptions concerning the macroeconomic environment and developments in the industries in which it operates, and estimates of the discounted future cash flows are appropriate, changes in assumptions or circumstances, could require changes in the analysis. This could lead to the recognition of additional impairment losses in the future, if developments are contrary to expectations, which could have a material adverse impact on Bayer's financial position and results of operations. At Pharmaceuticals, impairments may be required to be recognized at any time, particularly, if Bayer's research and development activities do not progress as planned. At Consumer Health, a weaker market environment led to impairment losses for fiscal year 2017 of €155 million related to a sunscreen product brand (Coppertone™) and of €47 million on a trademark in the allergies area (Aerius™). For more information on impairment risks associated with the Transaction, see "*1.2.8 Change of control, prohibition on merger or similar provisions in agreements and instruments to which Monsanto is a party may be triggered or alleged to be triggered by the Transaction and may lead to adverse consequences for the Bayer Group, including the loss of significant contractual rights and benefits, the possible termination of material agreements or the requirement to repay outstanding indebtedness.*"

1.1.11 Defects or quality issues associated with Bayer's products or Bayer's failure to respect safety requirements may require it to withdraw products from the market, which could expose Bayer to product liability claims and other litigation, adversely affect its results of operations, including as a result of damage payments being imposed, and negatively impact Bayer's and its brands' reputation.

Bayer assesses the potential health and environmental risks of a product along the entire value chain – from R&D through production, marketing and use by the customer to disposal. Despite extensive studies prior to approval or registration and Bayer's extensive monitoring of safety requirements and developments, it is possible that products could be partially or completely withdrawn from the market due to the occurrence of unexpected adverse side effects, product defects or other factors. Such a withdrawal may be voluntary or result from legal or regulatory measures. Furthermore, in Crop Science, the presence of traces of unwanted genetically modified organisms in agricultural products and/or food or feed cannot be entirely excluded. The above risks could expose Bayer to product liability claims and other litigation and potential resulting payments of damages may have a substantial negative impact on Bayer's earnings. In addition, defects or quality issues associated with Bayer's products could damage Bayer's and its brands' reputation.

1.1.12 Bayer is subject to extensive and increasingly stringent environmental, health and safety laws, regulations and standards, which may result in restrictions on production or marketing of its products, increased costs to ensure compliance, damage to Bayer's reputation, legal liability and remediation efforts.

Bayer is subject to a broad range of environmental, health and safety laws, regulations and standards in each of its operational jurisdictions. These requirements are comprehensive and relate to the entire value chain, including research and development, production, marketing, customer use and disposal. They cover not only product safety but also employee and environmental protection. Greenhouse gas emissions, and the generation, storage, handling, transportation, treatment, disposal and remediation of hazardous substances and waste materials are also covered. In light of the magnitude and complexity of these laws, regulations and standards, compliance with them or the establishment of effective monitoring systems may require a significant amount of financial and other resources. Misconduct and non-compliance with these requirements may result in personal injury, property and environmental damage, loss of production, business interruptions and/or liability for compensation payments. In addition, actual or perceived violations of these laws, regulations and standards may adversely affect Bayer's public image and relationships with its customers.

Furthermore, the scope of environmental, health and safety laws and regulations to which Bayer is subject may increase. Such changes in laws and regulations could inhibit or interrupt Bayer's operations, or require modifications to its facilities. There can be no assurance that Bayer will be able to pass on any costs of such measures to its customers. For example, chemical substances are subject to the European chemicals regulation 1907/2006/EC[1] ("**REACH**"). Alongside the standard registration obligation under REACH there is also an authorization procedure that can lead to the replacement of, or a ban on the use of, particularly hazardous substances. Already registered substances are also regularly evaluated by the authorities. For Bayer substances this can result in additional testing requirements, new risk management measures or the inclusion of substances in the REACH authorization procedure. Should Bayer due to a denial of authorization not be successful in supporting all current uses of certain substances in production or sourcing processes, Bayer may be forced to change these processes.

Bayer recognizes provisions for environmental protection that mainly relate to the rehabilitation of contaminated land, re-cultivation of landfills and redevelopment and water protection measures. However, estimating the future costs of environmental protection and remediation involves many uncertainties and is based on certain assumptions, particularly with regard to the status of laws, regulations and the information available about conditions in the various countries and at the individual sites. Significant factors in estimating the costs include previous experiences in similar cases, the conclusions in expert opinions obtained regarding the Group's environmental programs, current costs and new developments affecting costs, management's interpretation of current environmental laws and regulations, the number and financial position of third parties that may become obligated to participate in any remediation costs on the basis of joint liability, and the remediation methods likely to be deployed. Changes in these assumptions could impact future reported results of the Group. Given the difficulties inherent in estimating liabilities in the businesses in which the Group operates, especially for Crop Science, for which the risk of environmental damage is greater in relative terms, it remains possible that material additional costs may be incurred beyond the amounts accrued. It may transpire during remediation work that additional expenditures are necessary over an extended period and that these exceed existing provisions and cannot be reasonably estimated.

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[1] Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Despite its efforts to comply with environmental, health and safety laws, Bayer may face remediation liabilities and legal proceedings concerning environmental, health and safety matters. For example, in the United States, Bayer is one of numerous parties involved in a series of claims brought by federal and state environmental protection agencies. The claims arise from operations by entities which historically were conducted near Newark Bay or surrounding bodies of water, or which allegedly discharged hazardous waste into these waterways or onto nearby land. Bayer and the other potentially responsible parties are being asked to remediate and contribute to the payment of past and future remediation or restoration costs and damages. In August 2016, Bayer learned that two major potentially responsible parties had filed for protection under Chapter 11 of the U.S. Bankruptcy Code. While Bayer remains unable to determine the extent of its liability for these matters, this development is likely to adversely affect the share of costs potentially allocated to Bayer. In the Lower Passaic River matter, a group of more than sixty companies including Bayer is investigating contaminated sediments in the riverbed under the supervision of the United States Environmental Protection Agency ("**EPA**") and other governmental authorities. Future remediation will involve some form of dredging, the nature and scope of which are not yet defined, and potentially other tasks. The cost of the investigation and the remediation work may be substantial if the final remedy involves extensive dredging and disposal of impacted sediments. In the Newark Bay matter, an unaffiliated party is currently conducting an investigation of sediments in Newark Bay under EPA supervision. The investigation is in a preliminary stage. Bayer has contributed to certain investigation costs in the past and may incur costs for future investigation and remediation activities in Newark Bay. Bayer has also been notified by governmental authorities acting as natural resource trustees that it may have liability for natural resource damages arising from the contamination of the Lower Passaic River, Newark Bay and surrounding water bodies. Bayer is currently unable to determine the extent of its liability and has not recorded any provisions with respect to these matters.

1.1.13 Bayer is exposed to material risks from legal disputes and proceedings.

The Bayer Group is exposed to numerous risks from legal disputes and proceedings to which it is currently a party or which could arise in the future, particularly in the areas of product liability, competition and antitrust law, anticorruption law, patent law, tax law, data protection and environmental protection. Litigation and other judicial proceedings generally raise complex issues and are subject to many uncertainties and complexities, including, but not limited to, the facts and circumstances of the particular case, the jurisdiction in which each suit is brought and differences in applicable law. The outcome of any current or future proceedings can therefore not normally be predicted. It is particularly difficult to assess the likely outcomes of class actions for damages in the United States, which may give rise to significant financial and reputational risks for the Bayer Group. While Bayer has set up provisions for risks arising out of certain of the legal disputes and proceedings it is involved in, it is possible that legal or regulatory judgments or future settlements could significantly affect Bayer's results of operations and give rise to charges in excess of currently established provisions. In addition, while Bayer has insurance coverage as customary in the industry, Bayer could be found liable in cases not or not sufficiently covered by insurance.

Some of Bayer's legal disputes have already led to material payments in settlements and Bayer may agree to pay or be required to pay similarly large or greater amounts in settlement payments, fines, penalties or other damages in respect of current or future legal or regulatory disputes. The effects of such payments may materially impact Bayer's business and results of operations. In addition, these disputes could result in reduced revenues from products concerned or due to reputational harm more generally. For example, as of January 30, 2018, Bayer had reached agreements, without admission of liability, to settle approximately 10,600 claims in the U.S. for a total amount of approximately US$2.1 billion in connection with product-related litigation relating to Yasmin™ / YAZ™, which are oral contraceptives and among Pharmaceuticals best-selling products. Another recent example of legal proceedings that involve material risk relates to Pharmaceuticals' best-selling product in 2016 and 2017, Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots. As of April 13, 2018, U.S. lawsuits from approximately 23,200 recipients of Xarelto™ had been served upon Bayer. Plaintiffs allege that users have suffered personal injuries from the use of Xarelto™, including cerebra l, gastrointestinal or other bleeding and death, and seek compensatory and punitive damages. Additional lawsuits are anticipated. As of April 13, 2018, Bayer had been served with U.S. lawsuits from approximately 16,800 users of Essure™, a medical device offering permanent birth control with a nonsurgical procedure. Plaintiffs allege personal injuries from the use of Essure™, including hysterectomy, perforation, pain, bleeding, weight gain, nickel sensitivity, depression and unwanted pregnancy, and seek compensatory and punitive damages. Additional lawsuits are anticipated. The provisions relating to the Yasmin™ / YAZ™ and Essure™ claims exceed the available insurance coverage. In addition, investigations of possible legal or regulatory violations, such as potential infringements of antitrust, anticorruption or data privacy laws or certain marketing, distribution and product promotion methods, may result in the imposition of civil or criminal penalties—including substantial monetary fines—and/or other adverse financial consequences and harm Bayer's reputation. See also "*1.1.26 Bayer is subject to certain anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations with respect to its operations and noncompliance with such laws and regulations may subject Bayer to criminal and/or civil liability and harm its business and reputation.*"

1.1.14 The theft, misuse and counterfeiting of products by third parties exposes Bayer to reputational risks and could undermine Bayer's competitiveness.

Bayer faces risks in connection with the theft, misuse and illegal trading of counterfeit medicines and crop protection products by criminal third parties. In most cases, the composition and quality of counterfeit products are inferior to those of the original products. No local regulatory authority assures the quality of the manufacturing or distribution process. This means that any associated defects and adverse reactions will not be easily recognized or monitored and, if needed, an effective product recall would not be possible. Moreover, the professionalism and complexity of product-related crime has increased significantly in recent years. Products originating from illegal third-party manufacturing not only endanger patients, users, animals and the environment, but also jeopardize the reputation of Bayer and its products and undermine Bayer's competitiveness. Bayer's preventative measures and assistance to authorities' efforts to prosecute offenders may be insufficient to prevent product counterfeiting.

1.1.15 Bayer's dependence on external partnerships, including with suppliers, could adversely impact Bayer's business, operations and reputation.

Along the value chain, Bayer relies on collaboration with various third parties. Bayer has no direct influence on the operations of such partners and has limited ability to control the quality of products and services provided by such partners. The sub-optimal performance by collaboration partners or failure of a third-party supplier, contractor or other external partner to deliver as expected may affect the development, manufacture or marketing of Bayer's products and services and adversely impact its business. In particular, this could result in disruptions to Bayer's product development, supply and production processes, an increase in production costs, customer dissatisfaction and damage to Bayer's reputation. In Pharmaceuticals, for instance, the marketing rights for certain products and countries are held by third parties. For example, Bayer's best-selling pharmaceutical product, Xarelto™, is marketed in the United States by a subsidiary of Johnson & Johnson. Bayer depends upon the success of these third parties in performing their responsibilities and upon their continued cooperation to successfully market its products in the markets concerned. Inadequate performance by collaboration partners could adversely affect the development of Bayer's sales and costs. Furthermore, some materials, particularly in our Pharmaceuticals segment, are provided by only a very limited number of suppliers. Production may be disrupted by delays in delivery. Price adjustments may also occur that could have a negative impact on the margin for Bayer's products. While Bayer strives to counter these risks by establishing alternative suppliers, concluding long-term agreements, expanding inventories or producing raw materials itself and by employing Strategic Material Review Committees to regularly examine and assess supplier risks, there can be no assurance that these counter-measures will be successful.

There is also a risk that Bayer's corporate values, ethical requirements, compliance and sustainability are not adequately accounted for by its external network and partners. In its selection of new and established suppliers, Bayer applies, in addition to economic standards, certain ethical, environmental, social and governance standards that are defined in the Bayer Group's Supplier Code of Conduct. The Supplier Code of Conduct sets forth Bayer's sustainability principles, explains what Bayer expects from its partners along the value chain, and requires them to observe any relevant legal, regulatory or contractually agreed requirements, generally recognized standards as well as Bayer's standards in areas including environmental protection, occupational safety and human rights. However, there can be no assurance that Bayer's current or future suppliers have fully implemented the Supplier Code of Conduct or that Bayer's supplier assessments and audits will identify all instances of noncompliance with the Supplier Code of Conduct. For a description of risks associated with noncompliance with voluntary commitments, see "*1.1.20 Any actual or perceived violation of the commitments made by Bayer with a view to ensuring sustainable development and ethical conduct in its business activities may damage the reputation of the Bayer brand.*"

1.1.16 Bayer's production and procurement activities are exposed to various risks, including in connection with technical failures, natural disasters, regulatory action or legislative changes.

Risks associated with the manufacturing, filling, storage or shipping of products may result in personal injury, property damage, environmental contamination, loss of production, business interruptions and/or liability for compensation payments. Bayer's quality, health, environmental protection and safety management teams may not be able to fully mitigate such risks.

Operations at Bayer's sites may also be disrupted, among others, by natural disasters such as earthquakes, fires or explosions, pandemics and epidemics, power outages, terrorist attacks, cyber-attacks or other critical events. This also applies to external partners along the value chain. For example, some of our production sites are located in regions that could be affected by natural disasters such as flooding or earthquakes. Such events could result in personal injury and damage to our reputations as well as lead to declines in revenues and/or margins and necessitate the reconstruction of damaged infrastructure.

Disruption may also result from possible regulatory or legislative changes in the respective countries of operation. In biotechnical production especially, disruptions may occur as a result of regulatory non-compliance due

to contamination, for example. The complexity of multistage manufacturing processes for active ingredients or biotechnology products strengthens the potential for disruption and may limit product availability. This applies, for instance, to the biotech products of Pharmaceuticals because of their highly complex manufacturing processes, where limitations on and interruptions to product supply could result in product supply shortages in the market. There can be no assurance that Bayer will be able to fully preclude this risk through its numerous preventative actions, including a strategy of distributing production for certain products among multiple sites or of building up safety stocks. If Bayer is unable to meet demand for its products, sales may undergo a structural decline. In addition, potential infringements of current or changing regulatory requirements may result in the imposition of civil or criminal liabilities, including substantial monetary fines, a restriction on our freedom to operate, and/or other adverse financial consequences. They could also harm Bayer's reputation and lead to declining sales and/or margins.

For example, manufacturing of pharmaceutical products and product candidates is subject to compliance with the Current Good Manufacturing Practices ("**cGMP**") enforced by the United States Food and Drug Administration ("**FDA**") and other international regulations. As the responsible manufacturer and supplier, Bayer is liable for any noncompliance with current marketing authorizations, which may involve the shutdown of production facilities and other interruptions of production that could, in turn, lead to third-party litigation and significant costs associated with remedial actions. In addition, health authorities have in some cases imposed significant penalties for failures to comply with cGMP and other applicable regulations. A failure to comply with applicable rules could also lead to a delay in the approval of new products to be manufactured at the impacted site or a refusal to admit products manufactured at the facilities concerned into the market. If any of these risks were to materialize they could have a significant adverse effect on Bayer's ongoing business and results of operations.

In this context, Bayer is currently addressing certain observations related to deficiencies in cGMP raised by the FDA in a "Warning Letter" issued in November 2017 related to one of Bayer's main pharmaceutical production sites, the Supply Center Leverkusen, situated in Leverkusen, Germany. The Supply Center Leverkusen is engaged in the process of drug manufacturing including solid oral dosages forms. The issuance of the Warning Letter followed a routine inspection of the site by the FDA in January 2017, subsequent to which Bayer promptly instituted corrective and preventive actions. Following the receipt of the Warning Letter, a further comprehensive response was submitted, which is currently under review by the FDA. Release and distribution of products from the Supply Center Leverkusen continues. However, due to ongoing remediation and modernization measures at the site, there are certain supply limitations in individual countries, which affect Bayer's mature product portfolio and which are expected to continue to occur during the remainder of 2018. Accordingly, for the three months ended March 31, 2018, temporary supply disruptions for some of Bayer's established Pharmaceuticals and Consumer Health products had a negative impact on these segments' results of operations, as expected. More generally, at this stage in the process, Bayer cannot exclude with certainty that the risks and the significant adverse effects described in the preceding paragraph will materialize.

1.1.17 Pharmaceuticals is exposed to pricing pressure resulting from regulation and market conditions, which may negatively impact Bayer's business and results of operations.

Pharmaceuticals' growth and market share could be impaired by increasing global cost pressure on health systems as well as price regulations. Prices of pharmaceutical products are subject to regulatory monitoring and control in many markets, in part due to global cost pressure on health care systems, and government reimbursement systems often favor less expensive generic medicines over branded products. In addition, in some markets, major health care and health insurance providers can exert substantial pressure on prices, and pharmaceutical companies are coming under increasing pressure to justify the costs of their products as compared to the products' benefits. At the same time, there is considerable uncertainty surrounding the regulatory framework in the United States. Government price controls could reduce earnings from Bayer's pharmaceutical products and may occasionally make the market launch of a new product unprofitable. Furthermore, Bayer's growth and the development of its market share has in the past, and could in the future, be negatively affected by innovative and aggressive (pricing) policies by competitors, including generic competitors. Bayer expects the current extent of regulatory controls and pricing pressures to persist or increase. If such price controls and the pressure on prices intensify, it could be necessary to adjust Bayer's business model, which could have an adverse effect on Bayer's results of operations.

1.1.18 Bayer's business operations and financial performance may be affected by variations of weather conditions and other seasonal factors as well as by resistances.

Crop Science's business operations and financial performance, in particular, are subject to weather conditions and other seasonal factors as well as resistances, which can vary unpredictably from period to period. Specifically, weather conditions can affect the presence of disease and pests in the short term on a regional basis and, accordingly, can affect the demand for crop protection products and the mix of products used. For example, in

fiscal year 2017, Crop Science's results were significantly adversely impacted by developments in Brazil (the world's second largest agriculture market), which, among other factors, were caused by variations of weather conditions. Weather conditions may also affect the quality, volume and cost of seeds produced for sale. Seed yields can be higher or lower than planned and significantly higher yields could lead to Bayer purchasing more seeds from contract growers than can be sold during the limited product life of the seeds, which could lead to inventory provisions and write-offs. In addition, weather conditions have a significant impact on the overall development of the agricultural market and are a significant factor in determining its cyclicality. Furthermore, if weeds or pests show signs of resistance against Crop Science's products and Crop Science is unable to develop and market new formulae or treatments which perform well in the face of resistances, its sales volume could decline. Bayer expects that risks associated with variations of weather conditions and other seasonal factors as well as with resistances will gain further significance as a result of the Transaction, given that Crop Science including Monsanto's business will become Bayer's largest division in terms of net sales as a result of the Transaction. Weather conditions and other seasonal factors may also impact the demand for some of Consumer Health's best-selling products in the cold, allergy, sinus & flu and sun protection categories, which could significantly affect Consumer Health's results of operations.

1.1.19 Consumer resistance to plant biotechnology may negatively affect Bayer's public image and impact Bayer's sales volumes and revenues.

Crop Science is active in the field of agricultural biotechnology R&D in, and marketing of, crop protection and seeds, including genetically modified seeds. The high public profile of biotechnology in food production and lack of consumer acceptance of products to which Bayer has devoted substantial resources could negatively affect Bayer's public image and impact Bayer's sales volumes and revenues. The current resistance from consumer groups, particularly in Europe, to genetically modified crops could not only limit Bayer's projected sales in such markets, but also has the potential to spread to and influence the acceptance of products developed through biotechnology in other regions of the world. Opposition to plant biotechnology in cultivation countries and in some import regions appears to be a long-lasting trend impacting major seed markets globally. Declining acceptance of biotechnology could have a negative impact on public policy and restrict businesses' freedom to operate, which could materially and adversely affect Bayer's future sales volumes and revenues.

Moreover, as a result of the Transaction, Bayer's risk profile is expected to shift, and Bayer anticipates that risks associated with biotechnology products, such as those described above, will gain further significance. For a description of risks associated with Monsanto's biotechnology products, see "*1.2.5 The lack of public understanding and acceptance or perceived public acceptance of Monsanto's biotechnology and other agricultural products as well as of the merits of the Transaction could harm Bayer's reputation and, as a consequence, negatively affect Bayer's business, results of operations and share price.*"

1.1.20 Any actual or perceived violation of the commitments made by Bayer with a view to ensuring sustainable development and ethical conduct in its business activities may damage the reputation of the Bayer brand.

Many stakeholders evaluate companies according to whether they conduct themselves not just "legally" but also "legitimately." The Bayer Group is dedicated to maintaining its sustainable development and addressing its social and ethical responsibilities in all areas of its business activity. For example, Bayer is a founding member of the United Nations Global Compact, a strategic initiative for companies that undertake to align their business activities and strategies with ten universally recognized principles in the areas of human rights, labor standards, environmental protection and the fight against corruption. Bayer also supports the chemical industry's Responsible Care™ initiative, a voluntary commitment to conserve natural resources, safely operate facilities and minimize the environmental impact of Bayer's activities. Bayer's commitment to sustainable development is reflected in its inclusion in major sustainability indices that assess companies according to environmental, social and governance criteria.

With the aim of ensuring the sustainability of its activities along the entire value chain, Bayer has introduced a Supplier Code of Conduct and conducts supplier assessments and audits to verify implementation and compliance by its third-party partners. For more information, see "*1.1.15 Bayer's dependence on external partnerships, including with suppliers, could adversely impact Bayer's business, operations and reputation.*"

Any actual or perceived violation of Bayer's voluntary commitments, such as the United Nations Global Compact, the Responsible Care™ initiative or the Supplier Code of Conduct, and any resulting adverse media reporting or negative public perception of Bayer may damage the reputation of the Bayer brand.

1.1.21 There can be no assurance that Bayer will be able to recruit and retain a sufficient number of qualified employees at all sites in the future and difficulties in recruiting, retaining and further developing specialized employees could have significant adverse consequences for Bayer's future development.

Skilled and dedicated employees are essential for Bayer's success. Particularly in countries with full employment and in the emerging markets of Asia and Latin America, the number of people with the technical and language skills needed to meet the demanding requirements of an international enterprise remains relatively small. Globally, the recruitment of talent in the areas of new technologies, e.g., digital and biotechnology, in particular, is challenging. Accordingly, those who possess these skills are highly sought after. Difficulties in recruiting, hiring, retaining and further developing specialized employees could have significant adverse consequences for Bayer's future development. Furthermore, an inadequate or non-transparent company culture and strategy, as well as the resulting objectives and demands placed on employees, may lead to declining motivation and unsatisfactory performance and have a negative impact on Bayer's attractiveness as an employer.

1.1.22 Bayer is dependent on the uninterrupted operation of its global information technology systems.

Business and production processes and the internal and external communications of the Bayer Group are dependent on global information technology systems. The confidentiality of internal and external data is of fundamental importance in this connection. Information systems are generally susceptible to disruptions, damage, power outages, malicious attacks, computer viruses, fire and similar events. The disruption or interruption of the operation of these systems or the loss of important data, for example due to cyber-crime or during transition of data to an outsourced provider cannot be ruled out. In addition, the overall risk of cyber-attacks is increasing. Security vulnerabilities in information technology solutions and insufficient contingency planning measures may lead to incidents that affect the entire Bayer Group. A significant technical disruption or failures of information technology systems could severely impair Bayer's business and production processes. A loss of data confidentiality, integrity or authenticity, for example due to cyber-attacks, could lead to manipulation and/or the uncontrolled outflow of data, including customer, vendor, employee, research, patient, product, production and other data, and know-how, which could, in turn, expose the Bayer Group to liability and reputational harm.

Bayer's information technology systems are continuously extended, upgraded and decommissioned. Acquisitions such as that of the consumer care business of Merck & Co., Inc. and of Dihon Pharmaceutical Group Co. Ltd. have also required or, with respect to the Transaction, are expected to require the integration of different information technology systems and software applications. During such integration phases, the interaction and interdependencies between various components can in some cases make the systems more susceptible to disruptions than in cases where entire systems are brought into service at the same time. The integration and improvement of systems requires additional efforts, particularly by means of efficient monitoring. Bayer expects its exposure to IT related risks and cyber-attacks to increase as a result of the Transaction, see "*1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.*"

1.1.23 The Bayer Group is exposed to financial risk, including liquidity, credit and market price risks.

Liquidity risks reflect the possible inability of the Bayer Group to meet current or future payment obligations due to a lack of cash or cash equivalents.

Credit risks arise from the possibility that the value of receivables or other financial assets of the Bayer Group may be impaired because counterparties, including financial institutions in case of a renewed financial markets crisis, cannot meet their payment or other performance obligations. The maximum default risk is reduced by existing collateral, especially under Bayer's global credit insurance programs. Positive and negative fair values of derivative financial instruments may be netted when certain conditions are fulfilled.

Foreign currency risks for the Bayer Group result from changes in exchange rates and the related changes in the value of financial instruments (including receivables and payables) and of anticipated payment receipts and disbursements in the functional currency. For example, in a hypothetical adverse scenario in which the euro depreciates by 10% against all other currencies compared with the exchange rates as of March 31, 2018, the estimated hypothetical loss of cash flows from derivative and non-derivative financial instruments would have diminished earnings and equity (other comprehensive income) of the Bayer Group (excluding Monsanto) as of March 31, 2018 by €332 million (December 31, 2017: €346 million). Of this amount, €131 million is related to the U.S. dollar, €65 million to the Chinese renminbi, €42 million to the Japanese yen and €38 million to the Canadian dollar. Currency effects on anticipated exposure are not taken into account. Derivatives used to hedge anticipated currency exposure that are designated for hedge accounting would have diminished equity by €346 million. For the exchange rate related risks associated with the Transaction, see "*1.2.13 Fluctuations in exchange rates could have a significant impact on the amount of debt Bayer incurs and the results of operations of Bayer following completion of the*

Transaction." As a result of the Transaction, Bayer expects its exposure to foreign currency risks to increase in light of the geographical scope of Monsanto's business, see "*1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.*"

Interest-rate risks result for the Bayer Group through changes in capital market interest rates, which in turn could lead to changes in the fair value of fixed-rate financial instruments and changes in interest payments in the case of floating-rate instruments. For example, a sensitivity analysis based on the net floating-rate receivables and payables position of the Bayer Group (excluding Monsanto) as of March 31, 2018, taking into account the interest rates relevant for its receivables and payables in all principal currencies, produced the following result: a hypothetical increase of 100 basis points or one percentage point in these interest rates (assuming constant currency exchange rates) as of January 1, 2018 would have raised Bayer's interest expense for the three months ended March 31, 2018 by €11 million (December 31, 2017: €13 million). For the interest rate related risks associated with the Transaction, see "*1.2.12 Fluctuations in interest rates could have a significant impact on the results of operations of Bayer following completion of the Transaction*."

1.1.24 The Bayer Group faces risks from capital market developments in connection with its pension and post-employment benefit obligations.

The Bayer Group has obligations to current and former employees related to pensions and other post-employment benefits. Changes in relevant valuation parameters such as interest rates, mortality and rates of increases in compensation may raise the present value of Bayer's pension obligations. This may lead to increased costs for pension plans or diminish equity due to actuarial losses being recognized in other comprehensive income.

A large proportion of Bayer's pension and other post-employment benefit obligations is covered by plan assets including fixed-income securities, shares, real estate and other investments. Declining or even negative returns on these investments may adversely affect the future fair value of plan assets. This in turn may diminish equity, and/or it may necessitate additional contributions by Bayer.

1.1.25 There can be no assurance that Bayer's internal control system provides adequate protection against errors in the Group's financial statements or against financial loss resulting from incorrect Group financial statements.

Bayer has an internal control system in place for the Group's accounting and financial reporting. This internal control system is designed to identify and prevent errors in the Group's financial statements, to protect Bayer against financial loss resulting from incorrect Group financial statements and to ensure timely, accurate and meaningful documentation of processes relevant to the internal control system. However, due to the risk-based approach of Bayer's internal control system, there can be no assurance that the internal control system, irrespective of its design, fully protects Bayer against material misstatements, which might, for example, result from intentional or unintentional omitted posting of business transactions (incomplete postings), erroneous posting of business transactions (incorrect postings), erroneous evaluation of assets, stocks, overdue receivables and the like, incorrect consolidation of a legal entity's financial statements and incorrect configuration of financial systems as well as other irregularities.

1.1.26 Bayer is subject to certain anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations with respect to its operations and noncompliance with such laws and regulations may subject Bayer to criminal and/or civil liability and harm its business and reputation.

Bayer is subject to certain anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations, including in the United States, the United Kingdom and other foreign jurisdictions, in which it conducts its operations. Anti-corruption laws are often interpreted broadly and may prohibit companies, their employees as well as their third-party partners, such as agents, clinical research organizations, legal counsels, accountants, consultants, contractors and other partners, from authorizing, promising, offering, providing, soliciting or receiving, directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Bayer and its third-party partners may have direct and/or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations, including in connection with obtaining necessary permits, licenses, patent registrations and other regulatory approvals. Bayer could, depending on the circumstances, be held liable for the corrupt or other illegal activities of its personnel and third-party partners. In addition, to the extent that there is a finding of potentially incompliant behavior in connection with contracts involving public sector entities, including multi-lateral international financial institutions, Bayer may be barred from participating in such entities' public tenders for a certain period of time. Any of the foregoing could not only harm Bayer's business, but also its reputation. Accordingly, Bayer has established a global compliance management system to ensure the observance of laws and regulations. See also "*1.1.15 Bayer's dependence on external partnerships, including with suppliers, could adversely impact Bayer's business, operations*

and reputation." In this context, the World Bank has reviewed certain World Bank-financed contracts involving the procurement of Bayer manufactured contraceptive pharmaceuticals by the governments of Bangladesh and Nepal. In a letter to Bayer in March 2018, the World Bank concluded it believes that there is sufficient evidence of a sanctionable practice and recommended that a sanctions case be brought against Bayer. Bayer has conducted internal investigations with the assistance of independent counsel and has strongly rejected the allegations in a written response to the World Bank. The dialogue with the World Bank continues and at this point in time, no statements on the outcome of this exchange and potential disadvantages for Bayer that may result therefrom can be made.

Export control, sanctions, and other trade laws and regulations restrict Bayer's business dealings with certain sanctioned countries, persons and/or organizations. Bayer has operations in several countries that may be subject to various sanctions. Accordingly, Bayer has implemented compliance procedures to ensure that Bayer's operations with respect to these countries comply with all applicable sanctions. However, there can be no assurance that other persons and entities with whom Bayer now, or in the future, may engage in transactions will not become subject to sanctions, that the countries in which Bayer currently operates will not be subject to further and more restrictive sanctions in the future and that additional sanctions will not be imposed on other countries or entities with which Bayer does business.

1.1.27 Due to a complex multi-level group structure and the extended geographic reach of Bayer's business activities, Bayer could incur greater tax liabilities than expected and be affected by changes to the regulatory framework in particular in relation to the non-deductibility of interest payments, the future tax treatment of dividend payments in various jurisdictions and the introduction of additional taxes.

The companies of the Bayer Group operate in many countries that have complex tax systems and their taxation depends on various aspects of tax laws and regulations, including double taxation treaties concluded, in numerous jurisdictions, as well as their respective application and interpretation. Due to the nature of operating activities performed by Bayer, the tax issues Bayer faces are complex. This could lead to disputes with tax authorities and could further lead to an increase in tax liabilities, even for past periods. Bayer has a multi-level corporate and capital structure in place and future changes in the tax treatment of intra-group distributions in various jurisdictions or the introduction or tightening rules restricting the tax deductibility of interest expenses, as currently discussed in various jurisdictions, could lead to an increase in Bayer Group's overall tax burden. All these effects and, in addition, the introduction of new customs duties, levies or other fees or increases in existing ones, or other adverse developments of relevant tax laws or the application thereof, could adversely affect the Group's business, financial condition, results of operations and prospects.

1.1.28 Pending and future tax audits and changes to the interpretation of fiscal regulations could lead to additional tax liabilities.

The companies of the Bayer Group are subject to routine tax audits by various tax authorities in the jurisdictions in which they operate. Pending and future audits in any of the jurisdictions in which Bayer operates may result in additional tax and interest payments which would negatively affect Bayer's results of operations and financial condition. This may be the case, for example, with respect to major acquisitions, divestitures, restructurings and other reorganizations that the Bayer Group underwent in the past. Besides this, the Bayer Group operates tax groups and fiscal unities in a number of jurisdictions throughout the world whose existence or due operation could be challenged by the respective local tax authorities. Complex tax regulations may give rise to uncertainties with respect to their interpretation and the amount and timing of future taxable income. Given the wide range of international business relationships and the long-term nature and complexity of existing contractual agreements of the Bayer Group, differences arising between actual results and the assumptions made, or future changes to such assumptions could necessitate adjustments to tax income and expenses in the future. The Bayer Group establishes provisions for taxes for liabilities to the tax authorities of the respective countries that are uncertain as to their amount and the probability of their occurrence. The amount of such provisions is based on various factors, such as experience with previous tax audits and differing legal interpretations by the taxable entity and the responsible tax authority. It cannot be excluded that the provisions established may prove insufficient to cover the pertaining risks. Changes in fiscal regulations or the interpretation of tax laws by the courts or the tax authorities in any of the jurisdictions in which Bayer conducts its business may also have adverse consequences for the Bayer Group.

1.1.29 Bayer may be exposed to potential risks in connection with the recent U.S. tax reform, which cannot be fully assessed at this point in time.

On December 22, 2017, the United States enacted new tax legislation, the "Tax Cuts and Jobs Act of 2017," which provides for substantial changes to the U.S. taxation of individuals and businesses and aims to attract new investments, jobs and growth in the United States. Although the new law decreases tax rates applicable to corporations in the United States substantially, Bayer is unable to fully or finally assess what all of the consequences

of the legislation will be at this point in time. In particular, significant uncertainties remain as to how the U.S. government will implement the new legislation, including with respect to the deductibility of interest expense, participation exemption regime, one-time transition tax, minimum tax on so-called 'global intangible low-tax income' and base erosion and anti-abuse tax.

While Bayer has recorded certain one-time effects in an aggregate amount of €455 million in connection with the U.S. tax reform, which result from the revaluation of deferred tax items and the recognition of an additional tax on unrepatriated profits in its consolidated financial statements as of and for the year ended December 31, 2017, overall, Bayer currently expects the U.S. tax reform to have a favorable impact on the Group in coming years.

Since the legislation is new and unclear in many respects, Bayer expects additional rules and regulations to be issued in the medium term. This could entail potential risks that cannot be fully assessed at this point in time. In particular, it cannot be excluded that Bayer's tax positions may be affected by such future legislative and regulatory action, which could lead to an increase in Bayer's effective tax rate and could adversely affect its financial condition and results of operations. For information on the expected impact of the U.S. tax reform on the combined business and operations of Bayer and Monsanto and associated risks, see "*1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.*"

1.1.30 Bayer is exposed to financial risks from the development of the price of the shares in Covestro AG.

At the end of September 2017, Bayer lost control of its subsidiary Covestro AG due to the sale of shares and the signing of a control termination agreement. As a result, Covestro AG and its consolidated subsidiaries ("**Covestro**") were no longer required to be fully consolidated in Bayer's consolidated financial statements and Covestro ceased to be a reportable segment of the Bayer Group. While Covestro's operative risks are therefore no longer a part of Bayer's risk profile, Bayer remains exposed to financial risks in connection with the remaining direct interest of 6.8% it currently holds in Covestro AG, which is accounted for as other financial asset measured at fair value through profit or loss. Bayer therefore is exposed to financial risks from the development of the price of the shares in Covestro AG (the "**Covestro Shares**"), which may impact the value of its remaining equity interest. In addition, in connection with senior, unsecured exchangeable bonds in a nominal amount of €1.0 billion due 2020, with a coupon of 0.05% per annum issued by Bayer in June 2017, which may either be settled in cash or by delivery of Covestro Shares or by a combination thereof (the "**Exchangeable Bonds**"), Bayer faces the risk that at maturity of the Exchangeable Bonds the price of the Covestro Shares could be lower than the conversion price for the Exchangeable Bonds, in which case Bayer would be required to fund the difference.

1.2 Risks Related to the Acquisition of Monsanto

1.2.1 Certain divestiture actions and other commitments that Bayer was required to undertake in connection with obtaining regulatory approvals to complete the Transaction could negatively impact Bayer's strategic planning and necessitate substantial adjustments to its operational and financial structures, which, in turn, could have a material adverse effect on the current and future business, results of operations, financial condition, share price, dividend payments and prospects of Bayer. In addition, there is a limited residual risk that additional remedies could be required.

In connection with obtaining required antitrust and other regulatory approvals to complete the Transaction, Bayer was required to commit to the divestiture of certain of its assets and businesses to third parties, to agree to restrictions on its ability to operate in certain jurisdictions following completion of the Transaction and to make certain other commitments to regulatory authorities regarding ongoing operations.

In this context, Bayer, in separate transactions entered into in October 2017 and April 2018, respectively, has agreed to sell selected Crop Science businesses to BASF SE, Ludwigshafen, Germany, for an aggregate base purchase price of approximately €7.6 billion (the "**Transaction-related Divestments**"). The base purchase prices agreed will be subject to customary purchase price adjustment mechanisms and, with respect to the transaction entered into in October 2017, will be reduced by €0.2 billion at closing as a result of the Transaction not having closed by January 1, 2018. The businesses to be divested generated total sales of €2.2 billion for the fiscal year ended December 31, 2017 and of €0.9 billion for the three months ended March 31, 2018. The agreements relating to the Transaction-related Divestments contain both customary and divestment-specific representations and warranties, interim operating covenants and indemnities in respect of the assets being sold. They also require Bayer and BASF to enter into certain transition services agreements (including for services from BASF to Bayer) at closing, as well as long-term agreements in respect of product supply, tolling services, distribution services, intellectual property, site cooperation, site leasing and other long-term arrangements.

Until the closing of the Transaction-related Divestments, Bayer and Monsanto will be held separate as required by the U.S. Department of Justice. Bayer currently expects to be able to commence the integration of the two organizations in approximately two months. However, if the expected timing for completion of the Transaction-related Divestments were to be unduly delayed, the expected integration timeline could slip, which could delay the achievement of Bayer's strategic objectives as well as synergies and other operational targets in connection with the Transaction.

Following completion of the Transaction and of the Transaction-related Divestments, Bayer will remain active in the areas covered by the Transaction-related Divestments as a result of the programs, products and offerings of Monsanto that it will acquire as part of the Transaction and it has also taken the Transaction-related Divestments into account in developing the strategic objectives, synergy and other operational targets for the Combined Agriculture Business. However, the Transaction-related Divestments will require certain adjustments to Bayer's strategic and business planning in the near-term and the impact of the Transaction-related Divestments in the medium to long term cannot be assessed with certainty at this stage. See also "*1.2.2 Bayer's strategic objectives and operational targets for the Transaction are based on certain assumptions and estimates by Bayer's management that may prove inaccurate, including the ability to benefit from the Combined Agriculture Business's improved innovation capabilities, as well as future macroeconomic and market developments.*"

In addition, in connection with obtaining regulatory approvals to complete the Transaction in certain jurisdictions, Bayer and Monsanto have been required to make certain other commitments, including behavioral commitments, which, among others, involve the granting of licenses to certain of the Combined Agriculture Business's technologies and licensing practices, the transparency of commercial policies and the organization of distribution and sales activities. Furthermore, as part of the review process by the Committee on Foreign Investment in the United States, Bayer entered into a National Security Agreement ("**NSA**") with the United States Government. Among other matters, the NSA requires U.S. governmental approval of certain transfers of asset ownership, which may *inter alia* apply in the event of a change of control of Bayer. The NSA also provides for certain corporate governance requirements to ensure compliance with its terms.

The measures described above could negatively impact Bayer's strategic planning, necessitate substantial adjustments to its operational and financial structures and, accordingly, could have a material adverse effect on the current and future business, results of operations, financial condition, share price, dividend payments and prospects of Bayer.

As a formal matter, even after closing of the Transaction, which is expected to occur on or about June 7, 2018, there is a limited residual risk that additional remedies related to the divestments already agreed may be required by the EU Commission or the U.S. Department of Justice, should they conclude that this would be necessary in order for the agreed purchaser BASF to operate the divested businesses effectively.

1.2.2 Bayer's strategic objectives and operational targets for the Transaction are based on certain assumptions and estimates by Bayer's management that may prove inaccurate, including the ability to benefit from the Combined Agriculture Business's improved innovation capabilities, as well as future macroeconomic and market developments.

Through the Transaction, Bayer intends to create an agriculture business offering advanced customized agronomic solutions designed to help farmers achieve the productivity increases needed to feed an ever growing world population. In line with its strategic priorities to be a world-class life science company, Bayer intends, through the Transaction, to create a global leader committed to transforming agriculture, which offers advanced customized agronomic solutions, seeds and traits, as well as crop protection tailored to farmers' needs and enhanced by digital agronomic advice.

Bayer believes the agricultural industry offers long-term growth prospects driven by sustainable megatrends, including projected global population growth, higher protein intake, declining total size of farmland per capita and negative effects on yields resulting from climate change. Bayer anticipates that, as a result, a significant increase in productivity will be required to meet the future demand for food and feed products. Bayer is convinced the Transaction will bring together two highly complementary businesses and expects the Combined Agriculture Business to benefit from Monsanto's seeds and traits, its digital farming platform and Bayer's broad crop protection product line across a comprehensive range of indications and crops.

On an operational level, Bayer anticipates the integration of Monsanto will result in significant cost- and sales related synergies and estimates approximately US$1.2 billion in annual synergies (net EBITDA impact before special items) as of 2022. The cost synergy target now amounts to approximately US$ 1.0 billion net EBITDA impact before special items, compared to an initial cost synergy estimate of US$ 1.2 billion net EBITDA impact before special items announced in September 2016. The reduction of the synergy target reflects the divestments related to remedies required by regulatory authorities. The larger than expected scope of divestments reduces the basis (e.g., through the transfer of the cost base) underlying the initial cost and sales synergy estimate. Bayer expects approximately 70% of

the cost synergies to stem from savings in selling, general and administrative expenses. Bayer expects that the ramp-up of cost synergies will follow a typical, back-end loaded pattern and anticipates related, cumulative one-time costs required to generate these synergies to amount to approximately US$1.5 billion until 2022. With regard to expected sales synergies, Bayer targets to achieve approximately US$200 million net EBITDA impact before special items as of 2022. Bayer expects that more than 60% of the targeted sales synergies will be generated in four countries (U.S., Brazil, Argentina and Mexico). Bayer anticipates deriving sales synergies mainly from a broader product portfolio of seed and crop protection products and a greater geographic footprint by combining sales forces. The full synergy potential of the combined business and operations of Bayer and Monsanto is expected to be realized in the medium to long term. Bayer expects further sales synergies to be driven by a stronger offering of customized agronomic solutions to farmers as well as joint innovation capabilities and innovative systems and technology applications. From an earnings perspective, Bayer plans to have its shareholders benefit from accretion to core earnings per share in 2019 and, as of 2021, expects accretion to increase to double-digit percentage figures.

Bayer's strategic objectives, synergy and other operational targets and earnings impact expectations with respect to the Transaction are based on certain assumptions and estimates by Bayer's management that may prove inaccurate, including, in particular, (i) Monsanto's sales growth, earnings, cash flow potential, and cost bases, (ii) the ability to consolidate Monsanto's and Bayer's cost base in terms of selling, general and administrative expenses, R&D cost and cost of goods sold, (iii) the ability to benefit from the Combined Agriculture Business's improved innovation capabilities, as well as (iv) future macroeconomic, market and regulatory developments. For example, from a longer term perspective, there is a risk that the agricultural industry may not grow in size, or not grow as predicted, and that the business combinations of other market participants could further increase competition and render profit margins less attractive than anticipated. Moreover, it cannot be excluded that regulatory scrutiny or political decisions in major countries may lead to the revocation of registration or the restriction of application for important products in the portfolio of the Combined Agriculture Business. Should any of Bayer's assumptions and estimates underlying expected targets prove inaccurate, this could lead to the business combination with Monsanto falling short of Bayer's synergy forecast and other forecasts and the expectations of market participants.

Overall, the anticipated synergies and earnings impacts described in the foregoing are based on current assumptions with regard to US GAAP to IFRS conversion which could impact the timing of revenue and income recognition, and foreign exchange rate assumptions for key currencies. Accordingly, updates of the anticipated synergies and earnings impacts made in the future, if any, and, ultimately, the actual synergies and earnings impacts achieved may differ from the anticipated synergies and earnings impacts described in the foregoing, including in terms of the timing of their realization. Such differences may be significant.

In addition, the integration of Monsanto's business entails certain risks, which may impair Bayer's ability to realize the anticipated benefits from combining the businesses of Bayer and Monsanto. See also "*1.2.6 In connection with the integration of Monsanto's business, Bayer could encounter difficulties that may disrupt its operations or otherwise negatively affect its business, results of operations and share price, and may jeopardize the realization of the expected benefits of the Transaction.*"

If Bayer's strategic objectives, operational targets and earnings impact expectations with respect to the Transaction are not met, or not met in full or take longer to realize than expected and the Transaction turns out not to be accretive to Bayer's core earnings per share to the expected extent or within the expected timeframe or at all, this could negatively affect the market price of Bayer's shares and future dividend payments. In addition, no assurance can be given that a corresponding benefit will be available to offset the costs, including transaction and integration costs, incurred by Bayer in connection with the Transaction. The integration of two companies of significant size, domiciled in different countries entails considerable challenges. Therefore, the contemplated synergy effects may prove impossible to realize, in whole or in part.

1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.

As a result of the Transaction, the importance of Crop Science for the Bayer Group has increased significantly, taking into account that the Combined Agriculture Business would have contributed nearly half of the sales of the Bayer Group in life sciences on an aggregated basis for 2017. In addition, the operational focus of Crop Science is expected to shift as a result of the strengthening of the seeds and traits business. As a result, Bayer's risk profile may change and risks that have previously not been relevant or less relevant in the Group's overall risk assessment may gain significance. In addition, there may also be new risks associated with the Combined Agriculture Business, of which Bayer is currently not yet aware or which it is not yet able to assess conclusively. For a description of the risks which may arise in connection with the integration of Monsanto see "*1.2.6 In connection with the integration of Monsanto's business, Bayer could encounter difficulties that may disrupt its operations or otherwise negatively affect its business, results of operations and share price, and may jeopardize the realization of the expected benefits of the Transaction.*"

From today's perspective, Bayer believes that it may face increased or additional risks principally in the areas described below as a result of the Transaction. The following discussion is not meant to be exhaustive and, in addition, other risks and unexpected issues may arise that Bayer is currently unaware of or unable to assess:

- *Increased reputational risks*: Bayer expects to face increased reputational risks due to the public perception of Monsanto, the Combined Agriculture Business and its products, especially the herbicide *Roundup* branded and other glyphosate-based herbicides, and products involving genetically modified organisms in some parts of the world. See "*1.2.5 The lack of public understanding and acceptance or perceived public acceptance of Monsanto's biotechnology and other agricultural products as well as of the merits of the Transaction could harm Bayer's reputation and, as a consequence, negatively affect Bayer's business, results of operations and share price.*"

- *Exposure to additional regulatory and legal requirements and risks:* As a result of the Transaction, the Bayer Group may face additional regulatory and legal requirements, such as those resulting from Monsanto's stronger focus on seed, modified plant traits and phosphate mining. Related operations require permits and are subject to requirements relating to the development, manufacture and distribution of products, including with respect to the testing and planting of seeds containing biotechnology traits and the import of crops grown from those seeds. The detection of the presence of biotech traits not approved in the country of planting may affect seed availability or result in export disruption, compliance action, such as crop destruction, product recalls or litigation. Monsanto's products may require approvals which the Combined Agriculture Business may not be able to obtain or maintain and, as a result, the sale of the Combined Agriculture Business's products may be restricted or prohibited. For example, low volatility dicamba herbicides approved for use with dicamba-tolerant soybeans and cotton, including Monsanto's *XtendiMax* with *VaporGrip* Technology ("**XtendiMax**") formulation, are facing off-target-movement concerns in the United States. In October, 2017, the EPA approved updated labels for these products, including a "restricted use pesticide" designation, which will limit sale and use to certified applicators or those acting under their supervision. Additional measures imposed, some by state regulatory bodies, for example include further restrictions on the time of day for application, on the dates during which in-crop applications of the approved formulations can be made and on maximum temperatures for spraying the products. One state has imposed a ban from April 16, 2018 to October 31, 2018. In addition, several non-governmental organizations have brought suit against the EPA, in which Monsanto has intervened, challenging over-the-top approval of *XtendiMax*, and multiple growers have filed actions against Monsanto alleging crop damage and antitrust violations. These actions are currently pending in federal court. It cannot be excluded that regulatory scrutiny or legal action may lead to the imposition of further application restrictions or expiration or invalidation of the *XtendiMax* registration at the state and/or federal level. The likelihood and the business impact of such additional restrictions being imposed, which could also affect Dicamba-tolerant crop systems offered by Monsanto, cannot be assessed conclusively at this point in time. While the EU approval for Monsanto's herbicide active ingredient glyphosate was renewed for five years at the end of November 2017, each EU member state is responsible for the authorization of plant protection products containing glyphosate on a national level. This may lead to restrictions in some countries within the EU, subject to certain provisions and assessments they have to take into account in their decision making. Similarly, in the United States, glyphosate is currently undergoing a routine regulatory review of the pesticide registration, which may result in new labeled use restrictions. In addition, in the United States Monsanto is faced with multiple personal injury actions in state and federal courts regarding glyphosate. See also, "*1.1.6 There can be no assurance that Bayer will identify a sufficient number of research candidates and that Bayer's products will receive and maintain any necessary regulatory approvals, and any increase in regulatory and legal requirements, including as a result of higher public expectations, could lead to more costly and lengthy registration or approval procedures and could impair or preclude Bayer's product development and commercialization efforts*." and "*1.2.4 As a result of the Transaction, Bayer will assume the litigation risk arising in connection with Monsanto's pending and future litigation. Adverse outcomes in legal proceedings, including environmental remediation matters, could subject the Bayer Group to substantial damages and adversely affect the Bayer Group's results of operations and profitability.*"

- *Increased exposure to certain geographical regions:* Given the geographical scope of Monsanto's operations, which have a strong focus on North and South America, Bayer's exposure to certain geographical regions characterized by greater economic and political uncertainty and greater market volatility, including in particular Argentina, Mexico and Brazil, is expected to increase as a

result of the Transaction. See also, "*1.1.1 Sales and growth of the Bayer Group are dependent on the conditions of the global economy in general and of the economies where the Bayer Group operates in particular.*" and "*1.1.2 Continued elevated levels of political and economic uncertainty could have unpredictable consequences for the markets in which Bayer operates and for the greater economy.*" In addition, Bayer expects its exposure to foreign exchange risk to increase, in particular as regards the exchange rate of the euro to the U.S. dollar, but also to important Latin American currencies such as the Argentine peso, the Mexican peso and the Brazilian real. Finally, given that the planting seasons in a significant part of the geographical regions that Monsanto operates in, most notably Latin America, are not aligned with Bayer's fiscal year, the predictability of earnings and cash flows for the business at the beginning of Bayer's fiscal year is expected to decrease. See also "*1.1.3 Actual macroeconomic and market developments may deviate from those that Bayer's management expects and may have predicted, which could adversely affect Bayer's results of operations, and if assumptions made in preparing Bayer's financial and operational forecasts or estimates prove inaccurate, Bayer's actual performance may fall materially short of its forecasts or estimates or the expectations of market observers.*"

- *Fluctuations in commodity prices*: As a result of the strengthened seeds and traits business, Bayer's exposure to commodity prices can be expected to increase, given that production of seeds is contracted with growers at fair value and the seeds are retained in inventory until sold. These purchases are expected to constitute a significant portion of the manufacturing costs for the Combined Agriculture Business's seeds. In addition, costs associated with chemical manufacturing operations that use chemical intermediates and energy, which are subject to increases in price as the costs of oil and natural gas increase, can be expected to increase.

- *Inability to effectively monetize the Combined Agriculture Business's IP*: Competitors, farmers, or others in the chain of commerce may raise legal challenges to Monsanto's rights or illegally infringe on its rights, including through means that may be difficult to prevent or detect. For example, the practice by some farmers of saving seeds from non-hybrid crops (such as soybeans, canola and cotton) containing Monsanto's biotechnology traits has prevented Monsanto and may continue to prevent the Combined Agriculture Business from realizing the full value of its intellectual property, particularly outside the United States.

- *Increased tax risk*: The combination of two global businesses such as Bayer's and Monsanto's entails inherent tax risks that are being identified and will need to be addressed in the course of the integration of Monsanto into the Bayer Group. In particular, potential adverse impacts arising out of the different corporate and capitalization structures as well as business structures of Bayer and Monsanto on Bayer Group's tax situation will need to be assessed. Besides this, Bayer Group's exposure to the tax environment in emerging markets, including jurisdictions with complex tax systems and multifaceted enforcement procedures will increase as a result of the Transaction. In addition, on December 22, 2017, the United States enacted new tax legislation, the "Tax Cuts and Jobs Act of 2017." While Monsanto has disclosed certain provisional estimates in its income tax provisions for the six months ended February 28, 2018 it is still in the process of evaluating the impact this law will have on its consolidated financial statements and calculating the related impact to its tax expense. Monsanto expects the largest impact to it from this legislation to be from the provisions that lower the Federal corporate tax rate to 21% beginning on January 1, 2018, and impose a one-time transition tax on earnings outside the United States that have previously not been subject to United States tax, which must be paid beginning in fiscal 2019 through fiscal 2026. The adjustments to Monsanto's tax expense for this legislation could materially affect its consolidated financial statements and will be recorded beginning in the period of enactment. While Bayer currently does not expect an overall negative impact of the U.S. tax reform, as regards the 'global intangible low-tax income' ("**GILTI**") provision, which applies a minimum tax on GILTI earned by non-U.S. affiliates that are partially or wholly owned by U.S. companies, Bayer currently estimates that such provision could have an impact, depending on the ultimate U.S. ownership of non-U.S. affiliates after integration of Monsanto. Bayer expects additional rules and regulations to be issued in the medium term. This could entail potential risks that cannot be fully assessed at this point in time. In particular, it cannot be excluded that Bayer's positions described above may be affected by such future legislative and regulatory action, which could lead to an increase in the Bayer Group's effective tax rate and could adversely affect its financial condition and results of operations. See also "*1.1.29 Bayer may be exposed to potential risks in connection with the recent U.S. tax reform, which cannot be fully assessed at this point in time.*"

- *Heightened security and IT risks:* Opponents of agricultural biotechnology have attacked, and may in the future attack, farmers' fields and facilities used by agricultural biotechnology companies such as Monsanto. Bayer expects its exposure to such attacks, also in the form of cybersecurity incidents, to increase as a result of the Transaction. Security breaches and disruptions to IT systems could seriously harm the Bayer Group's operations. See also "*1.1.22 Bayer is dependent on the uninterrupted operation of its global information technology systems.*"

- *Potential downgrade in sustainability ratings:* There is also a risk that Bayer's sustainability ratings may be downgraded as a result of the Transaction. This could mean that Bayer may no longer satisfy the investment criteria of certain sustainability-oriented investors. Any negative effects on Bayer's reputation or potential downgrades in sustainability ratings resulting from the Transaction could lead to a decline in the price of Bayer's shares.

1.2.4 As a result of the Transaction, Bayer will assume the litigation risk arising in connection with Monsanto's pending and future litigation. Adverse outcomes in legal proceedings, including environmental remediation matters, could subject the Bayer Group to substantial damages and adversely affect the Bayer Group's results of operations and profitability.

As disclosed in its annual report on Form 10-K and its interim reports on Form 10-Q, from time to time, Monsanto has been and continues to be involved in lawsuits concerning intellectual property, biotechnology, torts, contracts, antitrust allegations, product claims and other matters, as well as governmental inquiries and investigations or litigation against government regulators concerning prior regulatory approvals. Pending and future lawsuits and governmental inquiries and investigations may have outcomes that may be significant to the Bayer Group's results of operations in the period recognized or limit the ability to engage in business activities. While Monsanto has insurance related to its business operations, it may not apply to or fully cover any liabilities incurred as a result of these lawsuits. In addition, Monsanto is required to indemnify its former parent Pharmacia LLC ("**Pharmacia**") for certain liabilities that are primarily related to Pharmacia's former chemical and agricultural businesses. Monsanto has recorded reserves for potential liabilities where it believes the liability to be probable and reasonably estimable. However, actual costs may be materially different from this estimate. The degree to which the Bayer Group may ultimately be responsible for the particular matters reflected in the reserve is uncertain.

In particular, Monsanto has disclosed the following in its annual report on Form 10-K and its interim reports on Form 10-Q in relation to its environmental and litigation liabilities and certain material proceedings it is defending:

Monsanto is involved in environmental remediation and legal proceedings to which Monsanto is party in its own name and proceedings to which its former parent, Pharmacia, or its former subsidiary, Solutia, Inc. ("**Solutia**"), is a party but that Monsanto manages and for which Monsanto is responsible pursuant to certain indemnification agreements. In addition, Monsanto has liabilities established for various product claims. With respect to certain of these proceedings, Monsanto has a liability recorded of US$277 million and US$254 million as of August 31, 2017, and February 28, 2018, respectively, for the estimated contingent liabilities. Included in this liability are amounts related to environmental remediation of sites associated with Pharmacia's former chemicals and agricultural businesses, with no single site representing the majority of the environmental liability. These sites are in various stages of environmental management. At some sites, work is in the early stages of assessment and investigation, while at others the cleanup remedies have been implemented and the remaining work consists of monitoring the integrity of that remedy. The extent of Monsanto's involvement at the various sites ranges from less than one percent to 100 percent of the costs currently anticipated. At some sites, Monsanto is acting under court or agency order, while at others it is acting with very minimal government involvement. Monsanto does not currently anticipate any material loss in excess of the amount recorded for the environmental sites reflected in the liability. However, it is possible that new information about these sites for which the accrual has been established, such as results of investigations by regulatory agencies, Monsanto or other parties, could require Monsanto to reassess its potential exposure related to environmental matters. Monsanto's future remediation expenses at these sites may be affected by a number of uncertainties. These uncertainties include, but are not limited to, the method and extent of remediation, the percentage of material attributable to Monsanto at the sites relative to that attributable to other parties and the financial capabilities of the other potentially responsible parties. The above-mentioned liability also includes amounts related to certain third-party litigation with respect to Monsanto's business, as well as tort litigation related to Pharmacia's former chemical business, including lawsuits involving polychlorinated biphenyls ("**PCBs**"), dioxins, and other chemical and premises liability litigation. Additional matters that are not reflected in the liability may arise in the future, and Monsanto may manage, settle, or pay judgments or damages with respect thereto in order to mitigate contesting potential liability.

Monsanto has also disclosed that it has been named in lawsuits brought by various governmental entities claiming that Monsanto, Pharmacia and Solutia, collectively as manufacturers of PCBs, should be responsible for a variety of damages due to PCBs in bodies of water, regardless of how the PCBs came to be located there. Monsanto

has also reported that it is defending lawsuits in various state and federal courts, in which approximately 5,200 plaintiffs claim to have been injured by exposure to glyphosate-based products manufactured by Monsanto. In addition, Monsanto has disclosed that legal actions have been filed in Brazil that raise various issues challenging the right to collect certain royalties for *Roundup Ready* soybeans, such as whether Brazilian pipeline patents have the duration of their corresponding U.S. patents (2014 for *Roundup Ready* soybeans) and whether Brazil's Plant Variety Protection law affects the enforceability of patents. These issues are currently under judicial review in Brazil.

1.2.5 The lack of public understanding and acceptance or perceived public acceptance of Monsanto's biotechnology and other agricultural products as well as of the merits of the Transaction could harm Bayer's reputation and, as a consequence, negatively affect Bayer's business, results of operations and share price.

Bayer is educating both Bayer's and Monsanto's stakeholders about the rationale and anticipated merits of the Transaction. However, there can be no assurance that customers, investors and employees, in each case existing and prospective, and the general public will be receptive to these arguments and that the Transaction will not negatively affect Bayer's standing or reputation.

Some opponents of technologies used by Monsanto or both companies, such as in connection with Roundup branded and other glyphosate-based herbicides or in connection with genetically modified organisms, actively raise public concern about the potential for adverse effects of certain products, such as the herbicide glyphosate or genetically modified corn or soy beans, on human or animal health, other plants and the environment. The potential for low-level presence of commercial biotechnology traits in conventional seed, or in the grain or products produced from conventional or organic crops, is another factor that may affect general public acceptance of these traits. There is a risk that this type of considerations, including a generally skeptical attitude vis-à-vis genetic modification, and a negative public perception of Monsanto and the Transaction could harm Bayer's reputation with its customers, suppliers, unions and the general public. See also "*1.1.19 Consumer resistance to plant biotechnology may negatively affect Bayer's public image and impact Bayer's sales volumes and revenues.*" This increased reputational risk could affect not only the Combined Agriculture Business, but also Bayer's other operations and activities. In particular, it could impair the Group's Public and Governmental Affairs Committee's activities, negatively affect the Bayer Group's ability to obtain government approvals for products and the timing of such approvals and increase the likelihood of various forms of opposition against the Combined Agriculture Business from the general public, from activists and from non-governmental organizations. Generally, there is also an increased risk that political opinion forming in this area may yield legislative and regulatory decisions that may negatively impact Bayer's business. See "*1.1.6 There can be no assurance that Bayer will identify a sufficient number of research candidates and that Bayer's products will receive and maintain any necessary regulatory approvals, and any increase in regulatory and legal requirements, including as a result of higher public expectations, could lead to more costly and lengthy registration or approval procedures and could impair or preclude Bayer's product development and commercialization efforts.*"

1.2.6 In connection with the integration of Monsanto's business, Bayer could encounter difficulties that may disrupt its operations or otherwise negatively affect its business, results of operations and share price, and may jeopardize the realization of the expected benefits of the Transaction.

The acquisition of Monsanto is designed to result in the integration of a global enterprise with core competencies in the fields of health care and agriculture and a global agriculture company. While the companies have different corporate cultures and, until closing of the Transaction-related Divestments, will be held separate as required by the U.S. Department of Justice, following completion of the Transaction-related Divestments, Bayer will start to integrate Monsanto's business with its Crop Science business. These processes hold special challenges for both parties and expose Bayer to a number of risks that could, among others, arise from the circumstances described below. The following discussion is not meant to be exhaustive and, in addition, other risks and unexpected issues may arise that Bayer is currently unaware of or unable to assess.

- *Commitment of management capacity*: The integration of Bayer and Monsanto has required and can be expected to continue to require significant resources in terms of time and attention by both companies' managements. If integration issues divert management from other responsibilities, Bayer's business could be adversely affected.

- *Possible loss of key employees*: Both companies depend on Bayer's and Monsanto's executives and talent for the successful integration and implementation of a joint strategy. Should the companies be unsuccessful in retaining these employees, for example due to potential uncertainty among employees regarding jobs, company locations or corporate culture, this could impede efficient integration and leveraging the companies' respective strengths. In particular, know-how of managerial staff and talented employees could be lost, which could negatively affect innovation capability and lead to business disruptions.

- *Transaction and integration costs*: Bayer and Monsanto have incurred and expect to continue to incur a number of non-recurring expenses associated with the Transaction and the integration of Monsanto's operations in the Bayer Group, which could be significant. These include financial advisory, legal, accounting, consulting and other advisory fees and expenses, investments in IT, business continuity and the adaptation of quality, health, safety & environment (QHSE) systems, reorganization and restructuring costs, severance/employee benefit-related expenses, public company filing fees and other regulatory expenses and related charges.

- *Disruption to business operations*: In connection with the integration of Monsanto, inadequate or misaligned commercial priorities, insufficient speed of decision-making, insufficient demand, supply and production planning, changes relating to product registration or production permits (for example as a result of the change in ownership), or unavailability of required production capacity could lead to supply interruptions that may result in business loss and reputational damage. In addition, failure to harmonize potentially diverging corporate and commercial policies of Bayer and Monsanto could negatively impact stakeholder loyalty and cause customers to enter into extensive negotiations or to change existing business relationships. A failure to harmonize external co-operations (for example in the area of R&D) could entail a loss of partners, loss of projects, overlaps and legal implications. There is also a risk that any negative perception of the Transaction may impair Bayer's ability to attract and retain its key stakeholders and could cause suppliers, customers and other counterparties to change existing business relationships.

- *Geographic, organizational and cultural coordination*: As a result of the Transaction, the Bayer Group is expected to confront a number of challenges inherent in the combination of two companies of the size, geographical diversity and scope of Bayer and Monsanto, including for example: (i) challenges in relation to developing and executing a successful strategy and business plan for the Combined Agriculture Business, (ii) difficulties in combining the businesses and workforces due to, among other factors, differences in corporate cultures and the intention to maintain multiple key locations for the Combined Agriculture Business, (iii) impediments to effectively align two global compliance organizations designed to oversee conduct in specific corporate contexts and (iv) risks associated with coordinating geographically separate and dispersed organizations.

- *Integration of internal controls and compliance procedures*: Monsanto has internal controls and compliance procedures in place to identify business and financial risks, including compliance risks, at an early stage and take appropriate action to manage them. While Bayer expects that Monsanto's control systems are designed to comply with legal and other requirements applicable or relevant to Monsanto, there can be no assurance that they cover all topics deemed relevant to Bayer. While Bayer will aim to bring Monsanto's internal controls and compliance procedures in line with those of the Bayer Group as quickly as possible, there can be no assurance that Bayer's control and risk management system can provide adequate protection against losses arising from business risks, including compliance risks, or (alleged) fraudulent actions arising in connection with Monsanto's business operations.

- *Unidentified risks and liabilities*: Bayer performed due diligence as part of the acquisition of Monsanto. However, due to the expedited process preceding the signing of the Merger Agreement, Bayer may not yet be aware of all material risks and such risks may only be detected in the course of the integration process. See also "*1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.*" In addition, there is a risk that Monsanto's liabilities, especially its contingent liabilities, may prove to be higher than anticipated.

- *Warranty claims limited in scope*: The Merger Agreement governing the Transaction does not provide for the assertion of claims for indemnification.

If any of the risks discussed were to materialize, this could disrupt the Bayer Group's operations and cause the integration of Monsanto to become more onerous, time-consuming and costly than anticipated. In addition, the potential benefits of the Transaction may not be realized to the full extent, in a timely fashion or at all; in particular, Bayer may not be able to capitalize on the expected opportunities for cost and sales synergies. See also "*1.2.2 Bayer's strategic objectives and operational targets for the Transaction are based on certain assumptions and estimates by Bayer's management that may prove inaccurate, including the ability to benefit from the Combined Agriculture Business's improved innovation capabilities, as well as future macroeconomic and market developments.*"

1.2.7 The size of the Bayer Group after the Transaction, contractual limitations it is subject to, its position in the markets in which it will operate as well as increased levels of indebtedness may decrease Bayer's ability to successfully carry out further acquisitions, investments, joint ventures and business integrations.

In the past, Bayer has made acquisitions of and investments in, and has entered into joint ventures and similar arrangements with, other companies and businesses. Much of Bayer's growth in past years has been attributable to such transactions, including the acquisition of the consumer care business of Merck & Co., Inc., United States, in 2014 and the combination of Bayer AG and Schering AG in 2006/2007.

Following closing of the Transaction, Bayer may be unsuccessful in the implementation of future acquisitions, investments or joint ventures or alliances. Bayer cannot enter into further transactions unless it can identify suitable candidates and agree on the terms with them. The size of the Bayer Group after the Transaction and its position in the markets in which it will operate may make it more onerous to identify suitable candidates, including because it may be harder for Bayer to obtain regulatory approval for future transactions. If appropriate opportunities do become available, Bayer may seek to acquire or invest in other businesses; however, any future acquisition, investment or joint venture may pose regulatory, antitrust and other risks, as well as integration risks in jurisdictions where the Bayer Group then has a presence. Furthermore, even if Bayer is able to identify suitable candidates for acquisitions, investments and joint ventures in the future, its elevated levels of indebtedness incurred in connection with the Transaction may further restrict Bayer's ability to enter into such transactions.

All of the above risks and restrictions may limit Bayer's ability to implement its global strategy and its ability to achieve future business growth.

1.2.8 Change of control, prohibition on merger or similar provisions in agreements and instruments to which Monsanto is a party may be triggered or alleged to be triggered by the Transaction and may lead to adverse consequences for the Bayer Group, including the loss of significant contractual rights and benefits, the possible termination of material agreements or the requirement to repay outstanding indebtedness.

Monsanto is a party to raw material purchase, collaboration, trait licensing and other agreements, guarantees and instruments, including debt securities, which may contain change of control or similar provisions that may be triggered (or be alleged to be triggered) by the Transaction. Some of these agreements may be material, and may contain change of control provisions which provide for or permit (or be alleged to provide for or permit) the termination of the agreement or other remedies upon the occurrence of a change of control of one of the parties or, in the case of certain debt instruments, entitle holders to require repayment of all outstanding indebtedness owed to them. Certain of these provisions may be triggered (or be alleged to be triggered) as a result of the Transaction.

If, upon review of these agreements, Bayer and Monsanto determine that such provisions can be waived by the relevant counterparties, they may decide to seek such waivers. In the absence of such waivers, the operation of the change of control or restriction on merger provisions, if any, could result in the loss of material contractual rights and benefits, the termination of the relevant agreements or the requirement to make certain payments including the repayment of outstanding indebtedness. Alternatively, in respect of certain debt instruments, the parties may decide to seek to effect certain restructuring transactions or redeem the instruments in accordance with their terms. Either such approach may be subject to uncertainty and result in significant costs to the Bayer Group.

In addition, various compensation and benefit programs with members of Monsanto's senior management and directors and other Monsanto employees contain change of control provisions providing for vesting or payment of compensation upon the completion of the Transaction or a qualifying termination of employment thereafter. Bayer has taken into account potential payments arising from the operation of change of control provisions, including compensation arising from certain change of control agreements, but such payments may exceed Bayer's expectations.

1.2.9 Bayer could be forced to recognize impairment losses on the intangible assets of Monsanto and goodwill of the Crop Science business.

Following completion of the Transaction, Bayer expects to recognize a substantial portion of the difference between the amount paid for the acquisition and the book value of Monsanto's equity as intangible assets of Monsanto and goodwill of the Crop Science business. During the year, these items must either be tested for impairment at least once a year or whenever there are indicators of impairment. If unexpected difficulties were to arise in the course of the integration of Monsanto's business into Bayer, if Monsanto's business were to fail to develop as expected or if any other business development affecting the Crop Science business were to occur that is not anticipated by Bayer, Bayer may, in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and as adopted by the European Union ("**IFRS**"), be forced to recognize an impairment loss on the intangible assets of Monsanto and on the goodwill of the Crop Science business which could have a material adverse effect on its financial condition and results of operations.

1.2.10 Bayer faces risks from financing the Transaction, including as a result of increased levels of debt and the potential downgrading of credit ratings.

In connection with the acquisition of Monsanto, Bayer AG, as borrower and guarantor, and Bayer U.S. Finance II LLC, as borrower, entered into a syndicated term loan facilities agreement in an amount of US$56.9 billion (€48.7 billion) (the "**Loan Facilities Agreement**") with Bank of America, N.A., Credit Suisse AG, London Branch, Goldman Sachs Bank U.S.A., Goldman Sachs Lending Partners LLC, HSBC Bank plc, The Hong Kong and Shanghai Banking Corporation Limited and JP Morgan Chase Bank, N.A., London Branch as committed original lenders, pursuant to which the original lenders agreed to provide financing commitments in an aggregate principal amount of US$56.9 billion (€48.7 billion), which have been syndicated to more than 20 banks. In addition, on November 22, 2016, Bayer Capital Corporation B.V. placed mandatory convertible notes in a nominal amount of €4.0 billion due 2019 and with a coupon of 5.625% per annum (the "**Mandatory Convertible Notes**"). The Mandatory Convertible Notes are unconditionally and irrevocably guaranteed by Bayer AG and will be mandatorily converted into shares of Bayer AG. On June 14, 2017, Bayer AG issued the Exchangeable Bonds. In accordance with the terms of the Loan Facilities Agreement, the net proceeds from the Mandatory Convertible Notes of €3.96 billion (US$4.2 billion) and of the Exchangeable Bonds in the amount of €1.05 billion (US$1.2 billion) were used to reduce the amount of the Loan Facilities Agreement.

The increased level of debt that will arise from drawing on the commitments under the Loan Facilities Agreement in connection with the completion of the Transaction could have significant negative consequences, including heightening Bayer's vulnerability to general adverse economic and industry conditions and limiting Bayer's ability to fund future working capital requirements and capital expenditures, to engage in future acquisitions or development activities or to otherwise realize the value of its assets and opportunities. The increased level of debt could also limit Bayer's flexibility in planning for, or reacting to, changes in its business and the industries in which it operates by impairing its ability to obtain additional financing in the future and by placing the Bayer Group at a competitive disadvantage compared to its competitors with less significant levels of debt.

There is a risk that due to changes in the monetary and interest rate policies of central banks such as the European Central Bank or the Board of Governors of the U.S. Federal Reserve System and other central banks, the level of interest rates may generally rise. A rise in general interest rate levels could negatively affect the terms of the refinancing of the Transaction, which would amplify the risks associated with an increased leverage ratio of the Bayer Group.

In May 2016, after Bayer's intention to acquire Monsanto became public, S&P Global Ratings ("**S&P**") placed Bayer's long-term credit rating of A- on CreditWatch with negative outlook. Similarly, Moody's Investors Service, Inc. ("**Moody's**") placed Bayer's long-term rating of A3 under review for downgrade. On June 4, 2018 S&P and Moody's updated their rating assessment taking into account the imminent closing of the Transaction and its envisaged financing. S&P assigned a BBB long-term rating and again confirmed Bayer's A-2 short-term rating, each with a stable outlook. Moody's assigned a Baa1 long-term rating and a P-2 short-term rating, each with a negative outlook.

Despite the current assignment of ratings, Bayer continues to face the risk of potential further rating downgrades in the future. Any downgrade of Bayer's credit ratings would result in an increase in the interest payable under the Loan Facilities Agreement. Under the Mandatory Convertible Notes a significant downgrading may result in an accelerated mandatory conversion of the Mandatory Convertible Notes into shares. It could also have a negative impact on the pricing and availability of any financing to Bayer. While Bayer has integrated several other businesses and established a track record of disciplined deleveraging in connection with past M&A projects of significant size, the Bayer Group may be unable to generate the strong cash flows necessary to reduce its financial indebtedness after the Transaction, which may have a detrimental impact on Bayer's credit ratings and refinancing capabilities. Any such downgrade could also have a material adverse effect on Bayer's refinancing of other existing indebtedness and financing its ongoing operations, including by increasing Bayer's cost of borrowing and significantly harming its financial condition, results of operations and profitability.

1.2.11 Bayer is exposed to risks arising from the necessity to refinance the loans taken out for the Transaction.

In connection with the closing of the Transaction, an aggregate amount of US$43.4 billion (€37.2 billion) is expected to be drawn down under the Loan Facilities Agreement to finance the purchase price for Monsanto. A substantial portion of the loans under the Loan Facilities Agreement are, subject to extension options, repayable on the first anniversary of the first utilization of any of the facilities thereunder (but at the latest 21 months after the date of the signing of the Loan Facilities Agreement). Further, margins payable on the loans under the Loan Facilities Agreement (or commitment fees on any undrawn facilities) increase over the term of the Loan Facilities Agreement. Fees may also be applicable after certain durations or extensions of the outstanding loans.

Bayer intends to refinance the amounts drawn down under the Loan Facilities Agreement primarily with proceeds from a combination of debt and equity offerings. Proceeds of approximately €6.0 billion are expected to be

raised through this rights offering. In order to refinance further amounts drawn down under the Loan Facilities Agreement, Bayer intends to offer directly or through a finance subsidiary senior unsecured notes denominated in U.S. dollars and/or euros across a market standard range of maturities in an aggregate principal amount of up to €20.0 billion (the **"Bond Offerings"**). The Bond Offerings may be launched, subject to market conditions, at any time, including during or shortly after the subscription period for this Offering. The Bond Offerings are fully independent of this Offering, are not conditional upon one another and may be consummated at different times. However, Bayer may not be able to effect any future offerings in the capital markets or other forms of refinancing as planned in terms of timing, economic terms or at all, especially in challenging market conditions. It cannot be excluded that the necessity to adjust current plans for any future capital markets offerings or other forms of refinancing may lead to terms under such refinancing measures which entail additional costs and/or lead to an increased level of indebtedness, in each case to the detriment of Bayer.

Failure to complete the refinancing measures for the Transaction as planned would constrain Bayer's ability to refinance its indebtedness under the Loan Facilities Agreement and require Bayer to seek alternative refinancing sources, which may be unavailable or result in higher costs. Whether or not Bayer will be able to refinance the indebtedness incurred in connection with the Transaction as planned, the portion of Bayer's consolidated statements of financial position that will be represented by debt will increase substantially as compared to its historical position of €1,650 million as of March 31, 2018 (net financial debt).

1.2.12 Fluctuations in interest rates could have a significant impact on the results of operations of Bayer following completion of the Transaction.

Bayer will finance part of the all-cash consideration for the Transaction with variable- and fixed-rate debt instruments, exposing Bayer to the fluctuations of variable and fixed interest rates.

Bayer has entered, and may in the future enter, into financial transactions to mitigate these interest rate risks in connection with the Transaction. These financial transactions and any other efforts taken to better hedge its exposure to interest rates may result in increased costs. In particular, while the Transaction has been partially hedged by Bayer against interest rate fluctuations, an increase in variable and/or fixed interest rates may require Bayer to incur additional interest expense and interest cash outflow for the debt instruments issued, or which may be issued in the future, in connection with the Transaction. Bayer also expects its exposure to interest rate fluctuations to increase as a result of the Transaction, given that the maturity profile of Monsanto's debt, which has been assumed by Bayer, is significantly longer than Bayer's.

1.2.13 Fluctuations in exchange rates could have a significant impact on the amount of debt Bayer incurs and the results of operations of Bayer following completion of the Transaction.

The all-cash consideration for the Transaction is payable in U.S. dollars, but some of the long-term refinancing of the Loan Facilities Agreement may occur in other currencies. Bayer has in the past entered into, and will continue to enter into, financial transactions to mitigate exchange risk between euro and U.S. dollars in connection with the refinancing. However, an appreciation of the U.S. dollar against the euro between completion of the Transaction and the execution of measures to refinance the Loan Facilities Agreement may require Bayer to incur additional indebtedness to repay the amounts drawn down under the Loan Facilities Agreement. In addition, Bayer is exposed to translational risk to the extent it refinances itself in U.S. dollars.

Following completion of the Transaction, Bayer will continue to report its consolidated results in euro. After taking into account the effects of the Transaction, given the geographic focus of Monsanto's operations on North and Latin America, Bayer will derive an increased portion of its revenues from operating companies that have non-euro functional currencies, including the U.S. dollar. Consequently, any fluctuations in exchange rates between such operating companies' functional currencies and the euro will affect the consolidated income statement and statements of financial position when the results of those operating companies are translated into euro for reporting purposes of the Bayer Group.

1.2.14 The pro forma financial information prepared by Bayer is subject to significant limitations and may not necessarily reflect what Bayer's financial position and results of operations would have been, had the integration and consolidation of Monsanto already taken place and may not be indicative of the financial positions and results of operations that Bayer will achieve in the future.

Bayer has prepared pro forma financial information in accordance with European Commission Regulation (EC) No. 809/2004 of April 29, 2004 to illustrate certain effects of Bayer's gradual reduction of its direct interest in Covestro AG to currently 6.8% in a series of transactions, a successful completion of the Transaction and the Transaction-related Divestments as well as the financing related to the Transaction (the "**Pro Forma Financial Information**"). The Pro Forma Financial Information was not prepared in accordance with the requirements in Article 11

of Regulation S-X issued by the SEC. Based on information available at the time of the preparation of the Pro Forma Financial Information, certain significant adjustments were made to Monsanto's financial information, which included the alignment of Monsanto's reporting periods with Bayer's reporting periods, the alignment of the presentation principles used by Monsanto in its historical financial information with the presentation principles used by Bayer in its historical financial information, the conversion of Monsanto's historical financial information, which is prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP), to Bayer's IFRS accounting principles and the translation of Monsanto's financial information from U.S. dollar to euro. In connection with these adjustments, certain assumptions were made, all of which are reflected in the notes to the Pro Forma Financial Information. The pro forma adjustments made are preliminary and subject to change. Also, the effects of the recently enacted U.S. tax reform are partially reflected in Monsanto's historical financial information used in the preparation of the Pro Forma Financial Information, and are already reflected in Bayer's historical financial information used in the preparation of the Pro Forma Financial Information. To align the presentation and accounting policies of the historical financial information presented in the Pro Forma Financial Information, Bayer made certain tax-related adjustments to Monsanto's historical financial information based on publicly available and other available information of Monsanto. The actual impact of the U.S. tax reform on Monsanto's historical financial information may, however, differ materially from that reflected in the assumptions-based adjustments made by Bayer to Monsanto's historical financial information in preparation of the Pro Forma Financial Information.

The business combination related adjustments for the Transaction considered in the Pro Forma Financial Information were prepared using the acquisition method of accounting for the business combination in accordance with IFRS 3 ("Business Combinations"). Due to the Transaction not yet having been completed and to the limited information available at the date of the preparation of the Pro Forma Financial Information, only a preliminary purchase price allocation has been performed. This purchase price allocation is based on the most current available information using certain estimates and assumptions in order to assess the fair value of the assets acquired and liabilities assumed. The final purchase price allocation will be carried out based on the actual total consideration transferred and the fair values of the acquired net assets as of the actual future acquisition date (closing). Therefore, the final purchase price allocation may differ significantly from the preliminary purchase price allocation performed for purposes of the Pro Forma Financial Information. The fair value amounts assigned to the identifiable assets acquired and liabilities assumed are preliminary and subject to change, when Bayer receives further information it believes to be necessary to finalize its fair value assessments. Investors assessing the Pro Forma Financial Information should note that following completion of the Transaction, a purchase price allocation is expected to lead to the recognition of fair value step ups and charges in the assets, liabilities and contingent liabilities of Monsanto, resulting inter alia in reduced earnings mainly due to the additional amortization and depreciation expenses and the step up of inventories. Depending on which assets are affected, the amortization and depreciation periods may differ. In addition, the Pro Forma Financial Information does not reflect the cost of any integration activities or the expected synergies from the Transaction. The Pro Forma Financial Information is based on certain pro forma assumptions with respect to timing and financing of the Transaction including the Transaction-related Divestments, outlined in the notes to the Pro Forma Financial Information, and is intended for illustrative purposes only. The Pro Forma Financial Information of Bayer assumes, in particular, that the Transaction including the Transaction-related Divestments and the financing related to the Transaction occurred on January 1, 2017, for purposes of the pro forma income statements and as of March 31, 2018 for purposes of the pro forma statement of financial position. Due to its nature, the Pro Forma Financial Information describes only a hypothetical situation and neither reflects the actual net assets, financial position and results of operations of Bayer after completion of the Transaction nor does it indicate the future development of the net assets, financial position and results of operations of Bayer.

Furthermore, the Pro Forma Financial Information does not reflect future exceptional charges resulting from the Transaction or future events that may occur, including restructuring activities or other costs related to the integration of Monsanto, and does not consider potential impacts of current market conditions on the results of operations.

As a result of the factors described above, investors should not place undue reliance on the Pro Forma Financial Information. In particular, the Pro Forma Financial Information may not reflect what Bayer's financial position and results of operations would have been had the Transaction already been effected during the relevant periods and may not be indicative of the financial position and results of operations that Bayer will achieve in the future.

1.3 Risks Related to the Shares and the Offering

1.3.1 The market price and trading volume of the Company's shares is volatile and the subscription price could exceed the market price of the Company's shares.

The price of the shares of Bayer AG may be subject to fluctuations, which could be substantial, especially as the result of changes in the actual or forecast operating results of the Group or our competitors, changes in the profit

forecasts or failure to meet profit expectations of investors and securities analysts, assessments by investors with regard to the success and the effects of this rights offering and of the Transaction, changes in the general economic conditions, as well as other factors. Furthermore, external factors such as changing demand in the markets in which the Bayer Group operates, monetary or interest rate policy measures by central banks, regulatory changes, political uncertainty or other external factors, seasonal influences or extraordinary events can impact the revenues and the earnings of the Group and lead to fluctuations in the price of the shares of Bayer AG. General fluctuations in share prices, especially the price of shares in other companies in the same industry we operate in, or a general deterioration in capital markets, may lead to pressure on the price of the shares of Bayer AG, and these fluctuations in share price may not necessarily be based on the business operations or the earnings prospects of Bayer AG.

The value of the subscription rights for the shares that form part of the rights offering being the subject matter of the Prospectus is dependent to a large extent on the share price of the Company's shares. Existing and prospective shareholders should note that the subscription price might exceed the current market price of the shares in Bayer AG. Should the market price of the Company's shares fall below the subscription price, the subscription rights would become worthless.

1.3.2 Subscription rights for the new shares that form part of the rights offering will expire if they are not exercised prior to expiry of the subscription period.

Subscription rights that are not exercised by and including June 19, 2018 will expire valueless. If a shareholder fails to exercise his or her subscription right, such shareholder's proportionate share of the total equity and the voting rights will decline. If a shareholder also fails to sell his or her subscription rights, such shareholder will sustain a monetary dilution in the amount of the value of the subscription rights. This dilution will be proportional to the percentage rate by which the share capital of the Company is increased and to the extent to which the shareholder does not participate in the capital increase.

The new shares and subscription rights that form part of the rights offering are not and will not be registered in accordance with the provisions of the United States Securities Act of 1933, as amended, with the securities regulators of the individual states of the United States of America or in other countries outside the Federal Republic of Germany. Furthermore, the new shares that form part of the rights offering will only be offered for public sale in the Federal Republic of Germany ("**Germany**") and the Grand Duchy of Luxembourg ("**Luxembourg**") and, in particular, will not be offered for public sale in the United States of America. It thus cannot be guaranteed that the acceptance of the rights offering being the subject matter of the Prospectus will be compatible with prevailing legislation in countries other than the Germany and Luxembourg. Certain shareholders abroad could therefore be precluded from participating in the rights offering being the subject matter of the Prospectus.

1.3.3 Active trading in the subscription rights might not develop, and the subscription rights could be subject to greater price fluctuations than the shares of the Company.

The Company intends to allow the subscription rights to be traded during the period from June 6, 2018, up to and including June 15, 2018 on the regulated market (*regulierter Markt*) (Xetra and Xetra Frankfurt Specialist) of the Frankfurt Stock Exchange. The Company cannot guarantee that active trading of the subscription rights will develop on the Frankfurt Stock Exchange or that sufficient liquidity will be available during the subscription rights trading period. The market price of the subscription rights will depend, among other things, on the market price of the Company's shares, but could also be subject to significantly greater price fluctuations than is the market price of its shares.

1.3.4 Future capitalization measures and the mandatory or the voluntary conversion of the Mandatory Convertible Notes could lead to substantial dilution, i.e., a reduction of existing shareholders' ownership interests in the Company.

We may require additional capital in the future to finance our business operations and growth or to repay debts we may incur. Both the raising of additional equity of the Company through the issuance of new shares and the conversion of the existing Mandatory Convertible Notes or the potential conversion or the potential exercise of conversion or option rights by holders of any other convertible bonds or bonds with warrants which may be issued in the future may dilute shareholders' ownership interests in the Company.

The Company may issue all or part of its remaining authorized shares or utilize its remaining authorization to issue further convertible bonds or bonds with warrants without any action or approval by its shareholders and, under certain, limited conditions, without granting any pre-emptive subscription rights to its shareholders. If the Company issues additional shares of common stock in the future, or if it issues securities that are convertible into shares of the Company's common stock, current shareholders may experience dilution of their equity investment.

1.3.5 The rights offering may expire and the subscription rights may become worthless if the underwriters terminate the underwriting agreement for the offered shares. In this case, we would receive no issue proceeds.

The Company and the underwriters have concluded an underwriting agreement, pursuant to which the underwriters have undertaken to offer the new shares to the Company's shareholders for subscription. The underwriting agreement is subject to a number of conditions and may be terminated by the underwriters under certain circumstances. If the underwriting agreement is terminated before the capital increase has been registered in the commercial register, the rights offering will lapse and the shareholders' subscription rights will expire. In this case, subscription rights trading transactions will not be reversed and investors that have acquired subscription rights for the new shares over a stock exchange would suffer a complete loss. Subscription declarations for new shares already made would be invalid. Should short sales have already occurred at the time of such an expiry of the rights offering, the short-seller of the shares would bear the risk of not being able to meet its obligation to deliver new shares. The Company will receive no issue proceeds in the event of a termination of the underwriting agreement.

1.3.6 The holdings of shareholders who do not participate in this rights offering will be significantly diluted, i.e., the value of their shares and their control rights will be negatively impacted.

Subscription rights for new shares will expire if they are not exercised by and including June 19, 2018, i.e., the expiry of the subscription period. If a shareholder does not exercise the subscription rights granted to it, its percentage shareholding in the Company will decline and its voting rights will be diluted. This dilution will be proportional to the percentage rate by which the share capital of the Company is increased and to the extent to which the shareholder does not participate in the capital increase.

2. GENERAL INFORMATION

2.1 Responsibility Statement

Bayer Aktiengesellschaft, with its registered office at Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Germany, and registered with the commercial register of the local court of Cologne (*Amtsgericht Köln*) under docket number HRB 48248 (hereinafter referred to as the "**Bayer AG**" or the "**Company**" and, together with its subsidiaries, including as of the closing date of the acquisition of Monsanto Company, St. Louis, Missouri, United States ("**Monsanto Company**"), Monsanto Company and its subsidiaries, "**Bayer**," "**we**," "**us**," "**our**," the "**Bayer Group**" or the "**Group**"), along with Credit Suisse Securities (Europe) Limited, London, United Kingdom ("**Credit Suisse**") and Merrill Lynch International, London, United Kingdom ("**BofA Merrill Lynch**" and together with Credit Suisse, the "**Joint Global Coordinators**"), as well as Goldman Sachs International, London, United Kingdom, HSBC Trinkaus & Burkhardt AG Dusseldorf, Germany ("**HSBC**"), J.P. Morgan Securities plc, London, United Kingdom ("**J.P. Morgan**"), Barclays Bank PLC, London, United Kingdom ("**Barclays**"), BNP PARIBAS, Paris, France, Citigroup Global Markets Limited, London, United Kingdom ("**Citigroup**"), COMMERZBANK Aktiengesellschaft, Frankfurt am Main, Germany ("**COMMERZBANK**"), Deutsche Bank Aktiengesellschaft, Frankfurt am Main, Germany ("**Deutsche Bank**"), Mizuho International plc, London, United Kingdom, MUFG Securities EMEA plc, London, United Kingdom ("**MUFG**"), Banco Bilbao Vizcaya Argentaria, S.A., Bilbao, Spain ("**BBVA**"), Crédit Agricole Corporate and Investment Bank, Montrouge Cedex, France ("**Crédit Agricole CIB**"), ING Bank N.V., Amsterdam, The Netherlands ("**ING**"), Banca IMI S.p.A., Milano, Italy ("**Banca IMI**"), Banco Santander, S.A., Madrid, Spain ("**Banco Santander**"), Société Générale, Paris, France, SMBC Nikko Capital Markets Limited, London, United Kingdom ("**SMBC Nikko**") and UniCredit Bank AG, Munich, Germany (together with Goldman Sachs International, HSBC, J.P. Morgan, Barclays, BNP PARIBAS, Citigroup, COMMERZBANK, Deutsche Bank, Mizuho International plc., MUFG, BBVA, Crédit Agricole CIB, ING, Banca IMI, Banco Santander, Société Générale and SMBC Nikko and the Joint Global Coordinators, the "**Joint Bookrunners**"), assume responsibility for the contents of this prospectus (the "**Prospectus**") pursuant to Section 5 para. 4 of the German Securities Prospectus Act (*Wertpapierprospektgesetz*) and declare that the information contained in this Prospectus is, to best of their knowledge, correct and contains no material omissions.

If any claims are asserted before a court of law based on the information contained in this Prospectus, the investor appearing as plaintiff may have to bear the costs of translating this Prospectus prior to the commencement of the court proceedings pursuant to the national legislation of the member states of the European Economic Area (the "**EEA**").

The information contained in this Prospectus will not be updated subsequent to the date hereof except for any significant new event or significant error or inaccuracy relating to the information contained in this Prospectus that may affect an assessment of the securities and occurs or comes to light following the approval of this Prospectus, but before the completion of the public offering or admission of the securities to trading, whichever is later. These updates must be disclosed in a prospectus supplement in accordance with Section 16 para. 1 sentence 1 of the German Securities Prospectus Act (*Wertpapierprospektgesetz*).

2.2 Purpose of this Prospectus

For the purpose of the public offering of new shares in the Federal Republic of Germany ("**Germany**") and the Grand Duchy of Luxembourg ("**Luxembourg**"), this Prospectus relates to 74,604,156 ordinary registered shares with no par value from the capital increase against cash contribution resolved by the management board of the Company (the "**Board of Management**") on June 3, 2018, approved by the presidial committee (*Präsidium*) of the supervisory board of the Company (the "**Supervisory Board**"), to which such competence was delegated, on the same day, on the basis of the Company's authorized capital resolved by the annual stockholders' meeting on April 29, 2014 with indirect subscription rights for shareholders of Bayer AG, each such share representing a notional value of €2.56 and carrying full dividend rights from January 1, 2018 (the "**New Shares**").

For the purpose of admission to trading on the regulated market segment (*regulierter Markt*) of the Frankfurt Stock Exchange with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange, and to the regulated market of the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart, this Prospectus relates to a total of 74,604,156 ordinary registered shares with no par value, each such share representing a notional value of €2.56 and carrying full dividend rights from January 1, 2018.

2.3 Forward-Looking Statements

This Prospectus contains forward-looking statements. A forward-looking statement is any statement that does not relate to historical facts and events or to facts or events as of the date of this Prospectus, but rather reflects

Bayer's current beliefs, expectations and assumptions regarding future events. This applies, in particular, to statements in this Prospectus containing information on future earning capacity, plans and expectations regarding Bayer's business and management including in relation to the acquisition of Monsanto Company (together with its consolidated subsidiaries, "**Monsanto**"), its growth and profitability, and general economic and regulatory conditions to which it is exposed. The words "aim," "anticipate," "expect," "intend," "outlook," "pipeline," "plan," "potential," "project," in conjunction with discussions of future operations, financial performance, Bayer's strategy for growth, product development, regulatory approvals, market position and expenditures, are used to identify forward-looking statements. Forward-looking statements in this Prospectus are based on estimates, assessments and assumptions made to the best of Bayer's present knowledge. They are subject to risks, uncertainties and other factors, the occurrence or non-occurrence of which could cause our actual results, including our financial condition and profitability, to differ materially from or fail to meet the expectations expressed or implied in the forward-looking statements.

For a description of the risks that could influence Bayer's forward-looking statements, see "*1. Risk Factors.*"

Moreover, it should be noted that neither the Company nor the Joint Bookrunners assume any obligation, except as required by law, to update any forward-looking statement or to conform any such statement to actual events or developments.

2.4 Note on Financial Information and Figures

2.4.1 Bayer

The financial information related to the Bayer Group contained in this Prospectus is extracted or derived from the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018, prepared in accordance with International Accounting Standard 34 – Interim Financial Reporting ("**IAS 34**"), a standard under the International Financial Reporting Standards as issued by the International Accounting Standards Board and as adopted by the European Union ("**IFRS**") and the audited consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2016 and December 31, 2017 prepared in accordance with IFRS and the additional requirements of German commercial law pursuant to 315e para. 1 of the German Commercial Code (*Handelsgesetzbuch,* the "**HGB**") (formerly Section 315a para. 1 of the HGB) or Bayer's internal and external accounting records. The financial information related to Bayer AG contained in this Prospectus is extracted from the audited unconsolidated financial statements of the Company as of and for the fiscal year ended December 31, 2017, prepared in accordance with the HGB. The financial statements mentioned are included in the section "*22. Financial Information*" of this Prospectus.

Where financial information in this Prospectus is labeled "audited," this means that it was extracted from the audited consolidated financial statements (IFRS) of Bayer as of and for the fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017 or from the audited unconsolidated financial statements (HGB) of Bayer AG as of and for the fiscal year ended December 31, 2017. The label "unaudited" is used in this Prospectus to indicate financial information that has been derived either from the unaudited condensed consolidated interim financial statements (IAS 34) of Bayer as of and for the three months ended March 31, 2018 or Bayer's internal and external accounting records or is based on calculations of financial information from the above-mentioned sources.

This Prospectus contains the following alternative performance measures EBIT, EBITDA, EBIT before special items, EBITDA before special items, Core EBIT, Core EPS, core net income from continuing operations, net financial debt, net operating profit after tax ("**NOPAT**"), return on capital employed ("**ROCE**") and currency-adjusted or currency- and portfolio-adjusted change in sales (together the "**Alternative Performance Measures**"). For more information on the Alternative Performance Measures, see "*10.4 Additional Key Figures for the Bayer Group*." The Alternative Performance Measures are not recognized as measures under IFRS and should not be considered as substitutes for figures determined in accordance with IFRS, such as income before income taxes, income after income taxes, net cash provided by (used in) operating activities or other income statement or cash flow data, or as measures of profitability or liquidity. The Alternative Performance Measures do not necessarily indicate whether cash flows will be available and/or sufficient for Bayer's cash requirements, nor is any such measure indicative of Bayer's historical operating results. Also, the Alternative Performance Measures are not meant to be indicative of future results. Because not all companies calculate these measures and figures in the same way, Bayer's presentation of the Alternative Performance Measures is not necessarily comparable with similarly titled measures used by other companies.

2.4.2 Monsanto

Monsanto Company's consolidated financial statements as of and for the fiscal years ended August 31, 2015, August 31, 2016 and August 31, 2017 and the notes related thereto contained in this Prospectus under

"*23. Monsanto Information*" were extracted from Monsanto Company's annual report on Form 10-K for the fiscal year ended August 31, 2017, included therein under "Item 8. Financial Statements and Supplementary Data." Monsanto Company's unaudited consolidated financial statements as of and for the six months ended February 28, 2018 and the notes related thereto contained in this Prospectus under "*23. Monsanto Information*" were extracted from Monsanto Company's quarterly report on Form 10-Q for the quarterly period ended February 28, 2018, included therein under "Item 1. Financial Statements." Monsanto Company's financial statements have been prepared in accordance with generally accepted accounting principles in the United States ("**U.S. GAAP**").

2.4.3 Pro Forma Information

Bayer has prepared pro forma financial information in accordance with European Commission Regulation (EC) No. 809/2004 of April 29, 2004 to present the material effects of Bayer's gradual reduction of its direct interest in Covestro AG in a series of transactions to currently 6.8%, the closing of the Transaction including certain divestments related to the Transaction and the financing related to the Transaction on the net assets, financial position and results of operations of Bayer (the "**Pro Forma Financial Information**"). The Pro Forma Financial Information was not prepared in accordance with the requirements in Article 11 of Regulation S-X issued by the SEC.

Based on information available at the time of the preparation of the Pro Forma Financial Information, certain significant adjustments were made to Monsanto's financial information, which included the alignment of Monsanto's reporting periods with Bayer's reporting periods, the alignment of the presentation principles used by Monsanto in its historical financial information with the presentation principles used by Bayer in its historical financial information, the conversion of Monsanto's historical financial information, which is prepared in accordance with U.S. GAAP, to Bayer's IFRS accounting principles and the translation of Monsanto's financial information from U.S. dollar to euro. In connection with these adjustments, certain assumptions were made, all of which are reflected in the notes to the Pro Forma Financial Information. The pro forma adjustments made are preliminary and subject to change. Also see, "*1.2.14 The pro forma financial information prepared by Bayer is subject to significant limitations and may not necessarily reflect what Bayer's financial position and results of operations would have been, had the integration and consolidation of Monsanto already taken place and may not be indicative of the financial positions and results of operations that Bayer will achieve in the future.*"

2.4.4 Other

Some figures (including percentages) in this Prospectus have been rounded. Figures in the tables that have been rounded in this way may not add up precisely to the totals included in these tables. In addition, rounded totals or subtotals in the tables may vary marginally from unrounded figures indicated elsewhere in this Prospectus.

Parentheses around any figures in the tables indicate negative values.

2.5 Trade Names

This Prospectus contains references to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this Prospectus may appear without the ® or ™ symbols. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies. Such trademarks, trade names and service marks appearing in this Prospectus are the property of their respective owners.

2.6 Sources of Market Data

To the extent not otherwise indicated, the information contained in this Prospectus on market environment, developments, growth rates, trends and competitive situation in the markets and segments in which Bayer operates is based on Bayer's assessment or present estimates or internal calculations of the Company. This Prospectus also contains estimates of market data and information derived from these estimates that would not be available from publications issued by market research firms or from any other independent sources. This information is based on internal estimates of the Company and, as such, may differ from the estimates made by competitors of Bayer or from data collected in the future by market research firms or other independent sources.

In addition, the following third party sources were used in the preparation of this Prospectus:

- Phillips McDougall – AgriService, September 2017 ("**Phillips McDougall – AgriService 2017**");
- Phillips McDougall – Global Crop Protection and Seed & Trait Market, 2000-2017, March 2017 ("**Phillips McDougall – 2000-2017**");
- IHS™ Markit, Global Executive Summary, April 2018 ("**IHS Markit – Global Executive Summary**");

- Global Insight, Comparative World Overview, February 2018 ("**Global Insight – Comparative World Overview**");
- CI&A Business Information/Reporting/Analysis – QuintilesIMS Market Prognosis March Update 2017, March 2017 ("**Quintiles IMS – Market Prognosis March 2017 Update**");
- CBI – IQVIA Market Prognosis – March 2018 Report, April 2018 ("**CBI – IQVIA Market Prognosis**");
- QuintilesIMS™ – IMS Global Analyses, LEU/PUB MAT Q3 2016, January 2017 ("**Quintiles IMS – MAT Q3 2016**");
- Nicholas Hall – DB6 Global Database FY 2016 data – data for full year of 2016 ("**Nicholas Hall – Full Year 2016**");
- Euromonitor – Sun Care Competitors – data for full year of 2016 ("**Euromonitor – Sun Care 2016**");
- CMi2i – Bayer AG Shareholder Identification Report May 2018, June 2018 ("**CMi2i Survey**").

It should be noted in particular that reference has been made in this Prospectus to information concerning markets and market trends, which was obtained from third party sources presented above. Where information in this Prospectus has been sourced from a third party, it has been accurately reproduced. As far as Bayer is aware and able to ascertain from information published by such third party, no facts have been omitted which would render the reproduced information inaccurate or misleading.

Bayer has not independently verified the market data and other information on which third parties have based their studies or the external sources on which Bayer's own estimates are based. Therefore, investors should exercise care when considering such information. Third party studies are often based on information that may not be exact or appropriate, and their methodology is, by nature, forward-looking and speculative. Moreover, investors should bear in mind that the Company's estimates are not always based on such third party market research.

2.7 Documents Available for Inspection

For the period during which this Prospectus remains valid, this Prospectus and the following documents will be available for inspection on the internet at www.investor.bayer.com:

- the Company's articles of incorporation (the "**Articles of Incorporation**");
- the Company's unaudited condensed consolidated interim financial statements prepared in accordance with IAS 34 as of and for the three months ended March 31, 2018;
- the Company's audited consolidated financial statements prepared in accordance with IFRS as of and for the fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017; and
- the Company's audited unconsolidated financial statements prepared in accordance with HGB as of and for the fiscal year ended December 31, 2017.

The financial statements referenced above are also contained in "*22. Financial Information*" of this Prospectus. All future consolidated financial statements and condensed consolidated interim financial statements of the Bayer Group as well as the unconsolidated financial statements of Bayer AG will be available from the Company and the current paying agent. See "*17.7 Announcements, Paying Agent and Registrar*." The consolidated financial statements as well as the unconsolidated annual financial statements will also be announced in the German Federal Gazette (*Bundesanzeiger*).

3. THE OFFERING

3.1 General

This offering relates to 74,604,156 new ordinary registered shares with no par value (*Stückaktien*), each such share representing a notional value of €2.56 and carrying full dividend rights from January 1, 2018, which will be offered to the Company's shareholders for subscription at a ratio of 23:2 (i.e., 23 existing shares of the Company entitle their holder to subscribe for two New Shares) at a subscription price of €81.00 per New Share (the "**Subscription Offer**"). The New Shares originate from a resolution passed by the Board of Management on June 3, 2018, approved by the Supervisory Board's presidial committee (*Präsidium*), to which such competence was delegated, on the same day, to increase the Company's registered share capital from €2,196,346,388.48 by €190,986,639.36 to €2,387,333,027.84 against contribution in cash utilizing the Company's authorized capital resolved by the annual stockholders' meeting of the Company on April 29, 2014 (the "**Capital Increase**") through the issue of 74,604,156 New Shares with indirect subscription rights for existing shareholders. The consummation of the Capital Increase is expected to be registered in the commercial register of the local court of Cologne, Germany (*Amtsgericht Köln*), on June 20, 2018.

The Subscription Offer will include (i) a public offering in Germany and Luxembourg, (ii) private placements in the United States of America (the "**United States**", "**U.S.A.**" or "**U.S.**") to qualified institutional buyers as defined in Rule 144A under the U.S. Securities Act of 1933 (as amended) (the "**Securities Act**"), and (iii) private placements to eligible investors outside the United States in offshore transactions in reliance on Regulation S under the Securities Act. Any New Shares that are not subscribed for in the Subscription Offer (the "**Rump Shares**") will be offered by the Joint Bookrunners for sale to eligible investors in Germany and other selected jurisdictions at a price at least as high as the subscription price (the "**Rump Placement**" and together with the Subscription Offer, the "**Offering**"). In the United States, the Rump Shares will only be offered to qualified institutional buyers within the meaning of Rule 144A under the Securities Act in a transaction meeting the requirements of Rule 144A under the Securities Act and outside the United States to eligible investors in offshore transactions in reliance on Regulation S under the Securities Act.

The Offering is based on the underwriting agreement dated June 3, 2018, among the Company and the Joint Bookrunners (the "**Underwriting Agreement**"), which provides for a firm underwriting of the New Shares not sold in the Offering by the Joint Bookrunners. The Offering is subject to, among other things, registration of the implementation of the Capital Increase in the commercial register of the local court of Cologne, Germany (*Amtsgericht Köln*), which is expected to occur on June 20, 2018.

Under certain circumstances, the Offering may be terminated. See below "*3.3 Subscription Offer*."

3.2 Timetable

The anticipated timetable for the Offering of the New Shares and for the admission to trading of the New Shares on the regulated market of the Frankfurt Stock Exchange with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange is as follows:

June 5, 2018	Approval of the Prospectus by the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*) (the "**BaFin**")
	Notification of the approved Prospectus to the competent authority in Luxembourg (*Commission de Surveillance du Secteur Financier*) (CSSF)
	Publication of the Prospectus on the Company's website
	Publication of the Subscription Offer in the German Federal Gazette (*Bundesanzeiger*)
June 6, 2018	Commencement of the subscription period
	Commencement of trading of subscription rights
	"Ex-rights" trading of shares
June 15, 2018	End of subscription rights trading (about 12:00 (noon) CEST)
June 19, 2018	End of the subscription period (about 17:30 CEST)
	Last day for payment of the subscription price

	Application for registration of the consummation of the Capital Increase in the commercial register of the local court of Cologne, Germany (*Amtsgericht Köln*)
June 20, 2018	Placement of the Rump Shares
	Announcement of the final results of the Subscription Offer
	Registration of the consummation of the Capital Increase in the commercial register of the local court of Cologne, Germany (*Amtsgericht Köln*)
	Admission of the New Shares to the regulated market with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange and to the regulated market of the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart
	Publication of the admission in the German Federal Gazette (*Bundesanzeiger*) and at www.deutsche-boerse.com, the website of the Frankfurt Stock Exchange
June 22, 2018	Inclusion of the New Shares in the Company's current stock quotation on the regulated market of the Frankfurt Stock Exchange with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange and to the regulated market of the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart
	Book-entry delivery of the New Shares subscribed for during the subscription period pursuant to the Subscription Offer
	Book-entry delivery of the Rump Shares placed in the Rump Placement

The Prospectus will be published on the Company's website at www.investor.bayer.com under sub-section "https://www.investor.bayer.com/en/stock/capital-increase/". Printed copies of the Prospectus are available from the Company free of charge during normal business hours at the following address: Bayer Aktiengesellschaft, Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Germany.

Information on the website listed in this section and information accessible via this website is neither part of nor incorporated by reference into this Prospectus.

3.3 Subscription Offer

The following is an English language translation of the German-language Subscription Offer. The German-language Subscription Offer is expected to be published in the German Federal Gazette (*Bundesanzeiger*) on June 5, 2018:

"Bayer Aktiengesellschaft
Leverkusen

(ISIN DE000BAY0017/WKN BAY001)

On April 29, 2014, the annual stockholders' meeting of Bayer Aktiengesellschaft (the "**Company**") adopted a resolution, which was entered into the commercial register on May 16, 2014, authorizing the management board of the Company (the "**Board of Management**") until and including April 28, 2019, with the approval of the supervisory board of the Company (the "**Supervisory Board**"), to increase the share capital of the Company by up to €530,000,000 through the issuance in one or more tranches of new no par value registered shares against contribution in cash and/or contribution in kind (with a sub-limit of €423,397,120.00 applicable to capital increases against contribution in kind).

In exercising this authorization, on June 3, 2018, the Board of Management resolved, with the approval of the Supervisory Board's presidial committee (*Präsidium*), to which such competence was delegated, on the same day, to increase the Company's registered share capital from €2,196,346,388.48 by €190,986,639.36 to €2,387,333,027.84 against contribution in cash through the issuance of 74,604,156 new no par value registered shares, each with a notional value of the Company's share capital of €2.56 and carrying full dividend rights from January 1, 2018 (the "**New Shares**").

In connection with the capital increase, the Company's existing shareholders will be granted the statutory subscription right in the form of an indirect subscription right pursuant to Section 186 para. 5 of the German Stock

Corporation Act (*Aktiengesetz*). In order to enable an even subscription ratio, one shareholder waived the right to exercise or sell 14 subscription rights. Credit Suisse Securities (Europe) Limited, London, United Kingdom ("**Credit Suisse**") and Merrill Lynch International, London, United Kingdom ("**BofA Merrill Lynch**" and together with Credit Suisse, the "**Joint Global Coordinators**"), as well as Goldman Sachs International, London, United Kingdom, HSBC Trinkaus & Burkhardt AG Dusseldorf, Germany ("**HSBC**"), J.P. Morgan Securities plc, London, United Kingdom ("**J.P. Morgan**"), Barclays Bank PLC, London, United Kingdom ("**Barclays**"), BNP PARIBAS, Paris, France, Citigroup Global Markets Limited, London, United Kingdom ("**Citigroup**"), COMMERZBANK Aktiengesellschaft, Frankfurt am Main, Germany ("**COMMERZBANK**"), Deutsche Bank Aktiengesellschaft, Frankfurt am Main, Germany ("**Deutsche Bank**"), Mizuho International plc, London, United Kingdom, MUFG Securities EMEA plc, London, United Kingdom ("**MUFG**"), Banco Bilbao Vizcaya Argentaria, S.A., Bilbao, Spain ("**BBVA**"), Crédit Agricole Corporate and Investment Bank, Montrouge Cedex, France ("**Crédit Agricole CIB**"), ING Bank N.V., Amsterdam, The Netherlands ("**ING**"), Banca IMI S.p.A., Milano, Italy ("**Banca IMI**"), Banco Santander, S.A., Madrid, Spain ("**Banco Santander**"), Société Générale, Paris, France, SMBC Nikko Capital Markets Limited, London, United Kingdom ("**SMBC Nikko**") and UniCredit Bank AG, Munich, Germany (together with Goldman Sachs International, HSBC, J.P. Morgan, Barclays, BNP PARIBAS, Citigroup, COMMERZBANK, Deutsche Bank, Mizuho International plc, MUFG, BBVA, Crédit Agricole CIB, ING, Banca IMI, Banco Santander, Société Générale and SMBC Nikko and the Joint Global Coordinators, the "**Joint Bookrunners**") have agreed, pursuant to an underwriting agreement concluded on June 3, 2018 (the "**Underwriting Agreement**"), (i) for the Joint Global Coordinators and COMMERZBANK to subscribe the New Shares and (ii) for each of the Joint Bookrunners to acquire and offer the New Shares to the Company's existing shareholders during the subscription period for indirect subscription at the subscription ratio and at the subscription price per New Share (the "**Subscription Offer**"). The Underwriting Agreement provides for a firm underwriting of the New Shares not sold in the offering by the Joint Bookrunners. The registration of the implementation of the capital increase in the commercial register of the local court of Cologne, Germany (*Amtsgericht Köln*) is expected to occur on June 20, 2018.

The subscription rights (ISIN DE000BAY1BR7/WKN BAY 1BR) attributable to the existing shares of the Company (ISIN DE000BAY0017/WKN BAY001) will automatically be delivered by Clearstream Banking Aktiengesellschaft, Mergenthalerallee 61, 65760 Eschborn, to the custodian banks on June 8, 2018 as per the status on June 7, 2018 at 11:59 p.m. CEST (Record Date). The custodian banks are responsible for booking the subscription rights to the eligible custodian accounts of the Company's existing shareholders.

We kindly request our shareholders to exercise their subscription rights for the New Shares during the period

from June 6, 2018 up to and including
June 19, 2018

through their custodian bank at the subscription agent, COMMERZBANK Aktiengesellschaft, during regular banking hours. Investors are recommended to follow the respective instructions by their custodian banks. Subscription rights that are not exercised in a timely manner will lapse and be of no value. No compensation will be payable for subscription rights that are not exercised.

The subscription agent has its registered office in Frankfurt am Main, Germany.

In accordance with the subscription ratio of 23:2, 23 existing shares of the Company entitle the holder to subscribe for two New Shares at the subscription price per New Share. Shareholders may only subscribe for one share or multiples thereof. The notice of the exercise of subscription rights is binding upon its receipt by the subscription agent and cannot be altered afterwards. The exercise of the subscription rights is, however, conditional upon the registration of the implementation of the capital increase in the commercial register and subject to the other limitations set forth below under "*Important Notice*."

Subscription Price

The subscription price per New Share is €81.00. The subscription price must be paid at the latest on June 19, 2018.

Trading in Subscription Rights

In connection with the Subscription Offer of the New Shares, the subscription rights (ISIN DE000BAY1BR7/WKN BAY 1BR) for the New Shares and fractional amounts of subscription rights will be traded on the regulated market (*regulierter Markt*) (Xetra and Xetra Frankfurt Specialist) of the Frankfurt Stock Exchange during the period from June 6, 2018 up to and including June 15, 2018. Neither the Company nor the subscription agent will apply for admission of the subscription rights to trading on any other stock exchange. The market price of the subscription rights depends, *inter alia*, on the development of the price of the Company's shares but it may deviate substantially from the price of the Company's shares. No compensation will be paid for subscription rights not exercised. Upon expiration of the subscription period, subscription rights not exercised will lapse and be of no value. The purchase of 23 subscription rights enables the exercise of the subscription rights for the purchase of two whole New Shares, i.e., two New Shares may be purchased for 23 subscription rights.

As of June 6, 2018, the existing shares of Bayer Aktiengesellschaft (ISIN DE000BAY0017/WKN BAY001) will be quoted as "ex-rights" on the regulated market of the Frankfurt Stock Exchange and the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart.

Credit Suisse may effect transactions on behalf of the Joint Bookrunners to provide liquidity for fair and orderly subscription rights trading and other measures customarily undertaken in this regard, such as, in particular, purchasing and selling subscription rights for New Shares or undertaking hedging transactions in the Company's shares, subscription rights or corresponding derivatives. Such measures and hedging transactions may influence the stock price or market rate of the subscription rights and shares in the Company. However, there is no guarantee that active trading in the Company's subscription rights will develop on the aforementioned stock exchanges and that there will be enough liquidity during the period of subscription rights trading.

The price of the subscription rights is determined continuously during the ordinary times of trading. On June 15, 2018, the subscription rights trading on Xetra will end with a closing auction starting not before 11:45 a.m. CEST and on Xetra Frankfurt Specialist with an independent special auction starting at 12:00 (noon) CEST.

The market price of the subscription rights is determined by the development of the price of the Company's shares but may be subject to stronger fluctuations than the share price.

Important Notice

Prior to making a decision to exercise, purchase or sell subscription rights for the New Shares, shareholders and investors are advised to carefully read the securities prospectus dated June 5, 2018, for the public offering of the New Shares (the "Prospectus") and to take particular note of the risks described in the section "*1. Risk Factors*" of the Prospectus and to consider such information when making their decision. In light of the potentially high volatility of equity prices and the market environment, shareholders should inform themselves of the Company's current share price before exercising their subscription rights for the New Shares at the subscription price.

The Joint Bookrunners are entitled to terminate the Underwriting Agreement or decide, together with the Company, to extend the subscription period under certain circumstances. These circumstances include, in particular, material adverse changes in the business or financial condition, prospects, shareholders' equity, or results of operations of the Company and/or its subsidiaries, a rating downgrade, material restrictions on stock exchange trading or banking activities, the outbreak or escalation of hostilities or war, or the occurrence of acts of terrorism or other calamity or crisis which have a material adverse impact on the financial markets in Germany, the United Kingdom, or the United States. The Joint Bookrunners are further relieved from their obligations under the Underwriting Agreement if the implementation of the capital increase is not registered in the commercial register maintained by the local court of Cologne, Germany (*Amtsgericht Köln*) on the second business day following the day on which the New Shares were subscribed, by 11:59 p.m. CEST, and the Joint Bookrunners and the Company fail to reach an agreement on a later deadline.

If the Joint Bookrunners terminate the Underwriting Agreement before the implementation of the capital increase has been registered in the commercial register, shareholders' subscription rights will lapse without compensation. In this case, the institutions brokering subscription rights trading will not reverse any transactions already completed with investors. Accordingly, investors who have acquired subscription rights through a stock exchange would suffer a complete loss. In addition, if, at the time of the termination, any sales of New Shares have already been made, the seller of the relevant shares bears the risk of not being able to meet the delivery obligation by delivering New Shares. If the Joint Bookrunners terminate the Underwriting Agreement after the registration of the implementation of the capital increase in the commercial register, shareholders and purchasers of subscription rights who have exercised their subscription rights will be entitled to acquire New Shares at the subscription price; a withdrawal of the shareholders and those having acquired and exercised subscription rights is no longer possible in such case.

Certification and Delivery of the Subscribed and of the Acquired New Shares

The New Shares (ISIN DE000BAY0017/WKN BAY001) will be represented by a global share certificate, which is expected to be deposited with Clearstream Banking Aktiengesellschaft on June 20, 2018. Under the Company's articles of incorporation, shareholders are not entitled to have their shares evidenced by individual share certificates. Unless the subscription period is extended or the Subscription Offer is cancelled, the New Shares subscribed for in the Subscription Offer are expected to be made available to the collective securities custody as co-ownership proportion in the global share certificate on or about June 22, 2018. In the same way, the New Shares acquired in the Rump Placement (as described below) are expected to be made available on June 22, 2018, i.e., after the end of the Rump Placement. The New Shares hold the same rights as all other shares of the Company (including full dividend rights from the fiscal year starting January 1, 2018) and do not convey any additional rights or advantages.

Commissions Charged by Custodian Banks

The custodian banks may charge a customary commission in connection with the subscription of the New Shares as well as for the sale and purchase of subscription rights.

Placement of Unsubscribed New Shares/Rump Placement

The Joint Bookrunners will offer any New Shares not subscribed for in the Subscription Offer (the "**Rump Shares**") for sale to eligible investors in the Federal Republic of Germany and other selected jurisdictions at a price at least as high as the subscription price (the "**Rump Placement**"). In the United States, the Rump Shares will only be offered to qualified institutional buyers within the meaning of Rule 144A under the U.S. Securities Act of 1933, as amended (the "**Securities Act**") meeting the requirements of Rule 144A under the Securities Act and outside the United States to eligible investors in offshore transactions in reliance on Regulation S under the Securities Act.

Admission to Trading and Listing of the New Shares

The admissions of the New Shares to trading on the regulated market (*regulierter Markt*) of the Frankfurt Stock Exchange with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange and to the regulated market of the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart are expected to be granted on June 20, 2018. The New Shares are expected to be included in the existing quotation for the Company's listed shares on the Frankfurt Stock Exchange and the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart (ISIN DE000BAY0017/WKN BAY001) on June 22, 2018.

Selling Restrictions

The subscription rights and the New Shares have not been or will not be registered under the Securities Act or with the securities regulatory authority of any state or other jurisdiction of the U.S. The subscription rights and the New Shares may at no time be offered, sold, exercised, pledged, transferred or delivered directly or indirectly, to or within the U.S., except pursuant to an exemption from the registration requirements of the Securities Act or in a transaction not subject to the registration requirements of the Securities Act and, in each case, in accordance with any applicable securities laws of any state of the United States.

The Subscription Offer has not been registered with the *Comision Nacional del Mercado de Valores* and therefore the New Shares may not be offered in the Kingdom of Spain ("**Spain**") by any means, except in circumstances which do not qualify as a public offer of securities in Spain in accordance with article 30bis of the Securities Market Act ("**Ley 24/1988, de 28 de julio del Mercado de Valores**") as amended and restated, or pursuant to an exemption from registration in accordance with article 41 of the Royal Decree 1310/2005 (*Real Decreto 1310/2005, de 4 de noviembre por el que se desarrolla parcialmente la Ley 24/1988, de 28 de julio, del Mercado de Valores, en materia de admision a negociacion de valores en mercados secundarios oficiales, de ofertas publicas de venta o suscripcion y del folleto exigible a tales efectos ("***Royal Decree 1310/2005***")*). Accordingly, it is expected that the subscription rights corresponding to the shares registered in the Spanish clearing system IBERCLEAR will be sold and the proceeds paid to shareholders through IBERCLEAR.

The acceptance of the offer outside of Germany and Luxembourg may be subject to restrictions. Persons that wish to accept this offer outside of Germany or Luxembourg are requested to inform themselves with regard to existing restrictions outside of Germany or Luxembourg and to comply with such restrictions.

Stabilization Measures

In connection with the placement of the New Shares, Credit Suisse acting for the account of the Joint Bookrunners will act as the stabilization manager (the "**Stabilization Manager**") and may, as Stabilization Manager, and acting in accordance with legal requirements (Article 5 para. 4 and 5 of the Market Abuse Regulation (EU) No 596/2014 in conjunction with Articles 5 through 8 of the Commission Delegated Regulation (EU) 2016/1052), make over-allotments and take stabilization measures to support the market price of the Company's shares and thereby counteract any selling pressure.

The Stabilization Manager is under no obligation to take any stabilization measures. Therefore, stabilization may not necessarily occur and may cease at any time. Such measures may be taken on the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*) from the date of the publication of the Subscription Offer and must be terminated no later than 30 calendar days after the expiration of the subscription period (the "**Stabilization Period**").

Stabilization transactions aim at supporting the market price of the Company's shares during the Stabilization Period. These measures may result in the market price of the Company's shares being higher than would otherwise have been the case. Moreover, the market price may temporarily be at an unsustainable level.

During the Stabilization Period, the Stabilization Manager will ensure adequate public disclosure of the details of all stabilization transactions no later than the end of the seventh daily market session following the date of execution of such transactions. Within one week of the end of the Stabilization Period, the Stabilization Manager will ensure adequate public disclosure as to whether or not stabilization was undertaken, the date on which stabilization started and last occurred, and the price range within which stabilization was carried out, for each of the dates during which

stabilization transactions were carried out and the trading venue on which the stabilization transactions were carried out, where applicable.

Availability of the Prospectus

The Prospectus was published on the Company's website (www.investor.bayer.com under sub-section "https://www.investor.bayer.com/en/stock/capital-increase/") on June 5, 2018. Printed copies of the Prospectus are available from the Company free of charge during normal business hours at the following address: Bayer Aktiengesellschaft, Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Germany.

Leverkusen, June 5, 2018

Bayer Aktiengesellschaft

The Board of Management"

3.4 Sale of Subscription Rights and Subscription Rights Remaining Unexercised

The subscription rights are freely transferable. To the extent provided for in the terms and conditions of the custodian banks, these banks will use their best efforts to dispose of the subscription rights at the best possible price, unless the party entitled to the subscription issues an instruction regarding the exercise of its subscription rights. Subscription rights remaining unexercised will lapse and be of no value.

3.5 Lock-Up Agreement

In the Underwriting Agreement, the Company has agreed with each Joint Bookrunner that, during the period commencing on June 3, 2018, the date of the Underwriting Agreement, and ending 90 days after the second day following the day of the registration of the Capital Increase in the commercial register (currently expected to take place on June 20, 2018), and will not agree, without the prior written consent of the Joint Global Coordinators, which may not to be unreasonably withheld, to:

- offer, sell or otherwise undertake to sell or to dispose of (i) bonds convertible or exchangeable into shares of the Company or (ii) shares of the Company or (iii) other securities which are convertible into or exchangeable for or grant the right to subscribe or receive shares of the Company;
- enter into any swap or other agreement that transfers to another party, in whole or in part, any of the economic consequences of ownership of shares of the Company, whether any such transaction described in this sentence is to be settled by delivery of securities, in cash or otherwise;
- announce or effect an increase of the Company's share capital out of authorized capital;
- propose to the Company's shareholders' meeting an increase of the Company's share capital, other than (i) a proposal to the Company's shareholders' meeting on authorizations for the issuance of new shares pursuant to an authorized capital (*genehmigtes Kapital*), and (ii) a proposal to the Company's shareholders' meeting on authorizations to issue convertible bonds and/or bonds with warrants, as well as participation rights with conversion or option rights (or a combination of these instruments) and the creation of conditional capital (*bedingtes Kapital*); or
- enter into a transaction or perform any action economically similar to those described above.

The foregoing, however, does not apply to (i) the issuance of the New Shares, (ii) the issuance of any class of shares upon the exercise of stock options that were already issued under an existing stock option plan of the Company and its subsidiaries, (iii) any swaps or other agreements for purposes of hedging the long-term incentive phantom stock option plan of the Company and its subsidiaries and (iv) the delivery of shares under the mandatory convertible bonds due 2019, issued by Bayer Capital Corporation B.V. on November 22, 2016 in a nominal amount of €4.0 billion and with a coupon of 5.625% per annum (the "**Mandatory Convertible Notes**").

3.6 Dilution

Shareholders who exercise their subscription rights with respect to the New Shares in full will maintain their percentage ownership of the Company's share capital following the Offering. Any shareholder who does not exercise its subscription rights will have its shareholding diluted by approximately 8%.

The net tangible book value (corresponding to total assets less intangible assets less noncurrent liabilities less current liabilities) derived from the Company's unaudited condensed consolidated interim financial statements as of and for the three months ended March 31, 2018, prepared in accordance with IAS 34, amounted to

€12,719 million as of March 31, 2018, which resulted in a net tangible book value per share of €14.82 (rounded and based on 857,947,808 shares of the Company outstanding immediately prior to the Offering). Based on a placement of all 74,604,156 New Shares from the Capital Increase, at a subscription price of €81.00 per New Share and after deduction of the estimated Offering expenses in an amount of €100 million, the net tangible book value of the Company as of March 31, 2018, would amount to €20.01 per share (calculated as adjusted for the effects of the Offering assuming that 932,551,964 shares of the Company will be outstanding after completion of the Offering). This corresponds to an increase of the Company's net tangible book value by €5.19 or 35.0% per share for the Company's existing shareholders as a result of this Offering and entails an immediate decrease in net tangible book value per share for the purchasers of the New Shares of €60.99 or 75.3% per share since the net tangible book value per share of the Company is below the subscription price per share by this amount or percentage.

3.7 Costs of the Offering and Net Issue Proceeds

Assuming gross proceeds of approximately €6.0 billion from the sale of the New Shares, the total expenses of the Offering, including commissions for the Joint Bookrunners, are expected to be approximately €100 million and the net issue proceeds from the Capital Increase to be €5.9 billion.

3.8 Additional Selling Restriction Notices

The distribution of this Prospectus and the sale of the New Shares may be restricted by law in certain jurisdictions. Pursuant to the Underwriting Agreement, no action has been or will be taken by the Issuer or the Underwriters to permit a public offering of the New Shares (except in Germany and Luxembourg).

The New Shares and the subscription rights for the New Shares will be offered to the public solely in Germany and Luxembourg. The New Shares and the subscription rights have not been and will not be registered under the Securities Act or with the securities regulatory authority of any State of the U.S. They may not be exercised, offered, sold or delivered, directly or indirectly, within or into the U.S. except pursuant to an exemption from the registration requirements of the U.S. securities laws and in compliance with all other applicable provisions of U.S. law. Thus, pursuant to the Underwriting Agreement, each of the Joint Bookrunners has severally represented and warranted to the Company that:

i. Neither it nor any of its affiliates (as defined in Rule 501(b) of Regulation D under the Securities Act, an "**Affiliate**") has, directly or through any agent, offered or will offer, solicited or will solicit offers to buy, or sold or will sell, the subscription rights or the New Shares to any persons in the United States, except to such persons who are qualified institutional buyers within the meaning of Rule 144A under the Securities Act in transactions not involving a public offering or which are exempt from the registration requirements of the Securities Act.

ii. Neither it nor any of its Affiliates, nor any person acting on its or any of its Affiliates' behalf (other than the Company as to which no representation is made) has engaged or will engage in any form of general solicitation or general advertising (within the meaning of Regulation D) or in any manner involving a public offering within the meaning of Section 4(a)(2) of the Securities Act in connection with any offer or sale of the subscription rights or the New Shares.

iii. Neither it nor any of its Affiliates nor any person acting on its or their behalf, has engaged or will engage in any directed selling efforts (as that term is defined in Regulation S) with respect to the subscription rights or the New Shares.

The Subscription Offer has not been registered with the *Comision Nacional del Mercado de Valores* and therefore the New Shares may not be offered in Spain by any means, except in circumstances which do not qualify as a public offer of securities in Spain in accordance with article 30bis of the Securities Market Act as amended and restated, or pursuant to an exemption from registration in accordance with article 41 of the Royal Decree 1310/2005.

Sales in the United Kingdom are also subject to restrictions. Pursuant to the Underwriting Agreement, each of the Joint Bookrunners has severally represented and warranted to the Company that it or any of its affiliates or any person acting on its or their behalf:

a) has only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity within the meaning of Section 21 of the Financial Services and Markets Act 2000, as amended ("**FSMA**") received by it in connection with the issue or sale of any subscription rights or New Shares in circumstances in which Section 21(1) of the FSMA does not apply to the Company; and

b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the subscription rights and the New Shares in, from or otherwise involving the United Kingdom.

Each of the Joint Bookrunners has also severally represented and warranted to the Company in the Underwriting Agreement that it has not and will not make an offer to the public of any subscription rights or New Shares in any member state of the EEA (other than the offers contemplated by this Prospectus in Germany and Luxembourg), except that it may make an offer to the public in a member state of the EEA of any of the subscription rights or the New Shares at any time under the following exemptions under the Prospectus Directive:

(i) at any time to any qualified investor as defined in the Prospectus Directive,

(ii) at any time to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the Joint Global Coordinators for any such offer, or

(iii) at any time in any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer (as set forth in (i) to (iii) above) of the subscription rights or the New Shares shall result in a requirement for the publication by the Company or any Joint Bookrunner of a prospectus pursuant to Article 3 of the Prospectus Directive, or of a supplement to the prospectus pursuant to Article 16 of the Prospectus Directive.

No prospectus has been filed with any securities commission or similar regulatory authority in Canada in connection with the offering of the subscription rights or the New Shares and the subscription rights and the New Shares have not been, and will not be, qualified for distribution to the public under the securities laws of Canada or any province or territory thereof. The offering of subscription rights and the sale and delivery of any New Shares shall be made so as to be exempt from the prospectus filing requirements and exempt from or in compliance with the dealer registration requirements of all applicable securities laws and regulations, rulings and orders made thereunder and rules, instruments and policy statements issued and adopted by the relevant securities regulator or regulatory authority, including those applicable in each of the provinces and territories of Canada. Pursuant to the Underwriting Agreement, each of the Joint Bookrunners has severally represented and warranted to the Company that:

(a) neither it nor any of its affiliates has offered, sold or distributed or will offer, sell or distribute any subscription rights or New Shares directly or indirectly, in Canada or to or for the benefit of any resident of Canada or any province thereof, other than in compliance with applicable securities laws;

(b) the offer, sale and distribution of the subscription rights and/or New Shares in Canada or to residents of Canada will be made only to "accredited investors" (as such term is defined under applicable Canadian securities laws) that are "permitted clients" (as such term is defined in National Instrument 31-103 – Registration Requirements, Exemptions and Ongoing Registrant Obligations), provided that that such investors are not persons created or being used solely to purchase or hold securities as an accredited investor as described in paragraph (m) of the definition of "accredited investor"; and

(c) neither it nor any of its affiliates has or will distribute or deliver the Prospectus, or any other offering material in connection with any offering of subscription rights or New Shares, in Canada other than in compliance with applicable securities laws.

In addition, each of the Joint Bookrunners has severally represented and warranted to the Company in the Underwriting Agreement that in connection with the offer and sale of the subscription rights and the New Shares it and any of its affiliates have complied, and will comply, with all applicable laws and regulations in each jurisdiction in which it offers, sells, or delivers any of the subscription rights or the New Shares or has in its possession, or distributes, any of the offering documents or any other material or communication relating to the subscription rights or the New Shares.

3.9 Underwriting Agreement

On June 3, 2018, the Company and the Joint Bookrunners entered into an Underwriting Agreement with respect to the Subscription Offer and the Rump Placement. The Joint Bookrunners have undertaken to firmly underwrite the New Shares.

Pursuant to the Underwriting Agreement, each of the Joint Bookrunners has severally agreed to underwrite the number of New Shares set forth below. The Company has agreed to issue the corresponding number of New Shares to the Joint Bookrunners:

Joint Bookrunner	Address	Number of New Shares	Percentage of New Shares
Merrill Lynch International	2 King Edward Street London EC1A 1HQ United Kingdom	8,575,191	11.49
Credit Suisse Securities (Europe) Limited	One Cabot Square London E14 4QJ United Kingdom	8,575,191	11.49
Goldman Sachs International	Peterborough Court 133 Fleet Street London EC4A 2BB United Kingdom	8,575,191	11.49
HSBC Trinkaus & Burkhardt AG	Königsallee 21/23 40212 Düsseldorf Germany	8,575,190	11.49
J.P. Morgan Securities plc	25 Bank Street Canary Wharf London E14 5JP United Kingdom	8,575,190	11.49
Barclays Bank PLC	1 Churchill Place London E14 5HP United Kingdom	2,572,557	3.45
BNP PARIBAS	16, boulevard des Italiens 75009 Paris France	2,572,557	3.45
Citigroup Global Markets Limited	Citigroup Centre, Canada Square London E14 5LB United Kingdom	2,572,557	3.45
COMMERZBANK Aktiengesellschaft	Kaiserstraße 16 (Kaiserplatz) 60311 Frankfurt am Main Germany	2,572,557	3.45
Deutsche Bank Aktiengesellschaft	Taunusanlage 12 60325 Frankfurt am Main Germany	2,572,557	3.45
Mizuho International plc	Mizuho House, 30 Old Bailey London EC4M 7AU United Kingdom	2,572,557	3.45
MUFG Securities EMEA plc	Ropemaker Place 25 Ropemaker Street London EC2Y 9AJ United Kingdom	2,572,557	3.45
Banco Bilbao Vizcaya Argentaria, S.A.	Plaza San Nicolás, 4 48005 Bilbao Spain	1,715,038	2.30
Crédit Agricole Corporate and Investment Bank	12, place des États-Unis CS 70052 92547 Montrouge Cedex France	1,715,038	2.30

Joint Bookrunner	Address	Number of New Shares	Percentage of New Shares
ING Bank N.V.	Amsterdamse Poort Bijlmerplein 888 1102 MG Amsterdam The Netherlands	1,715,038	2.30
Banca IMI S.p.A.	Largo Mattioli, 3 20121 Milano Italy	1,715,038	2.30
Banco Santander, S.A.	Ciudad Grupo Santander Avenida de Cantabria, s/n 28660 Boadilla del Monte (Madrid) Spain	1,715,038	2.30
Société Générale	29 Boulevard Haussmann 75009, Paris France	1,715,038	2.30
SMBC Nikko Capital Markets Limited	One New Change London EC4M 9AF United Kingdom	1,715,038	2.30
UniCredit Bank AG	Arabellastr. 12 81925 Munich Germany	1,715,038	2.30
Total		**74,604,156**	**100**

The Subscription Offer will include (i) a public offering in Germany and Luxembourg, (ii) private placements in the United States to qualified institutional buyers as defined in Rule 144A under the Securities Act, and (iii) private placements to eligible investors outside the United States in offshore transactions in reliance on Regulation S under the Securities Act. The Rump Shares will be offered by the Joint Bookrunners for sale in the Rump Placement. In the United States, the Rump Shares will only be offered to qualified institutional buyers within the meaning of Rule 144A under the Securities Act in a transaction meeting the requirements of Rule 144A under the Securities Act and outside the United States to eligible investors in offshore transactions in reliance on Regulation S.

According to the Underwriting Agreement, the Joint Bookrunners will pay the Company the subscription price for the New Shares. The Underwriting Agreement also stipulates that the Company must release the Joint Bookrunners from certain liabilities and that their obligations under the agreement are contingent on the fulfilment of certain conditions. Under the Underwriting Agreement the Company is obliged to pay the Joint Bookrunners a commission of approximately €91 million. In addition, the Company is obliged to pay to the Joint Global Coordinators an additional commission of approximately €6 million.

See above "*3.3 Subscription Offer—Important Notice*" for additional information on termination of the Underwriting Agreement.

3.10 Material Interests, including Conflicts of Interest

The Joint Bookrunners have entered into a contractual relationship with the Company in connection with the Offering and admission to trading of the Company's New Shares. The Company has engaged BofA Merrill Lynch and Credit Suisse to serve as Joint Global Coordinators and together with Goldman Sachs International, HSBC, J.P. Morgan, Barclays, BNP PARIBAS, Citigroup, COMMERZBANK, Deutsche Bank, Mizuho International plc, MUFG, BBVA, Crédit Agricole CIB, ING, Banca IMI, Banco Santander, Société Générale, SMBC Nikko and UniCredit Bank AG to act as Joint Bookrunners. The Joint Global Coordinators will advise the Company on the transaction and coordinate the structuring and execution of the transaction. Upon execution of the transaction, the Joint Bookrunners will receive a commission, the amount of which depends on the success of the transaction. The Joint Global Coordinators will receive an additional commission.

In connection with financing the Transaction (as defined under "*8. The Acquisition of Monsanto*"), affiliates of the Joint Bookrunners BofA Merrill Lynch, Credit Suisse, Goldman Sachs International, HSBC and J.P. Morgan entered into the Loan Facilities Agreement (as defined in "*8.9 Financing of the Transaction*") with Bayer, see "*8.9 Financing of the Transaction.*" The financing commitments under the Loan Facilities Agreement were syndicated

to more than 20 banks, which included affiliates of all the other Joint Bookrunners. The Company intends to use the net proceeds from this Offering to repay amounts drawn down under the Loan Facilities Agreement in connection with the Transaction, which will reduce the amounts outstanding under the Loan Facilities Agreement for which the affiliates of the Joint Bookrunners receive interest payments. For further information see "*5. Reasons for the Offering and Use of Issue Proceeds*."

The Joint Bookrunners or companies affiliated with them are engaged in securities trading and brokerage activities, as well as providing investment banking, asset management, financing, and financial advisory services and other commercial and investment banking products and services to a wide range of corporations and individuals. They may from time to time enter into business relationships with companies of the Group or perform services on their behalf as part of their normal course of business including such relating to lending and asset-backed securities transactions. In the ordinary course of the Joint Bookrunners' trading, brokerage, asset management, and financing activities, the Joint Bookrunners may at any time deal as principals or agents for more than one party in, or hold long or short positions, and may trade or otherwise effect transactions, for their own account or the accounts of customers, in debt or equity securities or senior loans of the Company, its affiliates or other entities that may be involved in or connected with the transactions contemplated hereby. Accordingly, the Joint Bookrunners and companies affiliated with them may in the future face conflicts of interests with shareholders in the Company.

Several members of the Company's Board of Management and the Supervisory Board hold shares of the Company and therefore have a personal interest in the performance of Bayer AG's share price. Several members of the Board of Management and the Supervisory Board have further informed the Company that they intend to or may take part in the Offering by exercising their subscription rights.

4. INFORMATION ON THE NEW SHARES

4.1 Legal Framework for Creation of the New Shares

Sections 202 *et seq*. of the German Stock Corporation Act (*Aktiengesetz*, "**AktG**") on capital increases made through the use of authorized capital against contributions in cash provide the legal basis for the issuance of the New Shares. By resolution of the annual stockholders' meeting on April 29, 2014, the Board of Management was authorized, up to and including April 28, 2019 and subject to the approval of the Supervisory Board, to increase the Company's share capital by up to a total of €530,000,000 by issuing new ordinary registered shares with no par value in one or more tranches against contribution in cash or contribution in kind (with a sub-limit of €423,397,120.00 applicable to capital increases against contribution in kind). This authorized capital (*Genehmigtes Kapital I*) was entered into the commercial register of the local court of Cologne, Germany *(Amtsgericht Köln)* on May 16, 2014.

By resolution of the Board of Management dated June 3, 2018, with approval of the Supervisory Board's presidial committee (*Präsidium*), to which such competence was delegated, on the same day, the Board of Management resolved to increase the registered share capital of the Company by €190,986,639.36 to €2,387,333,027.84 against contribution in cash, by issuing 74,604,156 new no par value registered shares (*Stückaktien*), each with a notional value of €2.56, with subscription rights for existing shareholders. The subscription price per New Share is €81.00. The implementation of the Capital Increase is expected to be entered into the commercial register of the local court of Cologne, Germany *(Amtsgericht Köln)* on June 20, 2018.

4.2 Admission to Exchange Trading, Individual Share Certificates, Delivery

The applications for admission of the New Shares to trading on the regulated market of the Frankfurt Stock Exchange and the simultaneous admission of the New Shares to the sub-segment of the regulated market of the Frankfurt Stock Exchange with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange and to the regulated market of the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart are expected to be made on June 6, 2018. The decisions approving the admission of the New Shares to exchange trading are expected on June 20, 2018. The New Shares are expected to begin trading on the German stock exchanges and to be included in the existing quotations of the Company's shares on the German stock exchanges on or about June 22, 2018.

The New Shares will be delivered to buyers in the form of co-ownership rights in a global share certificate expected to be deposited with the collective securities depositary Clearstream Banking Aktiengesellschaft on June 20, 2018. The New Shares are expected to be credited to investors' accounts on June 22, 2018 through the book-entry facilities of Clearstream Banking Aktiengesellschaft. Investors can obtain information about the actual delivery of the New Shares subscribed for under the Subscription Offer from their respective custodian bank. Trading in New Shares is expected to start on the day of the crediting of such shares to the investor's account. According to the Company's Articles of Incorporation, shareholders are not entitled to receive individual share certificates.

See "*18.1 Share Capital and Shares*" for additional information on the rights attached to shares of the Company.

4.3 Form, Voting Rights, Currency of the Securities Issuance

All of the Company's shares are ordinary registered shares with no par value (*Stückaktien*) each with a notional value of €2.56. Each share of the Company entitles the owner to one vote at the annual stockholders' meeting. There are no restrictions on voting rights.

The Company's shares, including the New Shares, are denominated in Euro.

4.4 Dividend Entitlement, Share of Liquidation Proceeds

The New Shares will carry full dividend rights from, and including, the fiscal year starting January 1, 2018 and have the same rights as all other shares of the Company. In the event of the Company's liquidation, shareholders are entitled to any remaining liquidation surplus in proportion to their shareholding after deduction of the Company's liabilities.

4.5 ISIN, WKN, Common Code, Stock Exchange Symbol

The New Shares are intended to be incorporated into the existing quotation on the regulated market segment (*regulierter Markt*) of the Frankfurt Stock Exchange with simultaneous admission to the sub-segment of the regulated market with additional post-admission obligations (Prime Standard) of the Frankfurt Stock Exchange as well as on the regulated market of the stock exchanges of Berlin, Dusseldorf, Hamburg, Hanover, Munich, and Stuttgart.

The various security identification numbers are as follows:

International Securities Identification Number (ISIN):

- for the existing shares and New Shares: DE000BAY0017
- for the subscription rights to the New Shares: DE000BAY1BR7

German Securities Identification Number (WKN):

- for the existing shares and New Shares: BAY001
- for the subscription rights to the New Shares: BAY 1BR

Common Code:

- for the existing shares and New Shares 044142961

Stock Exchange Symbol of the existing shares and New Shares: BAYN

Stock Exchange Symbol of the subscription rights to the New Shares: BAYR

4.6 Disposal Restrictions and Transferability

The New Shares are freely transferable. Other than the restrictions listed in "*3.3 Subscription Offer—Selling Restrictions*" and "*3.5 Lock-Up Agreement*," there are no legal restrictions on trading the New Shares.

4.7 Notice to Distributors

Solely for the purposes of the product governance requirements contained within (i) EU Directive 2014/65/EU on markets in financial instruments, as amended ("**MiFID II**"), (ii) Articles 9 and 10 of Commission Delegated Directive (EU) 2017/593 supplementing MiFID II, and (iii) local implementing measures (together, the "**MiFID II Product Governance Requirements**"), and disclaiming all and any liability, whether arising in tort, contract or otherwise, which any "manufacturer" (for the purposes of the MiFID II Product Governance Requirements) may otherwise have with respect thereto, the subscription rights to the New Shares and the New Shares have been subject to a product approval process. As a result, it has been determined that such subscription rights and such New Shares are (i) compatible with an end target market of retail investors and investors who meet the criteria of professional clients and eligible counterparties, each as defined in MiFID II and (ii) eligible for distribution through all distribution channels as are permitted by MiFID II (the "**Target Market Assessment**"). Notwithstanding the Target Market Assessment, distributors (for the purposes of the MiFID II Product Governance Requirements) should note that: the value of the subscription rights and the price of the New Shares may decline and investors could lose all or part of their investment. The New Shares offer no guaranteed income and no capital protection; and an investment in the subscription rights and the New Shares is compatible only with investors who do not need a guaranteed income or capital protection, who (either alone or in conjunction with an appropriate financial or other adviser) are capable of evaluating the merits and risks of such an investment and who have sufficient resources to be able to bear any losses that may result therefrom. The Target Market Assessment is without prejudice to the requirements of any contractual, legal or regulatory selling restrictions in relation to the Offering.

For the avoidance of doubt, the Target Market Assessment does not constitute: (a) an assessment of suitability or appropriateness for the purposes of MiFID II; or (b) a recommendation to any investor or group of investors to invest in, or purchase, or take any other action whatsoever with respect to the subscription rights or the New Shares. Each distributor is responsible for undertaking its own target market assessment in respect of the subscription rights and the New Shares and determining appropriate distribution channels.

5. REASONS FOR THE OFFERING AND USE OF ISSUE PROCEEDS

The net proceeds to Bayer from the Offering result from the gross proceeds less the underwriting commissions and other expenses described below. On the basis of a subscription price of €81.00 per New Share and issuance of 74,604,156 New Shares, Bayer is seeking to raise funds of approximately €6.0 billion in this Offering. The overall commissions to be paid by Bayer to the Joint Bookrunners are expected to amount to approximately €96.7 million. Other issue costs to be incurred by Bayer will be approximately €3.3 million. Investors will not be charged with expenses by the Company or the Joint Bookrunners (regarding potential charges by custodian banks, see "*3.3 Subscription Offer*"). On this basis, Bayer expects net proceeds from this Offering of €5.9 billion.

Bayer intends to use the net proceeds from the Offering to repay amounts drawn down under the Loan Facilities Agreement (as defined in "*8.9 Financing of the Transaction*") in connection with the Transaction (as defined under "*8. The Acquisition of Monsanto*"). Prior to the Offering, Bayer had already taken various financing measures, which included the issuance of the Mandatory Convertible Notes with net proceeds of €3.96 billion (US$4.2 billion) and the Exchangeable Bonds (as defined in "*8.9 Financing of the Transaction*") with net proceeds of €1.05 billion (US$1.2 billion) as well as the Temasek Investment with net proceeds of €3.0 billion (US$3.7 billion). In accordance with the terms of the Loan Facilities Agreement, these net proceeds, together with a portion in an amount of €1.5 billion (US$1.9 billion) of the net proceeds from the sale of shares in Covestro AG (the "**Covestro Shares**") in January 2018 and the net proceeds of €2.2 billion (US$2.5 billion) from the sale of Covestro Shares in May 2018 were used to reduce the commitments under the Loan Facilities Agreement from US$56.9 billion (€48.7 billion) to US$43.4 billion (€37.2 billion) prior to the closing of the Transaction. The expected net proceeds of €5.9 billion (approximately US$6.9 billion) from the Offering are intended to be used to reduce the aggregate amount outstanding under the Loan Facilities Agreement from US$43.4 billion (€37.2 billion) to US$36.5 billion (€31.3 billion). Also, since the Loan Facilities Agreement is denominated in US$ and cancellations occurred at different times and at different € / US$ exchange rates, the reductions of the Loan Facilities Agreement have been calculated based on the US$ amounts and subsequently the residual amount of the Loan Facilities Agreement has been translated to € applying the relevant exchange rate. The US$ amounts of the Loan Facilities Agreement were translated into € amounts and the € amounts of the proceeds from the Offering were translated into US$ amounts using the June 1, 2018 exchange rate of US$ 1.1672 = €1.0. As a result, there may be deviations from the € amounts for the Loan Facilities Agreement and the US$ amounts for the proceeds from the Offering presented in the Pro Forma Financial Information, which were translated at a different exchange rate, see "*9. Pro Forma Financial Information—Effects of the Covestro Divestments and the Acquisition of Monsanto on the Consolidated Financial Information of Bayer for the Fiscal Year ended December 31, 2017, and as of and for the Three Months Ended March 31, 2018.*"

In order to refinance further amounts drawn down under the Loan Facilities Agreement, Bayer intends to offer directly or through a finance subsidiary senior unsecured notes denominated in U.S. dollars and/or euros across a market standard range of maturities in an aggregate principal amount of up to €20.0 billion (the "**Bond Offerings**"). The Bond Offerings may be launched, subject to market conditions, at any time, including during or shortly after the subscription period for this Offering. The Bond Offerings are fully independent of this Offering, are not conditional upon one another and may be consummated at different times. In addition, in accordance with the terms of the Loan Facilities Agreement, Bayer expects to repay further amounts drawn down under the Loan Facilities Agreement with the net proceeds from the Transaction-related Divestments. In addition, in accordance with the terms of the Loan Facilities Agreement, Bayer expects to refinance amounts drawn down under the Loan Facilities Agreement with the net proceeds from the Transaction-related Divestments (as defined under "*8.10 Overview of Transaction-related Divestments*").

For more information on the financing of the Transaction and the Transaction-related Divestments, see "*8.9 Financing of the Transaction*", "*8.10 Overview of Transaction-related Divestments*" and "*12.3.2 The Acquisition of Monsanto and Related Divestitures.*"

6. USE OF DISTRIBUTABLE BALANCE SHEET PROFIT, EARNINGS (LOSS) PER SHARE AND DIVIDEND POLICY

6.1 General Rules on Balance Sheet Profit and Dividend Payments

Under German law, dividends can only be approved and paid on the basis of distributable balance sheet profit (*Bilanzgewinn*) reported in the unconsolidated financial statements of the Company, which were prepared in accordance with the HGB. Distributable balance sheet profit is calculated by adjusting the income/loss after taxes for the year (*Jahresüberschuss/-fehlbetrag*) for profit or loss carryforwards (*Gewinn-/Verlustvorträge*) and for allocations to or transfers from reserves. Some allocations to reserves are required by law and must be deducted when calculating distributable balance sheet profit.

When approving the unconsolidated financial statements, the Board of Management and Supervisory Board may allocate to other revenue reserves (*andere Gewinnrücklagen*) up to half of the net profit for the year remaining after deducting both allocations to statutory reserves (*gesetzliche Rücklagen*) and any loss carryforward. When the annual stockholders' meeting votes on the appropriation of distributable balance sheet profit, it may decide to make further allocations to revenue reserves or to carry forward a profit.

Resolutions on the payment of a dividend for any fiscal year, as well as the amount of the dividend, are adopted at the annual stockholders' meeting held the following fiscal year. The annual stockholders' meeting must be held within the first eight months of the fiscal year, and must include on its agenda a proposal by the Board of Management, approved by the Supervisory Board, regarding the uses of distributable profit. Dividends approved by the annual stockholders' meeting are to be paid three business days after the annual stockholders' meeting, unless the resolution provides otherwise. Since all of the Company's shares are evidenced by global certificates deposited with Clearstream Banking Aktiengesellschaft, Clearstream Banking Aktiengesellschaft transfers the dividends to the shareholders' custodian banks for crediting to their accounts. German custodian banks are under the same obligation to distribute the funds to their customers. Shareholders who have their shares held in safekeeping by a custodian bank situated outside Germany must inquire at the respective bank regarding the terms and conditions applicable in their case. Details of any dividends approved by the annual stockholders' meeting and the paying agent appointed by the Company are published in the German Federal Gazette (*Bundesanzeiger).* To the extent dividends can be distributed by the Company in accordance with the HGB, there are no restrictions under German law on shareholder rights to receive dividends.

Shareholders' stakes in the distributable balance sheet profit are determined on the basis of their individual holding of the total issued share capital. Individual shareholders are not entitled to receive a dividend unless a resolution on the uses of distributable profit has been adopted at the annual stockholders' meeting. Any dividends not claimed become time-barred within six years at the latest. Once the limitation period passes, the dividend remains with the Company.

The New Shares will carry full dividend rights from, and including, the fiscal year starting January 1, 2018.

6.2 Earnings (Loss) per Share and Dividend Policy

The following table shows the Company's consolidated result for the period and basic earnings per share, both based on the consolidated financial statements (IFRS) of Bayer as of and for the fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017, as well as the net profit for the year and the reported distributable balance sheet profit, both based on the unconsolidated financial statements (HGB) of Bayer AG as of and for the fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017. It also shows the annual dividend paid per share as well as the dividend payment for the fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017.

	For the fiscal year ended December 31,		
	2015	2016	2017
	(audited and in € million, unless otherwise indicated)		
Consolidated result for the period (IFRS)[1]	4,098	4,826[5]	8,094
Basic earnings per share (IFRS) (in €)	4.87	5.12[5]	8.41
Net profit for the year (HGB)[2]	1,361	3,600	4,543
Reported distributable balance sheet profit (HGB)[3]	2,067	2,233	2,900
Dividend paid per share in €	2.50	2.70	2.80[4]
Dividend payment for the respective year	2,067	2,233	2,402[4]

(1) Referred to as "Income after income taxes" in our audited consolidated financial statements as of and for the fiscal year ended December 31, 2017.

(2) Referred to as "Income after taxes/net income" in the audited unconsolidated financial statements of Bayer AG as of and for the fiscal year ended December 31, 2017.
(3) Referred to as "Distributable profit" in the audited unconsolidated financial statements of Bayer AG as of and for the fiscal year ended December 31, 2017.
(4) Unaudited.
(5) Figures extracted from the audited consolidated income statement of Bayer for fiscal year ended December 31, 2016, which presents Covestro in continuing operations.

As described above, under German law the dividend payment is determined by the distributable profit reported in the unconsolidated financial statements (HGB) of Bayer AG. Dividends resolved by the annual stockholders' meeting are paid annually, three business days after the annual stockholders' meeting, unless provided otherwise in the dividend resolution, in compliance with the rules of the respective clearing system. Details concerning any dividends resolved by the annual stockholders' meeting and the respective paying agent(s) will be published in the German Federal Gazette (*Bundesanzeiger*).

Bayer AG has continuously paid out dividends to its shareholders since 1952, and plans to continue this practice in the future. Core earnings per share form the basis of Bayer's dividend policy. Bayer aims to generally distribute dividends at a payout ratio of 30-40%, calculated on core earnings per share. For more information on our core earnings per share, see "*10.4 Additional Key Figures for the Bayer Group*." However, there can be no assurance with respect to any given year that the Company will pay dividends of a specific amount or at all.

For the fiscal year 2016, retained earnings were diminished by payment of the dividend of €2.70 per share, resulting in a total dividend payment of €2,233 million in fiscal year 2017. The resulting payout ratio of 37% calculated on core earnings per share was within the Company's target corridor of 30-40%. For fiscal year 2017, the dividend resolved upon by the annual stockholders' meeting amounted to €2.80 per share, which resulted in a total dividend payment of €2,402 million. The payment of the dividend was made on May 30, 2018.

7. CAPITALIZATION AND INDEBTEDNESS; STATEMENT ON WORKING CAPITAL

The following tables set forth, on an unaudited basis, the Company's actual capitalization and indebtedness as of March 31, 2018 derived from Bayer's unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018 or its internal reporting system prior to the implementation of the Offering. Investors should read these tables in conjunction with "*10.* Selected Consolidated Financial Information of the Bayer Group," "*12. Management's Discussion and Analysis of Financial Condition and Results of Operations*" and the consolidated financial statements, including the related notes contained in this Prospectus. For information on the effects of the Temasek Investment (as defined under "*8.9 Financing of the Transaction*"), the Transaction, the Offering and the Transaction-related Divestments. on Bayer's capitalization and indebtedness, see the Pro Forma Financial Information presented in "*9. Pro Forma Financial Information – Effects of the Covestro Divestments and the Acquisition of Monsanto on the Consolidated Financial Information of Bayer for the Fiscal Year Ended December 31, 2017, and as of and for the Three Months Ended March 31, 2018*."

7.1 Capitalization

	As of March 31, 2018*
	(in € million) (unaudited)
Total current debt(1)	**13,098**
Thereof guaranteed(2)	11
Thereof secured	–
Thereof unguaranteed/unsecured	13,087
Total noncurrent debt(3)	**23,912**
Thereof guaranteed(2)	–
Thereof secured	–
Thereof unguaranteed/unsecured	23,912
Total shareholder's equity(4)	**38,384**
Share capital(5)	2,117
Legal reserve(6)	9,658
Other reserves(7)	26,553
Equity attributable to non-controlling interest(8)	56
Total	**75,394**

* Extracted or derived from the Company's unaudited condensed consolidated interim financial statements and internal and external accounting records.

(1) Total current debt corresponds to the statement of financial position item "Current liabilities."

(2) Guaranteed comprises guarantees given by third parties in favor of Group companies.

(3) Total noncurrent debt corresponds to the statement of financial position item "Noncurrent liabilities."

(4) Total shareholder's equity corresponds to the statement of financial position item "Equity."

(5) Share capital corresponds to the statement of financial position item "Capital stock."

(6) Legal reserve corresponds to the statement of financial position item "Capital reserves."

(7) Other reserves correspond to the statement of financial position item "Other reserves."

(8) Equity attributable to non-controlling interest corresponds to the statement of financial position item "Equity attributable to non-controlling interest".

7.2 Indebtedness

		As of March 31, 2018* (in € million) (unaudited)
A.	Cash[1][2]	1,356
B.	Cash equivalents[1][3]	3,976
C.	Trading securities[4]	6,830
D.	**Liquidity (A)+(B)+(C)**	**12,162**
E.	**Current financial receivables[5]**	**10,441**
F.	Current bank debt[6]	597
G.	Current portion of noncurrent debt[7]	559
H.	Other current financial debt[8]	11,942
I.	**Current Financial Debt (F)+(G)+(H)**	**13,098**
J.	**Net current financial indebtedness (I)-(E)-(D)**	**(9,505)**
K.	Noncurrent bank loans[9]	14
L.	Bonds issued[10]	11,731
M.	Other noncurrent loans[11]	3,485
N.	**Noncurrent financial liabilities (K)+(L)+(M)**	**15,230**
O.	**Net financial indebtedness (J)+(N)**	**5,725**

* Extracted or derived from the Company's unaudited condensed consolidated interim financial statements and internal and external accounting records.

(1) The sum of Cash and Cash equivalent corresponds to the statement of financial position item "Cash and cash equivalents."

(2) Cash comprises cash, checks received and balances with banks and companies.

(3) Cash equivalents are highly liquid short-term financial investments that are subject to an insignificant risk of changes in value, are easily convertible into a known amount of cash and have a maturity of three months or less from the date of acquisition or investment.

(4) Trading securities comprise short-term financial assets – debt instruments – at fair value through profit or loss included in the statement of financial position item "Current other financial assets."

(5) Corresponds to the sum of the statement of financial position items "Current trade account receivables," "Current other financial assets," and "Current claims for income tax refunds" less "Short-term financial assets – debt instruments – at fair value through profit or loss."

(6) Corresponds to the current portion of liabilities to banks included in the statement of financial position item "Current financial liabilities."

(7) Corresponds to the current portion of bonds and notes/promissory notes included in the statement of financial position item "Current financial liabilities."

(8) Corresponds to the statement of financial position item "Current financial liabilities" less the current portion of liabilities to banks and less the current portion of bonds and notes/promissory notes plus the sum of the statement of financial position items "Current other provisions," "Current refund liabilities," "Current contract liabilities," "Current income tax liabilities," "Current trade accounts payables," "Current other liabilities" and "Liabilities directly related to assets held for sale."

(9) Corresponds to the noncurrent portion of liabilities to banks included in the statement of financial position item "Noncurrent financial liabilities."

(10) Corresponds to the noncurrent portion of bonds and notes/promissory notes included in the statement of financial position item "Noncurrent financial liabilities."

(11) Corresponds to the statement of financial position item "Noncurrent financial liabilities" less the noncurrent portion of liabilities to banks and less the noncurrent portion of bonds and notes/promissory notes plus the sum of the statement of financial position items "Noncurrent other provisions," "Noncurrent refund liabilities," "Noncurrent contract liabilities," "Noncurrent income tax liabilities" and "Noncurrent other liabilities."

7.3 Indirect and Contingent Indebtedness

The Group's contingent liabilities amounted to €844 million as of March 31, 2018, and mainly comprised litigation pending in several countries. The Group's other financial commitments amounted to €52,260 million as of March 31, 2018, and mainly comprised Bayer's contingent financial commitment in an amount of €45,673 million to acquire Monsanto Company pursuant to the Merger Agreement (as defined in "*8. The Acquisition of Monsanto*") signed with Monsanto Company on September 14, 2016, which provides for Bayer's acquisition of all outstanding shares of Monsanto Company against a payment of US$128 per share in cash which is expected to be completed on or about June 7, 2018. For more information on the acquisition of Monsanto, see "*8. The Acquisition of Monsanto.*" Further, the Group's other financial commitments included Bayer's potential payment obligations under research and development ("**R&D**") collaboration agreements in an amount of €2,265 million.

7.4 Statement on Working Capital

The Company is of the opinion that Bayer is in a position to meet the payment obligations that become due within at least the next 12 months from the date of this Prospectus.

8. THE ACQUISITION OF MONSANTO

On September 14, 2016, Bayer signed an agreement and plan of merger (the "**Merger Agreement**") with Monsanto Company, which provides for Bayer's acquisition (through a merger) of all outstanding shares of Monsanto Company against a payment of US$128.00 per share in cash (the "**Transaction**") which corresponded to an expected transaction value of approximately US$66 billion as of May 31, 2016. As of the date of this Prospectus, this corresponds to a transaction value of approximately US$63 billion taking into account Monsanto's debt outstanding as of February 28, 2018. The shareholders of Monsanto Company approved the merger with the requisite majority on December 13, 2016. The Transaction, which is subject to customary closing conditions, including the receipt of required antitrust and other regulatory approvals, all of which have been satisfied or waived (other than those conditions that by their nature are to be satisfied at the closing of the Transaction), is expected to be completed on or about June 7, 2018.

8.1 Reasons for the Acquisition and Strategy

With global net sales of US$14.6 billion in the fiscal year ended August 31, 2017, Monsanto is a global provider of agricultural products. Monsanto's seeds, biotechnology traits, herbicides and biologicals platform offerings as well as its management and agronomic decision support tools provide farmers with solutions aimed at improving productivity, reducing the costs of farming and producing safe, affordable and nutritious foods for consumers and higher quality feed for animals. Bayer believes that the Transaction will further strengthen its position as an agricultural innovator. In addition, the Transaction balances Bayer's life science portfolio with an enlarged Crop Science division, which upon completion of the Transaction will become the largest division of the Group in terms of net sales, complementing Bayer's health care businesses, Pharmaceuticals and Consumer Health.

Monsanto manages its business in two segments: Seeds and Genomics and Agricultural Productivity, with total net sales of US$10.9 billion and US$3.7 billion, respectively, in each case as reported for the fiscal year ended August 31, 2017. Monsanto's Seeds and Genomics segment is a global producer of high-quality seeds for row crops like corn, soybean, cotton and canola as well as seeds for a wide variety of vegetable crops. Monsanto's row crop seeds are marketed under its major brands *DEKALB, Asgrow* and *Deltapine* to farmers globally; its vegetable seeds are predominantly marketed under the brands Seminis and De Ruiter in more than 150 countries. Monsanto's Seeds and Genomics segment is also a developer and producer of biotechnology traits which are marketed under various brands including *Roundup Ready*, *Bollgard* and *Xtend*. These products offer weed and pest control and ultimately aim to enhance yields for farmers by enabling crops to protect themselves against a variety of agricultural pest species and/or to be tolerant of specific herbicides.

In its Agricultural Productivity segment, Monsanto manufactures glyphosate-based herbicides marketed under the *Roundup* brand, which represents the world's leading agrochemical[2], as well as other herbicides for use by farmers. *Roundup* agricultural herbicides combined with Monsanto's seeds containing *Roundup Ready* technology (glyphosate-tolerance) provide growers with a weed management system designed to deliver enhanced weed control. Monsanto also provides lawn-and-garden herbicide products for the residential market. For more information on Monsanto's business, see "*23. Monsanto Information*."

Bayer's Crop Science division, which generated net sales of €9,577 million in fiscal year 2017, forms an integral part of the Company's life science portfolio. In line with its strategic priorities to be a world-class life science company, Bayer intends, through the Transaction, to create a global leader committed to transforming agriculture, which offers advanced customized agronomic solutions, seeds and traits, as well as crop protection tailored to farmers' needs and enhanced by digital agronomic advice.

Bayer believes the agricultural industry offers long-term growth prospects driven by sustainable megatrends, including projected global population growth, higher protein intake, declining total size of farmland per capita and negative effects on yields resulting from climate change. Based on internal estimates as of April 2018, Bayer assesses the total agricultural market in 2017 to amount to €85 billion, with potential to grow to €110 billion in 2025, which translates to a compound annual growth rate ("**CAGR**") of approximately 3%. Key short term drivers that have in the past and could in the future impact market development include commodity prices, weather fluctuations, pest and disease pressure, economic development, channel inventory levels, energy markets / biofuel, technology adoption (e.g. GM) and agricultural policies.

Bayer is convinced the Transaction will bring together two highly complementary businesses and expects the combined agriculture business of Bayer and Monsanto (the "**Combined Agriculture Business**") to benefit from Monsanto's seeds and traits, its digital farming platform and Bayer's broad crop protection product line across a comprehensive range of indications and crops, with the Combined Agriculture Business being well-positioned to benefit from an attractive long-term growth market.

[2] Phillips McDougall – AgriService 2017

8.2 Outline of the Combined Business and Operations of Bayer and Monsanto

The Combined Agriculture Business is expected to benefit from Bayer's and Monsanto's complementary geographies. While Monsanto has a significant presence in North and South America and generated more than 80% of its total net sales in the fiscal year ended August 31, 2017 in these regions, Bayer's Crop Science business also has a strong footprint in the Europe / Middle East / Africa and the Asia / Pacific regions. The Combined Agriculture Business's agriculture operations will have their global seeds and traits and North American commercial headquarters in St. Louis, Missouri, their global crop protection and divisional crop science headquarters in Monheim, Germany, as well as many other locations throughout the United States and around the world.

For further indications of the effects the Transaction is expected to have on our business, see "*9. Pro Forma Financial Information – Effects of the Covestro Divestments and the Acquisition of Monsanto on the Consolidated Financial Information of Bayer for the Fiscal Year Ended December 31, 2017, and as of and for the Three Months Ended March 31, 2018.*"

8.3 Creation of a Global Leader Committed to Transforming Agriculture

Through the Transaction, Bayer aims to create a global leader committed to transforming agriculture which offers advanced customized agronomic solutions designed to help farmers achieve the productivity increases needed to feed an ever growing world population. Bayer considers this a highly attractive proposition in light of long-term megatrends which Bayer expects will lead to a significant growth in the market for agriculture inputs. From Bayer's perspective, these relevant trends will include projected global population growth, higher protein intake, declining total size of farmland per capita and negative effects on yields resulting from climate change. Bayer anticipates that, as a result, a significant increase in productivity will be required to meet the future demand for food and feed products.

Bayer believes that its Crop Science division will benefit from better capabilities for innovation with a significantly increased R&D budget as a result of the Transaction. This will enhance the ability of the Combined Agriculture Business to effectively address challenges to innovation in agrochemicals such as longer and more costly development cycles and higher regulatory requirements. Bayer intends to use the strength of the R&D platform of the Combined Agriculture Business, which is expected to provide access to a broad range of scientific approaches and to allow for parallel as opposed to sequential development, to deliver break-through innovation and generate advanced customized agronomic solutions for farmers faster and more efficiently. Bayer expects this development to be supported by a significant number of major R&D sites as well as a large number of breeding stations for seeds and traits in all relevant parts of the world, a strong R&D technology platform, cross-technology capabilities and a strong pipeline across crops, indications and technologies, which has delivered a significant number of pipeline advancements over the past two years. Bayer also intends to utilize the full potential of big data (in terms of field data from digital farming and scientific data) and to pursue a broad open innovation and partnering approach to accelerate research.

Bayer believes the respective product offerings of its Crop Science division and Monsanto to be complementary in terms of geographies and reach across indications and crops. While Bayer possesses an outstanding crop protection portfolio and has a strong focus on plant and soil health combined with excellent chemistry capabilities and a biologics platform, Monsanto benefits from an outstanding seeds & traits portfolio and has a strong focus on yield as well as breeding and trait development. Against this background, according to Bayer's estimates, the Combined Agriculture Business is expected to possess top-tier germplasm and traits, strong genetics and breeding capabilities combined with innovative chemistry for weed, pest and disease control as well as strong biologics. In addition to the expanded product offering, Bayer also expects to create value by growing Monsanto's digital farming platform. The digital farming platform, which was acquired by Monsanto in November 2013, is a leader in data analytics with core capabilities around hyperlocal weather monitoring, weather simulation and agronomic modeling. Bayer anticipates the Combined Agriculture Business to benefit from infrastructure across geographies, a broad and complementary combined offering as well as enhanced customer access.

From a longer term perspective, beyond combining Bayer's and Monsanto's existing technologies, Bayer's goal is to focus the Combined Agriculture Business on developing advanced customized agronomic solutions through a smart combination and optimized use of products based on digitally-enhanced agronomic advice and, ultimately, to introduce new, innovative products based on technologies optimally designed and tested to work well together. Bayer plans to achieve this goal by combining both companies' innovation capabilities and pipelines, as well as their R&D platforms. In addition, extensive data collection and predictive analytics through digital farming constitute another dimension which Bayer expects will enable the Combined Agriculture Business to offer data-based decision support for its product offerings. Bayer believes the Combined Agriculture Business will benefit farmers by offering enhanced yield, optimized inputs and more sustainable farming.

8.4 Commitment to Sustainability and Social Responsibility

Sustainability and social responsibility are firmly anchored in Bayer's corporate culture, as Bayer believes these are important business principles to safeguard the Company's long-term success. Sustainability is embedded in all of the Company's business practices and everyday procedures. Responsibility for the Group's sustainable orientation is firmly established at the level of Bayer's Board of Management. Bayer underlines its mission as a company which acts sustainably through its commitment to the U.N. Global Compact and the Responsible Care™ initiatives, and through its active global involvement in initiatives such as the World Business Council for Sustainable Development ("**WBCSD**"). Bayer is committed to the U.N. Sustainable Development Goals ("**SDGs**") and firmly believes its innovations, products and services contribute to overcoming some of the biggest global challenges, including the SDGs to achieve zero hunger, improved nutrition and sustainable agriculture as well as good global health care and healthy lives across all ages. The combined business and operations will be managed by applying Bayer's sustainability principles, business practices and procedures. Bayer will apply the same rigor in achieving its sustainability targets as it does to its financial targets.

Bayer strives to live up to its heightened responsibility that a leadership position in agriculture entails and is fully committed to upholding the highest ethical and responsibility standards. The Company will seek to make a greater contribution to improving health and nutrition, drawing from its core competencies in these areas. Bayer will work to further reduce its environmental footprint, for example by using its product portfolio to make food production more environmentally friendly and further reducing emissions. The Company's commitment to social responsibility is also demonstrated by the Group's close collaboration with smallholder farmers across the world, which will continue following the Transaction to ensure fair and reasonable license fees for smallholder farmers and expand food-chain partnership programs, which, among other matters, will provide educational training in sustainable farming practices.

Finally, Bayer will continue to be committed to being an employer of choice with a culture celebrating diversity and inclusion.

8.5 Value Impact of the Transaction

Despite the larger than expected scope of divestments, the Transaction is expected to create meaningful value for Bayer and its shareholders. For the Combined Agriculture Business, Bayer aspires to achieve average sales growth (on a currency and portfolio adjusted basis) above market. Bayer expects the integration of Monsanto to result in significant cost- and sales-related synergies and estimates a total annual synergy potential of approximately US$1.2 billion (net EBITDA impact before special items) as of 2022. The cost synergy target now amounts to approximately US$1.0 billion net EBITDA impact before special items, compared to an initial cost synergy estimate of US$1.2 billion net EBITDA impact before special items announced in September 2016. The reduction of the synergy target reflects the divestments related to remedies required by regulatory authorities. The larger than expected scope of divestments reduces the basis (e.g., through the transfer of the cost base) underlying the initial cost and sales synergy estimate. Bayer expects approximately 70% of the cost synergies to stem from savings in selling, general and administrative expenses. Bayer has validated its cost synergy target through a bottom-up analysis across countries and functions which has identified levers in the areas of information technology, support functions, country integration, commercial, procurement, product supply and research and development overheads, among others, to achieve cost synergies. Examples of such levers are the consolidation of Bayer's and Monsanto's IT platforms into one shared platform and the consolidation of IT networks and sites. In addition, the integration of Monsanto's support functions, such as accounting, controlling and country organizations, into Bayer's existing platforms, the consolidation of group functions, such as finance, taxes and human resources, the optimization of Bayer's real estate footprint, as well as in the area of procurement and product supply, the consolidation of suppliers, more efficient sourcing, the realization of insourcing potential and cost savings in the areas of warehousing and distribution are expected to contribute to achieving the targeted synergies. The top ten projects are expected to account for approximately 60% of the cost synergies. Bayer expects that the ramp-up of cost synergies will follow a typical, back-end loaded pattern and anticipates related, cumulative one-time costs required to generate these synergies to amount to approximately US$1.5 billion until the end of 2022. Bayer expects to record the majority of one-time costs incurred to achieve synergies as special items.

With regard to expected sales synergies, Bayer targets to achieve approximately US$200 million net EBITDA impact before special items as of 2022. Bayer expects that more than 60% of the targeted sales synergies will be generated in four countries (U.S., Brazil, Argentina and Mexico). Bayer anticipates deriving sales synergies mainly from a broader product portfolio of seed and crop protection products and a greater geographic footprint by combining sales forces and infrastructure. The full synergy potential of the combined business and operations of Bayer and Monsanto is expected to be realized in the medium to long term. Bayer expects further sales synergies to be driven by a stronger offering of customized agronomic solutions to farmers as well as joint innovation capabilities and innovative systems and technology applications.

The Combined Agriculture Business is expected to generate industry-leading profitability. In September 2016, Bayer announced a targeted Adjusted EBITDA Margin for the Combined Agriculture Business of greater than 30% after year three following closing of the Transaction. Given that it will only be possible to validate certain assumptions underlying this guidance following closing of the Transaction, Bayer intends to provide updated guidance on the targeted Adjusted EBITDA Margin after year three following closing of the Transaction, i.e., 2022, later in the year. In particular, Bayer will need to assess possible adjustments with respect to foreign-exchange rate effects and accounting effects resulting from US-GAAP to IFRS conversion as well as the reduction of the expected synergies due to the significantly extended divestment scope.

From an earnings perspective, Bayer expects the Transaction to be accretive to core earnings per share in 2019 and expects accretion to increase to double-digit percentage figures as of 2021.

Overall, the anticipated synergies and earnings impacts described in the foregoing are based on current assumptions with regard to US GAAP to IFRS conversion which could impact the timing of revenue and income recognition, and foreign exchange rate assumptions for key currencies. Accordingly, updates of the anticipated synergies and earnings impacts made in the future, if any, and, ultimately, the actual synergies and earnings impacts achieved may differ from the anticipated synergies and earnings impacts described in the foregoing, including in terms of the timing of their realization. Such differences may be significant.

8.6 Integration Planning

Until the closing of the Transaction-related Divestments described in "*8.10 Overview of Transaction-related Divestments*," Bayer and Monsanto will be held separate as required by the U.S. Department of Justice. Bayer currently expects to commence the integration of the two organizations in approximately two months. Bayer has carefully planned the integration process of Monsanto across all business areas in order to complete all integration measures and achieve target state for the combined organization by 2022. From the first day after closing of the Transaction-related Divestments ("**Day 1**"), Bayer intends to pursue its strategic priorities to build a leading innovator in global agriculture.

As of Day 1, Bayer plans to have the cornerstones of its new crop science vision, strategy, priorities, organizational design and key leaders in place to serve as foundation for the integration process. As part of its integration planning and to secure business continuity, Bayer aims to ensure retention of key talent across both companies and to swiftly initiate the on-boarding process for Monsanto employees. The new Crop Science Executive Leadership Team has already been announced. To ensure business continuity on Day 1, Bayer will put a global governance process for product supply in place and focus IT support on business critical systems and applications.

Key priorities for the transition period comprise the roll-out of a new vision, strategy and culture for the combined business and operations of Bayer and Monsanto, validation of planning assumptions and transition into a new operating model, implementation of a new organizational structure, a continuous HR selection process to identify the best talent for each level and function as well as the harmonization of the IT infrastructure. Country integration is planned to happen in tiers. Priority will initially be on the five top countries, which together account for more than 80% of sales of Monsanto – the U.S., Brazil, Argentina, Mexico and Canada. A dedicated monitoring team will be in place to ensure stringent synergy tracking and risk management throughout the integration process.

8.7 Transaction Timeline and Regulatory Approval Processes

The Transaction was unanimously approved by Monsanto's board of directors on September 13, 2016, as well as Bayer's Board of Management and Supervisory Board on September 14, 2016. On December 13, 2016, the shareholders of Monsanto Company approved the Transaction. On May 31, 2018, all closing conditions required to complete the Transaction (other than those conditions that by their nature are to be satisfied at the closing of the Transaction), including the receipt of required antitrust and other regulatory approvals, were satisfied or waived and the Transaction is expected to be completed on or about June 7, 2018.

In this regard, Bayer has obtained approvals from approximately 25 relevant regulatory authorities, including antitrust clearance by the European Commission and the U.S. Department of Justice. The U.S. Department of Justice gave its approval on May 29, 2018, with the final judgment expected to be entered by the court in September 2018. For information on the Transaction-related Divestments that Bayer was required to commit to in connection with the regulatory approval processes, see "*8.10 Overview of Transaction-related Divestments*" and "*12.3.2 The Acquisition of Monsanto and Related Divestitures*." See also "*1.2.1 Certain divestiture actions and other commitments that Bayer was required to undertake in connection with obtaining regulatory approvals to complete the Transaction could negatively impact Bayer's strategic planning and necessitate substantial adjustments to its operational and financial structures, which, in turn, could have a material adverse effect on the current and future business, results of operations, financial condition, share price, dividend payments and prospects of Bayer. In addition, there is a limited residual risk that additional remedies could be required.*"

On December 1, 2017, Bayer and Monsanto announced that the Committee on Foreign Investment in the United States ("**CFIUS**") had completed its review of the Transaction. As part of the CFIUS review process, Bayer entered into a National Security Agreement ("**NSA**") with the United States Government. Among other matters, the NSA requires U.S. governmental approval of certain transfers of asset ownership, which may *inter alia* apply in the event of a change of control of Bayer. The NSA also provides for certain corporate governance requirements to ensure compliance with its terms.

8.8 Key Terms of the Merger Agreement

Under and subject to the terms and conditions of the Merger Agreement, entered into on September 14, 2016, Bayer is offering an all cash consideration of US$128.00 per share of Monsanto Company. This corresponded to an expected transaction value of approximately US$66 billion as of May 31, 2016, comprising an equity value (purchase price) of approximately US$56 billion and net debt to be assumed in an amount of US$10 billion, which includes pension obligations as of May 31, 2016, as well as liabilities for payments under stock-based compensation programs. As of the date of this Prospectus, this corresponds to a transaction value of approximately US$63 billion taking into account Monsanto's debt outstanding as of February 28, 2018. The Merger Agreement is subject to customary closing conditions, including the receipt of required antitrust and other regulatory approvals, all of which have been satisfied or waived (other than those conditions that by their nature are to be satisfied at the closing of the Transaction).

Under the Merger Agreement Bayer had committed to undertake certain divestitures if and to the extent required to obtain antitrust approvals and completion of the CFIUS review process, including (i) agreeing to the sale, divestiture or other conveyance or holding separate of assets of Bayer or Monsanto, (ii) permitting Monsanto to sell, divest or otherwise convey or hold separate its assets, (iii) terminating existing relationships, contractual rights or obligations of Bayer or Monsanto, (iv) terminating any joint venture or other arrangement of Bayer or Monsanto, and (v) creating any relationship, contractual right or obligation of Bayer or Monsanto. However, under the terms of the Merger Agreement, Bayer was not required to take (a) any such divestiture action described in the foregoing clauses (i) or (ii) that, taken together with all other divestiture actions contemplated by clauses (i) through (v) above, would reasonably be likely to result in a loss of annual net sales to Bayer, Monsanto and their subsidiaries in excess of US$1.6 billion in the aggregate (measured in accordance with the Merger Agreement) or (b) any divestiture action that, taken together with all other such divestiture actions, would reasonably be likely to have a material adverse effect on the business, financial condition or results of operations of the consolidated agricultural businesses of Bayer, Monsanto and their subsidiaries, taken as a whole. Separately, if the Merger Agreement was terminated (a) as the result of an order imposed by a governmental antitrust entity or (b) if the outside date, June 14, 2018, had been reached and, at the time of termination, one or more of the closing conditions relating to the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, European Commission approval, laws and orders, governmental consents and foreign antitrust approvals (in each case per the terms of the Merger Agreement) was not satisfied and all of the other closing conditions had been satisfied or waived or would have been capable of being satisfied, then, Bayer would have been required to pay a US$2.0 billion reverse break-up fee.

For information on significant divestitures made in connection with the Transaction, see "*8.10 Overview of Transaction-related Divestments.*"

Following completion of the Transaction, which is expected to occur on or about June 7, 2018, Bayer intends to pursue the delisting of the traded shares of Monsanto Company from the New York Stock Exchange as promptly as practicable and the deregistration of these shares under the Exchange Act.

8.9 Financing of the Transaction

On September 14, 2016, Bayer AG, as borrower and guarantor, and Bayer U.S. Finance II LLC, as borrower, entered into the US$56.9 billion (€48.7 billion) syndicated term loan facilities agreement (the "**Loan Facilities Agreement**") with Bank of America, N.A., Credit Suisse AG, London Branch, Goldman Sachs Bank U.S.A., Goldman Sachs Lending Partners LLC, HSBC Bank plc, The Hong Kong and Shanghai Banking Corporation Limited and JPMorgan Chase Bank, N.A., London Branch as committed original lenders.

The Loan Facilities Agreement provides for the following facilities:

- a US$39.9 billion facility (with a base term of twelve months, subject to two six-month extension options),
- a US$7.0 billion facility (with a base term of 24 months, subject to two six-month extension options),

- a US$4.0 billion facility (with a term of three years), and
- a US$6.0 billion facility (with a term of five years).

The term of each facility commences on the earlier of the date of the first utilization of any facility and the date nine months after the date of the Loan Facilities Agreement, except for the five-year facility, the term of which commences on the date of the Loan Facilities Agreement.

The loans under the Loan Facilities Agreement may be used to finance the purchase price for the Transaction and other related payments, including fees and expenses, as well as the refinancing of indebtedness of Monsanto and its subsidiaries.

In connection with the completion of the Transaction, Bayer expects to draw down an aggregate amount of US$43.4 billion (€37.2 billion) under the Loan Facilities Agreement.

The loans under the Loan Facilities Agreement bear interest at variable rates in the amount of a LIBOR or EURIBOR rate if Bayer draws down any loan facility in euro (for a certain interest period selected by Bayer and, if any such rate is below zero, LIBOR/EURIBOR will be deemed to be zero) plus a margin set forth in the Loan Facilities Agreement. The applicable margins depend on the facility utilized, on the number of months elapsed after the date of the Loan Facilities Agreement (in case of the US$39.9 billion facility and US$7.0 billion facility) and on Bayer's long-term credit rating. In addition, the margin applicable to the US$4.0 billion facility and the US$6.0 billion facility depends on the utilization of the two other facilities. On average, the initial margin is expected to amount to 150 basis points for the four facilities.

One-time fees are payable if one or all of the facilities are utilized or if the terms of the US$39.9 billion facility or the US$7.0 billion facility are extended. Further, commitment fees apply to undrawn and uncancelled facilities that increase as a percentage of the then applicable margin over time.

Subject to certain exceptions, including for the refinancing of existing debt, the net proceeds of (i) sales of assets of Bayer that, when aggregated with the net proceeds of all other such disposals, exceed €5.0 billion, (ii) sales of shares of Monsanto Company, (iii) sales of assets of Monsanto that, when aggregated with the net proceeds of all other such disposals, exceed €750 million, (iv) capital increases and (v) debt financings must be used to prepay or cancel the US$39.9 billion facility or the US$7.0 billion facility. Accordingly, the net proceeds from the Mandatory Convertible Notes, the Exchangeable Bonds (as defined below) and net proceeds from the sale of Covestro Shares in January 2018 and May 2018 have been used to reduce the amount of the Loan Facilities Agreement. In addition, the net proceeds from the Transaction-related Divestments will be used to further reduce the amount of the Loan Facilities Agreement.

The Loan Facilities Agreement contains customary representations, warranties and covenants, including negative pledge undertakings and restrictions on disposals, new financial indebtedness and acquisitions, each subject to certain exemptions (in particular, depending on an investment grade long-term credit rating), qualifications and baskets, as well as undertakings relating to the Transaction.

The committed original lenders have syndicated portions of their loans to a broader group of banks. The syndication, which was executed on October 12, 2016, comprised more than 20 banks.

On November 22, 2016, Bayer Capital Corporation B.V. placed the Mandatory Convertible Notes in a nominal amount of €4.0 billion (US$4.2 billion) due 2019 and with a coupon of 5.625% per annum convertible into no par value ordinary registered shares of the Company and on June 14, 2017, Bayer AG issued senior, unsecured exchangeable bonds in a nominal amount of €1.0 billion (US$1.2 billion) due 2020, with a coupon of 0.05% per annum, which may either be settled in cash or by delivery of Covestro Shares or by a combination thereof (the "**Exchangeable Bonds**"). The net proceeds from the issuance of the Mandatory Convertible Notes amounted to approximately €3.96 billion (US$4.2 billion) and the net proceeds from the issuance of the Exchangeable Bonds amounted to €1.05 billion (US$1.2 billion). On April 23, 2018, Bayer AG closed a transaction involving a capital increase out of authorized capital against cash contributions and excluding the subscription rights of existing Bayer shareholders by way of issuing 31 million new shares for total gross proceeds of €3.0 billion (US$3.7 billion) to a subsidiary of the investment company Temasek Holdings (Private) Limited, which is wholly-owned by the Government of Singapore (the "**Temasek Investment**"). In accordance with the terms of the Loan Facilities Agreement, these net proceeds, together with net proceeds of €3.7 billion (US$4.4 billion) from the sale of Covestro Shares in January 2018 and May 2018, were used to reduce the amount of the Loan Facilities Agreement from US$56.9 billion (€48.7 billion) to US$43.4 billion (€37.2 billion) prior to the closing of the Transaction. Net proceeds of additional €5.9 billion (US$6.9 billion) are expected to be raised through this Offering and are intended to be used to repay amounts drawn down under the Loan Facilities Agreement to finance the Transaction from US$43.4 billion (€37.2 billion) to US$36.5 billion (€31.3 billion). In order to refinance further amounts drawn down under the Loan Facilities Agreement, Bayer intends to offer directly or through a finance subsidiary senior unsecured notes denominated in U.S. dollars

and/or euros across a market standard range of maturities in an aggregate principal amount of up to €20.0 billion. The Bond Offerings may be launched, subject to market conditions, at any time, including during or shortly after the subscription period for this Offering. The Bond Offerings are fully independent of this Offering, are not conditional upon one another and may be consummated at different times. In addition, in accordance with the terms of the Loan Facilities Agreement, Bayer expects to repay further amounts drawn down under the Loan Facilities Agreement with the net proceeds from the Transaction-related Divestments. In addition, in accordance with the terms of the Loan Facilities Agreement, Bayer expects to refinance amounts drawn down under the Loan Facilities Agreement with the net proceeds from the Transaction-related Divestments.

8.10 Overview of Transaction-related Divestments

In connection with obtaining required antitrust approvals to complete the Transaction, Bayer, in separate transactions entered into in October 2017 and April 2018, respectively, has agreed to sell selected Crop Science businesses to BASF SE, Ludwigshafen, Germany ("**BASF**"), as described below (the "**Transaction-related Divestments**"). Bayer will continue to own, operate and maintain the businesses covered by the Transaction-related Divestments until closing of the Transaction-related Divestments. In addition, until the closing of the Transaction-related Divestments, Bayer and Monsanto will be held separate as required by the U.S. Department of Justice. Bayer currently expects to be able to commence the integration of the two organizations in approximately two months. Following completion of the Transaction and of the Transaction-related Divestments, Bayer will remain active in the areas covered by the Transaction-related Divestments as a result of the programs, products and offerings it will acquire from Monsanto upon the completion of the Transaction. In accordance with the provisions of the Loan Facilities Agreement, Bayer will use the net proceeds from the Transaction-related Divestments to partially refinance the Transaction, see "*8.9 Financing of the Transaction*" and "*5. Reasons for the Offering and Use of Issue Proceeds*."

For information on the treatment of the Transaction-related Divestments for purposes of the Pro Forma Financial Information, see "*9.3.4.2.4 Assumption: Transaction-related Divestments,*" "*9.3.4.2.10 Assumption: Impact of the Divestments on the Loan Facility Agreement*" and "*9.3.5.2.8 Transaction-related Divestments*." For risks associated with the Transaction-related Divestments, see "*1.2.1 Certain divestiture actions and other commitments that Bayer was required to undertake in connection with obtaining regulatory approvals to complete the Transaction could negatively impact Bayer's strategic planning and necessitate substantial adjustments to its operational and financial structures, which, in turn, could have a material adverse effect on the current and future business, results of operations, financial condition, share price, dividend payments and prospects of Bayer. In addition, there is a limited residual risk that additional remedies could be required.*"

8.10.1 The First BASF Divestiture Package

On October 13, 2017, Bayer entered into four asset purchase agreements (the "**Divestiture Agreements**") with BASF in connection with the Transaction. Under the terms and conditions of the Divestiture Agreements, Bayer has agreed to sell, and BASF has agreed to purchase, certain assets which currently form part of the Crop Science business. These assets relate to (i) canola seeds and related gene events in North America and Europe, (ii) soybean seeds and related gene events globally, (iii) cotton seeds and related gene events globally (excluding India and South Africa), (iv) glufosinate-ammonium herbicide and related formulated products globally, (v) the licensing of intellectual property related to LibertyLink™ technology for herbicide tolerance to third parties for the creation of gene events and (vi) certain other research and development activities related to genes and gene products (the "**First BASF Divestiture Package**").

The Divestiture Agreements provide for an aggregate base purchase price of approximately €5.9 billion, subject in each case to customary adjustments (including in respect of finance lease liabilities, inventory, advance payment assets and liabilities, employee-related assets and liabilities and/or trade-related liabilities). The aggregate base purchase price is also subject to adjustment at closing of the First BASF Divestiture Package as a result of the Transaction not closing by January 1, 2018. Such adjustment will reduce the aggregate base purchase price by approximately €0.2 billion at closing, reflecting the fact that Bayer continues to get the benefit of the businesses covered by the Divestiture Agreements pending closing of the divestitures.

The Divestiture Agreements contain both customary and divestment-specific representations and warranties, interim operating covenants and indemnities in respect of the assets being sold. The Divestiture Agreements require Bayer and BASF to enter into certain transition services agreements (including for services from BASF to Bayer) at closing, as well as long-term agreements in respect of product supply, tolling services, distribution services, intellectual property, site cooperation, site leasing and other long-term arrangements.

The businesses covered by the First BASF Divestiture Package generated sales of €1.5 billion for the fiscal year ended December 31, 2017 and of €0.7 billion for the three months ended March 31, 2018. For information on the impact of the First BASF Divestiture Package on the consolidated statements of financial position of Bayer as of

December 31, 2017, see "*12.3.2 The Acquisition of Monsanto and Related Divestitures*" and "*12.4.7.2 Effects of the Acquisition of Monsanto and Related Divestitures.*"

8.10.2 The Second BASF Divestiture Package

On April 26, 2018, Bayer entered into agreements to sell further Crop Science businesses to BASF for an aggregate base purchase price of up to €1.7 billion, which is subject to customary purchase price adjustment mechanisms and includes a milestone payment of €0.1 billion expected to be paid in 2019 (the "**Second BASF Divestiture Package**"). The businesses to be divested include in particular Bayer's global vegetable seeds business, certain seed treatment products, Bayer's research platform for wheat hybrids and certain glyphosate-based herbicides in Europe that are predominantly used in industrial applications. In addition, three research projects in the field of total herbicides and Bayer's digital farming business will also be transferred. Bayer may license back, on a non-exclusive basis, technology needed for Bayer to sell certain digital agriculture products outside North America. The businesses to be divested as part of the Second BASF Divestiture Package generated total sales of €0.7 million for the fiscal year ended December 31, 2017 and of €0.2 billion for the three months ended March 31, 2018.

8.11 Impact of the Transaction on Bayer's Credit Rating

A key factor in maintaining Bayer's strong financial profile is its credit rating, which is affected by, among other factors, Bayer's capital structure, profitability, ability to generate cash flow, geographic and product diversification and its competitive market position.

For many years, Bayer has had its creditworthiness assessed by S&P Global Ratings ("**S&P**") and Moody's Investors Service, Inc. ("**Moody's**"). Before Bayer's intention to acquire Monsanto became public, S&P had assigned Bayer a long-term debt rating of A- and a short-term debt rating of A-2, while Moody's had assigned a long-term debt rating of A3 and a short-term debt rating of P-2. After Bayer's intention to acquire Monsanto became public in May 2016, S&P Global Ratings as well as Moody's Investors Service placed Bayer's credit ratings under review for downgrade.

On June 4, 2018, S&P and Moody's updated their rating assessment taking into account the imminent closing of the Transaction and its envisaged financing. S&P assigned a BBB long-term rating and again confirmed Bayer's A-2 short term rating, each with a stable outlook. Moody's assigned a Baa1 long-term rating and a P-2 short-term rating, each with a negative outlook. Despite the current assignment of ratings, Bayer still faces the risk of potential further rating downgrades in the future. See also "*1.2.10 Bayer faces risks from financing the Transaction, including as a result of increased levels of debt and the potential downgrading of credit ratings.*"

Following completion of the Transaction, Bayer intends to deleverage swiftly, supported by expected strong cash flows from the enlarged Bayer Group. Bayer is committed to the single "A" credit rating category in the long term.

Each of S&P and Moody's has a registered seat in the European Union and has been declared to be registered in accordance with Regulation (EC) No. 1060/2009 of the European Parliament and of the Council of September 16, 2009 on rating agencies by the European Securities and Markets Authority.

Investors should consider each rating individually and obtain additional information and a more detailed understanding of the significance of the credit rating information provided by the rating agencies. The ratings do not constitute a recommendation to buy or sell Bayer's securities. Rating agencies may change their ratings at any time if specific circumstances require such a change in their opinion.

9. PRO FORMA FINANCIAL INFORMATION – EFFECTS OF THE COVESTRO DIVESTMENTS AND THE ACQUISITION OF MONSANTO ON THE CONSOLIDATED FINANCIAL INFORMATION OF BAYER FOR THE FISCAL YEAR ENDED DECEMBER 31, 2017, AND AS OF AND FOR THE THREE MONTHS ENDED MARCH 31, 2018

9.1 Introduction

At the end of September 2017, Bayer Aktiengesellschaft ("**Bayer AG**", and together with its subsidiaries prior to completion of the acquisition of Monsanto Company, St. Louis, United States ("**Monsanto**"), which is expected to take place on or about June 7, 2018, referred to herein as "**Bayer**") lost control of its subsidiary Covestro AG ("**Covestro**") due to the sale of shares in Covestro (the "**Covestro Shares**") and the signing of a control termination agreement, as part of which Bayer has undertaken not to exercise certain voting rights at Covestro's annual stockholders' meeting (the "**Loss of Control**"). After additional sales of Covestro Shares in January 2018 and in May 2018 (together with the Loss of Control, the "**Covestro Divestments**") the interest held by Bayer in Covestro has been reduced to 6.8%.

As a result of the Loss of Control, Covestro was no longer required to be fully consolidated in Bayer's consolidated financial statements. Therefore the assets and liabilities of Covestro, including the carrying amount of the noncontrolling interest in Covestro, were derecognized as of the date of the Loss of Control and the results from the Covestro business until that date are presented as income from discontinued operations after income taxes in the consolidated financial statements of Bayer for the fiscal year ended December 31, 2017. Covestro was accounted for using the equity-method in Bayer's consolidated financial statements as of December 31, 2017, and as of March 31, 2018, applying the respective direct interest held in Covestro, as of those dates. Following the sale of Covestro Shares in May 2018, Bayer's remaining interest in Covestro is being accounted for as an other financial asset, measured at fair value through profit or loss. The remaining Covestro interest is held with the intention to repay senior, unsecured exchangeable bonds in a nominal amount of €1.0 billion (US$1.2 billion) due 2020 with a coupon of 0.05% per annum (the "**Exchangeable Bonds**") issued by Bayer AG in June 2017. For purposes of this pro forma financial information, Covestro is accounted for as an other financial asset applying Bayer's current interest of 6.8% in Covestro from January 1, 2017, onwards.

On September 14, 2016, Bayer and Monsanto announced that they had entered into an agreement and plan of merger (the "**Merger Agreement**") which provides, among other things and subject to the terms and conditions set forth therein, that an indirect wholly owned subsidiary of Bayer will be merged with and into Monsanto and that each share of Monsanto Company will be converted into the right to receive US$128.00 in cash, without interest (the "**Transaction**"). As of the signing of the Merger Agreement, the consideration corresponded to an expected transaction value of approximately US$66 billion, comprising an equity value (purchase price) of approximately US$56 billion and the assumption of approximately US$10 billion in net debt, including pension liabilities, existing as of May 31, 2016, as well as liabilities for payments under stock-based compensation programs. The stockholders of Monsanto approved the merger with the requisite majority on December 13, 2016. The Transaction, which is subject to customary closing conditions, including the receipt of required antitrust and other regulatory approvals, all of which have been satisfied or waived (other than those conditions that by their nature are to be satisfied at the closing of the Transaction), is expected to be completed on or about June 7, 2018.

Bayer is financing the Transaction with a combination of debt and equity as well as with proceeds from certain divestitures. As a first step, a syndicated loan facilities agreement in the amount of US$56.9 billion (€46.2 billion) (the "**Loan Facilities Agreement**") was committed by Bank of America N.A., Credit Suisse AG, London Branch, Goldman Sachs Bank U.S.A., Goldman Sachs Lending Partners LLC, HSBC Bank plc, The Hong Kong and Shanghai Banking Corporation Limited and JP Morgan Chase Bank, N.A., London Branch as original lenders upon the signing of the Merger Agreement. As of March 31, 2018, the funding required to complete the Transaction amounted to a total of US$56.4 billion (€45.8 billion) based on the undiluted number of shares in Monsanto outstanding as of February 28, 2018. The Loan Facilities Agreement provides, among other matters, that the net proceeds from (i) sales of assets of Bayer that, when aggregated with the net proceeds of all other such disposals, exceed a threshold of €5.0 billion, (ii) capital increases and (iii) debt financings, must be used to prepay or cancel the amounts outstanding under the Loan Facilities Agreement.

For purposes of the pro forma financial information, the US$ amounts of the Loan Facilities Agreement in the following section were translated into € amounts and the € amounts of the proceeds from the Offering were translated into US$ amounts using the March 31, 2018 exchange rate. Also, since the Loan Facilities Agreement is denominated in US$ and cancellations occurred at different times and at different € / US$ exchange rates, the reductions of the Loan Facilities Agreement have been calculated based on the US$ amounts. Subsequently, the residual amount of

the Loan Facilities Agreement has been translated to € applying the exchange rate as of March 31, 2018, for purposes of the pro forma financial information. For information on the March 31, 2018 exchange rate, see "*9.2.3.6 Principles to Translate Monsanto's Financial Information Reported in US$ to Bayer's Presentation Currency €.*"

On November 22, 2016, Bayer Capital Corporation B.V. issued mandatory convertible notes in a nominal amount of €4.0 billion (US$4.2 billion) due 2019 (the "**Mandatory Convertible Notes**"). On June 14, 2017, Bayer AG issued the Exchangeable Bonds described above. On April 23, 2018, Bayer closed a transaction involving a capital increase out of authorized capital against cash contributions and excluding the subscription rights of existing Bayer shareholders by way of issuing of 31 million new shares for total gross proceeds of €3.0 billion (US$3.7 billion) to a subsidiary of the investment company Temasek Holdings (Private) Limited, Singapore, a wholly-owned subsidiary of the Government of Singapore (the "**Temasek Investment**").

In connection with obtaining required antitrust approvals to complete the Transaction, Bayer has entered into certain divestment transactions (the "**Transaction-related Divestments**") in October 2017 and in April 2018, the aggregate net proceeds of which are expected to amount to €6.1 billion (US$7.6 billion). For more information on the Transaction-related Divestments, see "*9.3.4.2.4 Assumption: Transaction-related Divestments*" and "*9.3.5.2.8 Transaction-related Divestments.*" Taken together with the aggregate net proceeds of €8.7 billion (US$10.6 billion) from the Covestro Divestments, together with the Transaction-related Divestments, (the "**Divestments**"), the expected aggregate net proceeds from the Divestments therefore exceed by €9.8 billion (US$12.0 billion) the €5.0 billion threshold set forth in the Loan Facilities Agreement.

In accordance with the terms of the Loan Facilities Agreement, net proceeds from the Mandatory Convertible Notes of €3.96 billion (US$4.2 billion), from the Exchangeable Bonds of €1.05 billion (US$1.2 billion), together with a portion in an amount of €1.5 billion (US$1.9 billion) of the net proceeds from the sale of Covestro Shares completed in January 2018, the net proceeds from the Temasek Investment of €3.0 billion (US$3.7 billion), and the net proceeds from the sale of Covestro Shares completed in May 2018 of €2.1 billion (including the related income tax expense, US$2.5 billion), were used to reduce the undrawn commitments under the Loan Facilities Agreement to US$43.4 billion (€35.3 billion) prior to the closing of the Transaction.

Furthermore, Bayer is engaging in a rights offering consisting of 74,604,156 new ordinary registered shares with no par value with indirect subscription rights for shareholders of Bayer, each such share representing a notional value of €2.56 and carrying full dividend rights from January 1, 2018 (the "**New Shares**"), which will be offered to Bayer's shareholders for subscription at a ratio of 23:2 (i.e., 23 existing shares of Bayer entitle their holder to subscribe for two New Shares) at a subscription price of €81.00 per New Share (the "**Subscription Offer**"). Any New Shares that are not subscribed for in the Subscription Offer will be offered by the underwriters for sale to eligible investors in Germany and other selected jurisdictions at a price at least as high as the subscription price (the "**Rump Placement**" and together with the Subscription Offer, the "**Offering**").

In accordance with the terms of the Loan Facilities Agreement, Bayer intends to use the net proceeds from the Offering in an amount of €6.0 billion (including the related income tax refund) (US$7.4 billion) to repay amounts drawn down under the Loan Facilities Agreement, thereby reducing the amounts outstanding under the Loan Facilities Agreement from US$43.4 billion (€35.3 billion) to US$36.1 billion (€29.3 billion). In addition, in accordance with the terms of the Loan Facilities Agreement, Bayer expects to refinance amounts drawn down under the Loan Facilities Agreement with expected net proceeds of €6.1 billion (US$7.6 billion) from the Transaction-related Divestments, thereby reducing the amounts outstanding under the Loan Facilities Agreement from US$36.1 billion (€29.3 billion) to US$28.5 billion (€23.1 billion).

For purposes of this pro forma financial information, the Transaction is therefore assumed to be financed by the Loan Facilities Agreement as reduced by the net proceeds of the Mandatory Convertible Notes, the Exchangeable Bonds, the Temasek Investment and the Offering as well as the applicable portion of the net proceeds from the Divestments exceeding the €5.0 billion threshold set forth in the Loan Facilities Agreement (together the "**Related Financing**"). For purposes of this pro forma financial information, an aggregate amount of US$28.0 billion (€22.7 billion) is therefore assumed to have been drawn down under the Loan Facilities Agreement to finance the purchase price in connection with the closing of the Transaction. The further refinancing of the Loan Facilities Agreement through planned debt capital markets transactions, which, subject to market conditions, may be launched at any time, are fully independent of the Offering, are not conditional upon one another and may be consummated at different times, is currently not factually supportable and is therefore not considered in this pro forma financial information.

The Covestro Divestments, the Transaction and the Related Financing have had a material effect on the net assets, financial position and results of operations of Bayer. Therefore Bayer has prepared the following pro forma financial information, comprising pro forma income statements for the fiscal year ended December 31, 2017, and for the three months ended March 31, 2018, a pro forma statement of financial position as of March 31, 2018, and the pro forma notes (together the "**Pro Forma Financial Information**").

The purpose of the Pro Forma Financial Information is to present the material effects that the Covestro Divestments as well as the successful completion of the Transaction including the Transaction-related Divestments and the Related Financing would have on a pro forma basis

- on the historical consolidated income statement of Bayer for the fiscal year ended December 31, 2017, as if the Covestro Divestments as well as the Transaction including the Transaction-related Divestments and the Related Financing had occurred on January 1, 2017,
- on the historical consolidated income statement of Bayer for the three months ended March 31, 2018, as if the Covestro Divestments as well as the Transaction including the Transaction-related Divestments and the Related Financing had occurred on January 1, 2017.
- on the historical consolidated statement of financial position of Bayer as of March 31, 2018, as if the Covestro Divestments as well as the Transaction including the Transaction-related Divestments and the Related Financing had occurred on March 31, 2018.

The Pro Forma Financial Information is based on certain pro forma assumptions, outlined below, and is intended for illustrative purposes only. The Pro Forma Financial Information assumes, in particular, that the Covestro Divestments as well as the Transaction including the Transaction-related Divestments and the Related Financing occurred on January 1, 2017, for purposes of the pro forma income statements and that the Covestro Divestments, the Transaction including the Transaction-related Divestments and the Related Financing occurred on March 31, 2018, for purposes of the pro forma statement of financial position. Due to its nature, the Pro Forma Financial Information describes only a hypothetical situation and does not reflect the actual net assets, financial position and results of operations of Bayer after the Covestro Divestments and the completion of the Transaction including the Transaction-related Divestments and the Related Financing nor does it indicate the future development of the net assets, financial position and results of operations of Bayer.

The Pro Forma Financial Information is a combination of certain information derived from the historical consolidated financial statements of Bayer and the historical consolidated financial statements of Monsanto, subject to preliminary estimates and based on various assumptions – all of which are described in the accompanying pro forma notes – which Bayer considers to be reasonable.

The Pro Forma Financial Information has to be read in conjunction with the historical consolidated financial statements of Bayer for the fiscal year ended December 31, 2017, and the historical unaudited interim condensed consolidated financial statements of Bayer for the three months ended March 31, 2018, as well as with the historical consolidated financial statements of Monsanto for the fiscal year ended August 31, 2017, and the historical unaudited interim condensed consolidated financial statements of Monsanto for the quarterly periods ended November 30, 2016, November 30, 2017 and February 28, 2018.

9.2 Historical Information Included in the Pro Forma Financial Information

9.2.1 Historical Financial Information Used

The pro forma income statement for the fiscal year ended December 31, 2017, presents the following two business transactions.

1. The elimination of the income from discontinued operations after income taxes related to Covestro, the elimination of the results of Covestro accounted for according to the equity method since January 1, 2017, as well as the accounting for Covestro as an other financial asset measured at fair value through other comprehensive income ("**OCI**") for the fiscal year ended December 31, 2017, applying Bayer's current interest of 6.8% in Covestro, and
2. the combination of Bayer's audited results for the fiscal year ended December 31, 2017, and Monsanto's audited results for the fiscal year ended August 31, 2017, adjusted for purposes of the Pro Forma Financial Information to the period from December 1, 2016, to November 30, 2017, by subtracting the unaudited interim results for the first quarter ended November 30, 2016, of Monsanto's fiscal year ended August 31, 2017, and adding the unaudited interim results for the first quarter ended November 30, 2017, of Monsanto's fiscal year ended August 31, 2018.

The pro forma income statement for the fiscal year ended December 31, 2017, is based on the following information:

- The audited consolidated financial statements of Bayer for the fiscal year ended December 31, 2017, prepared according to International Financial Reporting Standards ("**IFRS**") and the interpretations of the IFRS Interpretations Committee ("**IFRS IC**"), both as endorsed by the European

Union ("**EU**") and the additional requirements of Section 315e para. 1 of the German Commercial Code (*Handelsgesetzbuch*, "**HGB**") included in the Bayer AG Annual Report 2017;

- The audited consolidated financial statements of Monsanto for the fiscal year ended August 31, 2017, prepared in accordance with U.S. generally accepted accounting principles ("**U.S. GAAP**") included in Monsanto's Annual Report on Form 10-K for the fiscal year ended August 31, 2017, and filed with the U.S. Securities and Exchange Commission ("**SEC**") on October 27, 2017;
- The unaudited interim condensed consolidated financial statements of Monsanto for the first quarter ended November 30, 2016, prepared in accordance with U.S. GAAP, included in Monsanto's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2016, and filed with the SEC on January 6, 2017; and
- The unaudited interim condensed consolidated financial statements of Monsanto for the first quarter ended November 30, 2017, prepared in accordance with U.S. GAAP, included in Monsanto's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2017, and filed with the SEC on January 5, 2018.

The pro forma income statement for the three months ended March 31, 2018, presents the following two business transactions:

1. The elimination of the gain resulting from the additional sale of Covestro Shares in January 2018, the elimination of the results of Covestro accounted for according to the equity-method as well as the accounting for Covestro as an other financial asset measured at fair value through profit or loss applying Bayer's current interest of 6.8% in Covestro, and
2. The combination of Bayer's unaudited interim results for the three months ended March 31, 2018, and Monsanto's unaudited interim results for the second quarter ended February 28, 2018.

The pro forma income statement for the three months ended March 31, 2018, is based on the following information:

- The consolidated interim financial statements of Bayer as of March 31, 2018, prepared in condensed form in compliance with IAS 34 according to the IFRS of the International Accounting Standards Board ("**IASB**"), London, which are endorsed by the EU, and the Interpretations of the IFRS IC in effect at the closing date.
- The unaudited interim condensed consolidated financial statements of Monsanto for the second quarter ended February 28, 2018, prepared in accordance with U.S. GAAP, included in Monsanto's Quarterly Report on Form 10-Q for the quarterly period ended February 28, 2018, and filed with the SEC on April 5, 2018.

The pro forma statement of financial position as of March 31, 2018, presents the following two business transactions:

1. The elimination of the Investments accounted for using the equity-method related to Covestro as well as the accounting for Covestro as an other financial asset applying Bayer's current interest of 6.8% in Covestro, and
2. The combination of Bayer's unaudited consolidated statement of financial position as of March 31, 2018, and Monsanto's unaudited consolidated statement of financial position as of February 28, 2018.

The pro forma statement of financial position as of March 31, 2018, is based on the following information:

- The unaudited interim condensed consolidated financial statements of Bayer for the three months ended March 31, 2018, prepared in condensed form in compliance with IAS 34 according to IFRS and the interpretations of IFRS IC, both as endorsed by the EU included in the Bayer AG Interim Report as of March 31, 2018; and
- The unaudited interim condensed consolidated financial statements of Monsanto for the second quarter ended February 28, 2018, prepared in accordance with U.S. GAAP, included in Monsanto's Quarterly Report on Form 10-Q for the quarterly period ended February 28, 2018, and filed with the SEC on April 5, 2018.

The Pro Forma Financial Information has been prepared based on the principles of presentation, recognition and measurement in accordance with IFRS, as endorsed by the EU, and the accounting policies consistently applied by Bayer as described in the notes to its consolidated financial statements as of and for the fiscal year ended December 31, 2017, and its unaudited interim condensed consolidated financial statements as of and for the three months ended March 31, 2018, respectively.

9.2.2 Adjustments to Align Monsanto's Reporting Periods

Monsanto's fiscal year ends on August 31, while Bayer's fiscal year ends on December 31. As a result, certain adjustments have been made to align the period for the Pro Forma Financial Information for the twelve-month period ended December 31, 2017.

The consolidated financial statement of Monsanto included in the pro forma income statement for the twelve-months ended December 31, 2017, covers the period from December 1, 2016, to November 30, 2017, and is derived from the audited consolidated financial statement of Monsanto for the fiscal year ended August 31, 2017, by subtracting the information from the unaudited interim condensed consolidated financial statement for the first quarter ended November 30, 2016, of Monsanto's fiscal year ended August 31, 2017, and adding the information from the unaudited interim condensed consolidated financial statement for the first quarter ended November 30, 2017, of Monsanto's fiscal year ending August 31, 2018.

U.S. GAAP	**Monsanto 10K** (audited) **September 1, 2016 - August 31, 2017** US$ million	**Monsanto Less** (unaudited) **September 1, 2016 - November 30, 2016** US$ million	**Monsanto Plus** (unaudited) **September 1, 2017 - November 30, 2017** US$ million	**Monsanto** Aggregated **December 1, 2016 - November 30, 2017** US$ million
Net Sales	**14,640**	**2,650**	**2,658**	**14,648**
Cost of goods sold	(6,703)	(1,391)	(1,346)	(6,658)
Gross Profit	**7,937**	**1,259**	**1,312**	**7,990**
Operating Expenses:				
Selling, general and administrative expenses	(2,969)	(585)	(664)	(3,048)
Research and development expenses	(1,607)	(370)	(382)	(1,619)
Restructuring charges	36	36	(4)	(4)
Pending Bayer transaction related costs	(185)	(93)	(20)	(112)
Total Operating Expenses	(4,725)	(1,012)	(1,070)	(4,783)
Income from Operations	**3,212**	**247**	**242**	**3,207**
Interest expense	(452)	(136)	(124)	(440)
Interest income	76	18	15	73
Other income (expense), net	50	(43)	97	190
Income from Continuing Operations Before Income Taxes	**2,886**	**86**	**230**	**3,030**
Income tax provision	(626)	(61)	(60)	(625)
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**2,260**	**25**	**170**	**2,405**
Discontinued Operations:				
Income from operations of discontinued business	21	16	2	7
Income tax provision	(8)	(6)	(1)	(3)
Income from Discontinued Operations	**13**	**10**	**1**	**4**
Net Income	**2,273**	**35**	**171**	**2,409**

The consolidated income statement of Monsanto included in the pro forma income statement for the three months ended March 31, 2018, covers the period from December 1, 2017, to February 28, 2018, and is derived from the unaudited interim condensed consolidated financial statements for the second quarter ended February 28, 2018, of Monsanto's fiscal year ended August 31, 2018. The period end dates of the financial information used for Bayer and Monsanto in the pro forma statement of financial position as of March 31, 2018, (Bayer: March 31, 2018; Monsanto: February 28, 2018) and the respective pro forma income statement periods (Bayer: twelve-month period from January 1, 2017, until December 31, 2017, and the three-month period from January 1, 2018, until March 31, 2018; and Monsanto: twelve-month period from December 1, 2016, until November 30, 2017, and three-month period from December 1, 2017, until February 28, 2018) differ by one month and therefore this financial information is only comparable to a limited extent.

9.2.3 Adjustments to Monsanto's Historical Financial Information to Align Presentation and Accounting Policies

9.2.3.1 Overview

Bayer's historical financial information presented was derived from its historical consolidated financial statements prepared in compliance with IFRS as issued by the IASB, London, and the Interpretations of the IFRS IC, as endorsed by the EU, whereas Monsanto's historical financial information presented was derived from its historical consolidated financial statements prepared in accordance with U.S. GAAP.

In order to ensure uniform presentation and accounting principles in the historical financial information of the Pro Forma Financial Information, the historical financial information of Monsanto, prepared in accordance with U.S. GAAP, was converted to the presentation and accounting principles as applied by Bayer in its consolidated financial statements for the fiscal year ended December 31, 2017, and its unaudited interim condensed consolidated financial statements for the three months ended March 31, 2018. The adjustments have been made based on the information available at the time of the preparation of the Pro Forma Financial Information.

The following adjustments have been made:

- Alignment of the presentation principles used by Monsanto in its historical financial information to the presentation principles used by Bayer in its historical financial information. The line items in Monsanto's historical financial information have been reclassified to the closest line items as presented in Bayer's historical financial information. Subsequently, certain presentation adjustments were made for line items not directly assignable to the line items in the historical financial information of Bayer.
- Monsanto's historical financial information, which is prepared in accordance with U.S. GAAP, was converted to Bayer's IFRS accounting principles.
- On December 22, 2017, the U.S. government enacted H.R. 1, originally known as the Tax Cuts and Jobs Act (the "**U.S. Tax Reform**"). The U.S. Tax Reform has a significant impact on the accounting for and reporting of income taxes in financial statements. The U.S. Tax Reform is effective from January 1, 2018, onwards. Due to the complexity and currently non-existent interpretations from the respective tax authorities, certain assumptions have to be made to estimate the impact of the U.S. Tax Reform on financial statements for the fiscal year ended December 31, 2017, and the period ending March 31, 2018. In addition, the U.S. Tax Reform may trigger re-organizations and as a result its actual impact on future financial statements may differ from what is currently expected. In light of these challenges, for purposes of the Pro Forma Financial Information, only effects arising from transition tax and the U.S. federal tax rate (reflecting a 14 percentage point decrease in the nominal tax rate) have been adjusted. Due to unavailability of data at this point in time, no adjustments for potential effects arising from base erosion and anti-abuse tax, provisions regarding global intangible low-taxed income, taxation of foreign-derived intangible income and potential other changes to the U.S. tax base have been taken into account for the Pro Forma Financial Information.

  In accordance with IFRS, companies have to recognize the effects of the tax law changes in the period, in which they are enacted or substantively enacted. Consequently, the effects of the U.S. Tax Reform were already required to be recognized in Bayer's consolidated financial statements as of and for the fiscal year ended December 31, 2017. For purposes of the Pro Forma Financial Information, Monsanto's historical financial information for the twelve-month period ended November 30, 2017, and three-month period ended February 28, 2018, has been used. For the twelve-month period ended November 30, 2017, the U.S. Tax Reform had not yet been enacted and as a result its effects are not reflected in Monsanto's historical financial information for the twelve-month period ended November 30, 2017.

  In order to reflect the effects of the U.S. Tax Reform for the twelve-month period ended November 30, 2017, Bayer has made assumption-based adjustments to Monsanto's historical financial information. Specifically, Bayer used publicly and other available information of Monsanto (Monsanto's Annual Report on Form 10-K for the fiscal year ended August 31, 2017 Monsanto's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2017, as well as Monsanto's Quarterly Report on Form 10-Q for the quarterly period ended February 28, 2018). In its Form 10-Q for the quarterly period ended February 28, 2018 Monsanto described the tax impact of the transition tax with US$168 million (discrete tax expense) and the impact of the U.S. tax rate change with a discrete tax benefit of US$165 million. For pro forma purposes these effects are already shown in the twelve-month period ended November 30, 2017. The tax effect related to the rate change had to be adjusted since tax rate changes under U.S. GAAP are recognized only in profit or loss whereas under IFRS the tax impacts are recognized inside and outside profit or loss depending on the underlying item. The discrete tax benefit in the income statement for the twelve-month period ended November 30, 2017, was calculated at US$220 million, the OCI impact was calculated with US$73 million.

  Consequently, the U.S. Tax Reform related tax journal entries for the three-month period ended February 28, 2018, which were already recorded in Monsanto's historical consolidated income statement, were reversed in total.

Since the known impacts of the U.S. Tax Reform are already reflected in the historical statement of financial position of Monsanto as of February 28, 2018 no adjustments of these historical figures are necessary.

After taking into account the drop in the federal tax rate described above, deferred taxes for the affected U.S. entities were calculated using tax rates ranging from 23.77% to 24.95% for the pro forma income statement for the twelve-month period ended November 30, 2017, and for the three-month period ended February 28, 2018.

- The adjusted financial information of Monsanto, which is prepared in US$, was translated to €, the presentation currency of Bayer (refer to "*9.2.3.6 Principles to Translate Monsanto's Financial Information Reported in US$ to Bayer's Presentation Currency €*").

9.2.3.2 Presentation Adjustments to Monsanto's Consolidated Income Statement for the Twelve-Month Period Ended November 30, 2017

The following presentation adjustments have been made to Monsanto's income statement for the twelve-month period ended November 30, 2017, to align the presentation of Monsanto to Bayer's presentation principles:

	for the twelve-month period ended Nov. 30, 2017						
	Monsanto historical presentation	Reclassifications		Adjust-ments	Note	Monsanto adjusted to Bayer presentation	
U.S. GAAP	US$ million	US$ million	US$ million	US$ million		US$ million	
Net Sales	**14,648**	**(14,648)**	**14,648**	**(224)**	a	**14,424**	**Net sales**
Cost of goods sold	(6,658)	6,658	(6,658)	514	b,d	(6,144)	Cost of goods sold
Gross Profit	**7,990**	**(7,990)**	**7,990**	**290**		**8,280**	**Gross profit**
Operating Expenses:	–						
Selling, general and administrative expenses	(3,048)	3,048	(3,048)	961	b,c,e	(2,087)	Selling expenses
Research and development expenses	(1,619)	1,619	(1,619)	47	b,c,d	(1,572)	Research and development expenses
Restructuring charges	(4)	4		(1,397)	b,c,e,i	(1,397)	General administration expenses
Pending Bayer transaction related costs	(112)	112					
Total Operating Expenses	(4,783)	4,783		834	a,b,c,f	834	Other operating income
Income from Operations	**3,207**	**(3,207)**	(116)	(505)	a,b,c,e,i	(621)	Other operating expenses
Interest expense	(440)	440	**3,207**	**230**		**3,437**	**EBIT**
Interest income	73	(73)					
Other income (expense), net	190	(190)		(17)	g	(17)	Equity-method income (loss)
Income from Continuing Operations Before Income Taxes	**3,030**	**(3,030)**	73	982	h	1,055	Financial income
Income tax provision	(625)	625	(250)	(1,195)	f,g,h	(1,445)	Financial expenses
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**2,405**	**(2,405)**	**(177)**	**(230)**		**(407)**	**Financial result**
Discontinued Operations:	–						
Income from operations of discontinued business	7	(7)	**3,030**	–		**3,030**	**Income before income taxes**
Income tax provision	(3)	3					
Income from Discontinued Operations	**4**	**(4)**	(625)	–		(625)	Income taxes
Net Income	**2,409**	**(2,409)**					
			2,405	–		**2,405**	**Income from continuing operations after income taxes**
			4	–		**4**	**Income from discontinued operations after income taxes**
			2,409	–		**2,409**	**Income after income taxes**

In a first step, the line items as presented in Monsanto's consolidated income statement have been allocated to the closest line items as presented in Bayer's consolidated income statement (column "Reclassifications"), considering the different presentation structures in U.S. GAAP and IFRS. The following reclassifications for line items not directly assignable have been made:

1) Selling, general and administrative expenses (US$3,048 million) have been allocated to Selling expenses.
2) Restructuring charges (US$4 million) have been allocated to Other operating expenses.
3) Pending Bayer transaction related costs (US$112 million) have been allocated to Other operating expenses.
4) Interest expense (US$440 million) has been allocated to Financial expenses.
5) Interest income (US$73 million) has been allocated to Financial income.
6) Other income (expense), net (US$190 million) has been allocated to Financial expenses.
7) Income tax provision (US$625 million) has been allocated to Income taxes.
8) Income from operations of discontinued business (US$7 million) and Income tax provision (related to Discontinued Operations) (US$3 million) have been allocated to Income from discontinued operations after income taxes.

In a second step, the following reclassification adjustments (column "Adjustments") have been made to align to a uniform presentation in accordance with IFRS as applied by Bayer:

a) Reclassification from Net sales to Other operating income (income of US$356 million results in a decrease of Net sales) as well as Net sales to Other operating expenses (expenses of US$356 million result in an increase of Net sales) as a result of grossing up barter transactions. Furthermore, reclassification of certain hedging losses from Net sales to Other operating expenses (expenses of US$3 million result in an increase of Net sales). Furthermore, reclassification of certain licensing income from Net sales (US$227 million) to Other operating income.

b) Reclassification of shipping, freight and other miscellaneous costs from Cost of goods sold (US$557 million) to Selling expenses. Reclassification of certain hedging losses, and net losses resulting from the disposal of tangible assets from Cost of goods sold (US$22 million) to Other operating expenses. Reclassification of certain hedging results from Cost of goods sold (US$18 million) to Other operating income. Certain amortization expenses classified as Research and development expenses (US$44 million) have been reclassified to Cost of goods sold. Reclassification of expenses related to other provisions from General administration expenses (US$8 million) to Cost of goods sold.

c) Components of Selling expenses (US$1,430 million) have been reclassified as Bayer presents General administration expenses as a separate line item. Reclassification of provisions for doubtful accounts from Selling expenses (US$92 million) to Other operating expenses. Components of Selling expenses (US$13 million) have been reclassified as certain amortization expenses are presented at Bayer as Research and development expenses. Certain amortization expenses and other miscellaneous costs classified as Research and development expenses (US$21 million) have been reclassified to Selling expenses. Reclassification of net gains resulting from the disposal of tangible assets from Selling expenses (US$3 million) to Other operating income.

d) Restructuring expenses have been reclassified from Cost of goods sold (US$5 million) to Research and development expenses.

e) An amount of US$11 million relating to restructuring expenses has been reclassified from Other operating expenses (US$4 million) and Selling expenses (US$7 million) to General administration expenses.

f) Reclassification of disposal gains and other miscellaneous income from Financial expenses (US$230 million) to Other operating income.

g) Separate presentation of results from equity-method investments within Equity-method income (loss) (US$17 million) from Financial expenses.

h) Reclassification of certain hedging and currency gains from Financial expenses (US$982 million) to Financial income.

i) An amount of US$36 million relating to donations has been reclassified from General administrative expenses to Other operating expenses.

9.2.3.3 Presentation Adjustments to Monsanto's Income Statement for the Three-Month Period Ended February 28, 2018

The following presentation adjustments have been made in the income statement for the three-month period ended February 28, 2018, to align the presentation of Monsanto to Bayer's presentation:

	for the three-month period ended February 28, 2018						
	Monsanto historical presentation	Reclassifications		Adjustments	Note	Monsanto adjusted to Bayer presentation	
U.S. GAAP	US$ million	US$ million	US$ million	US$ million		US$ million	
Net Sales	**5,019**	**(5,019)**	**5,019**	**(1)**	a	**5,018**	**Net sales**
Cost of goods sold	(2,053)	2,053	(2,053)	165	b,e	(1,888)	Cost of goods sold
Gross Profit	**2,966**	**(2,966)**	**2,966**	**164**		**3,130**	**Gross profit**
Operating Expenses:	**–**						
Selling, general and administrative expenses	(651)	651	(651)	140	b,c,d,e	(511)	Selling expenses
Research and development expenses	(395)	395	(395)	9	b,c	(386)	Research and development expenses
Restructuring charges	1	(1)		(312)	c,e,i	(312)	General administration expenses
Pending Bayer transaction related costs	(25)	25					
Total Operating Expenses	(1,070)	1,070		120	a,b,f	120	Other operating income
Income from Operations	**1,896**	**(1,896)**	(24)	(53)	a,b,c,d,i	(77)	Other operating expenses
Interest expense	(105)	105	**1,896**	**68**		**1,964**	**EBIT**
Interest income	24	(24)					
Other income (expense), net	24	(24)		(5)	g	(5)	Equity-method income (loss)
Income from Continuing Operations Before Income Taxes	**1,839**	**(1,839)**	24	231	h	255	Financial income
Income tax provision	(381)	381	(81)	(294)	f,g,h	(375)	Financial expenses
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**1,458**	**(1,458)**	**(57)**	**(68)**		**(125)**	**Financial result**
Discontinued Operations:	**–**						
Income from operations of discontinued business	2	(2)	**1,839**	–		**1,839**	**Income before income taxes**
Income tax provision	–	–					
Income from Discontinued Operations	**2**	**(2)**	(381)	–		(381)	Income taxes
Net Income	**1,460**	**(1,460)**					
			1,458	–		**1,458**	**Income from continuing operations after income taxes**
			2	–		**2**	**Income from discontinued operations after income taxes**
			1,460	–		**1,460**	**Income after income taxes**

In a first step, the line items as presented in Monsanto's consolidated income statement have been allocated to the closest line items as presented in Bayer's consolidated income statement (column "Reclassifications"), considering the different presentation structures in U.S. GAAP and IFRS. The following reclassifications for line items not directly assignable have been made:

1) Selling, general and administrative expenses (US$651 million) have been allocated to Selling expenses.
2) Restructuring charges (US$1 million) have been allocated to Other operating expenses.
3) Pending Bayer transaction related costs (US$25 million) have been allocated to Other operating expenses.
4) Interest expense (US$105 million) has been allocated to Financial expenses.
5) Interest income (US$24 million) has been allocated to Financial income.
6) Other income (expense), net (US$24 million) has been allocated to Financial expenses.
7) Income tax provision (US$381 million) has been allocated to Income taxes.
8) Income from operations of discontinued business (US$2 million) has been allocated to Income from discontinued operations after income taxes.

In a second step, the following reclassification adjustments (column "Adjustments") have been made to align to a uniform presentation in accordance with IFRS as applied by Bayer:

a) Reclassification from Net sales to Other operating income (income of US$49 million results in a decrease of Net sales) as well as Net sales to Other operating expenses (expenses of US$48 million result in an increase of Net sales) as a result of grossing up barter transactions. Furthermore, reclassification of certain hedging losses from Net sales to Other operating expenses (expenses of US$1 million result in an increase of Net sales).

b) Reclassification of shipping, freight and other miscellaneous costs from Cost of goods sold (US$169 million) to Selling expenses. Reclassification of certain hedging losses, and net losses resulting from the disposal of tangible assets from Cost of goods sold (US$4 million) to Other operating expenses. Reclassification of certain hedging results from Cost of goods sold (US$1 million) to Other operating income. Certain amortization expenses classified as Research and development expenses (US$9 million) have been reclassified to Cost of goods sold.

c) Components of Selling expenses (US$314 million) have been reclassified as Bayer presents General administration expenses as a separate line item. Reclassification of a gain from provisions for doubtful accounts from Selling expenses (US$7 million) to Other operating expenses. Components of Selling expenses (US$4 million) have been reclassified as certain amortization expenses are presented at Bayer as Research and development expenses. Certain amortization expenses and other miscellaneous costs classified as Research and development expenses (US$4 million) have been reclassified to Selling expenses.

d) Restructuring expenses have been reclassified from Selling Expenses (US$2 million) to Other operating expenses.

e) An amount of US$4 million relating to restructuring expenses has been reclassified from Cost of goods sold ($3 million) and Selling expenses (US$1 million) to General administration expenses.

f) Reclassification of disposal gains and other miscellaneous income from Financial expenses (US$69 million) to Other operating income.

g) Separate presentation of results from equity-method investments within Equity-method income (loss) (US$5 million) from Financial expenses.

h) Reclassification of certain hedging and currency gains from Financial expenses (US$231 million) to Financial income.

i) An amount of US$6 million relating to donations has been reclassified from General administrative expenses to Other operating expenses.

9.2.3.4 Presentation Adjustments to Monsanto's Consolidated Statement of Financial Position as of February 28, 2018

The following presentation adjustments have been made in the statement of financial position as of February 28, 2018, to align the presentation of Monsanto to Bayer's presentation:

	Monsanto historical presentation February 28, 2018	Reclassifications		Adjustments	Note	Monsanto adjusted to Bayer presentation February 28, 2018	
U.S. GAAP	US$ million	US$ million	US$ million	US$ million		US$ million	
Current assets	**10,056**	**(10,056)**	**12,573**	**44**		**12,616**	**Noncurrent assets**
Cash and cash equivalents	2,409	(2,409)	4,100	–		4,100	Goodwill
Trade receivables, net	2,520	(2,520)	977	387	a,m	1,364	Other intangible assets
Miscellaneous receivables	772	(772)	6,109	(277)	a,b	5,832	Property, plant and equipment
Inventory, net	4,015	(4,015)	–	163	c	163	Investments accounted for using the equity method
Assets held for sale	30	(30)	–	96	d,m	96	Other financial assets
Other current assets	310	(310)	892	(369)	b,c,d	523	Other receivables
			495	44	j	538	Deferred taxes
Noncurrent assets	**12,630**	**(12,630)**	**10,114**	**1,159**		**11,273**	**Current assets**
Property, Plant and Equipment, Net	6,109	(6,109)	4,015	–		4,015	Inventories
Goodwill	4,100	(4,100)	2,577	1,207	e,n	3,784	Trade accounts receivable
Other Intangible Assets, Net	977	(977)	310	(261)	f,j	49	Other financial assets
Deferred Tax Assets	495	(495)	772	41	f,g,n	814	Other receivables
Long-Term Receivables, Net	58	(58)	–	172	g	172	Claims for income tax refunds
Other Assets	892	(892)	2,409	–		2,409	Cash and cash equivalents
			30	–		30	Assets held for sale
Total assets	**22,687**	**(22,687)**	**22,687**	**1,202**		**23,889**	**Total assets**
Current liabilities	**7,149**	**(7,149)**	**7,766**	**–**		**7,766**	**Equity**
Short-term debt, including current portion of long-term debt	1,212	(1,212)	(15,047)	–		(15,047)	Capital stock of Bayer AG
Accounts payable	875	(875)	11,956	–		11,956	Capital reserves of Bayer AG
Income taxes payable	200	(200)	10,845	–		10,845	Other reserves
Accrued compensation and benefits	261	(261)					
Accrued marketing programs	1,754	(1,754)	**7,754**	**–**		**7,754**	**Equity attributable to Bayer AG stockholders**
Deferred revenues	1,686	(1,686)	12	–		12	Equity attributable to noncontrolling interest
Grower production accruals	189	(189)				**–**	
Dividends payable	239	(239)	**7,772**	**37**		**7,810**	**Noncurrent liabilities**
Customer payable	13	(13)	303	121	h	424	Provisions for pensions and other post-employment benefits
Restructuring reserves	18	(18)	213	121	i	334	Other provisions

U.S. GAAP	Monsanto historical presentation February 28, 2018 US$ million	Reclassifications US$ million	US$ million	Adjust-ments US$ million	Note	Monsanto adjusted to Bayer presentation February 28, 2018 US$ million	
Miscellaneous short-term accruals	702	(702)	–			–	Refund liabilities
			114			114	Contract liabilities
Noncurrent liabilities	**7,772**	**(7,772)**	6,635	–		6,635	Financial liabilities
Long-Term Debt	6,635	(6,635)		65	j	65	Income tax liabilities
Postretirement Liabilities	303	(303)	368	(270)	h,i,j	98	Other liabilities
Long-Term Deferred Revenue	114	(114)	139	–		139	Deferred taxes
Noncurrent Deferred Tax Liabilities	139	(139)				–	
Long-Term Portion of Environmental and Litigation Liabilities	213	(213)	**7,149**	**1,165**		**8,314**	**Current liabilities**
Other Liabilities	368	(368)	1,961	(1,478)	k,o	483	Other provisions
			–	2,785	e,o	2,785	Refund liabilities
			1,686	29	e	1,715	Contract liabilities
			1,212	–		1,212	Financial liabilities
			888	103	l	991	Trade accounts payable
			200	3	j	203	Income tax liabilities
			1,201	(277)	h,j,k,l	924	Other liabilities
				–		–	Liabilities directly related to assets held for sale
Shareowners Equity							
Common stock	6	(6)					
Treasury stock	(15,053)	15,053					
Additional contributed capital	11,956	(11,956)					
Retained earnings	13,290	(13,290)		–		–	
Accumulated other comprehensive loss	(2,445)	2,445		–		–	
Total Monsanto Company Shareowners Equity	**7,754**	**(7,754)**		**–**		**–**	
Noncontrolling Interest	12	(12)		–		–	
Total Shareowners Equity	**7,766**	**(7,766)**		**–**		**–**	
Total Liabilities and Shareowners Equity	**22,687**	**(22,687)**	**22,687**	**1,202**		**23,889**	**Total equity and liabilities**

In a first step, the line items as presented in Monsanto's consolidated statement of financial position have been allocated to the closest line items as presented in Bayer's consolidated statement of financial position (column "Reclassifications"), considering the different presentation structures in U.S. GAAP and IFRS. The following reclassifications for line items not directly assignable have been made:

1) Other current assets (US$310 million) have been allocated to Other financial assets current.
2) Accrued marketing programs (US$1,754 million), Grower production accruals (US$189 million) and Restructuring reserves (US$18 million) have been allocated to Other provisions current.
3) The line items Accounts payable (US$875 million) and Customer payable (US$13 million) have been allocated to Trade accounts payable.
4) Accrued compensation and benefits (US$261 million), Dividends payable (US$239 million) and Miscellaneous short-term accruals (US$702 million) have been allocated to Other liabilities current.
5) Deferred Revenues (US$1,686 million) have been allocated to Contract liabilities current.
6) The Long-term Portion of Environmental and Litigation Liabilities (US$213 million) have been allocated to Other provisions noncurrent.

7) Other Liabilities (US$368 million) have been allocated to Other liabilities noncurrent.
8) Long-term Deferred Revenue (US$114 million) have been allocated to Contract liabilities noncurrent.
9) The Long-term Receivables, Net (US$58 million) have been allocated to Trade account receivables.
10) The Other Assets (US$892 million) have been allocated to Other receivables noncurrent.
11) Common stock (US$6 million) and Treasury stock (minus US$15,053 million) have been allocated to Capital stock of Bayer AG.
12) Retained earnings (US$13,290 million) and Accumulated other comprehensive loss (US$2,445 million) have been allocated to Other reserves.

In a second step, the following reclassification adjustments (column "Adjustments") have been made to ensure a uniform presentation in accordance with IFRS as applied by Bayer:

a) Reclassification of personal computer related software (US$336 million) and capitalized permit fees from mining activities (US$17 million) from Property, plant and equipment to Other intangible assets (US$353 million).

b) Reclassification of tangible assets (US$76 million) from Other receivables noncurrent to Property, plant and equipment.

c) Reclassification of Investments accounted for using the equity method in the amount of US$163 million from Other receivables noncurrent to Investments accounted for using the equity method.

d) Reclassification of Other miscellaneous investments and long term marketable equity securities in the amount of US$130 million from Other receivables noncurrent to Other financial assets noncurrent.

e) Reclassification of anticipated rebates and bonuses granted to customers as well as other customer related refunds from Trade accounts receivable to Refund liabilities current of US$1,173 million as well as to Contract liabilities current of US$29 million.

f) Reclassification of prepaid expenses from Other financial assets current to Other receivables current of US$218 million.

g) Reclassification of tax related items from Other receivables current to Claims for income tax refunds of US$172 million.

h) Reclassification of pension and post-employment related liabilities from Other liabilities current of US$37 million to Provisions for pensions and other post-employment benefits as well as reclassification from Other liabilities noncurrent of US$84 million to Provisions for pensions and other post-employment benefits.

i) Reclassification of liabilities for e.g., incentives, environmental and legal obligations from Other liabilities noncurrent of US$121 million to Other provisions noncurrent.

j) Reclassification of the noncurrent portion of income tax liabilities (US$65 million) from Other liabilities noncurrent to Income tax liabilities noncurrent as well as reclassification of the current portion of income tax liabilities (US$3 million) from Other liabilities current to Income tax liabilities current. Furthermore, deferred taxes have been reclassified from Other financial assets current to Deferred taxes (US$44 million).

k) Reclassifications of liabilities for e.g., incentives, environmental and legal obligations from Other liabilities current of US$133 million to Other provisions current.

l) Reclassification of other miscellaneous accruals from Other liabilities current to Trade accounts payable of US$103 million.

m) Reclassification of options to acquire intellectual property from Other financial assets noncurrent to Other intangible assets of US$34 million.

n) Reclassification of Miscellaneous Receivables presented as Other receivables current to Trade accounts receivables of US$5 million.

o) Reclassification of customer incentive discounts from Other provisions current to Refund liabilities current of US$1,611 million.

9.2.3.5 Adjustments to Monsanto's Consolidated Income Statements for the Twelve-Month Period Ended November 30, 2017, and for the Three-Month Period Ended February 28, 2018, as well as for the Consolidated Statement of Financial Position as of February 28, 2018, to Convert the Consolidated Income Statements and the Consolidated Statement of Financial Position to IFRS and Translate it to Bayer's Presentation Currency €[3]

The following U.S. GAAP to IFRS adjustments have been made in the income statement for the twelve-month period ended November 30, 2017, to present Monsanto's figures in accordance with IFRS as applied by Bayer:

	for the twelve-month period ended November 30, 2017				
	Monsanto adjusted to Bayer presentation	IFRS Adjustments	Note	Monsanto converted to IFRS	Monsanto converted to IFRS
U.S. GAAP (after reclassification)	US$ million	US$ million		US$ million	€ million
Net sales	**14,424**	**(185)**	b,h	**14,239**	**12,641**
Cost of goods sold	(6,144)	(16)	a,c,d,k	(6,160)	(5,469)
Gross profit	**8,280**	**(201)**		**8,079**	**7,172**
Selling expenses	(2,087)	(7)	c	(2,094)	(1,859)
Research and development expenses	(1,572)	(15)	c,d,f	(1,587)	(1,409)
General administration expenses	(1,397)	117	c,d,e	(1,280)	(1,136)
Other operating income	834	33	p	867	770
Other operating expenses	(621)	(125)	e	(746)	(662)
EBIT	**3,437**	**(198)**		**3,239**	**2,875**
Equity-method income (loss)	(17)	–		(17)	(15)
Financial income	1,055	48	b,i,p	1,103	979
Financial expenses	(1,445)	11	c,f,j	(1,434)	(1,273)
Financial result	**(407)**	**59**		**(348)**	**(309)**
Income before income taxes	**3,030**	**(139)**		**2,891**	**2,567**
Income taxes	(625)	17	a,b,c,d,f,h,i,k,n,p,q	(608)	(540)
Income from continuing operations after income taxes	**2,405**	**(122)**		**2,283**	**2,027**
Income from discontinued operations after income taxes	**4**	(4)	h	**–**	**–**
Income after income taxes	**2,409**	**(126)**		**2,283**	**2,027**
of which attributable to noncontrolling interest	**9**	5	d	14	12
of which attributable to Bayer AG stockholders (net income)	**2,400**	**(131)**		**2,269**	**2,014**

The adjustments made to reconcile Monsanto's financial information from U.S. GAAP to IFRS (column "IFRS Adjustments") are described below the consolidated statement of financial position as of February 28, 2018.

[3] For the foreign currency translation principles applied refer to "*9.2.3.6 Principles to Translate Monsanto's Financial Information Reported in US$ to Bayer's Presentation Currency €.*"

The following U.S. GAAP to IFRS adjustments have been made in the income statement for the three-month period ended February 28, 2018, to present Monsanto's figures in accordance with IFRS as applied by Bayer:

	for the three-month period ended February 28, 2018				
	Monsanto adjusted to Bayer presentation	IFRS Adjustments	Note	Monsanto converted to IFRS	Monsanto converted to IFRS
U.S. GAAP (after reclassification)	US$ million	US$ million		US$ million	€ million
Net sales	**5,018**	**(235)**	b,h,r	**4,783**	**3,895**
Cost of goods sold	(1,888)	11	a,c,d,r	(1,877)	(1,528)
Gross profit	**3,130**	**(224)**		**2,906**	**2,366**
Selling expenses	(511)	(2)	c	(513)	(418)
Research and development expenses	(386)	(6)	c, d, f	(392)	(319)
General administration expenses	(312)	29	c, d, e	(283)	(230)
Other operating income	120	–		120	98
Other operating expenses	(77)	(32)	e	(109)	(89)
EBIT	**1,964**	**(235)**		**1,729**	**1,408**
Equity-method income (loss)	(5)	(1)	d	(6)	(5)
Financial income	255	10	b, g, p	265	216
Financial expenses	(375)	(6)	c, g	(381)	(310)
Financial result	**(125)**	**3**		**(122)**	**(99)**
Income before income taxes	**1,839**	**(232)**		**1,607**	**1,309**
Income taxes	(381)	69	a,b,c,g,n,q,r	(312)	(254)
Income from continuing operations after income taxes	**1,458**	**(163)**		**1,295**	**1,054**
Income from discontinued operations after income taxes	**2**	(2)	h	**–**	**–**
Income after income taxes	**1,460**	**(165)**		**1,295**	**1,054**
of which attributable to noncontrolling interest	**1**	3	d	4	3
of which attributable to Bayer AG stockholders (net income)	**1,459**	**(168)**		**1,291**	**1,051**

The adjustments made to reconcile Monsanto's financial information from U.S. GAAP to IFRS (column "IFRS Adjustments") are described below the statement of financial position as of February 28, 2018.

The following U.S. GAAP to IFRS adjustments have been made in the consolidated statement of financial position as of February 28, 2018, to present Monsanto's figures in accordance with IFRS as applied by Bayer:

U.S. GAAP (after reclassification)	Monsanto adjusted to Bayer presentation February 28, 2018 US$ million	IFRS Adjustments US$ million	Note	Monsanto converted to IFRS February 28, 2018 US$ million	Monsanto converted to IFRS February 28, 2018 € million
Noncurrent assets					
Goodwill	4,100	–		4,100	3,329
Other intangible assets	1,364	121	o	1,485	1,205
Property, plant and equipment	5,832	64	d,f,l	5,896	4,786
Investments accounted for using the equity method	163	(61)	d	102	83
Other financial assets	96	775	b,g,i,p	871	707
Other receivables	523	(146)	c,n,o	377	306
Deferred taxes	538	123	c,d,e,f,k,l,m,r	661	537
	12,616	**876**		**13,492**	**10,953**
Current assets					
Inventories	4,015	160	a,d	4,175	3,389
Trade accounts receivable	3,784	364	b,m,r	4,148	3,368
Other financial assets	49	–		49	40
Other receivables	814	(38)	n,o,r	776	630
Claims for income tax refunds	172	–		172	139
Cash and cash equivalents	2,409	2	d	2,411	1,957
Assets held for sale	30	–		30	25
	11,273	**488**		**11,761**	**9,547**
Total assets	**23,889**	**1,364**		**25,253**	**20,500**
Equity					
Capital stock of Bayer AG	(15,047)	–		(15,047)	(12,215)
Capital reserves of Bayer AG	11,956	–		11,956	9,706
Other reserves	10,845	825	a,b,c,d,e,f,g,i,k,n,p,r	11,670	9,473
Equity attributable to Bayer AG stockholders	**7,754**	**825**		**8,579**	**6,964**
Equity attributable to noncontrolling interest	12	9	d	21	17
	7,766	**834**		**8,600**	**6,982**
Noncurrent liabilities					
Provisions for pensions and other post-employment benefits	424	(40)	c	384	312
Other provisions	334	26	k,l	360	292
Refund liabilities	–	–		–	–
Contract liabilities	114	(33)	r	81	66
Financial liabilities	6,635	33	f	6,668	5,413
Income tax liabilities	65	–		65	53
Other liabilities	98	–		98	79
Deferred taxes (liabilities)	139	394	a,b,c,d,f,g,i,l,m,p,r	533	433
	7,810	**380**		**8,190**	**6,648**

U.S. GAAP (after reclassification)	Monsanto adjusted to Bayer presentation February 28, 2018 US$ million	IFRS Adjustments US$ million	Note	Monsanto converted to IFRS February 28, 2018 US$ million	Monsanto converted to IFRS February 28, 2018 € million
Current liabilities					
Other provisions	483	125	e	608	494
Refund liabilities	2,785	–		2,785	2,261
Contract liabilities	1,715	(73)	b,r	1,642	1,333
Financial liabilities	1,212	107	f,m	1,319	1,071
Trade accounts payable	991	(13)	d	978	794
Income tax liabilities	203	–		203	165
Other liabilities	924	4	d	928	753
Liabilities directly related to assets held for sale	–	–		–	–
	8,314	**150**		**8,464**	**6,871**
Total equity and liabilities	**23,889**	**1,364**		**25,253**	**20,500**

The adjustments made to reconcile Monsanto's financial information from U.S. GAAP to IFRS (column "IFRS Adjustments") for the twelve-month period ended November 30, 2017, and the three-month period ended February 28, 2018, as well as for the consolidated statement of financial position as of February 28, 2018, are described below. Bayer adopted IFRS 9 and IFRS 15 effective from January 1, 2018. Therefore, adjustments have also been made to Monsanto's financial information from December 1, 2017, onwards to account for the new standards consistently with the application by Bayer using the modified retrospective approach. Unless stated otherwise, the tax rates applied for the calculation of the deferred taxes of the adjustments described below are the tax rates as described in "*9.2.3.1 Overview*".

a) Monsanto has measured certain inventories using the last in, first out ("**LIFO**") cost methodology. The LIFO method is not permitted under IFRS and therefore an increase in Cost of goods sold of US$5 million in the income statement for the twelve-month period ended November 30, 2017, and a decrease in Cost of goods sold of US$6 million in the income statement for the three-month period ended February 28, 2018, have been recognized, respectively. The related deferred tax impact has been calculated by applying a tax rate of 24.95%. The deferred tax income amounted to US$1 million for the twelve-month period ended November 30, 2017, and deferred tax expenses amounted to US$1 million for the three-month period ended February 28, 2018. The adjustment in the statement of financial position as of February 28, 2018, results in an increase of Inventories and Other reserves in the amount of US$158 million. The related deferred tax impact resulted in an increase of deferred tax liabilities and consequently in a decrease of Other reserves in the amount of US$39 million.

b) Monsanto has recognized revenues for certain licensing arrangements over time, whereas in accordance with IFRS, revenues for those licenses would have been recognized at a point in time. Accordingly, Net sales recognized in Monsanto's income statement in the amount of US$217 million for the twelve-month period ended November 30, 2017, and of US$153 million for the three-month period ended February 28, 2018, have been eliminated as they would have already been recognized in a prior period under IFRS. Furthermore, under IFRS Monsanto would have had to recognize certain royalty revenues from a licensing arrangement earlier than under U.S. GAAP. This results in an increase of Monsanto's Net sales in the amount of US$25 million for the twelve-month period ended November 30, 2017, and a decrease of US$27 million for the three-month period ended February 28, 2018. At the point in time when revenues under IFRS are recognized, a financial receivable in the amount of the discounted contractually agreed future payments has been recognized. The interest income resulting from compounding the related Financial receivables noncurrent by applying the effective interest rate method has increased Financial income by US$34 million in the twelve-month period ended November 30, 2017, and by US$8 million in the three-month period ended February 28, 2018. These alignments resulted in deferred tax income in the amount of US$39 million for the twelve-month period ended November 30, 2017, and of US$42 million for the three-month period ended February 28, 2018. Tax rates of 24.95% and 34.0% for the affected entities have been applied to calculate the respective tax effects. Due to the point in time revenue recognition in accordance with IFRS, a financial receivable of US$947 million has been recognized in the statement of financial position as of February 28, 2018.

Thereof US$695 million has been classified as Other financial assets noncurrent and US$252 million has been classified as Trade accounts receivables. Furthermore, Contract liabilities current decreased by US$35 million. These adjustments recognized resulted in an increase of Other reserves in the amount of US$982 million. These adjustments resulted in an increase of the deferred tax liabilities by US$260 million and in a decrease of Other reserves in the amount of US$260 million.

c) In order to align the different measurement and presentation principles for postretirement benefits, the obligations for significant plans in the U.S., and outside the U.S. have been remeasured using actuarial assumptions (e.g., interest rates and mortality tables) applied by Bayer in these countries for comparable obligations as of the respective dates and accounted for in accordance with IFRS. As a result the expenses for the twelve-month period ended November 30, 2017, have increased by US$51 million (Cost of goods sold: increase by US$16 million; Selling expenses: increase by US$7 million; Research and development expenses: increase by US$14 million; General administration expenses: increase by US$6 million; Financial expenses: increase by US$8 million) and the expenses for the three-month period ended February 28, 2018, increased by US$15 million (Cost of goods sold: increase by US$5 million; Selling expenses: increase by US$2 million; Research and development expenses: increase by US$4 million; General administration expenses: increase by US$2 million; Financial expenses: increase by US$2 million). The deferred taxes on these adjustments have been calculated using the tax rates of each affected legal entity for fiscal year 2017. The tax rates used are between 9.2% and 34.0% (outside the U.S.) and 24.95% (in the U.S.). The related deferred tax income amounted to US$13 million for the twelve-month period ended November 30, 2017, and to US$4 million for the three-month period ended February 28, 2018. In the statement of financial position as of February 28, 2018, Provisions for pensions and other postemployment benefits decreased by US$40 million and Other receivables noncurrent decreased by US$8 million (thereof US$7 million asset ceiling), while the Other reserves increased by US$32 million. Deferred tax assets of US$14 million as well as deferred tax liabilities of US$9 million have decreased. As a result of the tax related adjustments, Other reserves decreased by US$5 million as of February 28, 2018.

d) Effective June 15, 2016, Monsanto signed agreements to contribute to a newly-formed joint venture certain intellectual property rights related to Monsanto's sorghum business. These agreements created a global joint venture in sorghum breeding. Monsanto has a 40% membership interest in this joint venture, which has been accounted for as an equity-method investment. According to IFRS, this newly formed entity does not meet the definition of a joint venture but is controlled by Monsanto and accordingly accounted for as a consolidated subsidiary. As a consequence, the Equity method income (loss) has been eliminated and consolidation adjustments for inter-company transactions have been made. This resulted in an increase of Income after income taxes by US$8 million (Cost of goods sold decrease by US$16 million; Research development expenses: increase by US$5 million; General administration expenses: increase by US$2 million; Income tax expenses: increase by US$1 million) for the twelve-month period ended November 30, 2017. For the three-month period ended February 28, 2018, the Income after income taxes increased by US$3 million (Cost of goods sold: decrease by US$8 million; Research development expenses: increase by US$3 million; General administration expenses: increase by US$1 million; Equity method income: decreased by US$1 million). An income after income taxes of US$5 million of the joint venture for the twelve-month period ended November 30, 2017, and an income after income taxes of US$3 million for the three-month period ended February 28, 2018, are attributable to noncontrolling interest. In the statement of financial position as of February 28, 2018, the carrying amount related to the joint venture presented in Investments accounted for using the equity method in the amount of US$61 million has been eliminated. Furthermore, Property, plant and equipment increased by US$2 million, Inventories increased by US$2 million, Cash and cash equivalents increased by US$2 million, Trade accounts payable decreased by US$13 million and Other liabilities current increased by US$4 million. As a result, Other reserves decreased by US$55 million and US$9 million has been presented as Equity attributable to noncontrolling interest. The related deferred tax adjustments resulted in an increase of deferred tax assets in the amount of US$20 million and in a decrease of deferred tax liabilities in the amount of US$15 million. Consequently, Other reserves have been increased by US$35 million.

e) For litigations, U.S. GAAP provides an accounting policy choice to accrue or expense as incurred legal counsel costs related to litigation proceedings, while IFRS requires the recognition of unavoidable counsel costs as a provision. Monsanto elected not to recognize the legal counsel costs as part of the litigation provision. As a result, General administration expenses decreased by US$125 million for the twelve-month period ended November 30, 2017, because these expenses had to be accrued according to IFRS in previous periods and by US$32 million for the three-month period ended February 28, 2018. Furthermore, expected legal costs for the following period had been recognized for the twelve-month period ended November 30, 2017 and for the three-month period ended February 28,

2018, because these expenses were not recognized under U.S. GAAP. As a result, Other operating expenses increased by US$125 million and by US$32 million, respectively. In the statement of financial position as of February 28, 2018, additional provisions in the amount of US$125 million have been recognized in Other provisions current. As a result, Other reserves have been decreased by US$125 million. For this effect a tax rate of 24.95% has been applied. The respective deferred tax assets amounted to US$31 million and have consequently increased Other reserves by US$31 million.

f) Certain leasing transactions classified as operating leases in Monsanto's financial statements have been reclassified as financial leases in accordance with IFRS. The reclassification resulted in an increase of the Income before income taxes of US$2 million (Research and development expenses: decrease by US$4 million; Financial expenses: increase by US$2 million) for the twelve-month period ended November 30, 2017 and an increase of the Income before income taxes of US$1 million (Research and development expenses: decrease by US$1 million) for the three-month period ended February 28, 2018. The related deferred tax expenses amounted to US$1 million for the twelve-month period ended November 30, 2017, applying a tax rate of 24.95%. In the statement of financial position as of February 28, 2018, Property, plant and equipment (increased by US$47 million), Financial liabilities current (increased by US$7 million) and Financial liabilities noncurrent (increased by US$33 million) have been recognized. The deferred tax assets amounted to US$10 million and the deferred tax liabilities amounted to US$12 million. As a result, Other reserves increased by US$5 million.

g) Certain investments are accounted for under the cost method under U.S. GAAP, whereas they have to be measured at fair value through OCI or at fair value through profit or loss under IFRS. This resulted in an increase in Financial expenses by US$4 million, Financial income by US$1 million and a gain in income taxes by US$1 million for the three-month period ended February 28, 2018. In the statement of financial position as of February 28, 2018, a fair value step up of US$24 million within Other financial assets noncurrent has been considered, which resulted in an increase of US$24 million in Other reserves. The increase in deferred tax liabilities decreased Other reserves by US$7 million.

h) Monsanto has been presenting the financial data of the divestments of the animal agricultural products business as discontinued operations. This transaction was consummated on October 1, 2008, and included a ten-year earn-out with potential annual payments being earned by Monsanto, if certain revenue levels are exceeded. Under IFRS, the criteria for a presentation as discontinued operations have not been met. As a result US$4 million income for the twelve-month period ended November 30, 2017, and US$2 million for the three-month period ended February 28, 2018, have been reclassified from Income from discontinued operations after income taxes to Net sales (US$7 million) and tax expenses (US$3 million) for the twelve-month period ended November 30, 2017, and to Net sales (US$2 million) for the three-month period ended February 28, 2018.

i) Monsanto held call options to acquire further shares of a research and development ("**R&D**") company from the other shareholder. Unlike U.S. GAAP under IFRS these call options have to be recognized separately and are presented as Other financial assets. The change in the fair value of the call options resulted in a financial income of US$11 million for the twelve-month period ended November 30, 2017. The related deferred tax expense amounted to US$3 million for the twelve-month period ended November 30, 2017, applying a tax rate of 24.95%. The Other financial assets noncurrent in the amount of US$19 million have been recognized in the statement of financial position as of February 28, 2018. As a result, Other reserves increased by US$19 million. The respective increase in deferred tax liabilities decreased Other reserves by US$5 million.

j) In the twelve-month period ended November 30, 2017, Monsanto changed the exchange rate used to translate the financial statements of a hyperinflated legal entity from local currency into group currency by using a devaluated official exchange rate for the foreign currency translation. Bayer had already switched its currency translation to a comparable devaluated exchange rate in a prior period. Therefore expenses of US$21 million for the twelve-month period ended November 30, 2017, have been eliminated, resulting in an increase in Income before income taxes (Financial expense: decrease by US$21 million).

k) Under IFRS, if there is a continuous range of equally possible outcomes for a single event, then the obligation is measured at the mid-point in the range, whereas under U.S. GAAP the obligation is measured at the low end of the range. Therefore, an addition to the existing provisions resulted in Cost of goods sold of US$11 million for the twelve-month period ended November 30, 2017. The related deferred tax income amounted to US$3 million for the twelve-month period ended November 30, 2017, applying a tax rate of 24.95%. Other provisions noncurrent in the amount of US$11 million have been

recognized in the statement of financial position as of February 28, 2018. As a result, Other reserves decreased by US$11 million. The respective increase in deferred tax assets increased Other reserves by US$3 million.

l) Monsanto has not recognized certain asset retirement obligations resulting in an increase in Property, plant and equipment by US$15 million and other provisions noncurrent by US$15 million in the statement of financial position as of February 28, 2018. Consequently, deferred tax assets and deferred tax liabilities increased by US$4 million, applying a tax rate of 24.95%.

m) Monsanto entered into various customer financing agreements related to trade accounts receivable as of February 28, 2018. Due to the different derecognition criteria of financial assets between U.S. GAAP and IFRS, certain financial assets that have been derecognized under U.S. GAAP do not qualify for derecognition under IFRS. As a result, additional Trade accounts receivable in the amount of US$100 million and additional current financial liabilities of US$100 million have been recognized in the statement of financial position as of February 28, 2018. Consequently, deferred tax assets and deferred tax liabilities increased by US$30 million, applying tax rates from 25.0% to 34.0%.

n) Under US GAAP Monsanto has recognized prepaid tax assets on certain inter-company asset transfers. These prepaid tax assets are amortized over the life of the transferred assets. Under IFRS, the amount of income taxes would have been charged as an expense in the year of the inter-company asset transfer and deferred tax assets recognized in the statement of financial position of the transferee legal entity. This resulted in a tax expense of US$80 million for the twelve-month period ended November 30, 2017, and a tax income of US$1 million for the three-month period ended February 28, 2018. The adjustments in the statement of financial position as of February 28, 2018, resulted in a decrease in Other receivables noncurrent (US$33 million) and Other receivables current (US$4 million). Accordingly, Other reserves decreased by US$37 million.

o) Monsanto presented certain rights on intellectual property within Other receivables noncurrent (US$105 million) and Other receivables current (US$16 million). Due to different presentation requirements under IFRS, the rights will be presented as Other intangible assets in the amount of US$121 million in the statement of financial position as of February 28, 2018.

p) Monsanto has divested its European-based silthiofam seed-treatment chemical business with a part of the consideration received being contingent on the silthiofam re-registration with certain authorities in the EU. Under IFRS, this contingent payment has to be accounted for as a financial asset resulting in an increase in Financial income of US$3 million and Other operating income of US$33 million for the twelve-month period ended November 30, 2017, and in an increase in Financial income of US$1 million for the three-month period ended February 28, 2018. The related deferred tax expense amounted to US$3 million for the twelve-month period ended November 30, 2017, applying a tax rate of 9.0%. Other financial assets noncurrent in the amount of US$37 million have been recognized in the statement of financial position as of February 28, 2018. As a result, Other reserves increased by US$37 million. The respective increase in deferred tax liabilities has decreased Other reserves by US$3 million.

q) Deferred taxes for the affected U.S. entities were calculated using tax rates ranging from 23.95% to 38.95% for the pro forma income statement for the twelve-month period ended November 30, 2017, and tax rates ranging from 23.95% to 29.77% for the pro forma income statement for the three-month period ended February 28, 2018, as well as for the pro forma statement of financial position as of February 28, 2018. The estimated deferred tax income amounted to US$52 million for the twelve-month period ended November 30, 2017, and US$3 million for the three-month period ended February 28, 2018.

r) With the initial application of IFRS 15, the timing of the revenue recognition has changed for certain contracts with customers. Accordingly, Net sales recognized in Monsanto's income statement in the amount of US$57 million for the three-month period ended February 28, 2018, have been eliminated as they would have already been recognized in a prior period under IFRS. This resulted also in a decrease in Cost of goods sold of US$2 million in the pro forma income statement for the three-month period ended February 28, 2018. The deferred tax income amounted to US$19 million for the three-month period ended February 28, 2018. In the pro forma statement of financial position as of February 28, 2018, Other receivables current decreased by US$18 million; Trade accounts receivable increased by US$12 million; Contract liabilities noncurrent decreased by US$33 million and Contract liabilities current decreased by US$38 million. The adjustments in the statement of financial position as of February 28, 2018, resulted in an increase in Other reserves of US$65 million. Deferred tax assets increased by US$39 million and deferred tax liabilities increased by US$58 million, applying a tax rate of 24.95% for the U.S. and tax rates between 30.0% and 34.0% for outside the U.S. The tax related adjustments resulted in a decrease of Other reserves by US$19 million as of February 28, 2018.

9.2.3.6 *Principles to Translate Monsanto's Financial Information Reported in US$ to Bayer's Presentation Currency €*

The adjusted financial information of Monsanto, which is prepared in US$, was translated to €, the presentation currency of Bayer. Monsanto's assets and liabilities are translated at the exchange rate as of March 31, 2018, while income and expenses are translated at the average exchange rate for Bayer's fiscal year ended December 31, 2017, or Bayer's three months ended March 31, 2018, respectively. The following exchange rates have been used as applicable:

€1/		Closing rate March 31, 2018	Average rate 12 months 2017	Average rate 3 months 2018
US$	United States	1.2319	1.1264	1.2281

9.3 Basis of Preparation

9.3.1 Preparation Principles

The Pro Forma Financial Information was prepared on the basis of the IDW Accounting Practice Statement: Preparation of Pro Forma Financial Information (IDW AcPS AAB 1.004) (*IDW Rechnungslegungshinweis: Erstellung von Pro-Forma-Finanzinformationen* (IDW RH HFA 1.004)), as promulgated by the Institute of Public Auditors in Germany (IDW, *Institut der Wirtschaftsprüfer in Deutschland e. V.*).

The pro forma adjustments made for purposes of the Pro Forma Financial Information are based on the information available at the time of the preparation of the Pro Forma Financial Information and on preliminary estimates as well as certain pro forma assumptions, which are described in the accompanying pro forma notes and Bayer considers to be reasonable. The Pro Forma Financial Information does not reflect the costs of any integration activities or cost savings that may result from synergies that may be derived from any future integration activities. The pro forma adjustments are directly attributable to the Covestro Divestments as well as to the Transaction including the Transaction-related Divestments and the Related Financing, determinable, factually supportable and described in the accompanying pro forma notes presented below. Furthermore, except for the adjustments related to the Transaction-related Divestments, the Pro Forma Financial Information does not include any potential or future effects resulting from the remedies imposed on Bayer.

The pro forma adjustments presented in respect of the Covestro Divestments include the recognition of Covestro as an other financial asset applying Bayer's direct interest of 6.8% in Covestro since January 1, 2017. The pro forma adjustments presented in respect of the Transaction including the Transaction-related Divestments and the Related Financing include (i) the elimination of business transactions between Bayer and Monsanto, (ii) the presentation of the Transaction using the acquisition method of accounting for the business combination in accordance with IFRS 3 ("Business Combinations"), (iii) the elimination of the income and expenses as well as the assets and liabilities relating to the Transaction-related Divestments and (iv) the financing of the Transaction by the Loan Facilities Agreement reduced by the net proceeds of the Mandatory Convertible Notes, the Exchangeable Bonds, the Temasek Investment and the Offering as well as the applicable portion of the net proceeds from the Divestments.

The Pro Forma Financial Information is presented in euros (€). Amounts are stated in millions of euros except where otherwise indicated, which may lead to rounding discrepancies. The amounts presented in the tables of the Pro Forma Financial Information were rounded according to established commercial principles. Therefore additions of the amounts may lead to amounts that deviate from those shown in the tables.

9.3.2 Overview of Covestro Divestments

At the end of September 2017, Bayer lost control of its subsidiary Covestro, due to the sale of Covestro Shares and the signing of a control termination agreement. As a result of the Loss of Control, Covestro was no longer required to be fully consolidated in Bayer's consolidated financial statements. Therefore, the assets and liabilities of Covestro, including the carrying amount of the noncontrolling interest, were derecognized as of the date of the Loss of Control. The direct interest of 24.6% in Covestro at that time was measured at fair value and accounted for using the equity method. Following a further sale of Covestro Shares in January 2018, Bayer held a direct interest of 14.2% in Covestro as of March 31, 2018. In May 2018, Bayer acquired a 6.8% interest in Covestro from Bayer Pension Trust e.V. (the "**Bayer Pension Trust**") and sold 14.2% of Covestro Shares. Following these transactions Bayer's current interest in Covestro of 6.8% is accounted for as an other financial asset. The remaining interest in Covestro is held with the intention to repay the Exchangeable Bonds.

9.3.3 Overview of Transaction and Related Financing

On September 14, 2016, Bayer and Monsanto signed a Merger Agreement. As of the closing of the transaction, KWA Investment Co., a wholly owned subsidiary of Bayer, will be merged with and into Monsanto and each share of common stock of Monsanto Company will be converted into the right to receive US$128.00 in cash, without interest. As of September 14, 2016, the purchase price amounted to US$56 billion.

Bayer intends to finance the Transaction with a combination of debt and equity as well as with proceeds from the Covestro Divestments and Transaction-related Divestments. As a first step, the Loan Facilities Agreement in the amount of US$56.9 billion (€46.2 billion) was committed upon the signing of the Merger Agreement. As of March 31, 2018, the funding required to complete the Transaction amounted to a total of US$56.4 billion (€45.8 billion) based on the number of shares in Monsanto outstanding as of February 28, 2018. Net proceeds of approximately US$13.5 billion (€11.7 billion) have already been raised through the issuance of the Mandatory Convertible Notes (US$4.2 billion (€3.96 billion)), the issuance of the Exchangeable Bonds (US$1.2 billion (€1.05 billion)), the sale of Covestro Shares completed in January 2018 (US$1.9 billion (€1.5 billion)), the Temasek Investment (US$3.7 billion (€3.0 billion)) and the sale of Covestro Shares completed in May 2018 (US$2.5 billion (€2.1 billion, including the related income tax expense)), and were used to reduce the undrawn commitments under the Loan Facilities Agreement to US$43.4 billion (€35.3 billion) prior to completion of the Transaction. For purposes of the Pro Forma Financial Information, the above-mentioned net proceeds reduced the amount which needs to be financed under the Loan Facilities Agreement to US$42.9 billion (€34.9 billion). Bayer intends to use the net proceeds from the Offering in the amount of US$7.4 billion (€6.0 billion) (including the related income tax refund) to repay amounts drawn down under Loan Facilities Agreement. Furthermore, in connection with the Transaction, Bayer entered into the Transaction-related Divestments and under the Loan Facilities Agreement is required to use the aggregate net proceeds US$7.6 billion (€6.1 billion) from the Transaction-related Divestments to reduce the amount outstanding under the Loan Facilities Agreement. As a result the Loan Facilities Agreement would be reduced to US$28.5 billion (€23.1 billion), of which US$28.0 billion (€22.7 billion) remain drawn to finance the Transaction.

For purposes of the Pro Forma Financial Information, the Transaction is therefore assumed to be financed by the Loan Facilities Agreement reduced by the net proceeds of the Mandatory Convertible Notes, the Exchangeable Bonds, the Temasek Investment and the Offering as well as the applicable portion of the net proceeds from the Divestments, all of which are therefore presented as pro forma adjustments. The further refinancing of the Loan Facilities Agreement through planned debt capital markets transactions, which, subject to market conditions, may be launched at any time, are fully independent of the Offering, are not conditional upon one another and may be consummated at different times, is currently not factually supportable and is therefore not considered in this pro forma financial information.

9.3.4 Pro Forma Assumptions

9.3.4.1 Assumptions Related to the Covestro Divestments

9.3.4.1.1 *Assumption: Other Financial Asset*

For purposes of the pro forma income statement for the fiscal year ended December 31, 2017, Covestro has been accounted for as an other financial asset measured at fair value through OCI applying Bayer's interest of 6.8% in Covestro in accordance with IAS 39. For purposes of the pro forma income statement for the three months ended March 31, 2018, Covestro has been accounted for as an other financial asset measured at fair value through profit or loss applying IFRS 9. For purposes of the pro forma statement of financial position as of March 31, 2018, Covestro has been accounted for as an other financial asset applying Bayer's current interest of 6.8% in Covestro, whereby the fair value of the Covestro shares as of March 31, 2018, has been assumed as acquisition costs. Bayer's remaining interest in Covestro is held with the intention to repay the Exchangeable Bonds and therefore linked to the Related Financing.

9.3.4.1.2 *Assumption: Elimination of the Income from discontinued operations related to Covestro*

For purposes of the pro forma income statement for the fiscal year ended December 31, 2017, the historical results of Covestro until Loss of Control presented as discontinued operations after income taxes are eliminated as it is assumed that the Loss of Control occurred on January 1, 2017. In addition, the gain from the derecognition of the assets and liabilities of Covestro, including the carrying amount of the noncontrolling interest, the gain from the performance of the shares sold on September 29, 2017, and the gain from the remeasurement of the remaining interest in Covestro recorded in Bayer's consolidated financial statements for the fiscal year ended December 31, 2017, were eliminated.

9.3.4.1.3 *Assumption: Elimination of the Impact of Equity-Method Accounting*

For purposes of the pro forma income statements, the historical results of Covestro presented as equity-method income have been eliminated. The gains from the additional sales of Covestro Shares in January 2018 and May 2018 are assumed to have occurred before closing of the Transaction and are therefore not included in the pro forma income statements. Furthermore, the gain from a purchase price adjustment mechanism linked to the performance of the Covestro Shares sold on September 29, 2017, recorded in Bayer's unaudited interim condensed consolidated financial statements for the three months ended March 31, 2018, was also eliminated.

9.3.4.2 Assumptions Related to the Acquisition of Monsanto

9.3.4.2.1 *Assumption: Date of Acquisition*

For purposes of the pro forma income statements, closing of the Transaction is assumed to have occurred as of January 1, 2017, and for purposes of the pro forma statement of financial position, it is assumed that closing of the Transaction occurred as of March 31, 2018.

9.3.4.2.2 *Assumption: Acquisition-Related Costs*

The non-recurring acquisition related costs of the Transaction of €304 million and the related tax effect of €95 million recorded in Bayer's consolidated financial statement for the fiscal year ended December 31, 2017, and of €58 million and the related tax effect of €18 million recorded in Bayer's unaudited interim condensed consolidated financial statement for the three months ended March 31, 2018, are assumed to have been incurred before closing of the Transaction and are therefore eliminated from the pro forma income statements. The additional non-recurring acquisition related costs that were not recorded as of March 31, 2018, but will occur until completion of the Transaction have been recognized as an additional liability (€15 million) with the corresponding entry to Other reserves in the pro forma statement of financial position as of March 31, 2018. The non-recurring acquisition related costs of Monsanto in respect to the Transaction recognized for the twelve-month period ended November 30, 2017, amounted to €99 million with the related tax effect of €38 million, and to €20 million with the related tax effect of €6 million for the three-month period ended February 28, 2018, and have also been eliminated. The expenses described above are assumed to be tax-deductible.

9.3.4.2.3 *Assumption: Transaction-Related Liabilities*

Due to the Transaction, Monsanto's existing share based payments programs will be mainly accelerated and cash settled. For purposes of the pro forma income statements, it is assumed that the accelerated vesting has occurred before closing of the Transaction and therefore the expenses related to the accelerated vesting are not included in the pro forma income statements. For purposes of the pro forma statement of financial position, it is assumed that the vesting period of these agreements will end on March 31, 2018. The liability resulting from this settlement including the payroll taxes (US$680 million) and the deferred tax assets (US$63 million) are recognized as additional pro forma adjustments as of March 31, 2018, with the corresponding entry to Other reserves.

Monsanto is party to change of control employment security agreements which provide severance benefits upon a qualifying termination of employment within two years following a change in control. For purposes of the pro forma income statements, it is assumed that the severance payments have occurred before closing of the Transaction and therefore the expenses related to the severance payments are not included in the pro forma income statements. A liability of US$40 million and deferred tax assets of US$10 million are recognized as additional pro forma adjustments as of March 31, 2018, with the corresponding entry to Other reserves.

Monsanto is party to a licensing agreement which includes a change of control clause. For purposes of the pro forma income statements, it is assumed that this business transaction occurred before closing. A liability of US$100 million and deferred tax assets of US$25 million are recognized as additional pro forma adjustments in the statement of financial position as of March 31, 2018, with the corresponding entry to Other reserves.

9.3.4.2.4 *Assumption: Transaction-related Divestments*

The businesses related to the Transaction-related Divestments generated sales of €2.2 billion for the fiscal year ended December 31, 2017, and of €0.9 billion for the three months ended March 31, 2018. The assets and liabilities related to the Transaction-related Divestments are presented as assets and liabilities held for sale in Bayer's consolidated statement of financial position as of March 31, 2018, and have been eliminated for pro forma purposes. The aggregate base purchase price for the Transaction-related Divestments amounted to €7.6 billion as of January 1, 2018. Due to the later than expected closing of the Transaction the base purchase price for the Transaction-related

Divestments agreed in October 2017 will be reduced by €0.2 billion in accordance with the relevant divestiture agreements, because the results of the businesses to be divested for the period between January 1, 2018, and closing of the Transaction-related Divestments are for Bayer's benefit. The base purchase price for the Transaction-related Divestments agreed in April 2018 includes a milestone payment of €0.1 billion, which is expected to be paid in 2019. The assumed gross proceeds of €7.3 billion have been reduced by the related income taxes of €1.1 billion, which are assumed to be paid. As a result, net proceeds of €6.1 billion are assumed to be cash effective in 2018 and to have reduced the Loan Facilities Agreement for purposes of the Pro Forma Financial Information. For purposes of the pro forma income statements, it is assumed that the gain from the Transaction-related Divestments has occurred before closing of the Transaction. Therefore, the gain related to the Transaction-related Divestments is not included in the pro forma income statements, but is reflected as an increase in Other reserves in the pro forma statement of financial position.

9.3.4.2.5 *Assumption: Noncontrolling interest*

Fair value adjustments related to the assets and liabilities acquired as well as the respective earnings impacts of these adjustments are not allocated to noncontrolling interest in the pro forma statement of financial position and in the pro forma income statements, respectively.

9.3.4.2.6 *Assumption: Loan Facilities Agreement*

In connection with the Transaction, Bayer as borrower and guarantor and Bayer U.S. Finance II LLC as borrower entered into the US$56.9 billion (€46.2 billion) Loan Facilities Agreement. The Loan Facilities Agreement is denominated in US$ and consists of four facilities with different terms and conditions. As a result, the Loan Facilities Agreement has been considered as a pro forma adjustment.

The Loan Facilities Agreement will bear interest at variable rates in the amount of a US$-LIBOR rate or EURIBOR rate if Bayer requests to draw any loan facility in euro (for a certain interest period selected by Bayer and, if any such rate is below zero, US$-LIBOR/EURIBOR will be deemed to be zero) plus a margin set forth in the Loan Facilities Agreement. The applicable margins depend on the facilities utilized, on the number of months elapsed after the date of the Loan Facilities Agreement, and on Bayer's long-term credit rating. The Loan Facilities Agreement may be used to finance the purchase price for the Transaction and other related payments, including fees and expenses, as well as to refinance indebtedness of the Monsanto group.

The pro forma adjustments in respect of the Loan Facilities Agreement are based on the following assumptions:

- For purposes of the pro forma income statements, it is assumed that the Loan Facilities Agreement was drawn on January 1, 2017. For purposes of the pro forma statement of financial position, the Loan Facilities Agreement is assumed to have been drawn on March 31, 2018.
- The Loan Facilities Agreement will only be drawn in the amount necessary, i.e., deducting the net proceeds of the Mandatory Convertible Notes, the net proceeds of the Exchangeable Bonds, the net proceeds of the Temasek Investment, the applicable portion of the net proceeds from Divestments exceeding the €5 billion threshold and the net proceeds of the Offering, plus the related transaction costs of the Loan Facilities Agreement. The amount of €22.7 billion will be recognized as noncurrent financial liabilities in the pro forma statement of financial position as of March 31, 2018.
- The interest expenses due to the Loan Facilities Agreement are presented in the pro forma income statements for the fiscal year ended December 31, 2017, and for the three months ended March 31, 2018, i.e., for a total period of fifteen months. Based on this duration and certain other assumptions, which Bayer considers to be reasonable, Bayer has calculated an average nominal interest rate of approximately 2.8% p.a. for fiscal year 2017, and an average nominal interest rate of approximately 2.8% p.a. for the three months ended March 31, 2018, for the Loan Facilities Agreement. Applying the effective interest method, these nominal interest rates including the debt issuance costs, resulted in an effective interest rate of 3.7% p.a. The respective financial expenses, which are included in the pro forma income statements, have been calculated based on this interest rate.
- One-time fees and commitments fees relating to the Loan Facilities Agreement in the amount of €214 million for the fiscal year ended December 31, 2017, and of €65 million for the three months ended March 31, 2018, are recognized in Bayer´s historical financial information. The one-time fees are reflected in the pro forma adjustment for interest expenses as amortized debt issuance costs,

and are therefore eliminated from the historical financial information. Similarly, as there would have been no obligation to pay commitment fees, if the Loan Facilities Agreement had been drawn on January 1, 2017, these fees are also eliminated.

- In addition, Bayer presumed full tax deductibility of financing costs and applied a tax rate of 25%, which represents the blended tax rate of the companies to which the financing will be allocated when the Transaction is closed.

9.3.4.2.7 *Assumption: Mandatory Convertible Notes*

On November 22, 2016, Bayer issued the Mandatory Convertible Notes. The Mandatory Convertible Notes are unconditionally and irrevocably guaranteed by Bayer and must be mandatorily converted into shares of Bayer. The net proceeds from the issuance of the Mandatory Convertible Notes were required to be used for the early replacement of a portion of the undrawn syndicated Loan Facilities Agreement. An amount of €3,300 million of the Mandatory Convertible Notes is accounted for as equity and an amount of €528 million as liabilities, €305 million thereof as noncurrent liabilities, in the consolidated statement of financial position as of March 31, 2018. Furthermore, deferred tax assets in the amount of €151 million are recognized as of March 31, 2018.

9.3.4.2.8 *Assumption: Exchangeable Bonds*

On June 14, 2017, Bayer AG issued the Exchangeable Bonds. The principal amount of the Exchangeable Bonds may either be settled in cash or by delivery of Covestro Shares or by a combination thereof. The issue price was fixed at 105.25% of the principal amount and the initial exchange price at €80.93. The net proceeds from the issuance of the Exchangeable Bonds were required to be used for the early replacement of a portion of the undrawn syndicated Loan Facilities Agreement. Assuming the Exchangeable Bonds had been issued as of January 1, 2017, the impact of the fair value adjustment necessary to the pro forma income statement for the twelve-months ended December 31, 2017, would approximately equal the expenses recognized in Bayer's consolidated income statement for the year ended December 31, 2017. Therefore, no adjustment has been made in the pro forma income statements. The Exchangeable Bonds are presented as noncurrent liabilities in the consolidated statement of financial position as of March 31, 2018. The impact of the fair value adjustment for the three months ended March 31, 2018, is already recognized in Bayer's historical financial information. Bayer's remaining interest in Covestro is held with the intention to repay the Exchangeable Bonds due in 2020.

9.3.4.2.9 *Assumption: Temasek Investment*

On April 23, 2018, Bayer AG closed a transaction involving a capital increase out of authorized capital against cash contributions and excluding the subscription rights of existing Bayer shareholders by way of issuing 31 million new shares for total gross proceeds of €3.0 billion (US$3.7 billion) to a subsidiary of Temasek Holdings (Private) Limited, which is wholly-owned by the Government of Singapore. The net proceeds from the Temasek Investment were required to be used for the early replacement of a portion of the undrawn syndicated Loan Facilities Agreement and are therefore related to the financing of the Transaction. As a result these net proceeds have been considered as pro forma adjustment. For purposes of the pro forma income statements, it is assumed that the Temasek Investment took place on January 1, 2017. For purposes of the pro forma statement of financial position, it is assumed that the Temasek Investment occurred on March 31, 2018. The transaction costs for the Temasek Investment in the amount of €0.3 million were recognized directly in equity in accordance with IFRS. Following the Temasek Investment, Bayer's common stock increased by 31,000,000 shares to a total of 903,467,808 shares.

9.3.4.2.10 *Assumption: Impact of the Divestments on the Loan Facility Agreement*

The Loan Facilities Agreement provides that the commitments thereunder must be reduced by the net proceeds of certain divestments to the extent the aggregate proceeds of such divestments exceed €5.0 billion for the period from signing the Loan Facilities Agreement until the amounts are drawn. As of the date of this Pro Forma Financial Information, the aggregate net proceeds after income taxes to be considered for these purposes amounted to €14.8 billion (US$18.1 billion) and resulted from the Divestments. The net proceeds from the Divestments are considered cash effective as of closing of the Transaction. As a result, the Loan Facilities Agreement drawn is presented as having been reduced by €9.8 billion (US$12.0 billion) and the corresponding cash and cash equivalents of €9.8 billion (US$12.0 billion) are used to finance the Transaction. It is further assumed, that the amount of aggregate net proceeds from the Divestments not exceeding the described €5.0 billion threshold will not be used to finance the Transaction.

9.3.4.2.11 *Assumption: Offering*

Bayer intends to use the net proceeds of the Offering to repay amounts drawn down under the Loan Facilities Agreement in connection with the Transaction.

The pro forma adjustments in respect of the Offering are based on the following significant assumptions:

- For purposes of the pro forma income statements, it is assumed that the Offering took place on January 1, 2017. For purposes of the pro forma statement of financial position, it is assumed that the Offering occurred on March 31, 2018.
- Bayer will issue 74,604,156 New Shares. The subscription price will amount to €81.00 per share. Following the implementation of the Offering, based on the assumption that all shares are subscribed for and the implementation of the capital increase through the issuance of 74,604,156 shares against contribution in cash was registered with the commercial register, Bayer's common stock will increase by 74,604,156 shares to a total theoretical weighted average number of shares of 978,071,964 as of March 31, 2018. The net proceeds of the Offering will amount to €5,974 million, assuming a tax refund of €31 million in respect of the transaction costs, and will be used to repay amounts drawn down under the Loan Facilities Agreement in connection with the Transaction.

The transaction costs for the Offering in the amount of €69 million, net of taxes, were recognized directly in equity in accordance with IFRS. The assumed tax refund in respect of the transaction costs (€31 million) are assumed to have increased Cash and cash equivalents.

9.3.5 Pro Forma Presentation

9.3.5.1 Pro Forma Presentation of the Covestro Divestments

At the end of September 2017, Bayer lost control of its subsidiary Covestro due to the sale of shares and the signing of a control termination agreement. Therefore in accordance with IFRS 10 ("Consolidated Financial Statements") the assets and liabilities of Covestro, including the carrying amount of the noncontrolling interest, were derecognized at the date control was lost. The Covestro business meets the requirement for being reported as discontinued operation in accordance with IFRS 5 ("Non-current assets held for sale and Discontinued Operations"). Therefore, the results from the Covestro business until the date of Loss of Control are presented as income from discontinued operations after income taxes in the consolidated financial statements of Bayer for the fiscal year ended December 31, 2017. The Loss of Control of Covestro resulted in a pre-tax gain on disposal in the amount of €519 million.

As Bayer still exercised significant influence over Covestro after the Loss of Control, the remaining interest of 24.6% in Covestro was classified as an associated company and accounted for using the equity-method. The interest at that point in time was recognized at fair value assuming a share price of €72.75. The resulting pre-tax gain of €2,382 million, the resulting pre-tax gain on disposal and the related income taxes were presented as income from discontinued operations after income taxes in the consolidated income statement of Bayer for the fiscal year ended December 31, 2017.

In accordance with IAS 28 and IFRS 3 Bayer performed a purchase price allocation in respect of the remaining interest in Covestro as of September 30, 2017. The purchase price allocation and the subsequent accounting for the implicit goodwill are performed in accordance with the requirements of IFRS 3 "Business Combinations", IAS 36 "Impairment of Assets", and IAS 38 "Intangible Assets". IFRS generally requires all assets, liabilities and contingent liabilities to be measured at fair value at the time of acquisition ("purchase price allocation"). This includes in particular intangible assets, property, plant and equipment and inventories. The results from the purchase price allocation and the related tax impacts are presented in Bayer's equity-method result.

Following a further sale of Covestro Shares in January 2018, Bayer's direct interest in Covestro was reduced to 14.2%. Bayer still exercised significant influence over Covestro and therefore accounted for the direct interest in Covestro as an equity-method investment in the three months ended March 31, 2018.

In May 2018, Bayer acquired 6.8% of Covestro Shares from the Bayer Pension Trust and sold 14.2% of Covestro Shares. Following these transactions Bayer's interest in Covestro has been reduced to 6.8%, which is accounted for as an other financial asset measured at fair value through profit or loss.

For purposes of the Pro Forma Financial Information, Covestro is accounted for as an other financial asset applying Bayer's current interest of 6.8% in Covestro since January 1, 2017. As a result the income from discontinued operations related to Covestro was eliminated in the pro forma income statement for the fiscal year ended

December 31, 2017. The Equity-method result of Covestro recorded in Bayer's consolidated income statement for the fiscal year ended December 31, 2017, and for the three months ended March 31, 2018, was also eliminated.

9.3.5.2 Pro Forma Presentation of the Acquisition of Monsanto

9.3.5.2.1 *Accounting for the Acquisition*

The Transaction is accounted for as a business combination in accordance with IFRS 3. According to IFRS 3, the actual initial consolidation of a business combination takes place at the time of acquisition, i.e., the time at which the acquiring company takes control of the acquired company or acquired business operation.

For purposes of the pro forma income statements, the pro forma initial consolidation of Monsanto was performed as of January 1, 2017, and for purposes of the pro forma statement of financial position, the pro forma initial consolidation of Monsanto was performed as of March 31, 2018.

9.3.5.2.2 *Preliminary Purchase Price Allocation*

The Transaction is accounted for as a business combination in accordance with IFRS 3. IFRS generally requires all assets, liabilities and contingent liabilities to be measured at fair value at the time of acquisition. This includes in particular intangible assets that were not recognized in Monsanto's consolidated financial statements to date (e.g., existing technologies (such as germplasm, traits, product- and process- related technologies), in process R&D ("**IPR&D**"), trademarks and customer relationships).

For purposes of the Pro Forma Financial Information, the purchase price allocation of Monsanto was performed on the basis of a preliminary valuation of the acquired net assets at fair value as of March 31, 2018. The income statement effects from the development of the preliminary purchase price allocation were taken into account in the pro forma income statements for the fiscal year ended December 31, 2017 and for the three months ended March 31, 2018. For the period between March 31, 2018, and the closing of the Transaction, it is assumed that the fair value of the net assets acquired remains unchanged.

This preliminary purchase price allocation is based on the most current available information using certain estimates and assumptions in order to assess the fair value of the assets acquired and liabilities assumed. The final purchase price allocation will be carried out based on the actual total consideration transferred and the fair values of the acquired net assets as of the actual future acquisition date (closing). Therefore, the final purchase price allocation may differ significantly from the preliminary purchase price allocation performed for purposes of the Pro Forma Financial Information.

9.3.5.2.3 *Acquisition-Related Costs*

In accordance with IFRS 3.53, the acquisition related costs in connection with the Transaction were accounted for as expenses.

9.3.5.2.4 *Preliminary Total Consideration Transferred*

As announced by Bayer on September 14, 2016, an indirect wholly owned subsidiary of Bayer will be merged with and into Monsanto and each share of Monsanto Company will be converted into the right to receive US$128.00 in cash, without interest. For the purposes of the Pro Forma Financial Information the preliminary total consideration transferred by Bayer in connection with this acquisition was determined as follows:

Monsanto's shares issued as of February 28, 2018 (in million)	615
Monsanto's Treasury shares as of February 28, 2018 (in million)	174
Monsanto's shares outstanding as of February 28, 2018 (in million)	**441**
Offering price per share outstanding (US$)	128
Preliminary cash consideration transferred (in US$ million)[4]	56,474
Exchange rate (€1/US$) as of March 31, 2018	1.2319
Preliminary cash consideration transferred (in € million)[4]	**45,845**
Basis adjustment for FX-hedging result (in € million)	312
Preliminary total consideration transferred (in € million)[4]	**46,157**

9.3.5.2.5 *Preliminary Goodwill*

Considering the pro forma assumptions described in this section, the preliminary total consideration for Monsanto (excluding interests in Monsanto previously held by Bayer) amounted to €46,089 million. Compared with

[4] Including interests in Monsanto previously held by Bayer (measured at US$128.00 per share was US$83 million (€68 million)).

the net fair value amount of identifiable assets acquired and liabilities assumed amounting to €23,971 million, the total consideration transferred resulted in pro forma goodwill of €22,185 million. This goodwill is recognized in the pro forma statement of financial position as of March 31, 2018, and derived as follows:

	March 31, 2018
	€ million
Historical assets of Monsanto February 28, 2018	20,500
Elimination of noncontrolling interest	(17)
Elimination of historical goodwill of Monsanto	(3,329)
Fair value adjustments to intangible assets	24,528
from existing technologies	*15,963*
from IPR&D	*3,845*
from marketing- and customer-related intangible assets	*4,501*
from other intangible assets	*219*
Fair value adjustments to property, plant and equipment	1,080
Fair value adjustment to inventories	1,940
Adjustment of deferred tax assets	103
Total identifiable assets acquired at fair value	**44,807**
Historical liabilities of Monsanto	13,519
Fair value adjustments to deferred revenue	(50)
Fair value adjustment to financial liabilities	93
Transaction-related liabilities	666
Adjustment of deferred tax liabilities	6,607
Total liabilities assumed at fair value	**20,835**
Fair value of previously held interest by Bayer in Monsanto	68
Preliminary total consideration for Monsanto (excluding previously held interest by Bayer in Monsanto)	46,089
Net fair value amount of acquired equity	23,971
Goodwill from the acquisition of Monsanto	**22,185**

The final goodwill resulting from the Transaction will be determined by the actual purchase price allocation that will be carried out as of the actual future acquisition date.

9.3.5.2.6 Overview of Significant Assumptions used for the Preliminary Purchase Price Allocation and Resulting Impacts on the Pro Forma Income Statements

	Fair Value Adjustments as of March 31, 2018	Useful life	Amortization and depreciation for the twelve-month period	Amortization and depreciation for the three-month period
	€ million	years	€ million	€ million
Intangible assets				—
from existing technologies	*15,963*	9 to 30 years	*1,253*	*288*
from IPR&D	*3,845*	n/a	—	—
from marketing- and customer-related intangible assets	*4,501*	10 to 30 years	*178*	*44*
from other intangible assets	*219*	1 to 15 years	*122*	*28*
Property, plant and equipment	1,080	4 to 25 years	*77*	*18*

9.3.5.2.7 *Income Taxes*

The U.S. Tax Reform is expected to have a significant impact on future effective tax rates for U.S. entities. Certain assumptions have been made to estimate the effective tax rates for the future as there are neither reliable interpretations nor basis available currently. All adjustments identified have been allocated to legal entities and deferred taxes have been calculated using the respective legal entity's actual tax rate for fiscal year 2018, which

ranged from 0% to 35% with the exception of U.S. legal entities. The tax rates applied for the U.S. legal entities reflect those future rates after US tax reform between 23.77% and 24.95%. The actual tax rate in the future may differ from those applied here.

9.3.5.2.8 *Transaction-related Divestments*

The businesses related to the Transaction-related Divestments generated sales of €2.2 billion for the fiscal year ended December 31, 2017, and of €0.9 billion for the three months ended March 31, 2018. The assets and liabilities related to the Transaction-related Divestments are presented as assets and liabilities held for sale in Bayer's consolidated statement of financial position as of March 31, 2018, and have been eliminated for pro forma purposes. The aggregate base purchase price of €7.6 billion for the Transaction-related Divestments will be reduced as a result of the Transaction not closing by January 1, 2018. Specifically, due to the later than expected closing of the Transaction, the base purchase price for the Transaction-related Divestments agreed in October 2017 will be reduced by €0.2 billion in accordance with the relevant divestiture agreements, because the results of the businesses to be divested for the period between January 1, 2018, and closing of the Transaction-related Divestments are for Bayer's benefit. In addition, the base purchase price for the Transaction-related Divestments agreed in April 2018 includes a milestone payment of €0.1 billion, which is expected to be paid in 2019, and is therefore not taken into account in calculating the assumed gross proceeds. The assumed gross proceeds of €7.3 billion have been reduced by the related income taxes of €1.1 billion, which are assumed to be paid. As a result, net proceeds of €6.1 billion are assumed to be cash effective in 2018 and to have reduced the Loan Facilities Agreement for purposes of the Pro Forma Financial Information. For purposes of the pro forma income statements, it is assumed that the gain from the Transaction-related Divestments has occurred before closing of the Transaction. Therefore, the gain related to the Transaction-related Divestments is not included in the pro forma income statements, but is reflected as an increase in Other reserves in the pro forma statement of financial position. The total net proceeds of the Transaction-related Divestments of €6.1 billion are required to be used to reduce the amount of the Loan Facilities Agreement.

The Transaction-related Divestments are factually supportable and directly attributable to the Transaction. As a result, the Transaction-related Divestments are reflected as pro forma adjustments in the pro forma statement of financial position and in the pro forma income statements. The pro forma adjustments do not necessarily reflect the financial position or results of operations of the Transaction-related Divestments as if these businesses were stand-alone businesses. Certain allocations, which are considered reasonable by Bayer management, were made to determine these pro forma adjustments.

For purposes of the pro forma income statements, it is assumed that the Transaction-related Divestments had taken place on January 1, 2017. For purposes of the pro forma statement of financial position, it is assumed that the Transaction-related Divestments had taken place on March 31, 2018.

9.3.5.3 Pro Forma Presentation of the Financing Related to the Transaction

Since the Loan Facilities Agreement, the Mandatory Convertible Notes, the Exchangeable Bonds, the Temasek Investment, the Divestments and the Offering are directly attributable to the financing necessary for the completion of the Transaction, these financing transactions were included in the Pro Forma Financial Information.

9.4 Explanation of Pro Forma Financial Information

Bayer AG
Pro Forma Income Statement
for the fiscal year ended December 31, 2017

	Historical Financials				Pro forma Adjustments Covestro	Note	Pro forma Adjustments Monsanto	Note	Pro forma Financials
	Bayer	Less Covestro[5]	Plus Monsanto	Aggregated					
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
Net sales	**35,015**	–	**12,641**	**47,656**	**–**		**(2,507)**	b,d,h	**45,149**
Cost of goods sold	(11,382)	–	(5,469)	(16,851)	–		(2,285)	a,b,d, g,i	(19,136)
Gross profit	**23,633**	–	**7,172**	**30,805**	**–**		**(4,792)**		**26,013**
Selling expenses	(11,116)	–	(1,859)	(12,975)	–		205	a,b,i	(12,770)
Research and development expenses	(4,504)	–	(1,409)	(5,913)	–		169	a,b,i	(5,744)
General administration expenses	(2,026)	–	(1,136)	(3,162)	**–**		384	b,i	(2,778)
Other operating income	864	–	770	1,634	**–**		(5)	b	1,629
Other operating expenses	(948)	–	(662)	(1,610)	–		99	i	(1,511)
EBIT	**5,903**	–	**2,875**	**8,778**	**–**		**(3,940)**		**4,838**
Equity-method income (loss)	20	51	(15)	(46)	–		–		(46)
Financial income	289	–	979	1,268	**19**	a	–		1,287
Financial expenses	(1,635)	–	(1,273)	(2,908)	–		(577)	c,e,j,k	(3,485)
Financial result	**(1,326)**	51	**(309)**	**(1,686)**	**19**		**(577)**		**(2,244)**
Income before income taxes	**4,577**	51	**2,567**	**7,093**	**19**		**(4,517)**		**2,595**
Income taxes	(1,329)	(1)	(540)	(1,868)	–		1,120	b,f,g,h, i,j,k	(748)
Income from continuing operations after income taxes	**3,248**	50	**2,027**	**5,225**	**19**		**(3,397)**		**1,847**
of which attributable to noncontrolling interest	(1)	–	12	11	–				11
of which attributable to Bayer AG stockholders (net income)	**3,249**	50	**2,014**	**5,213**	**19**		**(3,397)**		**1,835**
Income from discontinued operations after income taxes	**4,846**	**4,468**	–	**378**	–		**–**		**378**
of which attributable to noncontrolling interest	759	759	–	0	–		**–**		–
of which attributable to Bayer AG stockholders (net income)	**4,087**	**3,709**	–	**378**	–		**–**		**378**
Income after income taxes	**8,094**	**4,518**	**2,027**	**5,603**	**19**		**(3,397)**		**2,225**

[5] Represents the elimination of the Covestro related Equity-method income (€51 million) and the related tax expense (€1 million) already recorded in Bayer's historical financial information and the elimination of the net income of Covestro of €1,459 million, the gain of €519 million resulting from the derecognition of the assets and liabilities of Covestro, the gain of €2,382 million on the initial recognition of the remaining interest in Covestro as an Equity-method investment and a gain of €187 million from the performance of the shares sold on September 29, 2017, as well as the related tax expense of €79 million presented in Income from discontinued operations after income taxes.

	Historical Financials				Pro forma Adjustments		Pro forma Adjustments		Pro forma
	Bayer	Less Covestro	Plus Monsanto	Aggregated	Covestro	Note	Monsanto	Note	Financials
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
of which attributable to noncontrolling interest	758	759	12	11	–		–		11
of which attributable to Bayer AG stockholders (net income)	**7,336**	**3,759**	**2,014**	**5,591**	**19**		**(3,397)**		**2,213**
	€		€		€		€		€
Earnings per share	€		€		€		€		€
From continuing operations									
Basic	3.73							I	1.88
Diluted	3.73							I	1.88
From discontinued operations									
Basic	4.68								0.38
Diluted	4.68								0.38
From continuing and discontinued operations									
Basic	8.41							I	2.26
Diluted	8.41							I	2.26

The following pro forma adjustment with a recurring effect has been made for the Covestro Divestments:

a) For purposes of the Pro Forma Financial Information, Covestro is accounted for as an other financial asset measured at fair value through OCI applying Bayer's current interest of 6.8% in Covestro since January 1, 2017. Therefore, the change in fair value has no impact on the pro forma income statement for the fiscal year ended December 31, 2017. Dividends received from Covestro of €19 million have been recognized in Financial Income.

The following pro forma adjustments with a recurring effect have been made for the Transaction:

a) Recognition of the impact of the recurring effects of the preliminary purchase price allocation performed. The adjustments made relate to the amortization of intangible assets in the amount of €1,553 million which result from the fair value step ups. Furthermore, depreciation expenses of €77 million associated with the fair value step up of Property, plant and equipment have been considered. These additional amortization and depreciation expenses recognized in connection with the preliminary purchase price allocation are allocated to Cost of goods sold (€1,296 million), Selling expenses (€178 million) and Research and development expenses (€156 million).

b) Represents the elimination of the income and expenses related to the businesses subject to the Transaction-related Divestments. The adjustments consist of the elimination of Net sales (€2,232 million), Cost of goods sold (€905 million), Selling expenses (€369 million), Research and development expenses (€319 million), General administration expenses (€110 million), Other operating income (€5 million) and Income tax expenses (€161 million).

c) Represents the reduction of Financial expenses by €4 million as a result of the amortization of the fair value step up of financial liabilities related to the preliminary purchase price allocation performed.

d) Represents the elimination of inter-company transactions between Bayer and Monsanto (Net sales and Cost of goods sold each €221 million (results in a decrease of Net sales and Cost of goods sold) as well as inter-company profit elimination in the amount of €4 million (results in an increase of Cost of goods sold)).

e) Reflects the interest expenses (including the amortization of debt issuance costs) in respect of the Loan Facilities Agreement in the amount of €919 million as if the Loan Facilities Agreement had been drawn as of January 1, 2017.

f) Recognition of tax effects on the adjustments a) tax income of €416 million and c) tax expense of €1 million as well as e) tax income of €230 million, described above using the tax rates of the affected entities, which range from 23.77% to 29.4% for the deferred tax impacts relating to the purchase price allocation adjustments performed and Bayer's blended tax rate of 25% for the calculation of the income and deferred taxes associated with the financing.

The following pro forma adjustments with a non-recurring effect have been made for the Transaction:

g) The adjustment reflects the increase of Cost of goods sold of €2,121 million related to the subsequent measurement of the fair value step up of the inventories in connection with the preliminary purchase price allocation. It is assumed that the inventory step up will be fully recognized within one year (based on expected inventory turnover). The related tax income in the amount of €537 million has also been considered. The tax effect has been calculated using an average tax rate of 25.3% for the deferred tax impacts relating to this purchase price allocation adjustment.

h) The adjustment reflects the decrease in Net sales of €54 million related to the subsequent measurement of the fair value step down of deferred revenues. It is assumed that the step down will be fully recognized within one year. The related increase in tax income in the amount of €15 million has also been considered. The tax effect has been calculated using a blended tax rate of 27% for the deferred tax impacts relating to this purchase price allocation adjustment.

i) Represents the elimination of the previously recorded non-recurring acquisition related costs of Bayer of €304 million (thereof €10 million recognized in Cost of goods sold, €6 million recognized in Research and development expenses, €14 million recognized in Selling expenses and €274 million recognized in General administration expenses) and of Monsanto of €99 million (recognized in Other operating expenses) of the Transaction, which would not have been incurred, if the Transaction had already been completed as of January 1, 2017. These acquisition-related costs are assumed to be tax deductible. Applying a tax rate of 31.2% for Bayer's acquisition related costs and a tax rate of 38.25% for Monsanto's acquisition related costs, the respective tax adjustment amounts to an expense of €133 million.

j) Represents the elimination of one time and commitments fees relating to the Loan Facilities Agreement in the amount of €214 million, which are recognized in Bayer´s historical financial information as Financial expenses. Applying an average tax rate of 30.8% the respective tax adjustment amounts to an expense of €66 million.

k) Represents the elimination of the expense of €124 million in respect of the foreign exchange hedges entered into against the EURO / USD exchange rate fluctuations associated with the Monsanto purchase price, which are recognized as Financial expenses. The respective tax adjustment amounts to an expense of €39 million, applying a tax rate of 31.2%.

Earnings per share ("**EPS**") in the Pro forma Financials:

l) The EPS for the Pro Forma Financials have been calculated assuming a theoretical weighted average number of shares of 977,711,964. The Pro Forma Financial Information assumes that the Temasek Investment and the Offering were implemented as of January 1, 2017, and as a result the weighted average number of shares of Bayer AG of 872,107,808 as reported in the consolidated financial statements of Bayer for the fiscal year ended December 31, 2017, has been increased by 31,000,000 shares related to the Temasek Investment and 74,604,156 shares related to the Offering.

Bayer AG
Pro Forma Income Statement
for the Three Months ended March 31, 2018

	Historical Financials				Pro forma		Pro forma		
	Bayer	Less Covestro[6]	Plus Monsanto	Aggregated	Adjustments Covestro	Note	Adjustments Monsanto	Note	Pro forma Financials
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
Net sales	**9,138**	–	**3,895**	**13,033**	**–**		**(960)**	b,d	**12,073**
Cost of goods sold	(2,909)	–	(1,528)	(4,437)	–		59	a,b,d,g	(4,378)
Gross profit	**6,229**	–	**2,366**	**8,595**	**–**		**(901)**		**7,694**
Selling expenses	(2,509)	–	(418)	(2,927)	–		50	a,b,g	(2,877)
Research and development expenses	(1,040)	–	(319)	(1,359)	–		55	a,b,g	(1,304)
General administration expenses	(427)	–	(230)	(657)	–		59	b,g	(598)
Other operating income	152	–	98	250	–		(5)	b	245
Other operating expenses	(95)	–	(89)	(184)	–		20	g	(164)
EBIT	**2,310**	–	**1,408**	**3,718**	**–**		**(722)**		**2,996**
Equity-method income (loss)	71	80	(5)	(14)	–		–		(14)
Financial income	370	275	216	311	–		–		311
Financial expenses	(311)	–	(310)	(621)	(85)	a	(143)	c,e,h	(849)
Financial result	**130**	**355**	**(99)**	**(324)**	**(85)**		**(143)**		**(552)**
Income before income taxes	**2,440**	**355**	**1,309**	**3,394**	**(85)**		**(865)**		**2,444**
Income taxes	(494)	(5)	(254)	(743)	–		206	b,f,g,h	(537)
Income from continuing operations after income taxes	**1,946**	350	**1,054**	**2,650**	**(85)**		**(659)**		**1,906**
of which attributable to noncontrolling interest	–	–	3	3					3
of which attributable to Bayer AG stockholders (net income)	**1,946**	**350**	**1,051**	**2,647**	**(85)**		**(659)**		**1,903**
Income from discontinued operations after income taxes	**8**	**8**	–	**–**	**–**		**–**		**–**
of which attributable to noncontrolling interest	–	–	–	–	–		**–**		–
of which attributable to Bayer AG stockholders (net income)	**8**	**8**	–	**–**	–		**–**		**–**
Income after income taxes	**1,954**	**358**	**1,054**	**2,650**	**(85)**		**(659)**		**1,906**
of which attributable to noncontrolling interest	–	–	3	3	–		–		3
of which attributable to Bayer AG stockholders (net income)	**1,954**	**358**	**1,051**	**2,647**	**(85)**		**(659)**		**1,903**
	€		€		€		€		€
Earnings per share	€		€		€		€		€
From continuing operations									
Basic	2.23		–	**–**	–		–	i	1.95
Diluted	2.23		–	**–**	–		–	i	1.95
From discontinued operations									
Basic	0.01		–	**–**	–		–		–
Diluted	0.01		–	**–**	–		–		–
From continuing and discontinued operations									
Basic	2.24		–	**–**	–		–	i	1.95
Diluted	2.24		–	**–**	–		–	i	1.95

[6] Represents the elimination of the Covestro related Equity-method income (€80 million) and the related tax expense (€1 million) already recorded in Bayer's historical financial information, the elimination of the gain of €10 million from the performance of the shares sold on September 29, 2017, as well as the related tax expense of €2 million presented in Income from discontinued operations after income taxes and the elimination of the gain of €275 million and the related tax expense of €4 million from the sale of Covestro shares in January 2018.

The following pro forma adjustment with a recurring effect has been made for the Covestro Divestments:

a) For purposes of the Pro Forma Financial Information, Covestro is accounted for as an other financial asset measured at fair value through profit or loss applying Bayer's current interest of 6.8% in Covestro since January 1, 2018. Therefore, the change in the fair value of the other financial asset of €85 million has been recognized in Financial expenses.

The following pro forma adjustments with a recurring effect have been made for the Transaction:

a) Recognition of the impact of the recurring effects of the preliminary purchase price allocation performed. The adjustments made relate to the amortization of intangible assets in the amount of €360 million which result from the fair value step ups. Furthermore, depreciation expenses of €18 million associated with the fair value step up of property plant and equipment are considered. These amortization/ depreciation adjustments related to purchase price allocation are allocated to Cost of goods sold (€299 million), Selling expenses (€44 million) and Research and development expenses (€35 million).

b) Represents the elimination of the income and expenses related to the businesses subject to the Transaction-related Divestments. The adjustments consist of the elimination of Net sales (€904 million), Cost of goods sold (€301 million), Selling expenses (€90 million), Research and development expenses (€87 million), General administration expenses (€9 million), Other operating income (€5 million) and Income tax expenses (€113 million).

c) Represents the reduction of Financial expenses by €1 million as a result of the amortization of the fair value step up of financial liabilities related to the preliminary purchase price allocation performed.

d) Represents the elimination of inter-company transactions between Bayer and Monsanto (Net sales and Cost of goods sold each €56 million (results in a decrease of Net sales and Cost of goods sold) as well as inter-company profit elimination in the amount of €2 million (results in an increase of Cost of goods sold)).

e) Reflects the interest expenses (including the amortization of debt issuance costs) in respect of the Loan Facilities Agreement in the amount of €209 million as if the Loan Facilities Agreement had been drawn as of January 1, 2017.

f) Recognition of tax effects on the adjustments a) tax income of €85 million and c) tax expense of €0 million as well as e) tax income of €52 million, described above using the tax rates of the affected entities, which range from 23.77% to 29.4% for the deferred tax impacts relating to the purchase price allocation adjustments performed and Bayer's blended tax rate of 25% for the calculation of the income and deferred taxes associated with the financing.

The following pro forma adjustments with a non-recurring effect have been made for the Transaction:

g) Represents the elimination of the previously recorded non-recurring acquisition related costs of Bayer of €58 million (thereof €2 million recognized in Cost of goods sold, €3 million recognized in Research and development expenses, €3 million recognized in Selling expenses and €50 million recognized in General administration expenses) and Monsanto of €20 million (recognized in Other operating expenses) of the Transaction which would not have been incurred, if the Transaction had already been completed as of January 1, 2017. These acquisition-related costs are assumed to be tax deductible. Applying a tax rate of 31.2% for Bayer's acquisition related costs and a tax rate of 29.4% for Monsanto's acquisition related costs, the respective tax adjustment amounts to an expense of €24 million.

h) Represents the elimination of one time and commitments fees relating to the Loan Facilities Agreement in the amount of €65 million which are recognized in Bayer´s historical financial information. Applying a tax rate of 31.2% the respective tax adjustment amounts to an expense of €20 million.

EPS in the Pro forma Financials:

i) The EPS for the Pro Forma Financials have been calculated assuming a theoretical weighted average number of shares of 978,071,964. The Pro Forma Financial Information assumes that the Temasek Investment and the Offering were implemented as of January 1, 2017, and as a result the weighted average number of shares of Bayer AG of 872,467,808 calculated consistently with the principles described in Note 16 of the consolidated financial statements of Bayer for the fiscal year ended December 31, 2017, has been increased by 31,000,000 shares related to the Temasek Investment and 74,604,156 shares related to the Offering.

Bayer AG
Pro Forma Statement of Financial Position
as of March 31, 2018

	Historical Financials				Pro forma Adjustments		Pro forma Adjustments		Pro forma
	Bayer	Less Covestro[7]	Monsanto	Aggregated	Covestro	Note	Monsanto	Note	Financials
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
Noncurrent assets									
Goodwill	14,480		3,329	17,809	–		18,857	a	36,665
Other intangible assets	11,185		1,205	12,390	–		24,528	a	36,919
Property, plant and equipment	7,330		4,786	12,116	–		1,080	a	13,197
Investments accounted for using the equity method	2,574	2,169	83	488	–		–		488
Other financial assets	1,737		707	2,444	1,100	a	(62)	g	3,483
Other receivables	535		306	841	–		–		841
Deferred taxes	4,384		537	4,921	–		108	a,f,h	5,029
	42,225	**2,169**	**10,953**	**51,009**	**1,100**		**44,512**		**96,621**
Current assets									
Inventories	6,402		3,389	9,791	–		1,938	a,b	11,729
Trade accounts receivable	9,498		3,368	12,866	–		(40)	b	12,826
Other financial assets	7,315		40	7,355	–		–		7,355
Other receivables	1,029		630	1,659	–		130	c	1,789
Claims for income tax refunds	461		139	600	–		–		600
Cash and cash equivalents	5,332		1,957	7,289	1,042	a	(7,919)	a,c,d,e	412
Assets held for sale	3,132		25	3,157	–		(3,108)	c	49
	33,169	**–**	**9,547**	**42,716**	**1,042**		**(8,999)**		**34,760**
Total assets	**75,394**	**2,169**	**20,500**	**93,725**	**2,142**		**35,513**		**131,381**
Equity									
Capital stock of Bayer AG	2,117		(12,215)	(10,098)	–		12,485	a,d,e	2,387
Capital reserves of Bayer AG	9,658		9,706	19,364	–		(995)	a,d,e	18,369
Other reserves	26,553	(20)	9,473	36,046	(27)	a	(5,786)	a,b,c,e,f,g,h	30,234
Equity attributable to Bayer AG stockholders	**38,328**	**(20)**	**6,964**	**45,312**	**(27)**		**5,704**		**50,990**
Equity attributable to noncontrolling interest	56		17	73	–		–		73
	38,384	**(20)**	**6,982**	**45,386**	**(27)**		**5,704**		**51,063**

[7] Represents the elimination of the Investments accounted for using the equity method of Covestro in the amount of €2,169 million as well as the related deferred tax liabilities of €20 million for outside basis differences on Covestro with the corresponding decrease in Other reserves.

	Historical Financials				Pro forma Adjustments		Pro forma Adjustments		Pro forma
	Bayer	Less Covestro[19]	Monsanto	Aggregated	Covestro	Note	Monsanto	Note	Financials
	€ million	€ million	€ million	€ million	€ million		€ million		€ million
Noncurrent liabilities									
Provisions for pensions and other post-employment benefits	8,096		312	8,408	–		–		8,408
Other provisions	1,302		292	1,594	–		257	c	1,851
Refund liabilities	146		–	146	–		–		146
Contract liabilities	799		66	865	–		–		865
Financial liabilities	12,273		5,413	17,686	–		22,832	a,e	40,518
Income tax liabilities	482		53	535	–		–		535
Other liabilities	228		79	307	–		–		307
Deferred taxes	586	20	433	999	–		6,641	a,e	7,640
	23,912	**20**	**6,648**	**30,540**	**–**		**29,731**		**60,271**
Current liabilities									
Other provisions	2,194		494	2,688	–		681	f,h	3,368
Refund liabilities	2,519		2,261	4,780	–		–		4,780
Contract liabilities	197		1,333	1,530	–		(50)	a	1,481
Financial liabilities	1,761		1,071	2,832	–		–		2,832
Trade accounts payable	3,943		794	4,737	–		(40)	b	4,697
Income tax liabilities	646		165	811	–		–		811
Other liabilities	1,318		753	2,071	–		–		2,071
Liabilities directly related to assets held for sale	520		–	520	–		(513)	c	7
	13,098	**–**	**6,871**	**19,969**	**–**		**78**		**20,047**
Total equity and liabilities	**75,394**	**–**	**20,500**	**95,894**	**(27)**		**35,513**		**131,381**

The following pro forma adjustment has been made for the Covestro Divestments:

a) Represents the recognition of the other financial asset of €1,100 million and the corresponding decrease in Cash and cash equivalents. The increase in Cash and cash equivalents in the amount of €2,142 million is related to the net proceeds from the sale of Covestro Shares in May 2018 and used to finance the Transaction. The related income taxes (€20 million) are assumed to have reduced Cash and cash equivalents. The loss from the sale in the amount of €7 million and the related tax expense of €20 million have been considered in Other reserves.

The following pro forma adjustments have been made for the Transaction:

a) Recognition of the impact of the preliminary purchase price allocation performed. Bayer has estimated the potential fair value step ups and the related charges for selected assets and liabilities. These adjustments relate to the fair value step ups estimated for the intangible assets of €24,528 million (existing technologies of €15,963 million, IPR&D of €3,845 million, marketing- and customer-related intangible assets of €4,501 million and Other intangible assets of €219 million), Property, plant and equipment (€1,080 million), Inventories (€1,940 million), Financial liabilities noncurrent (€93 million), deferred revenues (recognized as a reduction in Contract liabilities current (€50 million)) as well as to the deferred tax assets of €24 million and deferred tax liabilities of €6,607 million related to the adjustments described above. The goodwill to be recorded amounts to €22,185 million. In addition, the elimination of Monsanto's equity (€6,964 million, thereof minus €12,215 million recognized in Capital stock of Bayer AG, €9,706 million recognized in Capital reserves of Bayer AG and €9,473 million recognized in Other reserves) as well as Monsanto's goodwill (€3,329 million) is presented in this adjustment. Furthermore, the retained earnings will be increased for the corresponding foreign exchange rate hedging of the purchase price recognized in OCI in Bayer's historical consolidated statement of financial position in the amount of €312 million, the respective amount was considered in the preliminary total consideration for Monsanto (€46,089 million). An amount of €45,777 million reduced Cash and cash equivalents.

b) Represents the elimination of inter-company transactions between Bayer and Monsanto. Inter-company profits on inventories in the amount of €2 million (Other reserves decreased accordingly) and inter-company trade accounts receivable of €40 million and inter-company trade accounts payable of €40 million have been eliminated.

c) Reflects the elimination of the assets and liabilities related to the Transaction-related Divestments. The assets and liabilities relating to the businesses subject to the Transaction-related Divestments were presented as Assets held for sale of €3,108 million and Liabilities directly related to assets held for sale of €513 million. The assumed net proceeds of €6,138 million have been presented as Cash and cash equivalents (the corresponding Income tax liabilities current assumed to be paid amounted to €1,135 million). The difference between the net proceeds and the assets and liabilities held for sale of €3,543 million resulting from the Transaction-related Divestments was recognized in Other reserves. Furthermore, the milestone payment of €130 million presented as Other receivables current and a contingent consideration presented as Other provisions noncurrent of €257 million have been recognized with the corresponding decrease in Other reserves of €127 million.

d) Reflects the Temasek Investment. The net proceeds received from the Temasek Investment amount to €3,007 million (thereof €79 million recognized in Capital stock of Bayer AG and €2,928 million recognized in Capital reserves of Bayer AG) with the corresponding increase in Cash and cash equivalents. The transaction costs (€0.3 million) of the Temasek Investment have been recognized in Capital reserves of Bayer AG as a reduction.

e) Reflects the Loan Facilities Agreement financing the Transaction in the amount of €22,739 million, presented as Financial liabilities noncurrent as well as the corresponding increase in Cash and cash equivalents. The Loan Facilities Agreement will only be drawn in the amount necessary, i.e., deducting the proceeds of the Divestments, the Temasek Investment, the Offering less the related transaction costs as well as Mandatory Convertible Notes (€3,956 million) and Exchangeable Bonds (€1,048 million) which were already recognized in Bayer's historical statement of financial position. The deferred tax liabilities for the Loan Facilities Agreement financing amounted to €34 million, which relate to the different treatment of one-time and commitment fees. As a result, Other reserves decreased by €34 million. The gross proceeds from the Offering in the amount of €6,043 million have been reduced by the transaction costs, net of tax, in the amount of €69 million, which were recognized directly in equity in accordance with IFRS and have therefore reduced the Capital reserves of Bayer AG. The assumed tax refund in respect of the transaction costs (€31 million) is assumed to have increased Cash and cash equivalents, applying Bayer's tax rate of 31.2%. Accordingly, the net proceeds received from the Offering amount to €5,974 million (thereof €191 million recognized in Capital stock of Bayer AG and €5,783 million recognized in Capital reserves of Bayer AG) with the corresponding increase in Cash and cash equivalents.

f) Represents the adjustment of Other provisions current relating to the cash settlement of Monsanto's equity awards as well as payroll taxes (totaling €552 million) and the related deferred tax assets (€51 million). As a result, Other reserves decreased by €501 million. This decrease in Other reserves reduced the net assets acquired and as a result Goodwill (€501 million) as well as Other reserves (€501 million) increased. Recognition of the change of control liabilities related to severance payments and a license agreement in Other provisions current (€114 million) and the related deferred tax assets of €28 million. The above described adjustments were considered in the calculation of the Goodwill (refer to a)).

g) Reflects the step up of shares already held in Monsanto in the amount of €6 million recognized in Other financial assets noncurrent, using a share price of US$128.00. As a result, Other reserves increased by €6 million. Subsequently these shares held in Monsanto presented as Other financial assets noncurrent in the amount of €68 million were derecognized as a result of the consolidation of Monsanto. This adjustment was considered in the calculation of the Goodwill (refer to a)).

h) Recognition of non-recurring acquisition related costs not recorded as of March 31, 2018, of €15 million in Other provisions current (resulting in a decrease of Other reserves by €15 million) and the related increase in deferred tax assets in the amount €5 million and Other reserves in the amount of €5 million, applying Bayer´s tax rate of 31.2%.

9.5 Report on the Examination of the Pro Forma Financial Information – Effects of the Covestro Divestments and the Acquisition of Monsanto on the Consolidated Financial Information of Bayer for the Fiscal Year ended December 31, 2017 and as of and for the Three Months Ended March 31, 2018

To Bayer Aktiengesellschaft, Leverkusen

We have examined whether the pro forma financial information as of March 31, 2018, of Bayer Aktiengesellschaft, Leverkusen, (the "Company") has been properly compiled on the basis stated in the pro forma notes and whether this basis is consistent with the accounting policies of the Company as well as the presentation, recognition and measurement principles of the Company. The pro forma financial information comprises pro forma income statements for the periods from January 1, 2017, to December 31, 2017 and from January 1, 2018, to March 31, 2018, a pro forma statement of financial position as of March 31, 2018, as well as pro forma notes.

The purpose of the pro forma financial information is to present the material effects the transactions described in the pro forma notes would have had on the historical consolidated financial statements if the group had existed in the structure created by the transactions throughout the entire reporting periods (pro forma income statements) or at March 31, 2018 (pro forma statement of financial position). As pro forma financial information reflects a hypothetical situation, it is not entirely consistent with the presentation that would have resulted had the relevant transactions actually occurred at the beginning of the reporting periods (pro forma income statements) or at March 31, 2018 (pro forma statement of financial position). Accordingly, we do not provide any assurance about the actual effects of the transactions described in the pro forma notes.

The compilation of the pro forma financial information in accordance with the *IDW Accounting Practice Statement: Preparation of Pro Forma Financial Information (IDW AcPS AAB 1.004) (IDW Rechnungslegungshinweis: Erstellung von Pro-Forma-Finanzinformationen (IDW RH HFA 1.004)*) promulgated by the Institut der Wirtschaftsprüfer in Deutschland e. V. (IDW) is the responsibility of the Company's management.

Our responsibility is, based on our examination, to express an opinion whether the pro forma financial information has been properly compiled on the basis stated in the pro forma notes and whether this basis is consistent with the accounting policies as well as the presentation, recognition and measurement principles of the Company. This also includes the evaluation of the overall presentation of the pro forma financial information. The subject matter of this engagement does neither include an audit of the basic figures including their adjustments to the accounting policies of the Company, nor of the pro forma assumptions stated in the pro forma notes.

We have planned and performed our examination in accordance with the *IDW Auditing Practice Statement: Audit of Pro Forma Financial Information (IDW AuPS 9.960.1) (IDW Prüfungshinweis: Prüfung von Pro-Forma-Finanzinformationen (IDW PH 9.960.1))* promulgated by the Institut der Wirtschaftsprüfer in Deutschland e. V. (IDW) in such a way that material errors in the compilation of the pro forma financial information on the basis stated in the pro forma notes and in the compilation of this basis consistent with the accounting policies as well as the presentation, recognition and measurement principles of the Company are detected with reasonable assurance.

In our opinion, the pro forma financial information has been properly compiled on the basis stated in the pro forma notes. This basis is consistent with the accounting policies as well as the presentation, recognition and measurement principles of the Company.

Munich, Germany, June 5, 2018

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

Prof. Dr. Frank Beine Wirtschaftsprüfer (German Public Auditor)	Michael Mehren Wirtschaftsprüfer (German Public Auditor)

10. SELECTED CONSOLIDATED FINANCIAL INFORMATION OF THE BAYER GROUP

The financial information contained in the following sections is extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2016 and December 31, 2017, from the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018 and from the Group's internal and external accounting records, or has been calculated on the basis of figures from the above-mentioned sources, unless otherwise indicated.

*At the end of September 2017, Bayer lost control of its subsidiary Covestro AG ("**Covestro AG**" and together with its subsidiaries "**Covestro**"), its former Material Science business, due to the sale of shares and the signing of a control termination agreement, as part of which Bayer has undertaken not to exercise certain voting rights at Covestro's annual stockholders' meeting (the "**Loss of Control**"). As a result of the Loss of Control at the end of September 2017, Covestro ceased to be a reportable segment and fulfilled the conditions for presentation as discontinued operations for the first nine months of 2017. As of October 1, 2017 Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss. The comparative information for fiscal year ended December 31, 2016 (with the exception of the consolidated statement of financial position as of December 31, 2016) as presented in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017 and for the three months ended March 31, 2017 as presented in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018, which are presented and discussed in the Prospectus, was restated accordingly to present Covestro as discontinued operations for the full fiscal year ended December 31, 2016 and for the three months ended March 31, 2017. However, the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, including the comparative information for fiscal year ended December 31, 2015, which are presented and discussed in this Prospectus, as well as the audited consolidated financial statements as of and for fiscal year ended December 31, 2015, which are also included in this Prospectus, were not restated to present Covestro as discontinued operations. For further information regarding the comparability of the financial information presented in the following sections, see "12.5 Comparability of the Financial Information Contained in the Audited Consolidated Financial Statements." In order to increase transparency in the following sections, we present the 2016 figures relating to the results of operations of the Bayer Group and the cash flows of the Bayer Group in two columns: one column showing the 2016 figures as presented in the audited consolidated income statement or the audited consolidated statement of cash flows of Bayer, as the case may be, as of and for fiscal year ended December 31, 2016 (with Covestro included in continuing operations) and a second column showing the 2016 figures as presented as comparative figures in the audited consolidated income statement or the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2017 (with Covestro presented as discontinued operations).*

The audited consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017, included in this Prospectus, were prepared in accordance with IFRS and the additional requirements of Section 315e para. 1 of the HGB (formerly Section 315a para. 1 of the HGB). The unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018 were prepared in accordance with IFRS for interim financial reporting (IAS 34). Additional information included in the following sections was extracted from the audited unconsolidated financial statements of Bayer AG as of and for fiscal year ended December 31, 2017, which were prepared in accordance with HGB.

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (formerly PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft) has audited and issued unqualified auditor's reports with respect to the consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2015 and December 31, 2016. These financial statements and the auditor's reports thereon are included in this Prospectus.

*Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Munich, Germany ("**Deloitte**"), was appointed as the statutory auditor for the consolidated financial statements of Bayer and the unconsolidated financial statements of Bayer AG beginning January 1, 2017. Deloitte has audited and issued an unqualified auditor's report with respect to the consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017 and the audited unconsolidated financial statements of Bayer AG as of and for fiscal year ended December 31, 2017. In addition, Deloitte was appointed to review the unaudited condensed consolidated interim financial statements of Bayer. Deloitte has reviewed and issued a review report with respect to the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018. These financial statements as well as the auditor's reports and review report thereon are included in this Prospectus.*

Where financial information in the following tables is labelled "audited," this means that it has been extracted from the audited financial statements mentioned above. The label "unaudited" is used in the following tables to

indicate financial information that either has been derived from the unaudited condensed consolidated interim financial statements mentioned above or the Group's internal and external accounting records, or has been calculated on the basis of figures extracted from the above-mentioned sources. All financial information presented in the following tables and sections are stated in millions of euro (in € million), except as otherwise stated. Certain financial information in the following tables and sections (including percentages) has been rounded according to established commercial standards. As a result, the aggregate amounts (sum totals or sub-totals or differences or if numbers are put in relation) may not correspond in all cases to the corresponding rounded amounts contained in the following tables and sections. Furthermore, in the following tables, these rounded figures may not add up exactly to the totals contained in the respective tables. The percentage changes that are stated in the following tables and sections have been commercially rounded to one decimal place, unless stated otherwise. Financial information presented in parentheses in the following tables denotes that the presented number is a negative number, unless stated otherwise. In respect of financial information set out in the main body of the Prospectus (i.e., other than in the section entitled "22. Financial Information"), a zero ("0") signifies that the relevant figure is available but has been rounded to zero, a dash ("–") signifies that an amount truly is zero and/or that the relevant figure is not available.

This Prospectus contains the following Alternative Performance Measures: EBIT, EBITDA, EBIT before special items, EBITDA before special items, Core EBIT, Core EPS, core net income from continuing operations, net financial debt, NOPAT, ROCE and currency-adjusted or currency- and portfolio-adjusted change in sales. The Alternative Performance Measures are not recognized as measures under IFRS and should not be considered as substitutes for figures determined in accordance with IFRS, such as income before income taxes, income after income taxes, net cash provided by (used in) operating activities or other income statement or cash flow data, or as measures of profitability or liquidity. The Alternative Performance Measures do not necessarily indicate whether cash flow will be sufficient or available for Bayer's cash requirements, nor whether any such measure is indicative of Bayer's historical operating results. The Alternative Performance Measures are not meant to be indicative of future results. Because not all companies calculate these measures and figures in the same way, Bayer's presentation of the Alternative Performance Measures is not necessarily comparable with similarly titled measures used by other companies.

The following selected financial information should be read together with the section "1. Risk Factors" which describes certain effects the materialization of the risks described therein may have on the business, financial condition and results of operations of the Bayer Group; the section "13. Business" which contains information on our business operations, and the section "12. Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as the audited consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2015, 2016 and 2017 and the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018, included in this Prospectus on pp. F-2 et seq., which contain further discussions of our financial information as well as financial data in addition to the data presented in this section.

10.1 Bayer Group Consolidated Income Statements

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million, unless otherwise indicated)		(audited) (in € million, unless otherwise indicated)		(unaudited) (in € million, unless otherwise indicated)	
Net sales	**46,085**	**46,769**	**34,943**	**35,015**	**9,680**	**9,138**
Cost of goods sold	(21,040)	(20,295)	(11,756)	(11,382)	(2,987)	(2,909)
Gross profit	**25,045**	**26,474**	**23,187**	**23,633**	**6,693**	**6,229**
Selling expenses	(12,272)	(12,474)	(11,148)	(11,116)	(2,667)	(2,509)
Research and development expenses	(4,274)	(4,666)	(4,405)	(4,504)	(1,094)	(1,040)
General administration expenses	(2,092)	(2,256)	(1,804)	(2,026)	(460)	(427)
Other operating income	1,109	898	787	864	159	152
Other operating expenses	(1,275)	(934)	(879)	(948)	(204)	(95)
EBIT[4]	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
Equity-method income (loss)	(9)	(26)	(6)	20	(7)	71
Financial income	371	151	149	289	32	370
Financial expenses	(1,367)	(1,280)	(1,108)	(1,635)	(321)	(311)
Financial result	**(1,005)**	**(1,155)**	**(965)**	**(1,326)**	**(296)**	**130**
Income before income taxes	**5,236**	**5,887**	**4,773**	**4,577**	**2,131**	**2,440**
Income taxes	(1,223)	(1,329)	(1,017)	(1,329)	(424)	(494)
Income from continuing operations after income taxes	**4,013**	**4,558**	**3,756**	**3,248**	**1,707**	**1,946**
Income from discontinued operations after income taxes	**85**	**268**	**1,070**	**4,846**	**564**	**8**
Income after income taxes	**4,098**	**4,826**	**4,826**	**8,094**	**2,271**	**1,954**

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million, unless otherwise indicated)		(audited) (in € million, unless otherwise indicated)		(unaudited) (in € million, unless otherwise indicated)	
of which attributable to noncontrolling interest	*(12)*	*295*	*295*	*758*	*188*	*–*
of which attributable to Bayer AG stockholders (net income)	*4,110*	*4,531*	*4,531*	*7,336*	*2,083*	*1,954*
Earnings per share in €						
From continuing operations						
Basic	4.87	5.12	4.50	3.73	1.96	2.23
Diluted	4.87	5.12	4.50	3.73	1.96	2.23
From discontinued operations						
Basic	0.10	0.32	0.94	4.68	0.43	0.01
Diluted	0.10	0.32	0.94	4.68	0.43	0.01
From continuing and discontinued operations						
Basic	4.97	5.44	5.44	8.41	2.39	2.24
Diluted	4.97	5.44	5.44	8.41	2.39	2.24

(1) Figures extracted from the audited consolidated income statement of Bayer for fiscal year ended December 31, 2016, which presents Covestro in continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which presents Covestro as discontinued operations, as included in the unaudited condensed consolidated interim income statement of Bayer for the three months ended March 31, 2018.

(4) Alternative Performance Measure used by Bayer, for more information see "*10.4. Additional Key Figures for the Bayer Group*."

10.2 Bayer Group Consolidated Statements of Financial Position

	As of December 31,			As of March 31,
	2015[1]	2016[2]	2017[3]	2018
		(audited) (in € million)		(unaudited) (in € million)
Assets				
Noncurrent assets	**50,096**	**51,791**	**45,014**	**42,225**
Goodwill	16,096	16,312	14,751	14,480
Other intangible assets	15,178	13,567	11,674	11,185
Property, plant and equipment	12,375	13,114	7,633	7,330
Investments accounted for using the equity method	246	584	4,007	2,574
Other financial assets	1,092	1,281	1,634	1,737
Other receivables	430	583	400	535
Deferred taxes	4,679	6,350	4,915	4,384
Current assets	**23,821**	**30,447**	**30,073**	**33,169**
Inventories	8,550	8,408	6,550	6,402
Trade accounts receivable	9,933	10,969	8,582	9,498
Other financial assets	756	6,275	3,529	7,315
Other receivables	2,017	2,210	1,276	1,029
Claims for income tax refunds	509	676	474	461
Cash and cash equivalents	1,859	1,899	7,581	5,332
Assets held for sale	197	10	2,081	3,132
Total assets	**73,917**	**82,238**	**75,087**	**75,394**
Equity	**25,445**	**31,897**	**36,861**	**38,384**
Capital stock	2,117	2,117	2,117	2,117
Capital reserves	6,167	9,658	9,658	9,658
Other reserves	15,981	18,558	25,026	26,553
Equity attributable to Bayer AG stockholders	**24,265**	**30,333**	**36,801**	**38,328**
Equity attributable to noncontrolling interest	1,180	1,564	60	56

	As of December 31,			As of March 31,
	2015[1]	2016[2]	2017[3]	2018
		(audited) (in € million)		(unaudited) (in € million)
Noncurrent liabilities	**31,492**	**31,804**	**24,633**	**23,912**
Provisions for pensions and other post-employment benefits	10,873	11,134	8,020	8,096
Other provisions	1,740	1,780	1,366	1,302
Refund liabilities[4]	–	–	–	146
Contract liabilities[4]	–	–	–	799
Financial liabilities	16,513	16,180	12,483	12,273
Income tax liabilities	475	423	495	482
Other liabilities	1,065	957	1,116	228
Deferred taxes	826	1,330	1,153	586
Current liabilities	**16,980**	**18,537**	**13,593**	**13,098**
Other provisions	5,045	5,421	4,344	2,194
Refund liabilities[4]	–	–	–	2,519
Contract liabilities[4]	–	–	–	197
Financial liabilities	3,421	3,401	1,935	1,761
Trade accounts payable	5,945	6,410	5,129	3,943
Income tax liabilities	923	884	422	646
Other liabilities	1,534	2,421	1,652	1,318
Liabilities directly related to assets held for sale	112	–	111	520
Total equity and liabilities	**73,917**	**82,238**	**75,087**	**75,394**

(1) Figures extracted from the audited consolidated statement of financial position of Bayer as of December 31, 2016, in which the assets and liabilities related to Covestro are still recognized within the financial position of the Group. In alignment with IFRS, the information on Bayer's financial position as of December 31, 2015 was not adjusted to reflect the sale of the consumer business of Crop Science's Environmental Science unit (the "**Environmental Science Consumer Business**").

(2) Figures extracted from the audited consolidated statement of financial position of Bayer as of December 31, 2016 in which the assets and liabilities related to Covestro are still recognized within the statement of financial position of the Group. The assets and liabilities related to the Environmental Science Consumer Business are derecognized in the audited consolidated statements of financial position of Bayer as of December 31, 2016. In alignment with IFRS, the information on Bayer's financial position as of December 31, 2016 was not adjusted to reflect the deconsolidation of Covestro.

(3) Figures extracted from the audited consolidated statement of financial position of Bayer as of December 31, 2017 in which the assets and liabilities related to Covestro, including the noncontrolling interest in Covestro, are derecognized. As of October 1, 2017, the remaining interest in Covestro was classified as an associate and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss.

(4) The line items Refund liabilities and Contract liabilities were introduced as of January 1, 2018 and reflect accounting changes due to the first-time application of IFRS 15.

10.3 Selected Information from Bayer Group's Consolidated Statements of Cash Flows

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million)		(audited) (in € million)		(unaudited) (in € million)	
Net cash provided by (used in) operating activities from continuing operations	**6,836**	**8,259**	**6,435**	**6,611**	**551**	**658**
Net cash provided by (used in) operating activities from discontinued operations	54	830	2,654	1,523	290	–
Net cash provided by (used in) operating activities (total)	**6,890**	**9,089**	**9,089**	**8,134**	**841**	**658**
Net cash provided by (used in) investing activities	**(2,762)**	**(8,729)**	**(8,729)**	**(432)**	**(1,136)**	**(2,058)**
Net cash provided by (used in) financing activities	**(3,974)**	**(350)**	**(350)**	**(1,881)**	**611**	**(581)**
Change in cash and cash equivalents due to business activities	**154**	**10**	**10**	**5,821**	**316**	**(1,981)**
Cash and cash equivalents at beginning of year	**1,853**	**1,859**	**1,859**	**1,899**	**1,899**	**7,436**
Change in cash and cash equivalents due to changes in scope of consolidation	5	3	3	–	–	1
Change in cash and cash equivalents due to exchange rate movements	(153)	27	27	(139)	9	(118)
Cash and cash equivalents at end of the year	**1,859**	**1,899**	**1,899**	**7,581**	**2,224**	**5,338**

(1) Figures extracted from the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2016, which present the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2017, which present the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from discontinued operations separately.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017 as included in the unaudited condensed consolidated interim statement of cash flows of Bayer for the three months ended March 31, 2018, which presents the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from discontinued operations separately.

10.4 Additional Key Figures for the Bayer Group

In Bayer's view, the Alternative Performance Measures described in this section constitute the most important indicators for measuring the operating and financial performance of the Bayer Group's business and, as such, are of use for potential investors. However, the Alternative Performance Measures are not recognized as measures under IFRS and should not be considered as substitutes for figures determined in accordance with IFRS, such as income before income taxes, income after income taxes, net cash provided by (used in) operating activities or other income statement or cash flow data, or as measures of profitability or liquidity. The Alternative Performance Measures do not necessarily indicate whether cash flows will be available and/or sufficient for Bayer's cash requirements, nor whether any such measure is indicative of Bayer's historical operating results. Also, the Alternative Performance Measures are not meant to be indicative of future results. Because not all companies calculate these measures and figures in the same way, Bayer's presentation of the Alternative Performance Measures is not necessarily comparable with similarly titled measures used by other companies. Bayer determines, in particular, the following Alternative Performance Measures:

- Earnings before interest and taxes, which is defined as income before income taxes less financial result ("**EBIT**").
- Earnings before interest, taxes, depreciation and amortization, which is defined as the sum of EBIT plus amortization of intangible assets and the depreciation of property, plant and equipment, plus impairment losses and minus impairment loss reversals, recognized in profit or loss during the reporting period ("**EBITDA**").
- EBIT before special items is defined as the sum of EBIT plus/minus special items, i.e., special charges or special gains, which may include, litigations, restructuring, integration costs, impairment losses and impairment loss reversals ("**EBIT before special items**").
- EBITDA before special items is defined as the sum of EBITDA plus/minus special items, i.e., special charges or special gains, which may include, litigations, restructuring and integration costs ("**EBITDA before special items**").
- Core earnings per share ("**Core EPS**") is based on the earnings per share ("**EPS**") for the Group as defined in IAS 33. Core EPS is defined as EBIT plus/minus amortization and impairment losses/ impairment loss reversals on intangible assets, impairment losses/ impairment loss reversals on property, plant and equipment and accelerated depreciation included in special items as well as special items (other than accelerated depreciation, amortization and impairment losses / loss reversals) (this sum is referred to as "**Core EBIT**"), plus/minus financial result, special items in the financial result, income taxes, special items in income taxes, tax effects relating to amortization/ impairment losses/impairment loss reversals and special items, income after income taxes attributable to noncontrolling interest and portion of the above-mentioned adjustments attributable to noncontrolling interest (this sum is referred to as "**Core net income from continuing operations**"); divided by the weighted average number of shares.
- Net financial debt is defined as the sum of financial liabilities (bonds and notes/promissory notes, liabilities to banks, liabilities under finance leases, liabilities from derivatives, other financial liabilities and receivables from derivatives) minus cash and cash equivalents and current financial assets.
- ROCE is defined as NOPAT to the average capital employed ("**Capital Employed**"). NOPAT represents the operating result after taxes and is calculated by subtracting income taxes (which are based on a historical average tax of 24%) from EBIT. The Capital Employed by the Group is the total carrying amount of operational assets, minus liabilities that are largely non-interest-bearing in character or would distort the capital base. For the components of capital employed, see "*10.4.5 Return on Capital Employed (ROCE)*." An average value, calculated from the values at the end of the prior year and of the reporting year, is used to depict the change in Capital Employed during the year.
- Currency-adjusted change in sales is defined as the percentage change in sales excluding the impact of exchange rate effects and currency- and portfolio-adjusted change in sales is defined as

the percentage change in sales excluding the impact of exchange rate effects and disregarding the acquisitions and divestitures material to each business entity. Exchange rate effects are generally calculated on the basis of the functional currency valid in the respective country. Exceptions exist in Brazil and Argentina, primarily for Crop Protection, where the respective functional currencies are restated in U.S. dollars for business reasons.

Bayer believes that the Alternative Performance Measures are useful to enable the comparison of performance indicators over time and against those of other companies in its industry. Also, individual Alternative Performance Measures may assist in evaluating Bayer's operating performance, measuring its periodic capital return, or generally assessing its liquidity, capital structure and financial flexibility. Specifically, Bayer uses the Alternative Performance Measures for the following:

- EBIT is used by the Group as an indicator for evaluating the operational performance of the Group. EBIT eliminates the effects differences in local taxation systems and different financing activities have on Bayer's operating result.
- EBITDA is used by the Group as an indicator for evaluating the operational performance of the Group. EBITDA neutralizes the effects of the financial result along with distortions of operational performance that result from divergent depreciation and amortization methods and the exercise of measurement discretion.
- EBIT before special items is used by the Group as an indicator for evaluating the operational performance of the Group. EBIT before special items shows the development of the operational business of the Group irrespective of the effects of special items, i.e. special effects for the Group with regard to their nature and magnitude.
- EBITDA before special items is used by the Group as an indicator for evaluating the operational performance of the Group. EBITDA before special items shows the development of the operational business irrespective of the effects of special items, i.e. special effects for the Group with regard to their nature and magnitude.
- Core EPS is used as an indicator for evaluating the operational performance of the Group as it neutralizes the effects of special items to enable a comparison of performance over time.
- Net financial debt is an important financial management indicator for the Group and is used both internally and externally in assessing its liquidity, capital structure and financial flexibility.
- ROCE measures the Group's economic success in relation to Capital Employed and supplements the operational management indicators. As a strategic indicator, ROCE measures periodic capital return. This can then be compared with the weighted average cost of capital. Monitoring ROCE over time supports the analysis of long-term business development, while the portfolio analysis process includes comparing ROCE between business areas.
- Currency-adjusted change in sales is used as an indicator for evaluating the operational performance of the Group as it shows the Group's net sales performance eliminating the impact exchange rate effects have on our net sales. Currency- and portfolio-adjusted change in sales is also used as an indicator for evaluating the operational performance of the Group as it shows the Group's net sales performance eliminating the impact exchange rate effects and net sales from acquisitions and divestitures have on our net sales. Also see "*10.4.6 Net Sales Adjusted for Foreign Currency Translation Effects and Portfolio Effects*."

The following table provides an overview of certain Alternative Performance Measures for the Group for the periods presented:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)		(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)		(unaudited) (in € million, unless otherwise indicated)	
EBIT[4]	6,241	7,042	5,738	5,903	2,427	2,310
EBITDA	9,573	10,785	8,801	8,563	2,999	2,818
EBIT before special items[4]	7,060	8,130	6,826	7,130	2,529	2,388
EBITDA before special items[4]	10,256	11,302	9,318	9,288	3,054	2,896
Core earnings per share from continuing operations (in €)	6.82	7.32	6.67	6.74	2.31	2.28
Net financial debt	17,449	11,778	11,778	3,595	10,400	1,650
Return on Capital Employed (ROCE) (in %)[4]	9.9	11.0	10.3	10.8	–	–

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(4) Audited for the fiscal years ended December 31, 2015, 2016 and 2017.

10.4.1 Reconciliation of EBIT and EBITDA

The following table provides a reconciliation of the Group's Alternative Performance Measures EBIT and EBITDA for the periods presented:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited, unless otherwise indicated) (in € million)		(audited, unless otherwise indicated) (in € million)		(unaudited) (in € million)	
Income before income taxes	5,236	5,887	4,773	4,577	2,131	2,440
Financial result	1,005	1,155	965	1,326	296	(130)
Equity-method (income) loss	*9*	*26*	*6*	*(20)*	*7*	*(71)*
Financial income	*(371)*	*(151)*	*(149)*	*(289)*	*(32)*	*(370)*
Financial expenses	*1,367*	*1,280*	*1,108*	*1,635*	*321*	*311*
EBIT	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
Depreciation, amortization and impairments	3,332	3,743	3,063	2,660	572	508
of which amortization and impairments on intangible assets[4]	*1,802*	*2,235*	*2,192*	*1,679*	*341*	*297*
of which depreciation and impairments on property, plant and equipment[4]	*1,530*	*1,508*	*871*	*981*	*231*	*211*
EBITDA[4]	**9,573**	**10,785**	**8,801**	**8,563**	**2,999**	**2,818**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(4) Unaudited.

10.4.2 Reconciliation of EBIT before Special Items and EBITDA before Special Items

The following table provides a reconciliation of the Group's Alternative Performance Measures EBIT before special items and EBITDA before special items for the periods presented:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million)		(audited) (in € million)		(unaudited) (in € million)	
EBIT	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
of which EBIT of segments	*6,740*	*7,406*	*6,102*	*6,389*	*2,567*	*2,417*
of which EBIT of Corporate Functions and Consolidation	*(499)*	*(364)*	*(364)*	*(486)*	*(140)*	*(107)*
Special items	**819**	**1,088**	**1,088**	**1,227**	**102**	**78**
of which special items of segments	*792*	*1,068*	*1,068*	*1,190*	*100*	*75*
of which special items of Corporate Functions and Consolidation	*27*	*20*	*20*	*37*	*2*	*3*
EBIT before special items	**7,060**	**8,130**	**6,826**	**7,130**	**2,529**	**2,388**
of which EBIT before special items of segments	*7,532*	*8,474*	*7,170*	*7,579*	*2,667*	*2,492*
of which EBIT before special items of Corporate Functions and Consolidation	*(472)*	*(344)*	*(344)*	*(449)*	*(138)*	*(104)*
Depreciation, amortization and impairment losses / loss reversals before special items	**3,196**	**3,172**	**2,492**	**2,158**	**525**	**508**
of which depreciation, amortization and impairment losses / loss reversals before special items of segments	*3,190*	*3,166*	*2,486*	*2,145*	*522*	*504*
of which depreciation, amortization and impairment losses / loss reversals before special items of Corporate Functions and Consolidation	*6*	*6*	*6*	*13*	*3*	*4*
EBITDA before special items	**10,256**	**11,302**	**9,318**	**9,288**	**3,054**	**2,896**
of which EBITDA before special items of segments	*10,722*	*11,640*	*9,656*	*9,724*	*3,189*	*2,996*
of which EBITDA before special items of Corporate Functions and Consolidation	*(466)*	*(338)*	*(338)*	*(436)*	*(135)*	*(100)*

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

10.4.3 Core Earnings per Share

The following table shows the calculation of the Alternative Performance Measure Core EPS:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)		(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)		(unaudited) (in € million, unless otherwise indicated)	
EBIT[4]	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
Amortization and impairment losses / impairment loss reversal on intangible assets	1,802	2,235	2,192	1,679	342	297
Impairment losses / impairment loss reversals on property, plant and equipment, and accelerated depreciation included in special items	115	35	29	84	13	7
Special items (other than accelerated depreciation, amortization and impairment losses / loss reversals)[5]	683	517	517	725	55	78
Core EBIT	**8,841**	**9,829**	**8,477**	**8,391**	**2,837**	**2,692**
Financial result[4]	(1,005)	(1,155)	(965)	(1,326)	(296)	130
Special items in the financial result[6]	(150)	(105)	(105)	611	35	(236)
Income taxes[4]	(1,223)	(1,329)	(1,017)	(1,329)	(424)	(494)
Special items in income taxes	(39)	–	–	455	–	–
Tax effects relating to amortization, impairment losses / loss reversals and special items	(755)	(838)	(826)	(922)	(138)	(107)
Income after income taxes attributable to noncontrolling interest[4]	12	(295)	(13)	1	2	–
Above-mentioned adjustments attributable to noncontrolling interest	(39)	(13)	(1)	–	–	–
Core net income from continuing operations	**5,642**	**6,094**	**5,550**	**5,881**	**2,016**	**1,985**
Weighted average number of shares (no. of shares)[4]	826,947,808	832,502,808	832,502,808	872,107,808	871,387,808	872,467,808
Core earnings per share from continuing operations (Core EPS) (in €)	**6.82**	**7.32**	**6.67**	**6.74**	**2.31**	**2.28**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(4) Audited for the fiscal years ended December 31, 2015, 2016 and 2017.

(5) These comprised litigation, restructuring, integration costs, divestments, revaluation of other receivables and others.

(6) These comprised mainly interest income related to the Dow AgroSciences LLC litigation, financing costs related to the acquisition of Monsanto and others.

10.4.4 Net Financial Debt

The following table shows the calculation of the Alternative Performance Measure net financial debt:

	As of December 31			As of March 31,
	2015[1]	2016[1]	2017	2018
	(audited, unless otherwise indicated) (in € million)			(unaudited) (in € million)
Bonds and notes / promissory notes	15,547	15,991	12,436	12,290
of which hybrid bonds[2][3]	*4,525*	*4,529*	*4,533*	*4,534*
Liabilities to banks	2,779	1,837	534	611
Liabilities under finance leases	474	436	238	248
Liabilities from derivatives[4]	753[3]	587	240	199
Other financial liabilities	369	730	970	686
Receivables from derivatives[2][4]	(350)	(313)	(244)	(223)
Financial liabilities[2][5]	**19,572**	**19,268**	**14,174**	**13,811**
Cash and cash equivalents	(1,859)	(1,899)	(7,581)	(5,332)
Current financial assets[2][6]	(264)	(5,591)	(2,998)	(6,829)
Net financial debt[2]	**17,449**	**11,778**	**3,595**	**1,650**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.
(2) Unaudited.
(3) Classified as debt according to IFRS.
(4) These include the market values of interest-rate and currency hedges of recorded transactions.
(5) Referred to as "Financial liabilities" as of December 31, 2015, 2016 and 2017.
(6) These include short-term loans and receivables with maturities between three and twelve months outstanding from banks and other companies as well as available-for-sale financial assets that were recorded as current on first-time recognition.

10.4.5 Return on Capital Employed (ROCE)

The following table shows the calculation of the Alternative Performance Measure ROCE:

	For fiscal year ended December 31,			
	2015[1]	2016[1]	2016[2]	2017
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)		(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
EBIT[3]	6,241	7,042	5,738	5,903
Taxes[4]	(1,498)	(1,690)	(1,377)	(1,417)
NOPAT	4,743	5,352	4,361	4,486
Average capital employed	47,797	48,777	42,318	41,600
ROCE (in %)[3][5]	9.9	11.0	10.3	10.8

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.
(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.
(3) Audited.
(4) 24% on EBIT, based on historical average of tax rates.
(5) ROCE is the ratio of NOPAT to Average capital employed.

The following table shows the components of the Alternative Performance Measure Capital Employed:

	As of December 31,			
	2015[1]	2016	2016[2]	2017
	(unaudited)	(audited, unless otherwise indicated)	(unaudited)	(audited, unless otherwise indicated)
	(in € million)		(in € million)	
Goodwill	16,054	16,312	16,048	14,751
Other intangible assets	15,171	13,567	13,470	11,674
Property, plant and equipment	12,369	13,114	8,475	7,633
Other financial assets[3] [4]	67	58	49	47
Inventories	8,493	8,408	6,687	6,550
Trade accounts receivable	9,888	10,969	9,319	8,582
Other receivables[3] [4]	2,042	1,701	1,367	1,293
Deferred tax assets[3] [4]	1,295	2,596	2,591	2,371
Claims for income tax refunds	509	676	676	474
Assets held for sale[5]	–	–	10	2,081
Gross capital employed[4]	**65,888**	**67,401**	**58,692**	**55,456**
Other provisions[3] [4]	(6,713)	(7,039)	(6,154)	(5,601)
Trade accounts payable	(5,909)	(6,410)	(4,991)	(5,129)
Other liabilities[3] [4]	(2,272)	(2,695)	(2,488)	(2,093)
Financial liabilities[3] [4]	(13)	–	–	(4)
Deferred tax liabilities[3] [4]	(804)	(1,252)	(1,242)	(910)
Income tax liabilities[4] [6]	(1,320)	(1,307)	(1,307)	(917)
Liabilities directly related to assets held for sale[5]	–	–	–	(111)
Capital employed[4] [7]	**48,857**	**48,698**	**42,510**	**40,690**
Average capital employed[4] [7]	47,797	48,777	42,318	41,600

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016. The 2015 figures presented here have been adjusted to reflect the sale of the Environmental Science Consumer Business in order to render ROCE for fiscal year 2015 and 2016 directly comparable. Bayer's consolidated statements of financial position as of December 31, 2015, under IFRS were not required to be adjusted retrospectively to reflect such sale.

(2) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017. The 2016 figures presented here have been adjusted to reflect the sale of Covestro in order to render ROCE for fiscal year 2016 and 2017 directly comparable. Bayer's consolidated statement of financial position as of December 31, 2016, under IFRS was not required to be adjusted retrospectively to reflect such sale.

(3) For the purpose of calculating "capital employed," nonoperative or non-interest-bearing items have been eliminated from selected items of this component.

(4) Unaudited.

(5) "Assets held for sale" and "Liabilities" directly related to assets held for sale" contributed to EBIT in fiscal year 2017 and are therefore included in capital employed for fiscal year 2017.

(6) Sum of current and noncurrent income tax liabilities as presented in Bayer's consolidated statements of financial position.

(7) Capital employed is the total carrying amount of operational assets, minus liabilities that are largely non-interest-bearing in character or would distort the capital base. An average value, calculated from the values at the end of the prior year and of the reporting year, is used to depict the change in capital employed during the year.

10.4.6 Net Sales Adjusted for Foreign Currency Translation Effects and Portfolio Effects

The Group's reporting currency is the Euro. However, a significant proportion of net sales is generated in other functional currencies and is therefore subject to foreign currency translation effects. Converting financial figures denominated in other functional currencies into Euro affects the comparability of the Group's results of operations between reporting periods when the exchange rates for Bayer's main currencies fluctuate. Accordingly, Bayer presents the impact of foreign currency translation, in absolute amounts and as a percentage of total net sales, on a consolidated basis for the Bayer Group and for Bayer's reportable segments. The foreign currency translation effects in net sales are calculated as follows: (1) (a) net sales for the current period, based on the currency exchange rate of the current period minus (b) net sales for the current period, based on the currency exchange rate of the previous period, divided by (2) net sales for the previous period, based on the currency exchange rate of the previous period. Currency translation effects are shown for all sales except for portfolio sales.

Exchange rate effects are generally calculated on the basis of the functional currency valid in the respective country. Exceptions exist in Brazil and Argentina, primarily for Crop Protection, where the respective functional currencies are restated in U.S. dollars for business reasons.

Portfolio effects in connection with the acquisition and divestiture of businesses also impact the comparability of Bayer's results of operations between the reporting periods. Accordingly, Bayer presents the impact

of acquisitions or divestitures on net sales, in absolute amounts and as a percentage of total net sales, on a consolidated basis for the Bayer Group and for Bayer's reportable segments. In case of acquisitions the portfolio effects are calculated as follows: (1) net sales of the acquired business in the reporting period divided by (2) net sales of Bayer for the previous period; or, in case of divestitures, (1) net sales of the divested business for the previous period divided by (2) net sales of Bayer for the previous period. Portfolio (sales) effects are shown on a nominal (not currency-adjusted) basis.

Bayer believes that the presentation of net sales adjusted for foreign currency translation and portfolio effects provides useful information to investors because a meaningful analysis of the net sales development from one period to the next requires comparable data and therefore an understanding of the business development net of the impact of foreign currency translation and portfolio effects.

10.5 Selected Key Data by Segment

The following table provides an overview of selected key data by segment for the periods presented. Following the deconsolidation of Covestro, the continuing operations of the Bayer Group consist of the businesses of the Pharmaceuticals, Consumer Health, Crop Science and Animal Health segments as well as Reconciliation. Prior to the deconsolidation of Covestro, these were together referred to as "**Life Sciences**" and the subtotal of Life Sciences was reported separately.

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited, unless otherwise indicated)		(audited, unless otherwise indicated)		(unaudited)	
	(in € million)		(in € million)		(in € million)	
Net sales (external)						
Pharmaceuticals	15,308	16,420	16,420	16,847	4,263	4,075
Consumer Health	6,076	6,037	6,037	5,862	1,601	1,409
Crop Science	10,128	9,915	9,915	9,577	3,120	2,861
Animal Health	1,490	1,523	1,523	1,571	440	414
Reconciliation[4]	1,101	1,048	1,048	1,158	256	379
Life Sciences	**34,103**	**34,943**	–	–	–	–
Covestro	11,982	11,826	–	–	–	–
Group	**46,085**	**46,769**	**34,943**	**35,015**	**9,680**	**9,138**
EBIT[5]						
Pharmaceuticals	3,028	3,389	3,389	4,325	1,219	1,163
Consumer Health	768	695	695	518	278	211
Crop Science	2,094	1,755	1,755	1,235	970	892
Animal Health	254	313	313	307	126	129
Reconciliation[4]	(538)	(414)	(414)	(482)	(166)	(85)
Life Sciences	**5,606**	**5,738**	–	–	–	–
Covestro	635	1,304	–	–	–	–
Group	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
EBITDA before special items[5]						
Pharmaceuticals	4,616	5,251	5,251	5,711	1,502	1,415
Consumer Health	1,456	1,411	1,411	1,231	392	313
Crop Science	2,406	2,421	2,421	2,043	1,115	1,042
Animal Health	347	349	349	381	135	139
Reconciliation[4]	(228)	(114)	(114)	(78)	(90)	(13)
Life Sciences	**8,597**	**9,318**	–	–	–	–
Covestro	1,659	1,984	–	–	–	–
Group	**10,256**	**11,302**	**9,318**	**9,288**	**3,054**	**2,896**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(4) Unaudited. Reconciliation includes business activities that cannot be allocated to any other segment reported under "All Other Segments," including primarily the services provided by Business Services, Technology Services and Currenta. It also includes items reported under "Corporate Functions and Consolidation," which mainly comprises Bayer holding companies and Leaps by Bayer (formerly: Bayer Lifescience Center) as well as the increase or decrease in expenses for Group-wide long-term stock-based compensation arising from fluctuations in the performance of Bayer stock, and the consolidation of intersegment sales.
(5) Alternative Performance Measure used by Bayer, for more information see "*10.4. Additional Key Figures for the Bayer Group*."

10.6 Net Sales by Region

The following table provides an overview of our net sales (external) by region for the periods presented:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million)		(audited) (in € million)		(unaudited) (in € million)	
Net sales (external) – by market						
Europe / Middle East / Africa	17,707	17,823	13,062	13,388	4,000	3,907
North America	12,621	12,806	10,066	10,143	2,994	2,654
Asia / Pacific	10,263	11,032	7,413	7,637	1,974	1,927
Latin America	5,494	5,108	4,402	3,847	712	650
Reconciliation[4]	–	–	–	–	–	–
Group	**46,085**	**46,769**	**34,943**	**35,015**	**9,680**	**9,138**

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.
(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.
(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.
(4) Reconciliation eliminates interregional sales and transactions and reflects income and expenses not allocable to geographical areas.

11. SELECTED CONSOLIDATED FINANCIAL INFORMATION OF MONSANTO

Investors should read the following selected consolidated financial information of Monsanto together with the subsections entitled "Item 1. Business," "Item 1.A. Risk Factors," "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Item 8. Financial Statements and Supplementary Information" included in the section "23.1 Excerpts from Monsanto's Annual Report on Form 10-K For the Fiscal Year Ended August 31, 2017" and with the subsections entitled "Item 1. Financial Statements", "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations Information" and "Item 1A. Risk Factors" included in the section "23.2 Excerpts from Monsanto's Quarterly Report on Form 10-Q for the Quarterly Period Ended February 28, 2018" of this Prospectus.

The financial information contained in the following sections is extracted from the audited consolidated financial statements of Monsanto as of and for the fiscal years ended August 31, 2015, August 31, 2016 and August 31, 2017 and from the unaudited consolidated interim financial statements of Monsanto as of and for the six months ended February 28, 2018. The consolidated financial statements of Monsanto were prepared in accordance with U.S. GAAP and are reported in U.S. dollars, which is the currency of Monsanto's country of incorporation, the United States of America. The audited consolidated financial statements of Monsanto as of and for the fiscal years ended August 31, 2015, August 31, 2016 and August 31, 2017, the auditor's report thereon and the unaudited consolidated interim financial statements of Monsanto as of and for the six months ended February 28, 2018 are included in this Prospectus.

11.1 Monsanto Company's Statements of Consolidated Operations

	For the fiscal year ended August 31,			For the six months ended February 28,	
	2015	2016	2017	2017	2018
		(audited)		(unaudited)	
	(in $ million, except per share amount)				
Net Sales	**15,001**	**13,502**	**14,640**	**7,724**	**7,677**
Cost of goods sold	6,819	6,485	6,703	3,513	3,399
Gross profit	**8,182**	**7,017**	**7,937**	**4,211**	**4,278**
Operating Expenses:					
Selling, general and administrative expenses	2,686	2,833	2,969	1,242	1,316
Research and development expenses	1,580	1,512	1,607	751	776
Restructuring charges	393	297	(36)	(13)	3
Pending Bayer transaction related costs	–	–	185	120	45
Total Operating Expenses	**4,659**	**4,642**	**4,725**	**2,100**	**2,140**
Income from Operations	**3,523**	**2,375**	**3,212**	**2,111**	**2,138**
Interest expense	433	436	452	238	229
Interest income	(105)	(74)	(76)	(36)	(39)
Other expense, net	34	22	(50)	(45)	(121)
Income from Continuing Operations Before Income Taxes	3,161	1,991	2,886	1,954	2,069
Income tax provision	864	695	626	566	441
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**2,297**	**1,296**	**2,260**	**1,388**	**1,628**
Discontinued Operations:					
Income from operations of discontinued businesses	45	27	21	21	4
Income tax provision	17	10	8	8	1
Income on Discontinued Operations	**28**	**17**	**13**	**13**	**3**
Net Income	**2,325**	**1,313**	**2,273**	**1,401**	**1,631**
Less: Net (loss) income attributable to noncontrolling interest	11	(23)	13	4	3
Net Income Attributable to Monsanto Company	**2,314**	**1,336**	**2,260**	**1,397**	**1,628**
Amounts Attributable to Monsanto Company:					
Income from continuing operations	2,286	1,319	2,247	1,384	1,625
Income on discontinued operations	28	17	13	13	3
Net Income Attributable to Monsanto Company	**2,314**	**1,336**	**2,260**	**1,397**	**1,628**

	For the fiscal year ended August 31,			For the six months ended February 28,	
	2015	2016	2017	2017	2018
		(audited)		(unaudited)	
	(in $ million, except per share amount)				
Basic Earnings per Share Attributable to Monsanto Company:					
Income from continuing operations	4.79	2.98	5.12	3.16	3.69
Income on discontinued operations	0.06	0.04	0.03	0.03	0.01
Net Income Attributable to Monsanto Company	4.85	3.02	5.15	3.19	3.70
Diluted Earnings per Share Attributable to Monsanto Company:					
Income from continuing operations	4.75	2.95	5.06	3.13	3.64
Income on discontinued operations	0.06	0.04	0.03	0.03	0.01
Net Income Attributable to Monsanto Company	4.81	2.99	5.09	3.16	3.65
Weighted Average Shares Outstanding:					
Basic	476.9	442.7	438.8	438.4	440.6
Diluted	481.4	447.1	443.8	442.3	445.9

11.2 Monsanto Company's Statements of Consolidated Financial Position

	As of August 31,		As of February 28,
	2016	2017	2018
	(audited)		(unaudited)
	(in $ million, except share amounts)		
Assets			
Current Assets:			
Cash and cash equivalents (variable interest entity restricted – 2018: $19, 2017: $94 and 2016: $122)	1,676	1,856	2,409
Short-term investments	60	8	–
Trade receivables, net (variable interest entity restricted – 2018: $124, 2017: $74 and 2016: $7)	1,926	2,161	2,520
Miscellaneous receivables (variable interest entity restricted – 2018: $8, 2017: $5 and 2016: $0)	755	827	772
Inventory, net	3,241	3,340	4,015
Assets held for sale	272	199	30
Other current assets (variable interest entity restricted – 2018: $0, 2017: $1 and 2016: $0)	227	260	310
Total Current Assets	**8,157**	**8,651**	**10,056**
Total property, plant and equipment	11,116	12,231	12,705
Less accumulated depreciation	5,885	6,301	6,596
Property, Plant and Equipment, net	5,231	5,930	6,109
Goodwill	4,020	4,088	4,100
Other Intangible Assets, Net	1,125	1,024	977
Deferred Tax Assets (variable interest entity restricted – 2018: $11, 2017: $11 and 2016: $0)	613	564	495
Long-Term Receivables, Net	101	121	58
Other Assets (variable interest entity restricted – 2018: $4, 2017: $4 and 2016: $0)	489	955	892
Total Assets	**19,736**	**21,333**	**22,687**
Liabilities and Shareowners' Equity			
Current Liabilities:			
Short-term debt, including current portion of long-term debt (variable interest entity restricted – 2018: $2, 2017: $0 and 2016: $113)	1,587	870	1,212
Accounts payable (variable interest entity restricted – 2018: $1, 2017: $9 and 2016: $0)	1,006	1,068	875
Income taxes payable	41	58	200
Accrued compensation and benefits	239	578	261
Accrued marketing programs	1,650	1,918	1,754
Deferred revenues (variable interest entity restricted – 2018: $1 and 2017: $0)	568	727	1,686
Grower production accruals	47	59	189
Dividends payable	237	237	239

	As of August 31,		As of February 28,
	2016	2017	2018
	(audited)		(unaudited)
	(in $ million, except share amounts)		
Customer payable	123	106	13
Restructuring reserves	227	37	18
Miscellaneous short-term accruals (variable interest entity restricted – 2018: $2, 2017: $2 and 2016: $0)	1,004	740	702
Total Current Liabilities	**6,729**	**6,398**	**7,149**
Long-Term Debt (variable interest entity restricted – 2018: $97, 2017: $104 and 2016: $0)	7,453	7,254	6,635
Postretirement Liabilities	371	313	303
Long-Term Deferred Revenue	35	114	114
Noncurrent Deferred Tax Liabilities	68	192	139
Long-Term Portion of Environment and Litigation Liabilities	200	218	213
Long-Term Restructuring Reserve	17	9	
Other Liabilities	318	377	368
Shareowners' Equity:			
Common stock (authorized: 1,500,000,000 shares, par value $0.01 per share) Issued 614,841,751, 613,219,246 and 611,435,047 shares, respectively Outstanding 441,200,613, 439,578,276 and 437,795,024 shares, respectively, at cost	6	6	6
Treasury stock 173,641,138, 173,640,970 and 173,640,023 shares, respectively, at cost	(15,053)	(15,053)	(15,053)
Additional contributed capital	11,626	11,840	11,956
Retained earnings	10,763	12,072	13,290
Accumulated other comprehensive loss	(2,808)	(2,427)	(2,445)
Total Monsanto Company Shareowners' Equity	**4,534**	**6,438**	**7,754**
Noncontrolling interest	11	20	12
Total Shareowners' Equity	**4,545**	**6,458**	**7,766**
Total Liabilities and Shareowners' Equity	**19,736**	**21,333**	**22,687**

11.3 Monsanto Company's Statements of Consolidated Cash Flows

	For the fiscal year ended August 31,			For the six months ended February 28,	
	2015	2016	2017	2017	2018
		(audited)		(unaudited)	
			(in $ millions)		
Net Cash Provided by Operating Activities	3,108	2,588	3,226	1,537	1,630
Net Cash Required by Investing Activities	(1,019)	(864)	(1,107)	(438)	(366)
Net Cash Required by Financing Activities	(430)	(3,742)	(1,966)	(494)	(714)
Effect of Exchange Rate Changes on Cash and Cash Equivalents	(325)	(7)	27	—	3
Net (Decrease) Increase in Cash and Cash Equivalents	1,334	(2,025)	180	605	553
Cash and Cash Equivalents at Beginning of Period	2,367	3,701	1,676	1,676	1,856
Cash and Cash Equivalents at End of Period	3,701	1,676	1,856	2,281	2,409

12. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read together with the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016 and 2017, the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018 and the audited unconsolidated financial statements of Bayer AG as of and for fiscal year ended December 31, 2017, including the related notes thereto, all contained in this Prospectus. The discussion of the financial information as of and for the three months ended March 31, 2017 and 2018 is based on financial information derived from the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018 and the discussion of the financial information as of and for fiscal years ended December 31, 2016 and 2017 is based on financial information derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, each of which presents Covestro as discontinued operations and reflect the segment structure in effect from September 30, 2017 following the deconsolidation of Covestro. As of October 1, 2017 Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss. The discussion of the financial information as of and for fiscal years ended December 31, 2015 and 2016 is based on financial information derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations and reflect the segment structure in effect from January 1, 2016 up to and excluding September 30, 2017. For more information on the comparability of Bayer's financial information included in this Prospectus, see "12.5 Comparability of the Financial Information Contained in the Audited Consolidated Financial Statements."

12.1 Overview

Bayer is a globally operating life science company with a more than 150-year history and core competencies in the areas of health care and agriculture. With our innovative products, we believe we are helping to find solutions to some of the major challenges of our time. With life expectancy continuing to rise, we are striving to improve quality of life for a growing population by focusing our research and development activities on preventing, alleviating and treating diseases. We are also aiming to make an important contribution to providing a reliable supply of high-quality food, feed and plant-based raw materials.

Our operations are currently divided into the following four reportable segments:

- *Pharmaceuticals*: Pharmaceuticals focuses on prescription products, especially for cardiology and women's health care, and on specialty therapeutics in the areas of oncology, hematology and ophthalmology. Pharmaceuticals' key growth products are Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™. The division also comprises the radiology business, which markets diagnostic imaging equipment together with the necessary contrast agents.

- *Consumer Health:* Consumer Health markets nonprescription (over-the-counter ("**OTC**")) medicines, medical products and cosmetics in the dermatology, nutritional supplement, analgesic, digestive health, allergy, cold, foot care and sun protection categories. The top five best-selling products of Consumer Health in fiscal year 2017 Claritin™, Aspirin™, Bepanthen™ / Bepanthol™, Aleve™ and Canesten™.

- *Crop Science:* Crop Science is an agriculture enterprise with businesses in crop protection, seeds and nonagricultural pest control. It markets a broad portfolio of high-value seeds and innovative pest management solutions, while at the same time providing extensive customer service for sustainable agriculture. In addition, it provides products and services for professional nonagricultural applications, such as vector and pest control and forestry.

- *Animal Health*: Animal Health develops and markets products and solutions for the prevention and treatment of diseases in farm and companion animals. Best-selling products of Animal Health in fiscal year 2017 included the Advantage™ product family, Seresto™, the Drontal™ product family and Baytril™.

In addition, business activities that cannot be allocated to any other segment, which primarily include the services provided by the service areas Business Services, Technology Services and Currenta are reported under "All Other Segments" and items reported under "Corporate Functions and Consolidation," which mainly comprise the Bayer holding companies and Leaps by Bayer (formerly: Bayer Lifescience Center), are reported under the item "Reconciliation."

Prior to its deconsolidation at the end of September 2017, Covestro, a provider of high-tech polymer materials and associated application solutions, was our fifth reportable segment. For more information, see "*12.3.1 Previous Transactions*."

In 2017, Bayer recognized external net sales of €35,015 million (2016: €34,943 million) and EBIT of €5,903 million (2016: €5,738 million). The individual segments contributed to the total external net sales and EBIT in 2017 as follows: Pharmaceuticals: €16,847 million in external net sales (48.1%), €4,325 million in EBIT (73.3%); Consumer Health: €5,862 million in external net sales (16.7%), €518 million in EBIT (8.8%); Crop Science: €9,577 million in external net sales (27.4%), €1,235 million in EBIT (20.9%), and Animal Health: €1,571 million in external net sales (4.5%), €307 million in EBIT (5.2%).

For the three months ended March 31, 2018, Bayer recognized external net sales of €9,138 million (three months ended March 31, 2017: €9,680 million) and EBIT of €2,310 million (three months ended March 31, 2017: €2,427 million). The individual segments contributed to the total external net sales and EBIT in the three months ended March 31, 2018 as follows: Pharmaceuticals: €4,075 million in external net sales (44.6%), €1,163 million in EBIT (50.3%); Consumer Health: €1,409 million in external net sales (15.4%), €211 million in EBIT (9.1%); Crop Science: €2,861 million in external net sales (31.3%), €892 million in EBIT (38.6%) and Animal Health: €414 million in external net sales (4.5%), €129 million in EBIT (5.6%).

In geographical terms and in terms of external net sales by destination, the individual regions contributed to the total external net sales in 2017 as follows: Europe / Middle East / Africa: €13,388 million or 38.2% (2016: €13,062 million or 37.4%); North America: €10,143 million or 29.0% (2016: €10,066 million or 28.8%); Asia / Pacific: €7,637 million or 21.8% (2016: €7,413 million or 21.2%) and Latin America: €3,847 million or 11.0% (2016: €4,402 million or 12.6%).

For the three months ended March 31, 2018, the individual regions contributed to the total external net sales (by destination) of €9,138 million as follows: Europe / Middle East / Africa: €3,907 million (42.8%); North America: €2,654 million (29.0%); Asia / Pacific: €1,927 million (21.1%) and Latin America: €650 million (7.1%).

Bayer has engaged in a number of strategic acquisitions and divestitures over the past years, including the acquisition of the consumer care business of the U.S. company Merck & Co., Inc., Whitehouse Station, New Jersey, United States ("**Merck & Co., Inc.**") in October 2014. On September 14, 2016, Bayer entered into an agreement and plan of merger with Monsanto Company, a global provider of agricultural products, including seeds and trait technologies, herbicides, and digital platforms to give farmers agronomic recommendations. The Merger Agreement provides for Bayer's acquisition (through a merger) of all outstanding shares of Monsanto Company against a payment of US$128.00 per share in cash which at the time corresponded to an expected transaction value of approximately US$66 billion as of May 31, 2016. As of the date of this Prospectus, this corresponds to a transaction value of approximately US$63 billion taking into account Monsanto's debt outstanding as of February 28, 2018. The Transaction, which is subject to customary closing conditions, including the receipt of required antitrust and other regulatory approvals, all of which have been satisfied or waived (other than those conditions that by their nature are to be satisfied at the closing of the Transaction), is expected to be completed on or about June 7, 2018. Upon completion of the Transaction, Crop Science including Monsanto's business will become Bayer's largest division in terms of net sales and, upon this basis, Bayer intends to create a global leader committed to transforming agriculture, which offers advanced customized agronomic solutions designed to help farmers achieve the productivity increases needed to feed an ever growing world population. For more information on the Transaction, see "*8. The Acquisition of Monsanto*."

In connection with obtaining required antitrust approvals to complete the Transaction, Bayer, in separate transactions entered into in October 2017 and April 2018, respectively, has agreed to sell selected Crop Science businesses to BASF. For more information, see "*8.10 Overview of Transaction-related Divestments*."

12.2 Recent Reorganizations of the Group

The corporate structure of the Group was changed over the past years. In the following, we provide an overview of these reorganizations, including their impact on Bayer's segment structure.

12.2.1 Bayer's Corporate Structure until December 31, 2015

Until December 31, 2015, Bayer AG served as a strategic management holding company. Under its direction, the three subgroups HealthCare (divided into the segments Pharmaceuticals and Consumer Health), Crop Science and Covestro (formerly Material Science) conducted their business operations on their own responsibility in line with predefined goals, supported by three service companies. The corporate functions and business services operated as group-wide competence centers, in which business support services were bundled. Currenta was the service company responsible for managing and operating the Chempark sites in Leverkusen, Dormagen and Krefeld-Uerdingen.

12.2.2 Bayer's Corporate Structure in Effect from January 1, 2016

On September 1, 2015, the former Material Science subgroup was renamed Covestro and became legally and economically independent. Subsequently, Covestro AG was floated on the stock market on October 6, 2015. After the floatation, Bayer held 69% of the shares in Covestro AG which it since has been gradually divesting. Prior to its deconsolidation, Covestro was fully consolidated in Bayer's financial statements, because Bayer still held the de-facto majority at Covestro AG's stockholders' meeting, and constituted a reportable segment of Bayer. See "*12.3.1 Previous Transactions*" for more information on Bayer's gradual divestment of Covestro Shares. With the company's focus on the Life Science businesses following the carve-out and stock market floatation of Covestro, a new organizational structure was introduced effective January 1, 2016. Since then Bayer's operations have been managed in three divisions – Pharmaceuticals, Consumer Health and Crop Science – and the Animal Health business unit. The former HealthCare subgroup was dissolved, with the former Radiology and Pharmaceuticals businesses having been merged to form the new Pharmaceuticals division. The Consumer Health division as of January 1, 2016 has consisted entirely of Bayer's consumer care business. Animal Health became a separate reportable segment, whereby the head of Animal Health reports to the board member who is also responsible for Crop Science. The Crop Science subgroup is now the Crop Science division. Effective January 1, 2016, the Board of Management was enlarged to include the heads of the new Pharmaceuticals, Consumer Health and Crop Science divisions. The corporate functions and business services continued to operate as group-wide competence centers, in which business support services were bundled. Currenta remained the service company responsible for managing and operating the sites in Leverkusen, Dormagen and Krefeld-Uerdingen.

From January 1, 2016 to September 30, 2017, Bayer AG reported five segments: Pharmaceuticals, Consumer Health, Animal Health, Crop Science and Covestro.

12.2.3 Deconsolidation of Covestro and Current Segment Reporting

At the end of September 2017, Bayer lost control of its subsidiary Covestro AG due to the sale of shares reducing Bayer's holdings in Covestro AG to 24.6%, at the time, and the signing of a control termination agreement, as part of which Bayer has undertaken not to exercise certain voting rights at Covestro's annual stockholders' meeting. See "*12.3.1 Previous Transactions*" for more information on Bayer's gradual divestment of Covestro Shares. As a result of the Loss of Control at the end of September 2017, Covestro ceased to be a reportable segment and fulfilled the conditions for presentation as discontinued operations for the first nine months of 2017. As of October 1, 2017 Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss. The comparative information for fiscal year ended December 31, 2016 (with the exception of the consolidated statement of financial position as of December 31, 2016) was restated accordingly to present Covestro as discontinued operations for the full fiscal year ended December 31, 2016. Accordingly, as of September 30, 2017, Bayer AG has been reporting four segments: Pharmaceuticals, Consumer Health, Animal Health and Crop Science. Business activities that cannot be allocated to any other segment, which primarily include the services provided by the service areas Business Services, Technology Services and Currenta are reported under "All Other Segments," and items reported under "Corporate Functions and Consolidation," which mainly comprise the Bayer holding companies and Leaps by Bayer (formerly: Bayer Lifescience Center), are reported under the item "Reconciliation."

12.2.4 Changes to the Structure of the Crop Science Segment

In connection with the Transaction (see "*12.3.2 The Acquisition of Monsanto and Related Divestitures*") and in preparation for the Combined Agriculture Business the structure of the Crop Science segment was adjusted as of January 1, 2018. Until January 1, 2018, Crop Science comprised the business units Crop Protection / Seeds (i.e., Herbicides, Fungicides, Insecticides, Seed Growth and Seeds) as well as Environmental Science. In the new structure, which took effect on January 1, 2018, all the strategic business entities – including the Herbicides, Fungicides, Insecticides and SeedGrowth businesses – are organizationally located directly below the Crop Science segment. The Crop Protection / Seeds unit has ceased to exist, as has the intermediate Crop Protection level below it. In addition, the business entities within Seeds (including Traits) are now regarded individually and not jointly. In line with this, Vegetable Seeds is reported separately. In view of the current size, the other Seeds businesses – comprising Corn Seed & Traits, Soybean Seed & Traits, Cotton Seed & Traits, Oilseeds & Traits and Other Seeds & Traits – are grouped together under Other (Seeds & Traits). Environmental Science continues to be managed as a separate entity, on the same level as the other strategic business entities. Also, the new reporting structure is expected to be reviewed again upon completion of the Transaction and would be modified in line with the framework conditions prevailing at that point in time. As the new structure was not in place for fiscal years 2015, 2016 and 2017, the information presented in this Prospectus with respect to these periods is presented based on the structure in place until December 31, 2017. The information presented in this Prospectus relating to the three months ended March 31,

2018, including the comparative information for the three months ended March 31, 2017, which was restated to reflect the reorganization, are presented based on the Crop Science segment structure as of January 1, 2018.

12.3 Acquisition and Divestiture Activities

12.3.1 Previous Transactions

Bayer has carried out a number of strategic acquisitions and divestitures over the past years, including the following, which we consider to be the most significant:

- In October 2014, HealthCare completed the acquisition of the consumer care business of the U.S. company Merck & Co., Inc. The purchase price amounted to €11,236 million, following purchase price allocation and adjustment. The acquired business was primarily comprised of products in the cold, allergy, sinus and flu, dermatology (including sun care), foot care and digestive health categories. The most important brands are Claritin™ (allergy), Coppertone™ (sun care), MiraLax™ (digestive health) and Afrin™ (cold), and – in North America and Latin America – Dr. Scholl's™ (foot care). These products and brands were intended to complement Bayer's existing range of nonprescription medicines offered by Consumer Health.

- In November 2014, Consumer Health acquired all the shares of Dihon Pharmaceuticals Group Co. Ltd., Kunming, Yunnan, China ("**Dihon**"). The purchase price amounted to €358 million, following purchase price allocation and adjustment. Dihon is a pharmaceutical company specializing in the manufacture and marketing of OTC and herbal traditional Chinese medicine products.

- In January 2016, Bayer completed the sale of its Diabetes Care business (the "**Diabetes Care Business**") to Panasonic Healthcare Holdings Co., Ltd., Tokyo, Japan, for €1.0 billion. Following the signing of the sale agreement in June 2015, the Diabetes Care Business was reported as discontinued operation.

- In October 2016, the sale of the Environmental Science Consumer Business to SBM Développement SAS, Lyon, France, was completed. Following the signing of the sale agreement in May 2016, the Environmental Science Consumer Business was reported as discontinued operation.

- As of September 1, 2015, Bayer's former Material Science subgroup was carved-out to become legally and economically independent and was renamed Covestro. On October 6, 2015, Covestro was floated on the stock market, immediately after which, Bayer still held 69% of the Covestro Shares. In a series of transactions that followed, Bayer gradually decreased its direct interest to currently 6.8%. Specifically, in April 2016, Bayer deposited 10 million Covestro Shares into Bayer Pension Trust e. V. ("**Bayer Pension Trust**"), a contractual trust arrangement for pension finance, thereby reducing its stake to 64.2%. In March 2017, Bayer reduced its stake to 53.3% by selling 22 million Covestro Shares to institutional investors at a price of €66.50 per Covestro Share. In June 2017, Bayer further reduced its holding to 44.8% by selling 17.25 million of Covestro Shares at a price of €62.25 per Covestro Share through an accelerated bookbuilding procedure. In addition, Bayer placed the Exchangeable Bonds in a nominal amount of €1.0 billion. Upon exchange, Bayer will have the flexibility to settle the Exchangeable Bonds in cash, by delivery of Covestro Shares or by a combination thereof. In June 2017, Bayer contributed 8 million additional Covestro Shares to the Bayer Pension Trust. In September 2017, Bayer reduced its direct interest to 31.5%, by selling 19 million of its Covestro Shares to institutional investors at a price of €63.25 per Covestro share and in late September 2017, Bayer AG sold a further 6.9% of Covestro Shares for €1.0 billion, thereby reducing its direct stake in Covestro to 24.6%. As a result of the reduced stake and the conclusion of a control termination agreement at the end of September 2017, Covestro ceased to be a reportable segment and fulfilled the conditions for presentation as discontinued operations for the first nine months of 2017. As of October 1, 2017 Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method. In January 2018, Bayer AG sold a further 10.4% of Covestro Shares for €1.8 billion, thereby reducing its direct stake in Covestro to 14.2%. At the beginning of May 2018 Bayer AG sold 28.81 million Covestro Shares, representing a 14.2% interest in Covestro AG for €2.2 billion. Following the acquisition of Covestro Shares from the Bayer Pension Trust in May 2018, which no longer holds any Covestro Shares, Bayer now holds 6.8% of Covestro Shares, which it intends to use to repay the Exchangeable Bonds that mature in 2020. Following this transaction, Bayer's remaining interest in Covestro is being accounted for at fair value.

For further information on acquisitions and divestiture activities conducted in fiscal years 2015, 2016 and 2017 and during the three months ended March 31, 2018, see the information on pages F-18 et. seq of Bayer's unaudited condensed consolidated interim financial statements as of and for the three months ended March 31, 2018, notes 6.2 and 6.3 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-28 et seq. of this Prospectus and notes 6.2 and 6.3 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-118 et seq. of this Prospectus.

12.3.2 The Acquisition of Monsanto and Related Divestitures

On September 14, 2016, Bayer signed the Merger Agreement with Monsanto Company, a global provider of agricultural products, including seeds and trait technologies, herbicides, and digital platforms to give farmers agronomic recommendations. The Merger Agreement provides for Bayer's acquisition (through a merger) of all outstanding shares of Monsanto Company against a payment of US$128.00 per share in cash which corresponded to an expected transaction value of approximately US$66 billion as of May 31, 2016. As of the date of this Prospectus, this corresponds to a transaction value of approximately US$63 billion taking into account Monsanto's debt outstanding as of February 28, 2018. The Transaction, which is subject to customary closing conditions, including the receipt of required antitrust and other regulatory approvals, all of which have been satisfied or waived (other than those conditions that by their nature are to be satisfied at the closing of the Transaction) is expected to be completed on or about June 7, 2018 after all required closing conditions were satisfied. Upon completion of the Transaction, Crop Science including Monsanto's business will become Bayer's largest division in terms of net sales. Bayer believes the agricultural industry offers long-term growth prospects driven by sustainable megatrends, including projected global population growth, higher protein intake, declining total size of farmland per capita and negative effects on yields resulting from climate change. Upon this basis, Bayer intends to create a global leader committed to transforming agriculture, which offers advanced customized agronomic solutions designed to help farmers achieve the productivity increases needed to feed an ever growing world population. Bayer is convinced the Transaction will bring together two highly complementary businesses and expects the Combined Agriculture Business to benefit from Monsanto's seeds and traits, its digital farming platform and Bayer's broad crop protection product line across a comprehensive range of indications and crops. For further information on the Transaction and its expected effects on our results of operations, see "*8. The Acquisition of Monsanto.*"

In connection with obtaining required antitrust approvals to complete the Transaction, Bayer has entered into the following Transaction-related Divestments: On October 13, 2017, Bayer reached an agreement with BASF on the First BASF Divestiture Package. The assets to be sold include Bayer's global glufosinate-ammonium herbicide business and the related LibertyLink™ technology for herbicide tolerance as well as respective R&D capabilities. The seed businesses to be divested include the global cotton seed business (excluding India and South Africa) as well as essentially the entire canola and soybean seed business. An aggregate base purchase price of approximately €5.9 billion was agreed. It excludes the value of any net working capital and is subject to customary price adjustment mechanisms. In addition, in accordance with the terms of the Divestiture Agreements, the aggregate base purchase price will be reduced by approximately €0.2 billion at closing as a result of the Transaction not closing by January 1, 2018. Such adjustment reflects the fact that Bayer continues to get the benefit of the businesses covered by the Divestiture Agreements pending closing of the transaction. The businesses covered by the First BASF Divestiture Package generated sales of €1.5 billion for the fiscal year ended December 31, 2017 and of €0.7 billion for the three months ended March 31, 2018. Furthermore, on April 26, 2018, Bayer entered into agreements to sell further Crop Science businesses to BASF for an aggregate base purchase price of up to €1.7 billion, which is subject to customary purchase price adjustment mechanisms and includes a milestone payment of €0.1 billion expected to be paid in 2019. The businesses to be divested include in particular Bayer's global vegetable seeds business, certain seed treatment products, Bayer's research platform for wheat hybrids and certain glyphosate-based herbicides in Europe that are predominantly used in industrial applications. In addition, three research projects in the field of total herbicides and Bayer's digital farming business will also be transferred. Bayer may license back, on a non-exclusive basis, technology needed for Bayer to sell certain digital agriculture products outside North America. The businesses to be divested as part of the Second BASF Divestiture Package generated total sales of €0.7 billion for the fiscal year ended December 31, 2017 and of €0.2 billion for the three months ended March 31, 2018. For more information on the Transaction-related Divestments, see "*8.10 Overview of Transaction-related Divestments*" and "*12.4.7.2 Effects of the Acquisition of Monsanto and* Related Divestitures."

12.4 Factors Affecting the Results of Operations of our Group

In the following we provide an overview of certain factors that typically affect the results of operations of our Group and its segments, with a particular focus on the economically most significant segments Pharmaceuticals, Consumer Health and Crop Science. Up until its deconsolidation at the end of September 2017, Covestro was a fully consolidated segment of the Bayer Group. For information on the effects Covestro has had on our business in the

past and the effects we expect the deconsolidation of Covestro to have on our business, see "*12.4.7.1 Effects of the Divestment and* Deconsolidation of Covestro." For information of the effects we expect the Transaction to have on our business, see "*12.4.7.2 Effects of the Acquisition of Monsanto and* Related Divestitures."

12.4.1 Our Ability to Sell our Key Products and Launch New and Innovative Products

Our segments' revenues are primarily driven by product sales, 48.1% of which derived from Pharmaceuticals in fiscal year 2017. The markets for our products are characterized by a high degree of innovation and development. We are only able to maintain our revenue levels, if our products continuously show a high degree of innovation and meet the demands and expectations of our customers. Thus, our results of operations are materially influenced by our ability to launch new and innovative products and to optimize the life cycle management of previously launched products.

12.4.1.1 Pharmaceuticals

A sustainable pipeline, life cycle management and inorganic growth concept is key for Pharmaceuticals in order to continue to generate profits. Pharmaceutical products must be investigated for effectiveness and safety in pivotal clinical studies to obtain marketing authorization and add value for patients to obtain pricing approval and be made available to patients. See "*14.1.1* Development of Drugs." There are defined criteria to assess efficacy and safety and added value which change over time. The development of new, innovative drugs and formulae that meet these criteria is critical. Generally, margins for pharmaceutical products are the highest in the years immediately following marketing authorization for a new product, since this is generally the time during which a product still benefits from patent protection as well as marketing exclusivity, i.e., no generic formulas of the same product may be granted marketing approval and the R&D expenses should be recouped. See also "*12.4.3 Pricing of Our Products*." In the past years, for example, the increase in net sales of Pharmaceuticals was driven by its key growth products Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™ which increased from €4,231 million in fiscal year 2015 to €5,413 million in fiscal year 2016 and to €6,196 million in fiscal year 2017. For fiscal year 2018, we are expecting net sales for Xarelto™, EYLEA™, Stivarga™, Adempas™, the Mirena™ product family and the YAZ™ product family to increase on a currency-adjusted basis compared to fiscal year 2017, while net sales of Xofigo™, Kogenate™/Kovaltry™, Betaferon™/Betaseron™ and Nexavar™ are expected to decline.

Upon patent expiration, drug prices usually decrease due to competition from generics as well as potentially new and better drugs for the same indication. Accordingly, upon patent expiration of our commercially successful products we expect Pharmaceuticals' net sales and profit to decline unless new, commercially viable drugs can be launched. For more information on the patent protection of Pharmaceuticals' key products, see "*13.4.1.3.2 Patent Protection for Key Products.*" Proper life cycle management can help expand the sales for a drug by having the drug approved for additional indications or treatment methods and thus expanding a drug's usability for the benefit of patients. Since Bayer may only, if at all, recoup the significant R&D expenses that go into the development of a new drug after successful completion of registration and pricing procedures (see "*14.1.1* Development of Drugs"), it is essential for Bayer to properly manage its pipeline of new drugs. This entails that the development of new drugs and additional drug uses and the launch thereof takes account of when and for how long the drug is estimated to generate relevant profits such that it can cover the R&D expenses already needed for the development of further new drugs. For more information on R&D, see "*12.4.5 Research and Development (R&D)*."

12.4.1.2 Consumer Health

Consumer Health's ability to sell its products is to a large degree dependent on the recognition of its brands, given that well-established brands are a key driver for the sales of consumer health products. In Consumer Health, the best-selling and most recognized brands currently include Claritin™, Aspirin™, Aleve™, Bepanthen / Bepanthol™, Canesten™, the Alka-Seltzer™ product family, Dr. Scholl's™, One A Day™, Coppertone™ and Elevit™, which, in fiscal years 2015, 2016 and 2017 accounted for slightly more than half of the sales generated by Consumer Health. Bayer focuses on continuously building Consumer Health's brands and market recognition through, for example, large marketing campaigns and customer-centric innovation.

In order for Consumer Health to generate high product sales, it is important that its products continue to provide new benefit areas and that they meet the various desires and needs of its customers. This may involve the development of new formulas, technical applications and medical devices as well as the testing and launch of new packaging designs, delivery forms or retail channels, such as e-commerce. Also, Consumer Health aims to branch out its product lines to create different variations of a product, for example day- versus night-time-formulas, adult and pediatric versions, stronger and weaker formulas or different product forms (pills, liquids, sprays, creams) to drive net sales. Another of Consumer Health's strategies to increase its sales is to switch products from the prescription market to the nonprescription market. Whether this is possible, however, depends on a number of factors, including the regulatory environment in the relevant countries with regard to prescription and nonprescription drugs. In 2017, for

example, the reclassification of two of Consumer Health's medicated skin care brands from OTC to prescription by the Chinese authorities had a negative impact on sales and EBIT of Consumer Health in the fourth quarter of 2017.

12.4.1.3 Crop Science

To maintain and drive net sales in Crop Science, it is essential that Crop Science continues developing innovative seeds and effective crop protection products that meet regulatory requirements while at the same time fully addressing farmers' needs. The effective management of Crop Science's product pipeline – just as in Pharmaceuticals – is important to drive net sales, since the active ingredients in crop protection products and most traits in seeds generally need to be registered before they may be placed on the market, which may take several years and is very cost-intensive (see "*14.3.2.1 Regulation Specific to Plant Protection Products*"). Since regulatory requirements continue to expand, in particular with regard to sustainability and environmental criteria, it is also crucial that Crop Science is able to expand the areas of application for the active ingredients in its products and their performance by new mixtures and through the development of innovative formulas that fulfill such requirements.

Variations of weather conditions and other seasonal factors that affect crop growth and new weed or pest resistances have impacted Crop Science's net sales in the past. Variations of weather conditions, in particular, are expected to further intensify. If Crop Science's products do not perform well under changing environmental conditions or if weeds or pests show signs of resistance against Crop Science's products, its sales volume would decrease. However, if Crop Science is able to develop and market new formulae or treatments which perform well in the face of variations of weather conditions and other seasonal factors or resistances, this should have a positive impact on product sales. Moreover, new forms of farming such as digital farming and enhanced solutions, which optimally combine the usage of products across different development stages of plant and farming cycles (from seeds to seed treatment, weed management and pest management), are becoming increasingly important. Bayer seeks to address these demands through a combined offering of crop protection products and seeds. As a result of the Transaction, Bayer anticipates that its Crop Science division will benefit from better capabilities for innovation with a significantly increased R&D budget. This will enhance the ability of the Combined Agriculture Business to effectively address challenges to innovation in agrochemicals such as longer and more costly development cycles and higher regulatory requirements. For more information on the strategic rationale and opportunities presented by the Transaction, see "*8. The Acquisition of Monsanto.*"

12.4.2 General Economic and Market Environment

Since we are a company with global operations, to a certain extent our economic success is influenced by the global economy and world-wide dynamics. Economic prospects have improved steadily throughout the year 2017. Real gross domestic product for the world increased by 3.3%[8], compared to an increase of 2.5% in 2016.[9] With respect to 2018, the real gross domestic product for the world is forecast to grow by 3.4%.[10] Although the risks for the world economy have increased in view of growing political tensions, the recent tax cuts in the United States should stimulate growth.

In the United States, the country with Bayer's largest external net sales exposure (2017: €8,561 million in external net sales; 2016: €8,706 million in sales, in both cases excluding net sales from Covestro), strong momentum resulted particularly from investment activity. Real gross domestic product increased by 2.3%[11] in 2017 in the United States, compared to an increase of 1.5% in 2016[12] and is forecast to increase by 2.7% in 2018.[13]

In the European Union, real gross domestic product increased by 2.5% in 2017, compared to 1.9% in 2016.[14] The pace of economic growth increased despite uncertainty concerning the form of the United Kingdom's exit from the European Union. In 2018, we anticipate robust growth in Europe. Real gross domestic product is forecast to grow by 2.3%[15] in Europe in 2018.

The growth rate of the emerging markets picked up considerably. For 2017, the economic output in emerging markets increased by 4.8%, compared to 3.9% in 2016.[16] We expect growth in economic output in 2018 to match the pace of the prior year, while for China, we anticipate continuing strong growth at a slightly slower rate.

[8] IHS Markit – Global Executive Summary
[9] IHS Markit – Global Executive Summary
[10] IHS Markit – Global Executive Summary
[11] IHS Markit – Global Executive Summary
[12] IHS Markit – Global Executive Summary
[13] IHS Markit – Global Executive Summary
[14] IHS Markit – Global Executive Summary
[15] IHS Markit – Global Executive Summary
[16] Global Insight – Comparative World Overview

Demographic trends, such as increasingly ageing populations worldwide associated with age related diseases as well as global population growth, a decline in the amount of agricultural land available per capita worldwide and the increasing demand for food and feed, are also important drivers of our success in the markets we operate in.

All of our markets are affected to different degrees by the global and regional economic and demographic trends described above. In particular, the markets for the products of our economically most significant segments Pharmaceuticals, Consumer Health and Crop Science are characterized by the following trends and developments:

12.4.2.1 Pharmaceuticals

The pharmaceuticals market is relatively independent of cyclical factors and is generally characterized by a constant demand for new, innovative pharmaceutical products to address unmet medical needs. In creating such innovation, Bayer focuses on key therapeutic areas for which medical need is still very high, such as cardiovascular diseases, oncology, women's health, ophthalmology and hematology. Due to its product portfolio, sales in Pharmaceuticals are driven by an increasingly ageing population worldwide and a rising demand for drugs in emerging markets such as China, Brazil and Russia. The increase in quality of life and life expectancy is leading to a heightened focus on the medical care needs of elderly patients. We believe that Pharmaceuticals' concentration on certain partly age-related diseases such as cancer or chronic cardiovascular disorders provides opportunities for Bayer. Nevertheless, Pharmaceuticals' net sales may, to a certain extent, be affected by general economic conditions in the markets in which it operates. While economic growth tends to positively influence Pharmaceuticals' net sales, in particular as a result of improved health care systems, a downturn in general economic conditions may result in pressure on selling prices and margins achieved or achievable in the future (see "*1.1.1 Sales and growth of the Bayer Group are dependent on the conditions of the global economy in general and of the economies where the Bayer Group operates in particular.*"). For example, an economic downturn could potentially put regulators under pressure to reduce patient and/or public health insurance costs for drugs and might lead regulators to impose mandatory rebates or discounts or other pricing restrictions. See also "*12.4.3 Pricing of Our Products*" and "*1.1.17 Pharmaceuticals is exposed to pricing pressure resulting from regulation and market conditions, which may negatively impact Bayer's business and results of operations.*"

12.4.2.2 Consumer Health

Net sales growth in Consumer Health is driven to a significant degree by increasing health consciousness as well as demographic macrotrends. The growing and aging world population represents an increasing challenge to public health care systems, resulting in self-care gaining importance for people, as well as for governments, health care systems and health care payers, especially for minor health disorders and complaints. This benefits Consumer Health with its mainly nonprescription (OTC) brand products to treat and prevent diseases and to improve well-being, providing consumers with the corresponding self-care solutions. Demand for Consumer Health's products is also impacted by economic conditions in key markets. For instance, the United States is Consumer Health's most important market in terms of single-country sales, exposing us to changes in the general economic environment and trends and seasonal fluctuations impacting the demand for Consumer Health products (including weather conditions or the strength of the allergy, flu or cold season) in the United States. Currently, the market environment for Consumer Health products in the United States continues to be difficult due to high competitive pressure and seasonal effects. In addition, Consumer Health tends to benefit from economic growth in emerging markets, which results in more income being available to spend on consumer health products. Accordingly, we consider emerging markets, such as China, Brazil and Russia, to present important growth opportunities for Consumer Health and are aiming to increase our presence in these markets. However, as we increase our focus on key emerging markets, our results of operations may also become more volatile since the economic development in these markets, be it positive or negative, is often characterized by a greater sensitivity to trends in the global economy. See also "*1.1.1 Sales and growth of the Bayer Group are dependent on the conditions of the global economy in general and of the economies where the Bayer Group operates in particular.*"

12.4.2.3 Crop Science

The agricultural market, including the market for Crop Science products is a cyclical market, which has recently been going through a trough characterized by low prices and profit margins for agricultural products, over-extension of farm operations and reduced investments in agriculture. Overall, the global seed and crop protection market expanded slightly in 2017, growing by around 1% in 2017, compared to zero percent growth in 2016. For 2018, we estimate the global seed and crop protection market to grow by around 3%. While demand for high-quality seed increased, sales of crop protection products stagnated worldwide. Positive growth momentum in 2017 came from the North America and Eastern Europe regions. Market volumes in Latin America declined as a result of high inventories of crop protection products and unfavorable macroeconomic conditions in Brazil. The Western European market also contracted, primarily as a result of relatively low fungal infestation levels.

Sales and earnings of Crop Science are also affected by the levels of pest infestation and variations in weather conditions and other seasonal factors impacting the growth and resistance of plants. The unpredictability of weather conditions, pests and diseases, in particular, can cause significant volatility in the supply and demand for Crop Science's products. In certain cases this can lead to market imbalances. In 2017 in Brazil (the world's second largest agriculture market), for example, Crop Science experienced severe problems on the sell-in side since distributors had built high inventories of crop protection products which, paired with low levels of insect and fungal infestation, led to extreme overstocking of crop protection products. Crop Science initiated measures aimed at normalizing the situation in Brazil (e.g., such as returns of products, selective price adjustments, campaigns to drive demand), requiring it to record significant provisions.

We believe that opportunities for our agricultural businesses arise from long-term trends and demands of the agricultural markets. These trends include the production of sufficient high-quality food, animal feed and renewable raw materials for a growing world population, despite the limited amount of available arable land.

12.4.3 Pricing of Our Products

The pricing of our products, which is influenced to a significant extent by external factors, has a significant impact on our results of operations. Factors relevant to the pricing of our products vary by segment.

12.4.3.1 Pharmaceuticals

In many markets, the pricing of pharmaceutical products is influenced by price regulations imposed, and budgeting decisions taken by, governments, health insurance and health care providers. Extensive price controls on the sale of pharmaceuticals may not only reduce earnings from Pharmaceuticals' products but also influence the purchasing patterns of hospitals, doctors and patients as well as how we market pharmaceutical products. Occasionally individual country price decisions may not reflect the value of Pharmaceuticals' products appropriately and may, thus, drive a decision against the market launch of a new product in this very country. The legal frameworks influencing the pricing of pharmaceutical products vary significantly from country to country. Since the prices of pharmaceuticals are generally regulated, there tend to be no unexpected price movements. However, the introduction or existence of reference prices, price controls, rebate systems or health care systems that dis-incentivize the use of innovative products and promote the use of generic drugs influence Bayer's results of operations. We expect the current extent of regulatory controls and pricing pressure to persist or increase. For further information, see "*14.1.3 Consumer Costs and Reimbursement Regulations*" and "*1.1.17 Pharmaceuticals is exposed to pricing pressure resulting from regulation and market conditions, which may negatively impact Bayer's business and results of operations.*"

12.4.3.2 Consumer Health

In Consumer Health the pricing strategy and price-setting is influenced by a number of factors, in particular, the strength of Consumer Health's brand equity which is linked to the effectiveness of its marketing, the individual market structures in which Consumer Health operates, its relationship with key customers as well as its competitors and their pricing activities in the market. Consumer Health is increasingly leveraging its value-added innovation (such as new formulations, delivery forms and packaging) to support more premium pricing. In a number of markets Consumer Health is seeing downward pressure on pricing from large customers, in particular, multiple retail chains. Consumer Health's actual in-market prices are, to a large degree, influenced by its recommended prices and actual trade prices, but also by its customers' pricing strategies and their desired margins.

12.4.3.3 Crop Science

Pricing for Crop Science's crop protection products is traditionally customer-value-driven by product innovation, which allows for pricing that reflects the measurably superior performance of Crop Science's products compared to its peers over fairly long product life cycles, which may range from 30 to 50 years. Depending on the product offerings of Crop Science's competitors and once the relevant products no longer benefit from patent protection, competitive pricing pressure increases and prices for Crop Science's products typically decline over time. For example, in the coming years, the patent protection of a significant number of leading active ingredients in the crop protection market will expire, including a number of Crop Science's active ingredients, which is expected to lead to highly increased pricing pressure. While Crop Science to some extent has been, and may continue to be, able to resist pricing pressure and delay price erosion over time based on the wide recognition of the Bayer brand, producers of generic forms of the relevant products are often able to offer the products at a significantly lower price because they do not have to recoup R&D expenditures related to the products' development. In addition, factors influencing farmers' purchasing decisions are not limited to evaluating a product's measurable benefits in relation to its price, but

increasingly have come to involve additional considerations such as producers' relationships with their trading partners, the emotional ties formed with farmers and other intangible values (such as "peace of mind").

Pricing for Crop Science's seed products is impacted by the shorter life cycles for these products, which are in the range of three to five years, and Crop Science's ability to optimize its products to respond to specific challenges arising, for example, from variations of weather conditions and other seasonal factors or soil pressure. When introducing new seed products, Crop Science initially often grants rebates to opinion-leading end customers, which are prepared to adopt seed products early. Once they have gained broader market acceptance based on their perceived benefits, Crop Science proceeds to raise the prices for its seed products. However, with respect to seed products, pricing pressure may arise at fairly short notice. For example, adverse weather conditions can lead to sudden significant losses on harvests and impact farmers' disposable income.

The distribution channels used by Crop Science for its products, e.g., mainly large trading partners and distributors as well as local trading partners with direct access to farmers and in some markets, such as Brazil, direct distribution to large farmers, may also impact the pricing of Crop Science's products. Crop Science offers discounts and rebates to its trading partners to compensate for their distribution and potential marketing services. Such discounts and rebates are deducted from gross prices (i.e., list prices), resulting in Crop Science's net prices. The levels and structure of discounts and rebates granted varies by regions and countries.

12.4.4 Competition

Our businesses operate in highly competitive markets. Corporate mergers, along with business practices such as aggressive marketing and pricing strategies – not only in the field of generic competition – may adversely affect our earnings and may force us to increase our expenditures. For example, in Consumer Health increasing competition for consumer attention combined with ongoing industry and distribution channel consolidation require a stronger focus on brand building, key markets and consumer-centric innovation. As a result we have invested and will continue to invest in product innovation and geographical expansion. In Crop Science, the current global consolidation process in the seeds and crop protection industry could greatly alter our future competitive environment. We are responding to this trend with acquisitions, collaborations and the expansion of in-house R&D capacities. See also "*1.1.21 There can be no assurance that Bayer will be able to recruit and retain a sufficient number of qualified employees at all sites in the future and difficulties in recruiting, retaining and further developing specialized employees could have significant adverse consequences for Bayer's future development.*"

12.4.5 Research and Development (R&D)

The economic success and competitiveness of our Group are dependent on our ability to position innovative and high-quality products on the markets in which we operate. We aim to expand our product pipeline organically and by pursuing in-licensing and bolt-on acquisition options, which necessitates substantial investments in R&D. Given the importance of innovation for these segments, we have in particular recorded high R&D expenses in Pharmaceuticals and Crop Science in the past, with the ratio of R&D expenses to sales in these segments continuously growing over the past years and reaching 17.1% and 12.2%, respectively, in fiscal year 2017. For fiscal year 2018, Bayer is targeting R&D investments of around €4.1 billion (excluding Monsanto).

The table below provides an overview of R&D expenses by segment for the periods presented:

	For the fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited, unless otherwise indicated)		(audited, unless otherwise indicated)		(unaudited)	
	(in € million)		(in € million)		(in € million)	
Pharmaceuticals	2,450	2,787	2,787	2,888	712	693
Consumer Health	250	259	259	240	59	55
Crop Science	1,082	1,164	1,164	1,166	283	257
Animal Health	134	140	140	155	33	30
Reconciliation[4]	96	55	55	55	7	5
Life Sciences	**4,012**	**4,405**	–	–	–	–
Covestro	262	261	–	–	–	–
Group	**4,274**	**4,666**	**4,405**	**4,504**	**1,094**	**1,040**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.

(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.
(4) Unaudited.

12.4.6 Sales and Marketing

While our selling expenses have remained relatively stable over the periods under review, especially as a percentage of sales, in Pharmaceuticals and Consumer Health, in particular, the launch of new products and the promotion of brands may result in temporary increases of selling expenses. Expenses may include investments to be made for product launches and brand (re-)launches (e.g., the ramp up of sales forces and of physical distribution and warehousing of finished products for the launch of a new drug, large marketing campaigns to launch or re-launch a brand or extensions thereof) and license fees due under license agreements related to the distribution, marketing and sale of products. For example, in 2015 an increase in marketing spend was recorded at Consumer Health in relation to the consumer care business acquired from Merck & Co., Inc., where investments were made in connection with the re-launch of certain of the products acquired. Also, in 2017 various initiatives were started to promote and restage a number of Consumer Health's brands, such as Dr. Scholl's™, that have been struggling due to, in particular, a difficult market environment and competitive pressure. Bayer plans to continue and expand these initiatives in 2018. At Pharmaceuticals, selling expenses in 2016 were reduced by a program to optimize the marketing and sales network.

12.4.7 Divestments and Acquisitions

Historically, we have divested and acquired a number of businesses. See also "*12.3.1 Previous Transactions*." Portfolio effects in connection with the acquisition and divestment of businesses generally influence our results of operations, in particular our net sales, and impact the comparability of our results of operations during reporting periods. See also "*10.4.6 Net Sales Adjusted for Foreign Currency Translation Effects and Portfolio Effects*." For example, the acquisition of Merck & Co. contributed a net sales increase of €1,770 million in fiscal year 2015 and has had a significant impact on our selling expenses. Acquisitions and divestments also impact our financial position (in particular, goodwill), liabilities and our cash flows. For further information on the effects of acquisition and divestment activities we have conducted historically on our financial statements, see also notes 6.2 and 6.3 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-28 et seq. of this Prospectus and notes 6.2 and 6.3 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-118 et seq. of this Prospectus.

In connection with our divestment and acquisition activities, we also regularly record special items, i.e., special effects for Bayer with regard to their nature and magnitude, typically consisting of special charges relating to integration costs (also see "*12.4.8.3 Integration Costs*"), transaction costs, financing costs and/or legal fees. Divestments and acquisitions may also affect the comparability of our financial information, see "*12.5 Comparability of the Financial Information Contained in the Audited Consolidated Financial Statements.*"

12.4.7.1 Effects of the Divestment and Deconsolidation of Covestro

At the end of September 2017, Bayer lost control of its subsidiary Covestro AG due to the sale of shares and the signing of a control termination agreement, as part of which Bayer has undertaken not to exercise certain voting rights at Covestro's annual stockholders' meeting. As a result of the Loss of Control at the end of September 2017, Covestro fulfilled the conditions for presentation as discontinued operations for the first nine months of 2017. In January 2018, Bayer sold a further 10.4% of Covestro Shares for €1.8 billion, thereby reducing its direct stake in Covestro to 14.2%. At the beginning of May 2018 Bayer AG sold 28.81 million Covestro Shares, representing a 14.2% interest in Covestro AG for €2.2 billion. Following the acquisition of Covestro Shares from the Bayer Pension Trust in May 2018, Bayer now holds 6.8% of Covestro Shares, which it intends to use to repay the Exchangeable Bonds that mature in 2020. See "*12.3.1 Previous Transactions*" for more information on Bayer's gradual divestment of Covestro Shares. As of October 1, 2017 Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss. The comparative information for fiscal year ended December 31, 2016 (with the exception of the consolidated statement of financial position as of December 31, 2016) was restated accordingly to present Covestro as discontinued operations for the full fiscal year ended December 31, 2016. Until its deconsolidation, Covestro constituted a reportable segment of the Bayer Group and contributed net sales of €11,826 million (25.3%) in fiscal year 2016 and €11,982 million (26.0%) in fiscal year 2015 towards Bayer's net sales. In addition, Covestro positively impacted our Group's earnings during the periods presented in this Prospectus, particularly due to a favorable balance between supply and demand which has allowed Covestro to maintain its selling prices and/or delay

decreases in its selling prices despite decreases in raw material prices, thus having a positive effect on Covestro's margins. Covestro contributed €1,304 million (18.5%) in fiscal year 2016 and €635 million (10.2%) in fiscal year 2015 towards Bayer's EBIT. With respect to EBITDA before special items, Covestro contributed €1,984 million (17.6%) in fiscal year 2016 and €1,659 million (16.2%) in fiscal year 2015.

For continuing operations, the Group's net sales, EBITDA before special items, EBIT and core earnings per share were adjusted retrospectively to exclude Covestro's contributions for fiscal years 2016 and 2017. In addition, all assets and liabilities allocated to Covestro were derecognized from Bayer's consolidated statements of financial position as of September 30, 2017. Given Covestro's significant contribution towards the Group's net sales, EBIT and EBITDA before special items in past periods, the deconsolidation of the Covestro business has had a significant impact on Bayer's financial statements for fiscal year 2017. For example, including net sales from Covestro, net sales of our Group amounted to €46,769 million for fiscal year 2016 and EBIT amounted to €7,042 million. In comparison, (after the figures were restated to reflect the deconsolidation of Covestro) net sales for fiscal year 2016 amount to €34,943 million and EBIT amounts to €5,738 million.

In addition, historically we have incurred a number of non-recurring expenses (special items) associated with Covestro. These special charges have included restructuring costs in particular with respect to the carve-out and stock market flotation of Covestro in fiscal year 2015 as well as restructuring costs related to the consolidation of production sites.

12.4.7.2 Effects of the Acquisition of Monsanto and Related Divestitures

The acquisition of Monsanto has already impacted Bayer's results of operations, financial position and liquidity for the periods under review in this Prospectus in various ways and following completion of the Transaction, which is expected to take place on or about June 7, 2018, Bayer anticipates additional significant impacts on its results of operations, financial position and liquidity. For example, Bayer has already incurred and expects to continue to incur a number of non-recurring expenses (special items) associated with the Transaction and the integration of Monsanto's operations. These special charges have included or will include, among others, financial, legal, accounting, consulting and other advisory fees, integration, reorganization and restructuring costs, severance/ employee benefit-related expenses and regulatory expenses.

In addition, in order to obtain merger approval for the Transaction, Bayer was required to divest certain assets and businesses to third parties. In this context, in October 2017, Bayer agreed on the First BASF Divestiture Package with BASF for an aggregate base purchase price of approximately €5.9 billion, which is subject to customary purchase price adjustment mechanisms and, in accordance with the terms of the Divestiture Agreements, will be reduced by approximately €0.2 billion at closing as a result of the Transaction not closing by January 1, 2018. In connection with the First BASF Divestiture Package, €2,081 million in assets and €111 million in liabilities was classified as held for sale according to IFRS 5 as of December 31, 2017. This total mainly comprised property, plant and equipment (€1,062 million), goodwill (€479 million), other intangible assets (€288 million) and provisions for pensions and other post-employment benefits (€13 million). The businesses to be divested under the First BASF Divestiture Package generated sales of €1.5 billion for the fiscal year ended December 31, 2017 and of €0.7 billion for the three months ended March 31, 2018. Furthermore, in April 2018, Bayer agreed on the Second BASF Divestment Package with BASF for an aggregate base purchase price of up to €1.7 billion, which is subject to customary purchase price adjustment mechanisms and includes a milestone payment of €0.1 billion expected to be paid in 2019. The businesses to be divested under the Second BASF Divestiture Package generated sales of €0.7 billion for the fiscal year ended December 31, 2017 and of €0.2 billion for the three months ended March 31, 2018. For more information on the Transaction-related Divestments, see "*8.10 Overview of Transaction-related Divestments*" and "*12.3.2 The Acquisition of Monsanto and Related Divestitures*."

As of March 31, 2018, Bayer had a contingent financial commitment in an amount of €45,673 million to acquire Monsanto's entire outstanding share capital. To finance the purchase price for the Transaction and other related payments Bayer entered into a Loan Facilities Agreement in an amount of US$56.9 billion (€48.7 billion) in September 2016. To replace commitments under the Loan Facilities Agreement, Bayer has already taken various financing measures that have affected Bayer's financial position and liquidity, including the issuance of Mandatory Convertible Notes with net proceeds of US$4.2 billion (€3.96 billion) and Exchangeable Bonds with net proceeds of US$1.2 billion (€1.05 billion) as well as the Temasek Investment. Net proceeds of additional €5.9 billion (approximately US$6.9 billion) are expected to be raised through this Offering and used to repay amounts drawn down under the Loan Facilities Agreement in connection with the Transaction In order to refinance further amounts drawn down under the Loan Facilities Agreement, Bayer intends to offer directly or through a finance subsidiary senior unsecured notes denominated in U.S. dollars and/or euros across a market standard range of maturities in an aggregate principal amount of up to €20.0 billion. The Bond Offerings may be launched, subject to market conditions, at any time, including during or shortly after the subscription period for this Offering. The Bond Offerings are fully independent of

this Offering, are not conditional upon one another and may be consummated at different times. In addition, in accordance with the terms of the Loan Facilities Agreement, Bayer expects to repay further amounts drawn down under the Loan Facilities Agreement with the net proceeds from the Transaction-related Divestments.

For further indications of the effects the Transaction is expected to have on our business, see "*9. Pro Forma Financial Information – Effects of the Covestro Divestments and the Acquisition of Monsanto on the Consolidated Financial Information of Bayer for the Fiscal Year Ended December 31, 2017, and as of and for the Three Months Ended March 31, 2018.*"

Bayer expects the integration of Monsanto to result in significant cost- and sales-related synergies and estimates a total annual synergy potential of approximately US$1.2 billion (net EBITDA impact before special items) as of 2022. Also, as a result of the Transaction, Bayer expects to recognize a substantial portion of the difference between the amount paid for the acquisition and the book value of Monsanto's equity as intangible assets of Monsanto and goodwill of the Crop Science business. If unexpected difficulties were to arise in the course of the integration of Monsanto's business into Bayer or if Monsanto's business were to fail to develop as expected Bayer may, in accordance with IFRS, be forced to recognize an impairment loss on the intangible assets of Monsanto and on the goodwill of the Crop Science business. See also "*1.2.9 Bayer could be forced to recognize impairment losses on the intangible assets of Monsanto and goodwill of the Crop Science business.*"

Upon completion of the Transaction, Crop Science including Monsanto's business will become Bayer's largest division in terms of net sales. Given the geographical scope of Monsanto's operations, which have a strong focus on North and South America, Bayer's and particularly Crop Science's results of operations are expected to be affected to a larger extent than previously by fluctuations in the business in these geographical regions. Since some of these regions, in particular Argentina, Mexico and Brazil, are characterized by greater economic and political uncertainty and greater market volatility we expect such fluctuations to also be reflected in Bayer's future results of operations. In addition, Bayer expects its exposure to foreign exchange rates to increase, in particular as regards the exchange rate of the euro to the U.S. dollar, but also to important Latin American currencies such as the Argentine peso, the Mexican peso and the Brazilian real. See also "*1.2.3 As a result of the Transaction, Bayer's risk profile may shift and it may be exposed to additional risks associated with the Combined Agriculture Business, some of which may still be unidentified or cannot yet be assessed conclusively.*" and "*1.2.13 Fluctuations in exchange rates could have a significant impact on the amount of debt Bayer incurs and the results of operations of Bayer following completion of the Transaction.*"

12.4.8 Special Items

Historically, our Group's EBIT and EBITDA have been impacted by several categories of special items, including restructuring, litigation, integration costs, impairment losses/impairment loss reversals, divestitures/ divestments, acquisition costs and revaluation of other receivables. These special items have influenced our cost of goods sold, our selling expenses, our R&D expenses, our general administration expenses and our other operating income/other operating expenses.

EBIT before special items and EBITDA before special items constitute relevant key data for Bayer and are determined by adding special charges and subtracting special gains. The following table provides an overview of the special items categories which have impacted EBIT in the periods indicated:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(unaudited, unless otherwise indicated) (in € million)		(unaudited, unless otherwise indicated) (in € million)		(unaudited) (in € million)	
EBIT[4] [5]	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
Special items[4]	**819**	**1,088**	**1,088**	**1,227**	**102**	**78**
of which restructuring	*648*	*242*	*242*	*227*	*43*	*13*
of which litigations / legal risks	*(237)*	*94*	*94*	*188*	*5*	*4*
of which integration costs	*227*	*100*	*–*	*–*	*–*	*–*
of which impairment losses / impairment loss reversals	*43*	*561*	*561*	*450*	*33*	*–*
of which divestitures / divestments	*47*	*5*	*5*	*58*	*–*	*–*
of which acquisition costs	*–*	*86*	*186*	*304*	*21*	*61*
of which revaluation of other receivables	*91*	*–*	*–*	*–*	*–*	*–*
EBIT before special items[4] [5]	**7,060**	**8,130**	**6,826**	**7,130**	**2,529**	**2,388**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.
(2) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, which present Covestro as discontinued operations.
(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.
(4) Audited for the fiscal years ended December 31, 2015, 2016 and 2017.
(5) Alternative Performance Measure used by Bayer, for more information see "*10.4. Additional Key Figures for the Bayer Group.*"

For information on our reconciliation of EBIT to EBIT before special items and EBITDA to EBITDA before special items, see "*10.4 Additional Key Figures for the Bayer Group*." In the following we provide additional information on the most important special items impacting our results in the periods under review.

12.4.8.1 Restructuring

Restructuring costs, which constitute special charges, include severance payments and other expenses resulting from the sale or termination of business units, site closures or relocations of business activities or fundamental reorganizations of business units. They may also arise in connection with the integration of acquired businesses.

In the periods under review, at group level, we incurred significant restructuring costs in particular with respect to the reorganization of our segments with effect from January 1, 2016 (see "*12.2.2 Bayer's Corporate Structure in Effect from January 1, 2016*"). We have also incurred restructuring costs in connection with efficiency enhancement programs and other strategy programs, for example, at Pharmaceuticals with regard to marketing and sales network optimization, and at Crop Science with regard to a strategy program aimed at increasing customer focus, promoting innovation and improving efficiency as well as a restructuring program in the United States involving the closure of production facilities.

12.4.8.2 Litigation

Litigation has had and is expected to continue to have an influence on our results of operations, particularly upon our consolidated other operating income and/or other operating expenses. In the past, we have incurred special charges for litigation but also special gains. At the segment level, litigation has had an impact, in particular, on Pharmaceuticals where we have incurred and/or expect to continue to incur significant product-related litigation costs in connection with disputes concerning our pharmaceutical products Yasmin™ / YAZ™, Essure™, Xarelto™, Cipro™ / Avelox™ and Mirena™. At Crop Science, we recorded special gains in fiscal year 2015 from litigation proceedings against Dow AgroSciences LLC, United States ("**Dow AgroSciences**"), for damage and license payments in an amount of €314 million in connection with the infringement of Bayer's rights to the Liberty Link™ weed control system.

12.4.8.3 Integration Costs

We have incurred integration costs in the last three fiscal years, in particular at Consumer Health in connection with the integration of the consumer care businesses of Merck & Co., Inc., and Dihon, which were acquired in 2014. In fiscal year 2016 and 2017, we incurred special charges in connection with the Transaction. In preparation for the Transaction, we initiated a project to carefully plan the integration of Monsanto in all business areas so that a smooth integration of Monsanto into the Bayer Group can be achieved. The integration process will start after the Transaction-related Divestments have closed and is expected to lead to further significant special charges.

12.4.8.4 Impairment Losses / Impairment Loss Reversals

As a life science company, a large part of our noncurrent assets consist of goodwill from our previous acquisitions or other intangible assets, such as patents, trademarks, marketing rights or other product rights. The goodwill recognized in connection with an acquisition may be changed within twelve months due to a revised purchase price allocation. Such revisions may be due to, for example, a reassessment of the benefits of an acquisition such as realizable cost synergies or sales synergies. Impairment losses on intangible assets may result, in particular, from changes in the assessment of the market environment and therefore lower or higher revenue expectations from marketable rights. In the life science business, in which the Group operates, it is possible that new research may become available that can either increase or decrease the value of a product's marketable rights. Impairment losses on intangible assets may also be incurred, if the development of a new drug or product is discontinued, the assessment of the market environment changes or revenue expectations are lowered, in which case the expenses

that have gone into the development of such product until then are recognized as losses. If we have an indication of a possible impairment, we perform an impairment test. Goodwill, intangible assets with an indefinite useful life and intangible assets not yet available for use are tested for impairment at least once a year.

In the periods under review, we recognized significant impairment losses of €456 million on intangible assets in 2017. At Pharmaceuticals, impairment losses of €207 million were recognized in 2017, in particular on intangible assets in the oncology area, a drug candidate for the treatment of lung infections due to new research findings and in the women's health and ophthalmology areas. At Consumer Health, a weaker market environment led to total impairment losses of €202 million in 2017, in particular for Coppertone™ and a trademark in the allergies area (Aerius™). At Crop Science, an impairment loss of €41 million was recognized in connection with termination of a research project.

For further information, see note 17 on goodwill and other intangible assets of Bayer's audited consolidated financial statements for fiscal year 2017, set forth on pages F-66 et seq. of this Prospectus.

12.4.9 Exchange Rate Fluctuations

Changes in exchange rates have been a significant driver of our results of operations in recent years. As a substantial portion of our assets, liabilities, sales and earnings are denominated in currencies other than the Euro, we are exposed to fluctuations in the values of these currencies relative to the Euro. Especially the fluctuation of the value of the U.S. dollar relative to the Euro and currently the appreciation of the Euro against the U.S. dollar, has a material impact on our results of operations. In addition, fluctuations in currencies other than the Euro and the U.S. dollar in countries in which we have significant operations and/or sales can have a material impact on our results of operations. We face both transaction risk, where our businesses generate sales in one currency but incur costs relating to that revenue in a different currency, and translation risk, which arises when we translate the income statements of our subsidiaries into Euro for inclusion in our financial statements. We do not quantify the effects on our financial statements of transaction risks. Translation risks, which we do quantify and against which we do not hedge, do not affect our local currency cash flows or results of operations but do affect our consolidated financial statements. Receivables and payables in liquid currencies from operating activities and financial items are generally fully exchange-hedged through forward exchange contracts and cross-currency interest-rate swaps.

12.4.10 U.S. Tax Reform

On December 22, 2017, the United States enacted new tax legislation, the "Tax Cuts and Jobs Act of 2017," which provides for substantial changes to the U.S. taxation of individuals and businesses and aims to attract new investments, jobs and growth in the United States. For fiscal year 2017, Bayer's reported tax expense reflects a one-time effect in an aggregate amount of €455 million that results solely from the U.S. tax reform. Among other matters, the U.S. tax reform provides for a reduction in the corporate tax rate from 35% to 21% from January 1, 2018. This led to a remeasurement of all of Bayer's deferred tax assets and tax liabilities associated with U.S. companies and resulted in deferred tax expense of €409 million. Furthermore, additional tax on unrepatriated profits, which previously had not been taxed in the United States, led to tax expenses of €46 million for Bayer in fiscal year 2017.

Although the new law decreases tax rates applicable to corporations in the United States substantially, Bayer is unable to fully or finally assess what all of the consequences of the legislation will be at this point in time. In particular, significant uncertainties remain as to how the U.S. government will implement the new legislation, including with respect to the tax qualification of interest deductions, the concept of a territorial tax regime and the manner in which royalty payments and cost of goods sold will be defined. Bayer currently does not expect an overall negative impact of the U.S. tax reform on the Bayer Group, including as a result of the Transaction. In particular, Bayer currently does not expect its ability to deduct interest expenses to be negatively affected by the U.S. tax reform. Bayer is currently also acting on the assumption that the minimum tax, referred to as base erosion and anti-abuse tax, which targets U.S. businesses benefitting from deductible payments made to non-U.S. related parties, will not be relevant to the Bayer Group. As regards the minimum tax on so-called 'global intangible low-tax income' earned by non-U.S. affiliates that are partially or wholly owned by U.S. companies, Bayer currently estimates that it could have an impact on the Bayer Group, depending on the ultimate U.S. ownership of non-U.S. affiliates after integration of Monsanto.

Bayer expects additional rules and regulations to be issued in the medium term. This could entail potential risks that cannot be fully assessed at this point in time. In particular, it cannot be excluded that Bayer's positions described above may be affected by such future legislative and regulatory action, which could lead to an increase in its effective tax rate and could adversely affect its financial condition and results of operations.

For information on the risks for Bayer associated with the U.S. tax reform, see "*1.1.29 Bayer may be exposed to potential risks in connection with the recent U.S. tax reform, which cannot be fully assessed at this point in*

time." and *"1.2.4 As a result of the Transaction, Bayer will assume the litigation risk arising in connection with Monsanto's pending and future litigation. Adverse outcomes in legal proceedings, including environmental remediation matters, could subject the Bayer Group to substantial damages and adversely affect the Bayer Group's results of operations and profitability.*"

12.5 Comparability of the Financial Information Contained in the Audited Consolidated Financial Statements

As a result of the Loss of Control at the end of September 2017, Covestro ceased to be a reportable segment and fulfilled the conditions for presentation as discontinued operations for the first nine months of 2017. As of October 1, 2017 Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss. The comparative information for fiscal year ended December 31, 2016 (with the exception of the consolidated statement of financial position as of December 31, 2016) as presented in the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017 and for the three months ended March 31, 2017 as presented in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018, was restated accordingly to present Covestro as discontinued operations for the full fiscal year ended December 31, 2016 and for the three months ended March 31, 2017. The audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, including the comparative information as of and for fiscal year ended December 31, 2015 were, however, not restated and present Covestro in continuing operations.

In order to increase transparency in the following sections, we present the 2016 figures relating to the results of operations of the Bayer Group and the cash flows of the Bayer Group in two columns: one column showing the 2016 figures as presented in the audited consolidated statement of financial income or the audited consolidated statement of cash flows of Bayer, as the case may be, as of and for fiscal year ended December 31, 2016 (with Covestro included in continuing operations) and a second column showing the 2016 figures as presented in the audited consolidated statement of financial income or the audited consolidated statement of cash flows of Bayer as of and for fiscal year ended December 31, 2017 (with Covestro presented as discontinued operations for the nine months ended September 30, 2017).

Against this background, the results of operations of the Bayer Group presented and discussed under sections "*12.9 Comparison of Fiscal Year 2017 with Fiscal Year 2016—12.9.1 Results of Operations of the Bayer Group"* and "*12.10 Comparison of Fiscal Year 2016 with Fiscal Year 2015—12.10.1 Results of Operations of the Bayer Group*" are not directly comparable. Similarly, the discussions of Bayer's cash flows under sections "*12.12.3 Comparison of Fiscal Year 2017 with Fiscal Year 2016*" and "*12.12.4 Comparison of Fiscal Year 2016 with Fiscal Year 2015*" are not directly comparable.

As a consequence of Bayer's increased focus on the life sciences business, Bayer started to present certain financial data for its Life Sciences in its audited consolidated financial statements as of and for fiscal year 2016 which allows the comparison of certain financial data for the Group for the years 2017 and 2016 (restated to reflect the deconsolidation of Covestro) with Bayer's Life Science business in fiscal year 2015 (see "*10.5 Selected Key Data by Segment*," "*12.4.5 Research and Development (R&D)*," "*12.9.1.1.1 Discussion of Factors Affecting Net Sales*," "*12.9.1.1.2 Discussion of Net Sales by Region*," "*12.9.1.5 Research and Development (R&D) Expenses*," "*12.13.3 Significant Capital Expenditures in Fiscal Year 2016*" and "*12.13.4 Significant Capital Expenditures in Fiscal Year 2015*").

Bayer's statement of financial position as of December 31, 2016 was not restated to reflect the deconsolidation of Covestro such that Covestro's assets and liabilities are still recognized in the balance sheet of the Group. Therefore, the 2016 figures presented and/or discussed under sections "*10.2 Bayer Group Consolidated Statements of Financial Position*", "*12.11 Information on Consolidated Statement of Financial Position*" and "*12.11.2 Comparison of December 31, 2017 with December 31, 2016*" are not comparable to the figures presented as of December 31, 2017 and the figures presented as of March 31, 2018 which present Covestro as discontinued operations. Similarly, Bayer's audited consolidated statements of financial position as of December 31, 2015 was not restated to reflect the sale of the Environmental Science Consumer Business such that its assets and liabilities are still recognized in the balance sheet of the Group. Therefore, the 2015 figures presented and/or discussed under sections "*10.2 Bayer Group Consolidated Statements of Financial Position*", "*12.11 Information on Consolidated Statement of Financial Position*" and "*12.11.3 Comparison of December 31, 2016 with December 31, 2015*" are not comparable to the figures presented as of December 31, 2016, which present the Environmental Science Consumer Business as discontinued operations.

In addition, following the deconsolidation of Covestro, Covestro ceased to be a reportable segment of the Bayer Group. Accordingly, Covestro is neither discussed nor presented as a segment in the section

"*12.9 Comparison of Fiscal Year 2017 with Fiscal Year 2016—12.9.2 Selected Segment Information*," but is discussed and presented as a segment in the section "*12.10 Comparison of Fiscal Year 2016 with Fiscal Year 2015—12.10.2 Selected Segment Information*"

12.6 Recently Adopted Financial Reporting Standards

The audited consolidated financial statements of Bayer as of and for fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017 include the effects of financial reporting standards applied for the first time in the respective reporting periods as disclosed in the notes to the financial statements. Where required by IFRS, comparative figures have been adjusted to reflect the retrospective application of new financial reporting standards. However, the first-time application had no, or no material impact, on the presentation of Bayer's financial position or results of operations, or on earnings per share.

The financial reporting standards that were applied for the first time in the respective reporting periods and their effects are described, in each case, on pages F-36 et seq.

For annual reporting periods beginning on or after January 1, 2018, a new standard for revenue recognition, IFRS 15 (Revenue from Contracts with Customers) has become applicable. Bayer has implemented IFRS 15 on the basis of the modified retrospective method, accounting for the aggregate amount of any transition effects by way of an adjustment to retained earnings as of January 1, 2018, and presenting the comparative period in line with previous rules. In addition, a new standard for accounting for financial instruments, IFRS 9 (Financial Instruments) has become applicable that Bayer applied retrospectively for the first time as of January 1, 2018, without restating the prior-year figures, accounting for the aggregate amount of any transition effects by way of an adjustment to equity and presenting the comparative period in line with previous rules. For additional information on the effects the new financial reporting standards have on Bayer, see pages F-9 et seq.

12.7 Explanation of Key Line Items in Bayer's Results of Operations

The following table provides an overview of the Bayer Group's results of operations for the periods indicated:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million, unless otherwise indicated)		(audited) (in € million, unless otherwise indicated)		(unaudited) (in € million, unless otherwise indicated)	
Net sales	**46,085**	**46,769**	**34,943**	**35,015**	**9,680**	**9,138**
Cost of goods sold	(21,040)	(20,295)	(11,756)	(11,382)	(2,987)	(2,909)
Gross profit	**25,045**	**26,474**	**23,187**	**23,633**	**6,693**	**6,229**
Selling expenses	(12,272)	(12,474)	(11,148)	(11,116)	(2,667)	(2,509)
Research and development expenses	(4,274)	(4,666)	(4,405)	(4,504)	(1,094)	(1,040)
General administration expenses	(2,092)	(2,256)	(1,804)	(2,026)	(460)	(427)
Other operating income	1,109	898	787	864	159	152
Other operating expenses	(1,275)	(934)	(879)	(948)	(204)	(95)
EBIT[4]	**6,241**	**7,042**	**5,738**	**5,903**	**2,427**	**2,310**
Equity-method income (loss)	(9)	(26)	(6)	20	(7)	71
Financial income	371	151	149	289	32	370
Financial expenses	(1,367)	(1,280)	(1,108)	(1,635)	(321)	(311)
Financial result	**(1,005)**	**(1,155)**	**(965)**	**(1,326)**	**(296)**	**130**
Income before income taxes	**5,236**	**5,887**	**4,773**	**4,577**	**2,131**	**2,440**
Income taxes	(1,223)	(1,329)	(1,017)	(1,329)	(424)	(494)
Income from continuing operations after income taxes	**4,013**	**4,558**	**3,756**	**3,248**	**1,707**	**1,946**
Income from discontinued operations after income taxes	**85**	**268**	**1,070**	**4,846**	**564**	**8**
Income after income taxes	**4,098**	**4,826**	**4,826**	**8,094**	**2,271**	**1,954**
of which attributable to noncontrolling interest	*(12)*	*295*	*295*	*758*	*188*	*–*
of which attributable to Bayer AG stockholders (net income)	*4,110*	*4,531*	*4,531*	*7,336*	*2,083*	*1,954*

(1) Figures extracted from the audited consolidated income statement of Bayer for fiscal year ended December 31, 2016 which presents Covestro in continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.
(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.
(4) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group*."

12.7.1 Net Sales

Net sales include all external sales, without intersegment sales. All revenues derived from the selling of products or rendering of services or from licensing agreements are recognized as sales. Sales are recognized in profit or loss when the significant risks and rewards of ownership of the goods have been transferred to the customer, the company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold, the amount of revenue and costs incurred or to be incurred can be measured reliably, and it is sufficiently probable that the economic benefits associated with the transaction will flow to the company. For more information on Bayer's accounting for net sales, see note 4 to the audited consolidated financial statements as of and for the fiscal year ended December 31, 2017, F-39 et seq. and "*12.6 Recently Adopted Financial Reporting Standards*."

12.7.2 Cost of Goods Sold

Cost of goods sold include the production costs of goods or services sold and the cost for goods purchased and resold in the accounting period as well as other production-related costs.

12.7.3 Gross Profit

Gross profit represents net sales after deducting cost of goods sold.

12.7.4 Selling Expenses

Selling expenses comprise all expenses incurred in the reporting period for the sale, storage and transportation of saleable products, advertising, the provision of advice to customers, and market research.

12.7.5 R&D Expenses

Research expenses are defined as costs incurred for current or planned investigations undertaken with the prospect of gaining new scientific or technical knowledge and understanding. Development expenses are defined as costs incurred for the application of research findings or specialist knowledge to plans or designs for the production, provision or development of new or substantially improved products, services or processes, respectively, prior to the commencement of commercial production or use. R&D expenses are incurred in the Bayer Group for in-house R&D activities as well as numerous R&D collaborations and alliances with third parties. R&D expenses mainly comprise the costs for active ingredient discovery, clinical studies, R&D activities in the areas of application technology and engineering, field trials, regulatory approvals and approval extensions. For more information on Bayer's accounting for R&D expenses, see note 4 to the audited consolidated financial statements as of and for the fiscal year ended December 31, 2017, set forth on pages F-39 et seq.

12.7.6 General Administration Expenses

General administration expenses include all costs incurred in connection with the administration of the Group's business except for costs incurred in close connection with the production or selling of products. Administration expenses, for example, include personnel expenses, costs incurred for depreciations and other administration-related expenses.

12.7.7 Other Operating Income

Operational revenues not derived from the selling of products or rendering of services or from licensing agreements are recognized as other operating income. Other operating income includes gains on retirements of noncurrent assets, reversals of impairment losses on receivables, reversals of unutilized provisions, gains from derivatives and miscellaneous operating income.

12.7.8 Other Operating Expenses

Other operating expenses include losses on retirements of noncurrent assets, impairment losses on receivables, expenses related to significant legal risks, losses from derivatives and miscellaneous operating expenses.

12.7.9 EBIT

Earnings before interest and taxes, which is defined as total income before income taxes less financial result.

12.7.10 Financial Income and Financial Expenses

Financial income includes income from investments in affiliated companies, income from interest and similar income, interest income from derivatives (held for trading) and other financial income. Financial expenses include loss from investments in affiliated companies, interest and similar expenses, interest expenses for derivatives (held for trading) and other financial expenses.

12.7.11 Income Taxes

Income taxes comprise the taxes levied on taxable income in the individual countries along with changes in deferred tax assets and liabilities that are recognized in profit or loss. The income taxes recognized are reflected at the amounts likely to be payable under the statutory regulations in force, or already enacted in relation to future periods, at the end of the reporting period.

12.8 Comparison of Three Months Ended March 31, 2018 with Three Months Ended March 31, 2017

12.8.1 Results of Operations of the Bayer Group

12.8.1.1 Net Sales

12.8.1.1.1 *Discussion of Factors Affecting Sales*

Net sales of the Bayer Group decreased by €542 million, or 5.6%, from €9,680 million in the three months ended March 31, 2017 to €9,138 million in the three months ended March 31, 2018. On a currency- and portfolio-adjusted basis, net sales increased by 2.0% in the three months ended March 31, 2018.

The table below provides a breakdown of the factors that affected the Bayer Group's reported net sales in the three months ended March 31, 2018, in absolute amounts and as a period-on-period change:

	For the three months ended March 31, 2018	Change (period-on-period)
	(unaudited)	
	(in € million)	(in %)
Volume	308	3.2
Price	(115)	(1.2)
Currency	(728)	(7.5)
Portfolio	(7)	(0.1)
Total	**(542)**	**(5.6)**

The decrease in the Bayer Group's net sales in the three months ended March 31, 2018 was attributable to unfavorable currency effects, a decline in selling prices and portfolio effects which resulted in a 7.5%, 1.2% and 0.1% decrease in net sales, respectively. These effects were partially offset by an increase in sales volume by 3.2%.

The unfavorable currency effects in the three months ended March 31, 2018 were mainly attributable to the Euro strengthening against the U.S. dollar (USD), the Canadian dollar (CAD), the Chinese renminbi (CNY) and the Japanese yen (JPY).

The decrease in selling prices was mainly attributable to lower selling prices at Pharmaceuticals.

The portfolio effects were attributable to the sale of Pharmaceuticals' MK Generics business in Central America and the Caribbean.

The volume-driven increase in the Group's net sales in the three months ended March 31, 2018 was attributable to higher sales volumes in Pharmaceuticals and Animal Health.

For more information on our segments, including a breakdown of the factors that affected our segments' net sales, see "*12.8.2 Selected Segment Information*."

12.8.1.1.2 *Discussion of Net Sales by Region*

The following table presents the Bayer Group's external net sales by region (by market), for the periods indicated, in absolute amounts and as a percentage of the Bayer Group's total net sales, as well as the period-on-period change in external net sales by region (by market) on a reported and on a currency-adjusted basis:

	For the three months ended March 31,		Change (period-on-period)	Currency-adjusted
	2017[1]	2018		
	(unaudited) (in € million, unless otherwise indicated)		(unaudited) (in %)	
Europe / Middle East / Africa	4,000	3,907	(2.3)	0.2
% of net sales	*41.3%*	*42.8%*		
North America	2,994	2,654	(11.4)	0.4
% of net sales	*30.9%*	*29.0%*		
Asia / Pacific	1,974	1,927	(2.4)	6.2
% of net sales	*20.4%*	*21.1%*		
Latin America	712	650	(8.7)	5.9
% of net sales	*7.4%*	*7.1%*		
Total	**9,680**	**9,138**	**(5.6)**	**1.9**

(1) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

The following discussion of the net sales development by region is presented on a currency-adjusted basis:

The net sales of the Bayer Group in the Europe / Middle East / Africa region remained level period-on-period. Net sales of Pharmaceuticals increased, while net sales of Consumer Health, Crop Science and Animal Health declined.

The net sales of the Bayer Group in the North America region remained level period-on-period. Net sales of Crop Science and Animal Health increased, while net sales of Pharmaceuticals and Consumer Health declined.

The increase in net sales of the Bayer Group in the Asia / Pacific region was attributable to increases in net sales of Pharmaceuticals, Consumer Health and Animal Health. The net sales of Crop Science decreased.

The increase in net sales of the Bayer Group in the Latin America region was attributable to increases in net sales in all segments.

12.8.1.2 Cost of Goods Sold

Cost of goods sold of the Bayer Group decreased by €78 million, or 2.6%, from €2,987 million in the three months ended March 31, 2017 to €2,909 million in the three months ended March 31, 2018. The decrease in cost of goods sold in the three months ended March 31, 2018 was mainly due to the lower cost of goods sold in Consumer Health and Crop Science. Special charges impacting cost of goods sold in the three months ended March 31, 2018 amounted to €10 million, compared to €25 million in the three months ended March 31, 2017.

12.8.1.3 Gross Profit

Gross profit of the Bayer Group decreased by €464 million, or 6.9%, from €6,693 million in the three months ended March 31, 2017 to €6,229 million in the three months ended March 31, 2018. The decrease in gross profit in the three months ended March 31, 2018 was mainly attributable to the decrease in net sales.

12.8.1.4 Selling Expenses

Selling expenses of the Bayer Group decreased by €158 million, or 5.9%, from €2,667 million in the three months ended March 31, 2017 to €2,509 million in the three months ended March 31, 2018, mainly due to higher selling expenses at Pharmaceuticals.

12.8.1.5 Research and Development (R&D) Expenses

R&D expenses of the Bayer Group decreased by €54 million, or 4.9%, from €1,094 million in the three months ended March 31, 2017 to €1,040 million in the three months ended March 31, 2018.

The following table provides a breakdown of our R&D expenses by segment for the periods presented:

	For the three months ended March 31,	
	2017[1]	2018
	(unaudited) (in € million)	
Pharmaceuticals	712	693
Consumer Health	59	55
Crop Science	283	257
Animal Health	33	30
Reconciliation	7	5
Group	**1,094**	**1,040**

(1) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

The decrease in R&D expenses in the three months ended March 31, 2018 was attributable to lower R&D investments in all segments. Special charges impacting R&D expenses in the three months ended March 31, 2018 amounted to €3 million, compared to €36 million in the three months ended March 31, 2017.

12.8.1.6 General Administration Expenses

General administration expenses of the Bayer Group decreased by €33 million, or 7.2%, from €460 million in the three months ended March 31, 2017 to €427 million in the three months ended March 31, 2018. The decrease in general administration expenses in the three months ended March 31, 2018 was mainly attributable to Crop Science. Special charges impacting general administration expenses in the three months ended March 31, 2018 amounted to €58 million, compared to €35 million in the three months ended March 31, 2017 and arose primarily in connection with the Transaction.

12.8.1.7 Other Operating Income

Other operating income of the Bayer Group decreased by €7 million, or 4.4%, from €159 million in the three months ended March 31, 2017 to €152 million in the three months ended March 31, 2018.

12.8.1.8 Other Operating Expenses

Other operating expenses of the Bayer Group decreased by €109 million, or 53.4%, from €204 million in the three months ended March 31, 2017 to €95 million in the three months ended March 31, 2018. The decrease was mainly attributable to derivatives including positive currency effects due to a strong Euro.

12.8.1.9 EBIT

EBIT of the Bayer Group decreased by €117 million, or 4.8%, from €2,427 million in the three months ended March 31, 2017 to €2,310 million in the three months ended March 31, 2018. The decrease in Group EBIT in the three months ended March 31, 2018 was attributable to a decrease in EBIT at Consumer Health, Crop Science and Pharmaceuticals. EBIT of the Bayer Group included special charges of €78 million in the three months ended March 31, 2018, compared to €102 million in the three months ended March 31, 2017. The special charges in the three months ended March 31, 2018 primarily consisted of expenses of €61 million in connection with the Transaction and of €13 million in charges relating to efficiency improvement programs.

EBIT before special items decreased by €141 million, or 5.6%, from €2,529 million in the three months ended March 31, 2017 to €2,388 million in the three months ended March 31, 2018.

The following table provides an overview of special items included in EBIT for the periods shown by segment:

	For the three months ended March 31,	
	2017[1]	2018
	(unaudited, unless otherwise indicated) (in € million)	
EBIT before special items[2]	**2,529**	**2,388**
Special items of Pharmaceuticals	(36)	(1)
Special items of Consumer Health	(9)	(5)
Special items of Crop Science	(37)	(61)
Special items of Animal Health	–	–
Special items of Reconciliation	(20)	(11)
Total special items	**(102)**	**(78)**
EBIT[2]	**2,427**	**2,310**

(1) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(2) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group*."

12.8.1.10 Financial Result

The financial result of Bayer was a net income of €130 million in the three months ended March 31, 2018, in comparison to a net expense of €296 million in the three months ended March 31, 2017. The financial result included a gain of €275 million in the three months ended March 31, 2018 from the sale of Covestro shares in January 2018 and pro-rata income of €80 million from the interest in Covestro accounted for using the equity method. The financial result also included €236 million in special gains in the three months ended March 31, 2018 (compared to €35 million in special charges in the three months ended March 31, 2017), primarily in connection with the aforementioned gain from the sale of Covestro shares, which was partially offset by special charges of €68 million in connection with the Transaction.

Financial income of the Bayer Group increased by €338 million from €32 million in the three months ended March 31, 2017 to €370 million in the three months ended March 31, 2018. The increase was attributable to a gain of €275 million from the sale of Covestro shares in January 2018 as well as €41 million positive fair value changes of the Exchangeable Bonds issued in June 2017.

Financial expenses of the Bayer Group decreased by €10 million from €321 million in the three months ended March 31, 2017 to €311 million in the three months ended March 31, 2018.

12.8.1.11 Income before Income Taxes

Income before income taxes increased by €309 million, or 14.5%, from €2,131 million in the three months ended March 31, 2017 to €2,440 million in the three months ended March 31, 2018. Income tax expenses of the Bayer Group increased by €70 million, or 16.5%, from €424 million in the three months ended March 31, 2017 to €494 million in the three months ended March 31, 2018.

12.8.1.12 Income from Continuing Operations after Income Taxes

Income from continuing operations after income taxes increased by €239 million, or 14.0%, from €1,707 million in the three months ended March 31, 2017 to €1,946 million in the three months ended March 31, 2018.

12.8.1.13 Income from Discontinued Operations after Income Taxes

Income from discontinued operations after income taxes decreased by €556 million, from €564 million in the three months ended March 31, 2017 to €8 million in the three months ended March 31, 2018 due to the deconsolidation of Covestro in the third quarter of 2017.

12.8.1.14 Income after Income Taxes

Overall, Income after income taxes decreased by €317 million, or 14.0%, from €2,271 million in the three months ended March 31, 2017 to €1,954 million in the three months ended March 31, 2018 mostly due to a decrease in income from discontinued operations resulting from the deconsolidation of Covestro.

12.8.2 Selected Segment Information

12.8.2.1 Pharmaceuticals

The following table provides an overview of the key data for Pharmaceuticals for the periods indicated:

	For the three months ended March 31,	
	2017[1]	2018
	(unaudited) (in € million, unless otherwise indicated)	
Net sales	**4,263**	**4,075**
Change		(4.4)%
Currency- and portfolio-adjusted[2]		2.9%
Sales by region	**4,263**	**4,075**
Europe / Middle East / Africa	1,606	1,611
Currency-adjusted change[2]		2.6%
North America	1,073	923
Currency-adjusted change[2]		(3.0)%
Asia / Pacific	1,312	1,303
Currency-adjusted change[2]		7.7%
Latin America	272	238
Currency-adjusted change[2]		2.6%
EBITDA before special items[2]	**1,502**	**1,415**
Depreciation, amortization and impairment losses/loss reversals before special items	(247)	(251)
Special items	(36)	(1)
of which:		
Restructuring	*(3)*	*(1)*
Impairment losses / impairment loss reversals	*(33)*	–
EBIT[2]	**1,219**	**1,163**

(1) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(2) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.8.2.1.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Pharmaceuticals increased by 2.9% in the three months ended March 31, 2018. Total combined net sales of Xarelto™, EYLEA™, Xofigo™, Stivarga™ and Adempas™ delivered a strong performance overall and their combined sales increased from €1,445 million in the three months ended March 31, 2017 to €1,561 million in the three months ended March 31, 2018. We registered a noticeable decline in sales in our business with Kogenate™ that resulted from the termination of an agreement with a distribution partner at the end of 2017. After adjusting for this effect, sales of Pharmaceuticals increased by 4.6% on a currency- and portfolio-adjusted basis in the three months ended March 31, 2018, compared to the three months ended March 31, 2017.

Reported net sales of Pharmaceuticals decreased by €188 million, or 4.4%, from €4,263 million in the three months ended March 31, 2017 to €4,075 million in the three months ended March 31, 2018.

The table below provides a breakdown of the factors that affected Pharmaceuticals' reported net sales in the three months ended March 31, 2018, in absolute amounts and as a period-on-period change:

	For the three months ended March 31, 2018	Change (period-on-period)
	(unaudited)	
	(in € million)	(in %)
Volume	244	5.7
Price	(119)	(2.8)
Currency	(305)	(7.1)
Portfolio	(8)	(0.2)
Total	**(188)**	**(4.4)**

The decrease in net sales in the three months ended March 31, 2018 was attributable to unfavorable currency effects, a decline in selling prices and portfolio effects which reduced net sales by 7.1%, 2.8% and 0.2%, respectively. These effects on net sales were partially offset by an increase in sales volume by 5.7%.

The unfavorable currency effects in the three months ended March 31, 2018 were mainly attributable to the Euro strengthening against the U.S. dollar (USD), the Chinese renminbi (CNY) and the Japanese yen (JPY).

The decline in selling prices was mainly attributable to Xarelto™ and Nexavar™.

The portfolio effects were mainly attributable to the divestment of Multi Vendor Service (Radiology).

The higher sales volume was mainly driven by Pharmaceuticals' key growth products Xarelto™, EYLEA™, Xofigo™, Stivarga™ and Adempas™.

The following overview provides information on the net sales of Pharmaceuticals' best-selling products for the three months ended March 31, 2018; for a more detailed description of these products, see "*13.4.1.3.1 Overview of Key Products.*":

- Xarelto™: On a currency-adjusted basis, net sales of our oral anticoagulant Xarelto™ increased by 13.0% in the three months ended March 31, 2018. This significant increase was mainly attributable to expanded sales volumes in Europe and Asia / Pacific. Our license revenues – recognized as sales – in the United States, where Xarelto™ is marketed by a subsidiary of Johnson & Johnson were down year-on-year. Reported net sales of Xarelto™ increased by €63 million, or 8.4%, from €751 million in the three months ended March 31, 2017 to €814 million in the three months ended March 31, 2018.
- EYLEA™: On a currency-adjusted basis, net sales of our eye medicine EYLEA™ increased by 19.2% in the three months ended March 31, 2018. This strong increase was primarily due to higher volumes in Europe. Reported net sales of EYLEA™ increased by €58 million, or 13.0%, from €446 million in the three months ended March 31, 2017 to €504 million in the three months ended March 31, 2018.
- Xofigo™: On a currency-adjusted basis, net sales of our cancer drug Xofigo™ increased by 2.0% in the three months ended March 31, 2018. Higher demand in Japan and Europe more than offset the decline in the United States. Reported net sales of Xofigo™ decreased by €8 million, or 8.0%, from €100 million in the three months ended March 31, 2017 to €92 million in the three months ended March 31, 2018.
- Adempas™: On a currency-adjusted basis, net sales of Adempas™ to treat pulmonary hypertension rose strongly by 21.2% in the three months ended March 31, 2018 due primarily to positive development in the United States and Europe and, as in the past, reflected the proportionate recognition of the upfront and milestone payments resulting from the sGC collaboration with Merck & Co., Inc. Reported net sales of Adempas™ increased by €8 million, or 11.0%, from €73 million in the three months ended March 31, 2017 to €81 million in the three months ended March 31, 2018.
- Stivarga™: On a currency-adjusted basis, net sales of our cancer drug Stivarga™ increased by 3.3% in the three months ended March 31, 2018. This increase was mainly attributable to expanded volumes in Japan and China, where we benefited from the market launches in previous years. By contrast, sales declined significantly in the United States as a result of competitive pressure. Reported net sales of Stivarga™ decreased by €5 million, or 6.7%, from €75 million in the three months ended March 31, 2017 to €70 million in the three months ended March 31, 2018.
- Mirena™ product family: On a currency-adjusted basis, net sales of the hormone-releasing intrauterine devices of our Mirena™ product family (Mirena™, Kyleena™ and Jaydess™ / Skyla™) increased by 13.4% in the three months ended March 31, 2018. Net sales rose considerably, particularly in the United States, where the successful launch of Kyleena™ continued to have a positive impact. Reported net sales of Mirena™ increased by €2 million from €315 million in the three months ended March 31, 2017 to €317 million in the three months ended March 31, 2018.
- Kogenate™ / Kovaltry™: On a currency-adjusted basis, net sales of the blood-clotting medicine Kogenate™ / Kovaltry™ decreased by 15.9% in the three months ended March 31, 2018. Business with Kogenate™ / Kovaltry™ was negatively impacted by the termination of an agreement with a distribution partner at the end of 2017. Adjusted for this development, net sales increased on a currency-adjusted basis by 11.1%. Reported net sales of Kogenate™ / Kovaltry™ decreased by €61 million, or 22.2%, from €275 million in the three months ended March 31, 2017 to €214 million in the three months ended March 31, 2018.

- Adalat™: On a currency-adjusted basis, net sales of Adalat™, our product to treat hypertension and coronary heart disease, increased by 9.0% in the three months ended March 31, 2018. This marked increase was mainly attributable to the expansion of volumes in China. Reported net sales of Adalat™ increased by €2.0 million, or 1.1%, from €174 million in the three months ended March 31, 2017 to €176 million in the three months ended March 31, 2018.
- Glucobay™: On a currency-adjusted basis, net sales of our diabetes treatment Glucobay™ increased by 13.7% in the three months ended March 31, 2018. This increase was mainly attributable to the expansion of volumes in China. Reported net sales of Glucobay™ increased by €10 million, or 6.3%, from €158 million in the three months ended March 31, 2017 to €168 million in the three months ended March 31, 2018.
- Nexavar™: On a currency-adjusted basis, net sales of our cancer drug Nexavar™ decreased by 14.3% in the three months ended March 31, 2018. This significant decline was mainly the result of lower demand in the United States. Reported net sales of Nexavar™ decreased by €45 million, or 21.7%, from €207 million in the three months ended March 31, 2017 to €162 million in the three months ended March 31, 2018.
- YAZ™ / Yasmin™ / Yasminelle™: On a currency-adjusted basis, net sales of our YAZ™ / Yasmin™ / Yasminelle™ line of oral contraceptives decreased by 1.8% in the three months ended March 31, 2018. This decrease was primarily due to generic competition in Europe and the United States. Sales developed positively in Japan and China. Reported net sales of YAZ™ / Yasmin™ / Yasminelle™ decreased by €18 million, or 10.6%, from €170 million in the three months ended March 31, 2017 to €152 million in the three months ended March 31, 2018.
- Aspirin™ Cardio: On a currency-adjusted basis, net sales of Aspirin™ Cardio, our product for the secondary prevention of heart attacks, increased by 1.1% in the three months ended March 31, 2018. This slight increase was mainly attributable to the continuation of our good business performance in China. Slightly lower sales volumes in Europe had an opposing effect. Reported net sales of Aspirin™ Cardio decreased by €9 million, or 5.7%, from €157 million in the three months ended March 31, 2017 to €148 million in the three months ended March 31, 2018.
- Betaferon™ / Betaseron™: On a currency-adjusted basis, net sales of our multiple sclerosis product Betaferon™ / Betaseron™ decreased by 16.5% in the three months ended March 31, 2018. This expected decrease was mainly attributable to the highly competitive market environment in the United States. Reported net sales of Betaferon™ / Betaseron™ decreased by €41 million, or 24.0%, from €171 million in the three months ended March 31, 2017 to €130 million in the three months ended March 31, 2018.
- Avalox™ / Avelox™: On a currency-adjusted basis, net sales of our antibiotic Avalox™ / Avelox™ increased by 3.6% in the three months ended March 31, 2018. This increase was mainly a result of the good development of business in China. Reported net sales of Avalox™ / Avelox™ decreased by €3 million, or 3.0%, from €100 million in the three months ended March 31, 2017 to €97 million in the three months ended March 31, 2018.
- Gadavist™ / Gadovist™: On a currency-adjusted basis, net sales of our magnetic resonance imaging ("**MRI**") contrast agent Gadavist™ / Gadovist™ increased by 4.7% in the three months ended March 31, 2018, mainly due to higher sales in the United States. Reported net sales of Gadavist™ / Gadovist™ decreased by €2 million, or 2.2%, from €89 million in the three months ended March 31, 2017 to €87 million in the three months ended March 31, 2018.

12.8.2.1.2 *EBITDA before Special Items*

EBITDA before special items of Pharmaceuticals declined by €87 million, or 5.8%, from €1,502 million in the three months ended March 31, 2017 to €1,415 million in the three months ended March 31, 2018. This decline was driven by higher cost of goods sold, primarily due to higher project costs in connection with capital expenditures for production facilities, as well as an increase in research and development expenses and higher selling expenses. By contrast, positive earnings contributions primarily came from a significant expansion of volumes, particularly for our key growth products.

12.8.2.1.3 *EBIT*

EBIT of Pharmaceuticals decreased by €56 million, or 4.6%, from €1,219 million in the three months ended March 31, 2017 to €1,163 million in the three months ended March 31, 2018. EBIT included special charges of

€1 million in the three months ended March 31, 2018, compared to €36 million in the three months ended March 31, 2017 which mainly related to impairment losses on intangible assets.

12.8.2.2 Consumer Health

The following table provides an overview of the key data for Consumer Health for the periods indicated:

	For the three months ended March 31,	
	2017[1]	2018
	(unaudited) (in € million, unless otherwise indicated)	
Net sales	**1,601**	**1,409**
Change		(12.0)%
Currency- and portfolio-adjusted[2]		(2.2)%
Sales by region	**1,601**	**1,409**
Europe / Middle East / Africa	538	496
Currency-adjusted change[2]		*(3.5)%*
North America	701	596
Currency-adjusted change[2]		*(2.1)%*
Asia / Pacific	220	177
Currency-adjusted change[2]		*(12.3)%*
Latin America	142	140
Currency-adjusted change[2]		*16.9%*
EBITDA before special items[2]	**392**	**313**
Depreciation, amortization and impairment losses/loss reversals before special items	(106)	(97)
Special items	(9)	(5)
of which:		
Restructuring	*(9)*	*(5)*
EBIT[2]	**278**	**211**

(1) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(2) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.8.2.2.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Consumer Health decreased by 2.2% in the three months ended March 31, 2018. This development was driven by the sharp decline in the Asia / Pacific region which resulted mainly from the reclassification of two of Consumer Health's medicated skin care brands from OTC to prescription by the Chinese authorities in the fall of 2017. Sales also developed negatively in the North America and in the Europe / Middle East / Africa region. In Latin America, by contrast, Consumer Health posted encouraging sales gains on a currency-adjusted basis.

Reported net sales of Consumer Health decreased by €192 million, or 12.0%, from €1,601 million in the three months ended March 31, 2017 to €1,409 million in the three months ended March 31, 2018.

The table below provides a breakdown of the factors that affected Consumer Health's reported net sales in the three months ended March 31, 2018, in absolute amounts and as a period-on-period change:

	For the three months ended March 31, 2018	Change (period-on-period)
	(unaudited)	
	(in € million)	(in %)
Volume	(54)	(3.3)
Price	17	1.1
Currency	(155)	(9.8)
Portfolio	–	–
Total	**(192)**	**(12.0)**

The decrease in net sales of Consumer Health in the three months ended March 31, 2018 was attributable to unfavorable currency effects and a decrease in sales volume, which resulted in a 9.8% and 3.3% decrease of net sales, respectively. The impact of the unfavorable currency effects and the decrease in sales volume on net sales was partly offset by an increase in selling prices of 1.1%.

The unfavorable currency effects in the three months ended March 31, 2018 were mainly attributable to the Euro strengthening against the US Dollar (USD), the Argentinian Peso (ARS), the Russian Ruble (RUB) and the Chinese Renminbi (CNY).

The decline in sales volume was mainly due to the reclassification of two of Consumer Health's medicated skin care brands from OTC to prescription by the Chinese authorities in the fall of 2017.

The increase in selling prices mainly resulted from positive price developments in the Europe / Middle East / Africa region, particularly in Turkey, as well as in the Latin America region, particularly in Argentina and Brazil.

The following overview provides information on the net sales of Consumer Health's best-selling products for the three months ended March 31, 2018; for a more detailed description of these products, see "*13.4.1.3.1 Overview of Key Products*":

- Claritin™: On a currency-adjusted basis, net sales of our antihistamine Claritin™ remained level in the three months ended March 31, 2018, compared to the three months ended March 31, 2017. Growth in China was sufficient to offset declines in Japan that arose from price pressure and intense competitive pressure, as well as negative effects resulting from a slow start to the allergy season in the United States. Reported net sales of Claritin™ decreased by €23 million, or 12.1%, from €190 million in the three months ended March 31, 2017 to €167 million in the three months ended March 31, 2018.

- Aspirin™: On a currency-adjusted basis, net sales of our analgesic Aspirin™ increased by 3.1% in the three months ended March 31, 2018. This growth was mainly attributable to gains in Latin America. Reported net sales of Aspirin™ decreased by €8 million, or 6.8%, from €117 million in the three months ended March 31, 2017 to €109 million in the three months ended March 31, 2018. Together with Aspirin™ Cardio, which is reported under the Pharmaceuticals segment, reported net sales decreased by €17 million, or 6.2% (and by 2.0% on a currency-adjusted basis), from €274 million in the three months ended March 31, 2017 to €257 million in the three months ended March 31, 2018.

- Bepanthen™ / Bepanthol™: On a currency-adjusted basis, net sales of our Bepanthen™ / Bepanthol™ wound and skin care products increased by 10.7% in the three months ended March 31, 2018. Business with the Bepanthen™/Bepanthol™ wound and skin care products developed positively, especially in Brazil and Europe. Reported net sales of Bepanthen™ / Bepanthol™ increased by €5 million, or 5.3%, from €95 million in the three months ended March 31, 2017 to €100 million in the three months ended March 31, 2018.

- Coppertone™: On a currency-adjusted basis, net sales of our sunscreen product Coppertone™ decreased by 3.4% in the three months ended March 31, 2018. This decrease was due to a weaker season, particularly in the United States. Reported net sales of Coppertone™ decreased by €16 million, or 15.7%, from €102 million in the three months ended March 31, 2017 to €86 million in the three months ended March 31, 2018.

- Aleve™: On a currency-adjusted basis, net sales of our analgesic Aleve™ increased slightly by 1.1% in the three months ended March 31, 2018, compared to a weak prior-year quarter. Reported net sales of Aleve™ decreased by €10 million, or 12.2%, from €82 million in the three months ended March 31, 2017 to €72 million in the three months ended March 31, 2018.

- Canesten™: On a currency-adjusted basis, net sales of our skin and intimate health products Canesten™ decreased considerably by 21.2% in the three months ended March 31, 2018, primarily due to anticipated temporary supply disruptions. Reported net sales of Canesten™ decreased by €18 million, or 25.7%, from €70 million in the three months ended March 31, 2017 to €52 million in the three months ended March 31, 2018.

- Alka-Seltzer™: On a currency-adjusted basis, net sales of the Alka-Seltzer™ product family to treat gastric complaints and cold symptoms decreased by 14.5% in the three months ended March 31, 2018. This decrease was due, in part, to intense competitive pressure. Reported net sales of the Alka-Seltzer™ product family decreased by €18 million, or 25.7%, from €70 million in the three months ended March 31, 2017 to €52 million in the three months ended March 31, 2018.

- Elevit™: On a currency-adjusted basis, net sales of our prenatal vitamin Elevit™ increased by 6.1% in the three months ended March 31, 2018. This increase was mainly due to good demand in Europe. Reported net sales of Elevit™ decreased by €2 million, or 3.8%, from €52 million in the three months ended March 31, 2017 to €50 million in the three months ended March 31, 2018.

- Dr. Scholl's™: On a currency-adjusted basis, net sales of our Dr. Scholl's™ foot care products increased by 34.8% in the three months ended March 31, 2018. Strong sales gains were attributable particularly to the inventory reduction undertaken in the prior-year quarter in preparation for the repositioning of the brand. Reported net sales of Dr. Scholl's™ increased by €8 million, or 19.5%, from €41 million in the three months ended March 31, 2017 to €49 million in the three months ended March 31, 2018.
- One A Day™: On a currency-adjusted basis, net sales of our One A Day™ vitamin product decreased by 3.0% in the three months ended March 31, 2018, compared to the prior-year quarter, in which we had benefited from a product line extension. Reported net sales of One A Day™ decreased by €9 million, or 16.4%, from €55 million in the three months ended March 31, 2017 to €46 million in the three months ended March 31, 2018.

12.8.2.2.2 *EBITDA before Special Items*

EBITDA before special items of Consumer Health decreased significantly by €79 million, or 20.2%, from €392 million in the three months ended March 31, 2017 to €313 million in the three months ended March 31, 2018. Adjusted for negative currency effects of €34 million, earnings decreased by 11.5%. This decrease was driven by lower volumes that chiefly resulted from anticipated temporary supply disruptions and the reclassification of two of Consumer Health's brands in China. In the three months ended March 31, 2017, earnings had included one-time gains of €34 million. Positive earnings contributions in the three months ended March 31, 2018 predominantly came from a lower cost of goods sold.

12.8.2.2.3 *EBIT*

EBIT of Consumer Health decreased by €67 million, or 24.1%, from €278 million in the three months ended March 31, 2017 to €211 million in the three months ended March 31, 2018. EBIT included special charges of €5 million in the three months ended March 31, 2018, compared to €9 million in the three months ended March 31, 2017. The special charges in the three months ended March 31, 2018 resulted from efficiency improvement measures.

12.8.2.3 Crop Science

The following table provides an overview of the key data for Crop Science for the periods indicated:

	For the three months ended March 31,	
	2017[1]	2018
	(unaudited) (in € million, unless otherwise indicated)	
Net sales	**3,120**	**2,861**
Change		(8.3)%
Currency- and portfolio-adjusted[2]		(1.0)%
Sales by region	**3,120**	**2,861**
Europe / Middle East / Africa	1,462	1,294
Currency-adjusted change[2]		(8.8)%
North America	1,042	969
Currency-adjusted change[2]		4.5%
Asia / Pacific	366	368
Currency-adjusted change[2]		10.4%
Latin America	250	230
Currency-adjusted change[2]		4.8%
EBITDA before special items[2]	**1,115**	**1,042**
Depreciation, amortization and impairment losses/loss reversals before special items	(108)	(89)
Special items	(37)	(61)
of which:		
Restructuring	*(16)*	*(2)*
Litigations	*–*	*(1)*
Acquisition costs	*(21)*	*(58)*
EBIT[2]	**970**	**892**

(1) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.
(2) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.8.2.3.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Crop Science decreased by 1.0% in the three months ended March 31, 2018. The decline in net sales in the Europe / Middle East / Africa region was nearly offset by sales gains in the North America, Asia / Pacific and Latin America regions.

Reported net sales of Crop Science decreased by €259 million, or 8.3%, from €3,120 million in the three months ended March 31, 2017 to €2,861 million in the three months ended March 31, 2018.

The table below provides a breakdown of the factors that affected Crop Science's reported net sales in the three months ended March 31, 2018, in absolute amounts and as a period-on-period change:

	For the three months ended March 31, 2018	Change (period-on-period)
	(unaudited)	
	(in € million)	(in %)
Volume	(17)	(0.6)
Price	(14)	(0.4)
Currency	(228)	(7.3)
Portfolio	0	—
Total	**(259)**	**(8.3)**

The decrease in net sales in Crop Science in the three months ended March 31, 2018 was attributable to unfavorable currency effects, a decrease in sales volume and a decrease in selling prices, which resulted in a 7.3%, 0.6% and 0.4% decrease in net sales, respectively.

The unfavorable currency effects in the three months ended March 31, 2018 were mainly attributable to the Euro strengthening against the U.S. dollar (USD), the Canadian dollar (CAD), the Brazilian real (BRL) and the Ukrainian hryvni (UAH).

The decrease in sales volume in the three months ended March 31, 2018 was mainly attributable to decreases in sales in the Europe / Middle East / Africa region.

The decrease in selling prices was mainly attributable to the North America region.

The following overview provides information on Crop Science's net sales by region for the three months ended March 31, 2018. For more information on Crop Science's strategic business entities, see "*13.4.3 Crop Science*":

- Europe / Middle East / Africa: On a currency-adjusted basis, net sales decreased by 8.8% in the three months ended March 31, 2018. Crop Science recorded lower sales at Fungicides, Herbicides and Vegetable Seeds, mainly due to the weather conditions in Europe. At Fungicides, business was also held back by a substantial market decline in France. Net sales at SeedGrowth also decreased in the three months ended March 31, 2018, compared to the three months ended March 31, 2017. In contrast, net sales at Insecticides increased, but this growth was insufficient to offset the declines elsewhere. Reported net sales in our Europe / Middle East / Africa region decreased by €168 million, or 11.5%, from €1,462 million in the three months ended March 31, 2017 to €1,294 million in the three months ended March 31, 2018.
- North America: On a currency-adjusted basis, net sales increased by 4.5% in the three months ended March 31, 2018. The canola seed business in Canada performed very well due to increased acreages. Higher demand in Canada resulted in sales gains at Herbicides. On the other hand, there was a significant decline at Environmental Science due to lower product deliveries to the purchaser of the consumer business and at Insecticides due to lower pest pressure in the United States. Reported net sales in our North America region decreased by €73 million, or 7.0%, from €1,042 million in the three months ended March 31, 2017 to €969 million in the three months ended March 31, 2018.
- Asia/Pacific: On a currency-adjusted basis, net sales increased by 10.4% in the three months ended March 31, 2018. The encouraging growth at Fungicides and Insecticides was attributable especially to advance sales in China and to high pest pressure in India. By contrast, sales were

down at Herbicides. Reported net sales in Crop Science's Asia / Pacific remained level at €368 million in the three months ended March 31, 2018, compared to €366 million in the three months ended March 31, 2017 to.

- Latin America: On a currency-adjusted basis, net sales increased by 4.8% in the three months ended March 31, 2018. Crop Science posted double-digit percentage growth at Fungicides after a weak prior-year quarter. In Brazil, demand for Crop Science's fungicides and insecticides increased, while inventories continued to normalize. However, sales at Herbicides declined, especially in Argentina. Reported net sales in Crop Science's Latin America region decreased by €20 million, or 8.0%, from €250 million in the three months ended March 31, 2017 to €230 million in the three months ended March 31, 2018.

The table below provides a breakdown of the net sales per strategic business entity for the periods indicated, in absolute amounts as well as the period-on-period change in net sales on a reported and on a currency- and portfolio-adjusted basis:

	For the three months ended March 31,		Change (period-on-period)	Currency- and portfolio-adjusted
	2017	2018		
	(unaudited) (in € million)		(unaudited) (in %)	
Herbicides	912	800	(12.3)	(6.6)
Fungicides	787	728	(7.5)	(2.0)
Insecticides	301	299	(0.7)	8.0
SeedGrowth	251	210	(16.3)	(8.4)
Vegetable Seeds	162	144	(11.1)	(6.2)
Environmental Science	147	114	(22.4)	(14.3)
Other (Seeds & Traits)	560	566	1.1	12.9
Total	**3,120**	**2,861**	**(8.3)**	**(1.0)**

12.8.2.3.2 *EBITDA before Special Items*

EBITDA before special items for Crop Science decreased by €73 million, or 6.5%, from €1,115 million in the three months ended March 31, 2017 to €1,042 million in the three months ended March 31, 2018. Adjusted for negative currency effects in the amount of €44 million, earnings were down by 2.6%. A decline in other operating income and a higher cost of goods sold were among factors that held back earnings. Lower expenses for research and development and for general administration had an opposing effect.

12.8.2.3.3 *EBIT*

EBIT of Crop Science decreased by €78 million, or 8.0%, from €970 million in the three months ended March 31, 2017 to €892 million in the three months ended March 31, 2018. EBIT comprised special charges of €61 million in the three months ended March 31, 2018, compared to €37 million in the three months ended March 31, 2017, primarily in connection with the Transaction.

12.8.2.4 Animal Health

The following table provides an overview of the key data for Animal Health for the periods indicated:

	For the three months ended March 31,	
	2017[1]	2018
	(unaudited) (in € million, unless otherwise indicated)	
Net sales	**440**	**414**
Change		(5.9)%
Currency- and portfolio-adjusted[2]		3.0%
Sales by region	**440**	**414**
Europe / Middle East / Africa	144	136
Currency-adjusted change[2]		(4.2)%
North America	177	160
Currency-adjusted change[2]		4.5%
Asia / Pacific	76	77
Currency-adjusted change[2]		11.8%
Latin America	43	41
Currency-adjusted change[2]		7.0%
EBITDA before special items[2]	**135**	**139**
Depreciation, amortization and impairment losses/loss reversals before special items	(9)	(10)
Special items	–	–
of which:		
Restructuring	–	–
EBIT[2]	**126**	**129**

(1) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(2) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.8.2.4.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Animal Health increased by 3.0% in the three months ended March 31, 2018. Growth at Animal Health was negatively impacted by amended financial reporting standards (IFRS 15), among other factors. For further information on the impact of IFRS 15, see pages F-9 et seq. The Asia/Pacific region developed very positively. Animal Health also expanded business in the Latin America and North America regions on a currency-adjusted basis, while sales receded in the Europe / Middle East / Africa region.

Reported net sales of Animal Health decreased by €26 million, or 5.9%, from €440 million in the three months ended March 31, 2017 to €414 million in the three months ended March 31, 2018.

The table below provides a breakdown of the factors that affected Animal Health's reported net sales in the three months ended March 31, 2018, in absolute amounts and as a period-on-period change:

	For the three months ended March 31, 2018	Change (period-on-period)
	(unaudited)	
	(in € million)	(in %)
Volume	11	2.5
Price	2	0.5
Currency	(39)	(8.9)
Portfolio	0	–
Total	**(26)**	**(5.9)**

The decrease in net sales in the three months ended March 31, 2018 was attributable to unfavorable currency effects, which resulted in a 8.9% decrease in net sales, respectively. The impact of the unfavorable currency effects on net sales was slightly offset by an increase in sales volume and an increase in selling prices by 2.5% and 0.5%, respectively.

The unfavorable currency effects in the three months ended March 31, 2018 were mainly attributable to the Euro strengthening against the U.S. dollar (USD).

The increase in sales volume was attributable to the Asia / Pacific as well as the North America and Latin America regions that were partially offset by lower sales volume in the Europe / Middle East / Africa region.

The increase in selling prices in the three months ended March 31, 2018 was mainly attributable to the Europe / Middle East / Africa and the Latin America regions.

The following overview provides information on the net sales of Animal Health's best-selling products for the three months ended March 31, 2018; for a more detailed description of these products, see "*13.4.1.3.1 Overview of Key Products*":

- Advantage™ product family: On a currency-adjusted basis, net sales of our Advantage™ family of flea, tick and worm control products decreased by 8.2% in the three months ended March 31, 2018 due to seasonal shifts in Europe / Middle East / Africa and North America regions. Volumes in the North America region were also negatively impacted by increased competitive pressure and the related decline in demand. Growth in the Asia / Pacific region was not sufficient to offset this development. Reported net sales of our Advantage™ family decreased by €22 million, or 16.2%, from €136 million in the three months ended March 31, 2017 to €114 million in the three months ended March 31, 2018.
- Seresto™: On a currency-adjusted basis, net sales of our Seresto™ flea and tick collar increased by 24.8% in the three months ended March 31, 2018. This development was mainly driven by higher demand in the United States and by price and volume increases in the Europe / Middle East / Africa region. Reported net sales of Seresto™ increased by €12 million, or 15.8%, from €76 million in the three months ended March 31, 2017 to €88 million in the three months ended March 31, 2018.
- Drontal™ product family: On a currency-adjusted basis, net sales of our Drontal™ line of dewormers decreased by 4.4% in the three months ended March 31, 2018. This was due to lower volumes in the Europe / Middle East / Africa region. In addition, demand in the North America region was below that of the strong prior-year quarter. Reported net sales of our Drontal™ line decreased by €4 million, or 11.4%, from €35 million in the three months ended March 31, 2017 to €31 million in the three months ended March 31, 2018.
- Baytril™: On a currency-adjusted basis, net sales of our antibiotic Baytril™ increased by 2.9% in the three months ended March 31, 2018. This slight increase resulted from a positive business development in the North America, Asia / Pacific and Latin America regions. Reported net sales of Baytril™ decreased by €2 million, or 7.4%, from €27 million in the three months ended March 31, 2017 to €25 million in the three months ended March 31, 2018.

12.8.2.4.2 *EBITDA before Special Items*

EBITDA before special items of Animal Health increased by €4 million, or 3,0%, from €135 million in the three months ended March 31, 2017 to €139 million in the three months ended March 31, 2018. Adjusted for negative currency effects in the amount of €10 million, earnings increased by 10.4%. Positive contributions came from lower selling expenses, while the aforementioned effect of the first-time application of IFRS 15 had a negative impact on earnings.

12.8.2.4.3 *EBIT*

EBIT of Animal Health increased by €3 million, or 2.4%, from €126 million in the three months ended March 31, 2017 to €129 million in the three months ended March 31, 2018. In the three months ended March 31, 2018 and March 31, 2017, EBIT included no special charges.

12.8.2.5 Reconciliation

Net sales recorded under Reconciliation amounted to €379 million in the three months ended March 31, 2018, compared to €256 million in the three months ended March 31, 2017. EBITDA before special items recorded under Reconciliation amounted to negative €13 million in the three months ended March 31, 2018, compared to negative €90 million in the three months ended March 31, 2017.

EBIT recorded under Reconciliation amounted to negative €85 million in the three months ended March 31, 2018, mainly attributable to Corporate Functions and Consolidation, compared to negative €166 million in the three months ended March 31, 2017. EBIT included special charges of negative €11 million in the three months ended March 31, 2018, compared to negative €20 million in the three months ended March 31, 2017. Special charges in the three months ended March 31, 2018 included €5 million in restructuring costs, €3 million in costs related to litigation and legal risks and €3 million in acquisition costs.

12.9 Comparison of Fiscal Year 2017 with Fiscal Year 2016

12.9.1 Results of Operations of the Bayer Group

The following discussion is based on the 2017 and 2016 figures included in the audited consolidated income statement of Bayer and the notes thereto for fiscal year ended December 31, 2017, including the comparative information for fiscal year ended December 31, 2016, which presents Covestro as discontinued operations. Accordingly, the following 2017 and 2016 figures are not directly comparable with the 2016 and 2015 figures presented and discussed under "*12.9.1 Results of Operations of the Bayer Group*", which are included in the audited consolidated income statement of Bayer and the notes thereto for fiscal year ended December 31, 2016, including the comparative information for fiscal year ended December 31, 2015, which presents Covestro in continuing operations. For further information on the comparability of the information discussed in the following sections and the financial information contained in this Prospectus, see "*12.5 Comparability of the Financial Information Contained in the Audited Consolidated Financial Statements.*"

12.9.1.1 Net Sales

12.9.1.1.1 *Discussion of Factors Affecting Net Sales*

Net sales of the Bayer Group remained level at €35,015 million in fiscal year 2017, compared to €34,943 million in fiscal year 2016. On a currency- and portfolio-adjusted basis, net sales increased by 1.5% in fiscal year 2017.

The table below provides a breakdown of the factors that affected the Bayer Group's reported net sales in fiscal year 2017, in absolute amounts and as a year-on-year change:

	Fiscal year ended December 31, 2017	Change (year-on-year)
	(audited)	
	(in € million)	(in %)
Volume	810	2.3
Price	(269)	(0.8)
Currency	(490)	(1.4)
Portfolio	21	0.1
Total	**72**	**0.2**

Net sales of the Bayer Group remained level in fiscal year 2017. A higher sales volume and a portfolio effect resulted in a 2.3% and 0.1% increase in net sales, respectively. The impact of the increase in sales volume and the portfolio effect on net sales was partially offset by unfavorable currency effects and a slight decline in selling prices, which decreased net sales by 1.4% and 0.8%, respectively.

The volume-driven increase in the Group's net sales in fiscal year 2017 was primarily attributable to a higher sales volume at Pharmaceuticals. The slightly positive portfolio effect on net sales was mainly attributable to the Cydectin™ product portfolio acquired by Animal Health in January 2017 from Boehringer Ingelheim Vetmedica, Inc., United States.

The unfavorable currency effects in fiscal year 2017 were mainly attributable to the Euro strengthening against the US dollar (USD), the Japanese yen (JPY), the Turkish lira (TRY) and Chinese renminbi (CNY). The negative effect of selling prices on net sales in fiscal year 2017 was attributable to Crop Science and Pharmaceuticals.

For more information on our segments, including a breakdown of the factors that affected our segments' net sales, see "*12.9.2 Selected Segment Information*."

12.9.1.1.2 *Discussion of Net Sales by Region*

The following table presents the Bayer Group's external net sales by region (by market) for the periods indicated, in absolute amounts and as a percentage of the Bayer Group's total net sales, as well as the year-on-year change in external net sales by region (by market) on a reported and on a currency-adjusted basis:

	Fiscal year ended December 31,		Change (year-on-year)	Currency-adjusted (year-on-year)
	2016[1]	2017		
	(audited, unless stated otherwise) (in € million, unless otherwise indicated)		(unaudited)	(unaudited)
			(in %)	
Europe / Middle East / Africa	13,062	13,388	2.5	2.9
% of net sales[2]	*37.4*	*38.2*		
North America	10,066	10,143	0.8	1.7
% of net sales[2]	*28.8*	*29.0*		
Asia / Pacific	7,413	7,637	3.0	5.7
% of net sales[2]	*21.2*	*21.8*		
Latin America	4,402	3,847	(12.6)	(9.5)
% of net sales[2]	*12.6*	*11.0*		
Total	**34,943**	**35,015**	**0.2**	**1.6**

(1) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.
(2) Unaudited.

The following discussion of net sales by region is presented on a currency-adjusted basis:

The net sales of the Bayer Group in the Europe / Middle East / Africa region increased slightly. This was mainly attributable to increases in the net sales of Pharmaceuticals and Consumer Health. The net sales of Crop Science and Animal Health in the Europe/Middle East / Africa region remained level compared to the previous year.

The increase in net sales of the Bayer Group in the North America region was mainly attributable to increases in net sales of Pharmaceuticals, Crop Science and Animal Health. The net sales of Consumer Health declined.

The increase in net sales of the Bayer Group in the Asia / Pacific region was attributable to increases in net sales of Pharmaceuticals, Crop Science and Animal Health. The net sales of Consumer Health declined.

The decrease in net sales of the Bayer Group in the Latin America region was attributable to a substantial decrease in net sales of Crop Science. Net sales of Consumer Health and Animal Health remained level, compared to the previous year. The net sales of Pharmaceuticals increased.

12.9.1.2 Cost of Goods Sold

Cost of goods sold of the Bayer Group decreased by €374 million, or 3.2%, from €11,756 million in fiscal year 2016 to €11,382 million in fiscal year 2017. Special charges impacting cost of goods sold in fiscal year 2017 amounted to €163 million, compared to €412 million in fiscal year 2016. Special charges were incurred mainly in relation to the execution of a divestment project and efficiency improvement programs in Crop Science as well as impairment losses on intangible assets in Consumer Health.

12.9.1.3 Gross Profit

Gross profit of the Bayer Group increased by €446 million, or 1.9%, from €23,187 million in fiscal year 2016 to €23,633 million in fiscal year 2017. The increase in gross profit in fiscal year 2017 was mainly attributable to the increase in net sales in Pharmaceuticals and the decline in cost of goods sold. The ratio of cost of goods sold to total net sales declined year-on-year to 32.5% in fiscal year 2017, compared to 33.6% in fiscal year 2016.

12.9.1.4 Selling Expenses

Selling expenses of the Bayer Group remained level in fiscal year 2017 at €11,116 million, compared to €11,148 million in fiscal year 2016. A decrease in our selling expenses was mainly incurred in other selling expenses which was slightly offset by an increase in selling expenses for physical distribution and warehousing of finished products and an increase in commission and licensing expenses. Special charges of €305 million impacted selling expenses in fiscal year 2017, compared to €317 million in fiscal year 2016. These mainly comprised impairment losses on intangible assets in Consumer Health.

12.9.1.5 Research and Development (R&D) Expenses

R&D expenses of the Bayer Group increased by €99 million, or 2.2%, from €4,405 million in fiscal year 2016 to €4,504 million in fiscal year 2017.

The following table provides a breakdown of our R&D expenses by segment based on the Bayer Group's segment structure in effect from September 30, 2017 for the periods presented:

	For fiscal year ended December 31,	
	2016[1]	2017
	(audited, unless otherwise indicated) (in € million)	
Pharmaceuticals	2,787	2,888
Consumer Health	259	240
Crop Science	1,164	1,166
Animal Health	140	155
Reconciliation[2]	55	55
Group	**4,405**	**4,504**

(1) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.
(2) Unaudited.

The increase in R&D expenses in fiscal year 2017 was mainly attributable to higher R&D investments in Pharmaceuticals. Special charges impacting R&D expenses in fiscal year 2017 amounted to €232 million, compared to €84 million in fiscal year 2016. They mainly included special charges related to impairment losses on intangible assets at Pharmaceuticals and Crop Science.

12.9.1.6 General Administration Expenses

General administration expenses of the Bayer Group increased by €222 million, or 12.3%, from €1,804 million in fiscal year 2016 to €2,026 million in fiscal year 2017. The increase in administration expenses in fiscal year 2017 was mainly attributable to additional expenditures related to the Monsanto acquisition. Special charges impacting general administration expenses in fiscal year 2017 amounted to €339 million, compared to €185 million in fiscal year 2016, and arose primarily in connection with the Transaction.

12.9.1.7 Other Operating Income

Other operating income of the Bayer Group increased by €77 million, or 9.8%, from €787 million in fiscal year 2016 to €864 million in fiscal year 2017.

The following table provides a breakdown of the Bayer Group's other operating income for the periods presented:

	For fiscal year ended December 31,	
	2016[1]	2017
	(audited) (in € million)	
Gains on retirements of noncurrent assets	64	173
Reversal of impairment losses on receivables	18	23
Reversals of unutilized provisions	122	26
Gains from derivatives	255	291
Miscellaneous operating income	328	351
Total	**787**	**864**
of which special items	*115*	*14*

(1) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.

The increase in other operating income was mainly attributable to an increase in gains on retirements of noncurrent assets, gains from derivatives and miscellaneous operating income, which was partly offset by a decrease in reversals of unutilized provisions. Gains on retirements of noncurrent assets increased by €109 million, or 170.3%, from €64 million in fiscal year 2016 to €173 million in fiscal year 2017. Gains on retirements of noncurrent assets included an €81 million gain from the sale of trademark rights for the Vagitrol™, Benadon™, Claradol™, Transipeg™ and Colopeg™ brands and some smaller brands from the Consumer Health segment. Reversals of unutilized provisions decreased by €96 million, or 78.7%, from €122 million in fiscal year 2016 to €26 million in fiscal year 2017.

For further information, see note 10 on other operating income of Bayer's audited consolidated financial statements for fiscal year 2017, set forth on pages F-58 et seq. of this Prospectus.

12.9.1.8 Other Operating Expenses

Other operating expenses of the Bayer Group increased by €69 million, or 7.8%, from €879 million in fiscal year 2016 to €948 million in fiscal year 2017.

The following table provides a breakdown of the Bayer Group's other operating expenses for the periods presented:

	For fiscal year ended December 31,	
	2016[1]	2017
	(audited) (in € million)	
Losses on retirements of noncurrent assets	19	39
Impairment losses on receivables	163	139
Expenses related to significant legal risks	262	258
Losses from derivatives	171	258
Miscellaneous operating expenses	264	254
Total	**879**	**948**
of which special items	*205*	*202*

(1) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.

The increase in other operating expenses in fiscal year 2017 was mainly attributable to an increase in higher losses from derivatives. This increase was partly offset by lower expenses related to impairment losses on receivables and expenses related to significant legal risks. Special charges impacting other operating expenses in fiscal year 2017 amounted to €202 million, compared to €205 million in fiscal year 2016 and mainly related to, as in the previous year, impairment losses on receivables and accounting measures taken in connection with legal proceedings related to Xarelto™, Essure™ and Cipro™ / Avalox™.

For further information, see note 11 on other operating expenses of Bayer's audited consolidated financial statements for fiscal year 2017, set forth on page F-39 of this Prospectus.

12.9.1.9 EBIT

EBIT of the Bayer Group increased by €165 million, or 2.9%, from €5,738 million in fiscal year 2016 to €5,903 million in fiscal year 2017. The increase in Group EBIT in fiscal year 2017 was mainly attributable to a substantial increase in EBIT of Pharmaceuticals, which was offset by substantial decreases in EBIT of Consumer Health and Crop Science. EBIT of the Bayer Group included special charges of €1,227 million in fiscal year 2017, compared to €1,088 million in fiscal year 2016. Special charges in fiscal year 2017 mainly comprised €450 million in impairment losses on intangible assets and €304 million in expenses in connection with the Transaction. In addition, in fiscal year 2017, special charges included €227 million for efficiency improvement programs and €188 million in provisions for litigations and legal risks.

EBIT before special items increased by €304 million, or 4.5%, from €6,826 million in fiscal year 2016 to €7,130 million in fiscal year 2017.

The following table provides an overview of special items included in EBIT by segment based on the Bayer Group's segment structure in effect from September 30, 2017 for the periods presented:

	For fiscal year ended December 31,	
	2016[1]	2017
	(unaudited, unless otherwise indicated) (in € million)	
EBIT before special items[2] [3]	**6,826**	**7,130**
Special items of Pharmaceuticals	(558)	(340)
Special items of Consumer Health	(292)	(300)
Special items of Crop Science	(143)	(408)
Special items of Animal Health	(7)	(31)
Special items of Reconciliation	(88)	(148)
Total special items[2]	**(1,088)**	**(1,227)**
EBIT[2] [3]	**5,738**	**5,903**

(1) Figures extracted or derived from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group*."

12.9.1.10 Financial Result

The financial result of Bayer was negative €1,326 million in fiscal year 2017, in comparison to negative €965 million in fiscal year 2016. Among other items, the financial result comprised net interest expense of €413 million in fiscal year 2017, compared to €504 million in fiscal year 2016, currency hedging costs in an amount of €326 million in fiscal year 2017, compared to €121 million in fiscal year 2016 and interest cost of €189 million for pension and other provisions in fiscal year 2017, compared to €251 million in fiscal year 2016 and miscellaneous expenses of net €428 million in fiscal year 2017, compared to net €87 million in fiscal year 2016. The financial result included special charges of €611 million in fiscal year 2017, compared to special gains in an amount of €105 million in fiscal year 2016, mainly related to the Transaction and the Exchangeable Bonds issued in June 2017.

Financial income of the Bayer Group increased by €140 million, or 94.0%, from €149 million in fiscal year 2016 to €289 million in fiscal year 2017. The increase was mainly attributable to an increase in income from interest and similar income by €137 million, or 101.5%, from €135 million in fiscal year 2016 to €272 million in fiscal year 2017.

Financial expenses of the Bayer Group increased by €527 million, or 47.6%, from €1,108 million in fiscal year 2016 to €1,635 million in fiscal year 2017. The increase in fiscal year 2017 was mainly attributable to an increase in miscellaneous financial expenses and an increase in exchange losses, both mainly relating to the Transaction and the Exchangeable Notes issued in June 2017.

For further information, see note 13 of Bayer's audited consolidated financial statements for fiscal year 2017, set forth on pages F-60 et seq. of this Prospectus.

12.9.1.11 Income before Income Taxes

Income before income taxes decreased by €196 million, or 4.1%, from €4,773 million in fiscal year 2016 to €4,577 million in fiscal year 2017.

Income tax expenses of the Bayer Group increased by €312 million, or 30.7%, from €1,017 million in fiscal year 2016 to €1,329 million in fiscal year 2017. This includes a negative one-time effect of €455 million that relates exclusively to the tax reform in the United States and results from the revaluation of deferred tax items and the recognition of an additional tax on unrepatriated profits. For further information on the effects the U.S. tax reform may have on Bayer, see "*1.1.29 Bayer may be exposed to potential risks in connection with the recent U.S. tax reform, which cannot be fully assessed at this point in time.*" Net income attributable to Bayer AG stockholders from continuing and discontinued operations and after income tax expenses increased by €2,805 million, or 61.9%, from €4,531 million in fiscal year 2016 to €7,336 million in fiscal year 2017.

The following table provides a breakdown of our income tax expenses for the periods presented:

	For fiscal year ended December 31,	
	2016[1]	2017
	(audited) (in € million)	
Taxes paid or accrued	1,589	1,531
Deferred taxes	(572)	(202)
Total	**1,017**	**1,329**

(1) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated income statement of Bayer for fiscal year ended December 31, 2017, which presents Covestro as discontinued operations.

The use of tax loss carryforwards reduced current income taxes in fiscal year 2017 by €47 million, compared to a reduction by €82 million in fiscal year 2016. The use of tax credits reduced current income taxes by €16 million in fiscal year 2017, the same amount as in fiscal year 2016. The effective tax rate was 29.0% in 2017, compared to 21.3% in 2016.

For further information, see note 14 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-63 et seq. of this Prospectus.

12.9.1.12 Income from Continuing Operations after Income Taxes

Income from continuing operations after income taxes decreased by €508 million, or 13.5%, from €3,756 million in fiscal year 2016 to €3,248 million in fiscal year 2017, due to the tax reform in the United States and results from the revaluation of deferred tax items and the recognition of an additional tax on unrepatriated profits.

12.9.1.13 Income from Discontinued Operations after Income Taxes

Income from discontinued operations after income taxes increased by €3,776 million from €1,070 million in fiscal year 2016 to €4,846 million in fiscal year 2017. Of this amount, €4,468 million, compared to €802 million in fiscal year 2016, was attributable to Covestro. This figure primarily comprises a gain from deconsolidation and on remeasurement of the remaining interest at the end of the third quarter, as well as operating income in the first nine months of 2017. In comparison with the prior-year reporting period, Covestro increased sales for the nine months ended September 30, 2017 by 19.9% on a currency- and portfolio-adjusted basis to €10,556 million, compared to €8,829 million for the nine months ended September 30, 2016, in particular owing to significantly higher selling prices and higher volumes. EBITDA before special items of Covestro improved by €906 million, or 56.2%, from €1,611 million for the nine months ended September 30, 2016 to €2,517 million for the nine months ended September 30, 2017. Substantially higher selling prices more than offset increased raw material prices.

For additional information on the effects that the divestments of Covestro, the Diabetes Care Business and the Environmental Science Consumer Business have had on Bayer's income statement of discontinued operations, see note 6.3 Divestments, material sale transactions and discontinued operations of to the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, set forth on pages F-55 et seq.

12.9.1.14 Income after Income Taxes

Overall, income after income taxes increased by €3,268 million, or 67.7%, from €4,826 million in fiscal year 2016 to €8,094 million in fiscal year 2017 mostly due to gains resulting from the deconsolidation of Covestro.

12.9.2 Selected Segment Information

The following discussion is based on the 2017 and 2016 figures included in the audited consolidated income statement of Bayer and the notes thereto for fiscal year ended December 31, 2017, including the comparative information for fiscal year ended December 31, 2016, which presents Covestro as discontinued operations. Since its deconsolidation at the end of September 2017, Covestro is no longer a reportable segment of our Group. Thus, the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, including the comparative information as of and for fiscal year ended December 31, 2016, discussed and presented in this section of the Prospectus, only comprise the four reportable segments Pharmaceuticals, Consumer Health, Crop Science and Animal Health. Business activities that cannot be allocated to any other segment are reported under "All Other Segments" and mainly include services provided by the service areas Business Services, Technology Services and Currenta. Bayer holding companies and Leaps by Bayer (formerly: Bayer Lifescience Center) are reported under

"Corporate Functions and Consolidation." "All Other Segments" and "Corporate Functions and Consolidation" are combined in the Reconciliation item, which bridges the gap between reportable segment and group figures.

12.9.2.1 Pharmaceuticals

The following table provides an overview of the key data for Pharmaceuticals for the periods indicated:

	For fiscal year ended December 31,	
	2016[1]	2017
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**16,420**	**16,847**
Change[2]		2.6%
Currency- and portfolio-adjusted[3]		4.3%
Sales by region	**16,420**	**16,847**
Europe / Middle East / Africa	6,417	6,521
Currency-adjusted change[3]		*2.4%*
North America	4,194	4,229
Currency-adjusted change[3]		*2.1%*
Asia / Pacific	4,775	5,013
Currency-adjusted change[3]		*8.5%*
Latin America	1,034	1,084
Currency-adjusted change[3]		*5.1%*
EBITDA before special items[2] [3]	**5,251**	**5,711**
Depreciation, amortization and impairment losses/loss reversals before special items	(1,304)	(1,046)
Special items	(558)	(340)
of which:		
Restructuring	*(69)*	*(9)*
Litigations	*(88)*	*(124)*
Impairment losses/impairment loss reversals	*(401)*	*(207)*
EBIT[1] [2]	**3,389**	**4,325**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.9.2.1.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Pharmaceuticals increased by 4.3% in fiscal year 2017, mainly driven by its key growth products. Total combined net sales of Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™ increased by €783 million, or 16.3% (currency-adjusted), from €5,413 million in fiscal year 2016 to €6,196 million in fiscal year 2017. Net sales of Kogenate™ declined considerably due to lower order volumes being placed for the active ingredient from a distribution partner ahead of the planned contract termination at the end of 2017. After adjusting for this effect, sales of Pharmaceuticals increased by 5.6% on a currency- and portfolio-adjusted basis. The Pharmaceuticals business expanded in all regions.

Reported net sales of Pharmaceuticals increased by €427 million, or 2.6%, from €16,420 million in fiscal year 2016 to €16,847 million in fiscal year 2017.

The table below provides a breakdown of the factors that affected Pharmaceuticals' reported net sales in fiscal year 2017, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2017	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	867	5.2
Price	(154)	(0.9)
Currency	(276)	(1.7)
Portfolio	(10)	(0.0)
Total	**427**	**2.6**

The increase in net sales in fiscal year 2017 was attributable to a higher sales volume, which resulted in a 5.2% increase in net sales. The impact of the sales volume on net sales was partially offset by unfavorable currency effects and a slight decrease in selling prices, which resulted in a 1.7% and 0.9% decrease in net sales, respectively.

The increase in sales volume was mainly driven by Pharmaceuticals' key growth products Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™.

The unfavorable currency effects in fiscal year 2017 were mainly attributable to the Euro strengthening against the Japanese yet (JPY), the Chinese renminbi (CNY), the U.S. dollar (USD) and the British pound (GBP).

The following overview provides information on the net sales of Pharmaceuticals' best-selling products for fiscal year 2017; for a more detailed description of these products, see "*13.4.1.3.1 Overview of Key Products*":

- Xarelto™: On a currency-adjusted basis, net sales of our oral anticoagulant Xarelto™ increased by 13.9% in fiscal year 2017. This significant increase was mainly attributable to expanded sales volumes in Europe, Japan and China. We also posted gains in license revenues – recognized as sales – in the United States, where Xarelto™ is marketed by a subsidiary of Johnson & Johnson. Reported net sales of Xarelto™ increased by €370 million, or 12.6%, from €2,928 million in fiscal year 2016 to €3,298 million in fiscal year 2017.
- EYLEA™: On a currency-adjusted basis, net sales of our eye medicine EYLEA™ increased by 18.5% in fiscal year 2017. This strong increase was mainly attributable to expanded volumes in Europe, Canada and Japan. Reported net sales of EYLEA™ increased by €255 million, or 15.7%, from €1,625 million in fiscal year 2016 to €1,880 million in fiscal year 2017.
- Xofigo™: On a currency-adjusted basis, net sales of our cancer drug Xofigo™ increased significantly by 25.6% in fiscal year 2017. This increase was mainly attributable to its market launch in Japan in 2016 and to higher demand in the United States. Reported net sales of Xofigo™ increased by €77 million, or 23.3%, from €331 million in fiscal year 2016 to €408 million in fiscal year 2017.
- Stivarga™: On a currency-adjusted basis, net sales of our cancer drug Stivarga™ increased by 17.2% in fiscal year 2017. This substantial increase was mainly attributable to new approvals for the drug in 2017 as a second-line treatment for patients with hepatocellular carcinoma, especially in the United States and Japan. Reported net sales of Stivarga™ increased by €40 million, or 14.5%, from €275 million in fiscal year 2016 to €315 million in fiscal year 2017.
- Adempas™: On a currency-adjusted basis, net sales of Adempas™ to treat hypertension increased by 17.8% in fiscal year 2017 mainly as a result of expanded volumes in the United States. The sales of the product reflected proportionate recognition of upfront and milestone payments resulting from the sGC collaboration with Merck & Co., Inc. Reported net sales of Adempas™ increased by €41 million, or 16.1%, from €254 million in fiscal year 2016 to €295 million in fiscal year 2017.
- Mirena™ product family: On a currency-adjusted basis, net sales of the hormone-releasing intrauterine devices of our Mirena™ product family (Mirena™, Jaydess™ / Skyla™ and Kyleena™) increased by 9.2% in fiscal year 2017. This noticeable increase was mainly attributable to the successful launch of the Kyleena™ intrauterine device, which led to higher volumes, particularly in the United States and Europe. Sales of Mirena™ grew primarily in Latin America and China. Reported net sales of the Mirena™ product family increased by €83 million, or 8.0%, from €1,043 million in fiscal year 2016 to €1,126 million in fiscal year 2017.
- Kogenate™ / Kovaltry™: On a currency-adjusted basis, net sales of the blood-clotting medicine Kogenate™ / Kovaltry™ decreased by 15.9% in fiscal year 2017. This sharp decrease was due to lower order volumes being placed for the active ingredient from a distribution partner ahead of the planned contract termination at the end of 2017. Adjusted for this development, sales were level with the previous year. Reported net sales of Kogenate™ / Kovaltry™ decreased by €199 million, or 17.1%, from €1,166 in fiscal year 2016 to €967 million in fiscal year 2017.
- Nexavar™: On a currency-adjusted basis, net sales of our cancer drug Nexavar™ decreased by 2.7% in fiscal year 2017. This slight decline resulted from decreased demand and elevated pressure on prices, particularly in Germany and the United States. Reported net sales of Nexavar™ decreased by €36 million, or 4.1%, from €870 million in fiscal year 2016 to €834 million in fiscal year 2017.
- Betaferon™ / Betaseron™: On a currency-adjusted basis, net sales of our multiple sclerosis product Betaferon™ / Betaseron™ decreased by 10.0% in fiscal year 2017. This expected

decrease was mainly attributable to lower sales volumes as a result of a highly competitive market environment in the United States and Europe. Reported net sales of Betaferon™ / Betaseron™ decreased by €83 million, or 11.3%, from €734 million in fiscal year 2016 to €651 million in fiscal year 2017.

- Adalat™: On a currency-adjusted basis, net sales of Adalat™, our product to treat hypertension and coronary heart disease, increased by 7.0% in fiscal year 2017. This marked increase was mainly attributable to a continued positive business performance in China. Reported net sales of Adalat™ increased by €24 million, or 3.8%, from €624 million in fiscal year 2016 to €648 million in fiscal year 2017.
- YAZ™ / Yasmin™ / Yasminelle™: On a currency-adjusted basis, net sales of our YAZ™ / Yasmin™ / Yasminelle™ line of oral contraceptives decreased by 4.2% in fiscal year 2017. This decrease was primarily due to generic competition in the United States. Sales growth in Japan, where we benefitted from a product line extension, and in China was not sufficient to offset this effect. Reported net sales of our YAZ™ / Yasmin™ / Yasminelle™ line decreased by €30 million, or 4.4%, from €678 million in fiscal year 2016 to €648 million in fiscal year 2017.
- Aspirin™ Cardio: On a currency-adjusted basis, net sales of Aspirin™ Cardio, our product for the secondary prevention of heart attacks, increased by 10.5% in fiscal year 2017. This increase was mainly attributable to a continued positive business performance in China. Reported net sales increased by €43 million, or 8.0%, from €538 million in fiscal year 2016 to €581 million in fiscal year 2017.
- Glucobay™: On a currency-adjusted basis, net sales of our diabetes treatment Glucobay™ increased by 13.0% in fiscal year 2017. This increase was mainly attributable to a continued positive business performance in China. Reported net sales of Glucobay™ increased by €48 million, or 9.3%, from €515 million in fiscal year 2016 to €563 million in fiscal year 2017.
- Gadavist™ / Gadovist™: On a currency-adjusted basis, net sales of our magnetic resonance imaging ("**MRI**") contrast agent Gadavist™ / Gadovist™ increased by 7.2% in fiscal year 2017. This encouraging increase was mainly attributable to the positive development of business in the United States and Japan. Reported net sales of Gadavist™ / Gadovist™ increased by €19 million, or 5.5%, from €346 million in fiscal year 2016 to €365 million in fiscal year 2017.
- Avalox™ / Avelox™: On a currency-adjusted basis, net sales of our antibiotic Avalox™ / Avelox™ decreased by 5.1% in fiscal year 2017. This decrease was mainly a result of lower license revenues in Europe. The encouraging sales development in China was not sufficient to offset this effect. Reported net sales of Avalox™ / Avelox™ decreased by €20 million, or 5.7%, from €353 million in fiscal year 2016 to €333 million in fiscal year 2017.

12.9.2.1.2 *EBITDA before Special Items*

EBITDA before special items of Pharmaceuticals increased by €460 million, or 8.8%, from €5,251 million in fiscal year 2016 to €5,711 million in fiscal year 2017. Adjusted for negative currency effects of €98 million, earnings advanced by 10.6%. Growth was mainly driven by higher volumes and lower cost of goods sold. Expenses for R&D were level with fiscal year 2016 and included a gain in the mid-double-digit millions from a development collaboration. In addition, we recorded a positive earnings effect from the recognition of a receivable in the mid-double-digit millions as one of our distribution partners for the active ingredient in Kogenate™ did not fulfill its purchase obligation.

12.9.2.1.3 *EBIT*

EBIT of Pharmaceuticals increased by a substantial €936 million, or 27.6%, from €3,389 million in fiscal year 2016 to €4,325 million in fiscal year 2017. EBIT included special charges of €340 million in fiscal year 2017, compared to €558 million in fiscal year 2016. The special charges in 2017 mainly comprised €207 million in impairment losses on intangible assets and €124 million in provisions for litigations.

12.9.2.2 Consumer Health

The following table provides an overview of the key data for Consumer Health for the periods indicated:

	For fiscal year ended December 31,	
	2016[1]	2017
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**6,037**	**5,862**
Change[2]		(2.9)%
Currency- and portfolio-adjusted[3]		(1.7)%
Sales by region	**6,037**	**5,862**
Europe / Middle East / Africa	1,918	1,962
Currency-adjusted change[3]		*2.1%*
North America	2,627	2,480
Currency-adjusted change[3]		*(4.1)%*
Asia / Pacific	781	738
Currency-adjusted change[3]		*(4.0)%*
Latin America	711	682
Currency-adjusted change[3]		*(0.4)%*
EBITDA before special items[2] [3]	**1,411**	**1,231**
Depreciation, amortization and impairment losses/loss reversals before special items	(424)	(413)
Special items	(292)	(300)
of which:		
Restructuring	*(32)*	*(98)*
Integration costs	*(100)*	*–*
Impairment losses/impairment loss reversals	*(160)*	*(202)*
EBIT[1] [2]	**695**	**518**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.9.2.2.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Consumer Health decreased by 1.7% in fiscal year 2017. This decrease was attributable to persistently weak business development in the United States. Furthermore, the reclassification of two of Consumer Health's medicated skin care brands from OTC to prescription by the Chinese authorities in the fall of 2017 led to sales declines of around €70 million in the fourth quarter of 2017. Sales in Latin America came in at the prior-year level on a currency-adjusted basis. By contrast, business expanded slightly in Europe / Middle East / Africa, and particularly in Germany.

Reported net sales of Consumer Health decreased by €175 million, or 2.9%, from €6,037 million in fiscal year 2016 to €5,862 million in fiscal year 2017.

The table below provides a breakdown of the factors that affected Consumer Health's reported net sales in fiscal year 2017, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2017	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	(177)	(3.0)
Price	77	1.3
Currency	(75)	(1.2)
Portfolio	0	0.0
Total	**(175)**	**(2.9)**

The decrease in net sales of Consumer Health in fiscal year 2017 was attributable to a lower sales volume mainly attributable to the weak business development in the United States and unfavorable currency effect, which resulted in a 3.0% and 1.2% decrease in net sales respectively. The impact of the decrease in sales volume and currency effects on net sales was partially offset by an increase in selling prices, which resulted in a 1.3% increase in net sales.

The increase in selling prices was mainly attributable to positive price developments in the Europe / Middle East / Africa region, particularly in Turkey.

The unfavorable currency effects in fiscal year 2017 were mainly attributable to the Euro weakening against the Turkish lira (TRY), the Argentinian Peso (ARS) and the British pound (GBP).

The following overview provides information on the net sales of our best-selling Consumer Health products for fiscal year 2017; for a more detailed description of these products, see "*13.4.1.3.1 Overview of Key Products.*"

- Claritin™: On a currency-adjusted basis, net sales of our antihistamine Claritin™ decreased by 2.4% in fiscal year 2017, compared to the previous year, in which we benefited from a product line extension in the United States. This slight decrease was mainly attributable to intensified competition in the United States and Japan. Sales developed positively in China. Reported net sales of Claritin™ decreased by €20 million, or 3.3%, from €605 million in fiscal year 2016 to €585 million in fiscal year 2017.
- Aspirin™: On a currency-adjusted basis, net sales of our analgesic Aspirin™ increased by 1.8% in fiscal year 2017. This slight growth was mainly attributable to a positive business performance in the North America and Europe / Middle East / Africa regions. Reported net sales of Aspirin™ decreased by €1 million, or 0.2%, from €463 million in fiscal year 2016 to €462 million in fiscal year 2017. Together with Aspirin™ Cardio, which is reported under the Pharmaceuticals segment, reported net sales increased by €42 million, or 4.2% (and 6.5% on a currency-adjusted basis), from €1,001 million in fiscal year 2016 to €1,043 million in fiscal year 2017.
- Bepanthen™ / Bepanthol™: On a currency-adjusted basis, net sales of our Bepanthen™ / Bepanthol™ wound and skin care products increased by 6.6% in fiscal year 2017. This increase was mainly attributable to sales gains in the Europe / Middle East / Africa region, especially in Germany. Reported net sales of Bepanthen™ / Bepanthol™ increased by €17 million, or 4.7%, from €362 million in fiscal year 2016 to €379 million in fiscal year 2017.
- Aleve™: On a currency-adjusted basis, net sales of our analgesic Aleve™ decreased sharply by 7.9% in fiscal year 2017, compared to the previous year, in which we benefited from a product line extension. This decrease mainly resulted from intense competition in the United States. Reported net sales of Aleve™ decreased by €41 million, or 9.9%, from €416 million in fiscal year 2016 to €375 million in fiscal year 2017.
- Canesten™: On a currency-adjusted basis, net sales of our skin and intimate health products Canesten™ increased by 3.5% in fiscal year 2017. This increase was mainly attributable to a positive business performance in China and the United Kingdom. Reported net sales of Canesten™ increased by €9 million, or 3.3%, from €269 million in fiscal year 2016 to €278 million in fiscal year 2017.
- Alka-Seltzer™: On a currency-adjusted basis, net sales of the Alka-Seltzer™ product family to treat gastric complaints and cold symptoms decreased by 1.2% in fiscal year 2017. This slight decrease was mainly attributable to sales declines in Latin America that were partly offset by gains in the United States resulting mainly from a strong cold season. Reported net sales of the Alka-Seltzer™ product family decreased by €9 million, or 3.6%, from €253 million in fiscal year 2016 to €244 million in fiscal year 2017.
- One A Day™: On a currency-adjusted basis, net sales of our One A Day™ vitamin product increased by 2.3% in fiscal year 2017. This increase mainly resulted from the United States, where we benefited from the expansion of our regular and e-commerce distribution channels. Reported net sales of One A Day™ remained level year-on-year and amounted to €222 million in fiscal year 2017.
- Dr. Scholl's™: On a currency-adjusted basis, net sales of our Dr. Scholl's™ foot care products decreased by 8.6% in fiscal year 2017. Net sales decreased markedly, particularly in the United States, due to the repositioning of the brand. The success that followed this move was not sufficient to fully offset the associated inventory reduction. Reported net sales of Dr. Scholl's™ decreased by €24 million, or 10.2%, from €235 million in fiscal year 2016 to €211 million in fiscal year 2017.
- Coppertone™: On a currency-adjusted basis, net sales of our sunscreen product Coppertone™ decreased by 6.5% in fiscal year 2017. This decrease was primarily a result of intensified competition in the United States and Brazil. Reported net sales of Coppertone™ decreased by €11 million, or 5.0%, from €219 million in fiscal year 2016 to €208 million in fiscal year 2017.

- Elevit™: On a currency-adjusted basis, net sales of our prenatal vitamin Elevit™ increased by 4.7% in fiscal year 2017. This good development was mainly due to steady demand in our Asia / Pacific region. Reported net sales of Elevit™ increased by €7 million, or 3.8%, from €182 million in fiscal year 2016 to €189 million in fiscal year 2017.

12.9.2.2.2 *EBITDA before Special Items*

EBITDA before special items of Consumer Health decreased by €180 million, or 12.8%, from €1,411 million in fiscal year 2016 to €1,231 million in fiscal year 2017. Adjusted for negative currency effects of €25 million, earnings were down 11.0%. This decline was largely due to lower volumes, in part as a consequence of the reclassification of two of Consumer Health's medicated skin care brands from OTC to prescription by the Chinese authorities in the fall of 2017 and the associated effect of around €50 million, as well as a higher cost of goods sold, primarily as a result of inventory impairments. Earnings were also held back by higher selling expenses. Positive contributions came from one-time gains of €80 million, predominantly relating to the divestment of noncore brands.

12.9.2.2.3 *EBIT*

EBIT of Consumer Health decreased by €177 million, or 25.5%, from €695 million in fiscal year 2016 to €518 million in fiscal year 2017. EBIT included special charges of €300 million in 2017, compared to €292 million in fiscal year 2016. The special charges in fiscal year 2017 mainly related to special charges of €202 million for impairment losses on intangible assets and €98 million for restructuring measures.

12.9.2.3 Crop Science

The following table provides an overview of the key data for Crop Science for the periods indicated:

	For fiscal year ended December 31,	
	2016[1]	2017
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**9,915**	**9,577**
Change[2]		(3.4)%
Currency- and portfolio-adjusted[3]		(2.2)%
Sales by region	**9,915**	**9,577**
Europe / Middle East / Africa	3,290	3,335
Currency-adjusted change[3]		*1.5%*
North America	2,616	2,772
Currency-adjusted change[3]		*5.8%*
Asia / Pacific	1,548	1,563
Currency-adjusted change[3]		*2.0%*
Latin America	2,461	1,907
Currency-adjusted change[3]		*(18.0)%*
EBITDA before special items[2][3]	**2,421**	**2,043**
Depreciation, amortization and impairment losses/loss reversals before special items	(523)	(400)
Special items	(143)	(408)
of which:		
Restructuring	*(51)*	*(32)*
Litigations	*(1)*	*(4)*
Acquisition costs	*(86)*	*(273)*
Impairment losses / reversals	*–*	*(41)*
Divestments	*(5)*	*(58)*
EBIT[2] [3]	**1,755**	**1,235**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.9.2.3.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Crop Science decreased by 2.2% in fiscal year 2017. This decline was mainly attributable to the crop protection business in Brazil. High inventories in that market necessitated measures to normalize the situation that in turn led to negative sales development. Excluding the

Brazilian business, sales of Crop Science increased by 3.0% year-on-year on a currency- and portfolio-adjusted basis. Environmental Science posted a positive performance, in part due to the delivery of products to the company that acquired Crop Science's consumer business. Reported net sales of Crop Science decreased by €338 million, or 3.4%, from €9,915 million in fiscal year 2016 to €9,577 million in fiscal year 2017.

The table below provides a breakdown of the factors that affected Crop Science's reported net sales in fiscal year 2017, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2017	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	37	0.3
Price	(251)	(2.5)
Currency	(124)	(1.2)
Portfolio	0	0.0
Total	**(338)**	**(3.4)**

The decrease in net sales in Crop Science in fiscal year 2017 was attributable to a decrease in selling prices and unfavorable currency effects, which resulted in a 2.5% and 1.2% decrease in net sales, respectively. The impact of these unfavorable effects on net sales was slightly offset by a higher sales volume which resulted in a 0.3% increase in net sales.

The decrease in selling prices was mainly attributable to the crop protection business in Brazil and North America.

The unfavorable currency effects in fiscal year 2017 were mainly attributable to the Euro strengthening against the Brazilian real (BRL), Turkish lira (TRY) and the U.S. dollar (USD).

The slight increase in sales volume in fiscal year 2017 was mainly attributable to the North American region of our Crop Protection business as well as to Seeds and to Environmental Science that compensated decreases in sales volume in Brazil.

The following overview provides information on Crop Science's net sales by region in fiscal year 2017 and on how the business units within Crop Science (Crop Protection / Seeds (i.e., Herbicides, Fungicides, Insecticides, Seed Growth and Seeds) as well as Environmental Science) affected these developments. For more information on Crop Science's business units, see "*13.4.3* Crop Science":

- Europe/Middle East/Africa: On a currency-adjusted basis, net sales increased by 1.5% in fiscal year 2017. Insecticides developed very positively, in part due to increased demand and the introduction of new products. Also, net sales at Seeds increased, particularly for vegetables. On the other hand, increased competitive pressure led to declines at SeedGrowth and Fungicides. Reported net sales in our Europe / Middle East / Africa region decreased by €45 million, or 1.4%, from €3,290 million in fiscal year 2016 to €3,335 million in fiscal year 2017.
- North America: On a currency-adjusted basis, net sales increased by 5.8% in fiscal year 2017. The Seeds business registered a double-digit growth rate with robust sales gains for oilseed rape / canola – due to increased acreages in Canada – and for soybeans more than offsetting declines in net sales for cotton. SeedGrowth also developed very positively due to increased demand for products to treat soybean and wheat seed. In contrast, we recorded declines at Insecticides. Environmental Science posted a considerable increase in sales. Reported net sales in our North America region increased by €156 million, or 6.0%, from €2,616 million in fiscal year 2016 to €2,772 million in fiscal year 2017.
- Asia/Pacific: On a currency-adjusted basis, net sales increased by 2.0% in fiscal year 2017. Business performance was encouraging at Fungicides, particularly in Southeast Asia, and at Herbicides, mainly due to new product launches in China and Japan. In addition, Crop Science achieved sales growth in the Seeds business, particularly for cotton and oilseeds, but posted a decline at Insecticides. Reported net sales in Crop Science's Asia / Pacific region increased by €15 million, or 1.0%, from €1,548 million in fiscal year 2016 to €1,563 million in fiscal year 2017.
- Latin America: On a currency-adjusted basis, net sales decreased by 18.0% in fiscal year 2017. This decline was attributable to returns of crop protection products and lower sales into the distribution channel to normalize inventories in Brazil. Price reductions also had an effect. Crop Science posted gains in sales overall in the other Latin American countries on a currency-adjusted

basis. Reported net sales in our Latin America region decreased by €554 million, or 22.5%, from €2,461 million in fiscal year 2016 to €1,907 million in fiscal year 2017.

The table below provides a breakdown of the net sales per business unit for the periods indicated, in absolute amounts as well as the year-on-year change in net sales on a reported and on a currency- and portfolio-adjusted basis:

	For fiscal year ended December 31,		Change (year-on-year)	Currency- and portfolio-adjusted
	2016[1]	2017		
	(audited) (in € million)		(audited) (in %)	
Crop Protection / Seeds	**9,317**	**8,906**	**(4.4)**	**(3.2)**
Crop Protection	7,961	7,403	(7.0)	(5.3)
Herbicides	*2,693*	*2,633*	*(2.2)*	*(1.6)*
Fungicides	*2,961*	*2,597*	*(12.3)*	*(9.9)*
Insecticides	*1,357*	*1,246*	*(8.2)*	*(6.1)*
SeedGrowth	*950*	*927*	*(2.4)*	*(0.3)*
Seeds	1,356	1,503	10.8	9.1
Environmental Science	**598**	**671**	**12.2**	**14.0**

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

12.9.2.3.2 *EBITDA before Special Items*

EBITDA before special items for Crop Science decreased by €378 million, or 15.6%, from €2,421 million in fiscal year 2016 to €2,043 million in fiscal year 2017. Adjusted for negative currency effects of €63 million, earnings were down by 13.0%. The decline is largely attributable to the aforementioned situation in Brazil, which resulted in lower selling prices and sales volumes. Outside of Brazil, lower selling prices were offset by expanded sales volumes. Other operating income had a positive effect on earnings.

12.9.2.3.3 *EBIT*

EBIT of Crop Science decreased by €520 million, or 29.6%, from €1,755 million in fiscal year 2016 to €1,235 million in fiscal year 2017. EBIT in fiscal year 2017 included special charges of €408 million, compared to €143 million in fiscal year 2016. Special charges in fiscal year 2017 primarily related to the Transaction and the execution of a divestment project.

12.9.2.4 Animal Health

The following table provides an overview of the key data for Animal Health for the periods indicated:

	For fiscal year ended December 31,	
	2016[1]	2017
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**1,523**	**1,571**
Change[2]		3.2%
Currency- and portfolio-adjusted[3]		2.0%
Sales by region	**1,523**	**1,571**
Europe / Middle East / Africa	445	442
Currency-adjusted change[3]		*0.0%*
North America	621	655
Currency-adjusted change[3]		*6.4%*
Asia / Pacific	300	317
Currency-adjusted change[3]		*7.3%*
Latin America	157	157
Currency-adjusted change[3]		*0.0%*
EBITDA before special items[2] [3]	**349**	**381**
Depreciation, amortization and impairment losses/loss reversals before special items	(29)	(43)
Special items	*(7)*	*(31)*
of which:		
Restructuring	*(7)*	*(31)*
EBIT[2] [3]	**313**	**307**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.9.2.4.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Animal Health increased by 2.0% in fiscal year 2017. Business in the Asia / Pacific region developed especially positively due to higher demand and price increases. Animal Health also registered currency-adjusted growth in North America, with the Cydectin™ product portfolio acquired in January 2017 from Boehringer Ingelheim Vetmedica, Inc., United States, contributing to sales gains. The Europe / Middle East / Africa and Latin America regions remained at the prior-year level.

Reported net sales of Animal Health increased by €48 million, or 3.2%, from €1,523 million in fiscal year 2016 to €1,571 million in fiscal year 2017.

The table below provides a breakdown of the factors that affected Animal Health's reported net sales in fiscal year 2017, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2017	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	7	0.4
Price	25	1.6
Currency	(15)	(0.9)
Portfolio	31	2.1
Total	**48**	**3.2**

The increase in net sales in fiscal year 2017 was attributable to favorable portfolio effects, an increase in selling prices and higher sales volumes, which resulted in 2.1%, 1.6% and 0.4% increases in net sales, respectively. The impact of these favorable effects on net sales was partially offset by unfavorable currency effects which reduced net sales by 0.9%.

The favorable portfolio effects resulted from the Cydectin™ product portfolio acquired in January 2017 from Boehringer Ingelheim Vetmedica, Inc., United States.

The increase in selling prices was attributable to the increases in selling prices in all regions.

The increase in sales volume in fiscal year 2017 was mainly attributable to business in the Asia / Pacific region and was partially offset by decreases in sales volume in the Latin America and Europe / Middle East / Africa regions.

The unfavorable currency effects in fiscal year 2017 were mainly attributable to the Euro strengthening against the British pound (GBP) and the U.S. dollar (USD).

The following overview provides information on the net sales of Animal Health's best-selling products for fiscal year 2017; for a more detailed description of these products, see "*13.4.1.3.1* Overview of Key Products."

- Advantage™ product family: On a currency-adjusted basis, net sales of our Advantage™ family of flea, tick and worm control products decreased by 7.8% in fiscal year 2017. This decrease was mainly due to increased competitive pressure and the related decline in demand in the Europe / Middle East / Africa and North America regions. Reported net sales of our Advantage™ family decreased by €47 million, or 8.8%, from €535 million in fiscal year 2016 to €488 million in fiscal year 2017.
- Seresto™: On a currency-adjusted basis, net sales of our Seresto™ flea and tick collar increased by 25.1% in fiscal year 2017. This strong increase was mainly attributable to increased demand in the United States and Europe. Reported net sales of Seresto™ increased by €44 million, or 25.3%, from €174 million in fiscal year 2016 to €218 million in fiscal year 2017.
- Drontal™ product family: On a currency-adjusted basis, net sales of our Drontal™ line of dewormers increased by 4.5% in fiscal year 2017. This increase was mainly attributable to increased prices and volumes in the United States and in the Asia / Pacific region. Reported net sales of our Drontal™ line increased by €4 million, or 3.1%, from €128 million in fiscal year 2016 to €132 million in fiscal year 2017.

- Baytril™: On a currency-adjusted basis, net sales of our antibiotic Baytril™ increased by 2.5% in fiscal year 2017. This increase was mainly attributable to the United States, partly due to a one-time effect in connection with a change in the distribution model and due to expanded volumes in Mexico. Reported net sales of Baytril™ remained level year-on-year and amounted to €113 million in fiscal year 2017.

12.9.2.4.2 *EBITDA before Special Items*

EBITDA before special items of Animal Health increased by €32 million, or 9.2%, from €349 million in fiscal year 2016 to €381 million in fiscal year 2017. Adjusted for negative currency effects of €8 million, earnings increased by 11.5%. Price increases, the acquired Cydectin™ business and lower selling expenses contributed to the growth in earnings. In contrast, negative contributions came from net other operating expenses as well as higher research and development expenses.

12.9.2.4.3 *EBIT*

EBIT of Animal Health decreased by €6 million, or 1.9%, from €313 million in fiscal year 2016 to €307 million in fiscal year 2017. In 2017, EBIT included €31 million in special charges in conjunction with efficiency improvement measures, compared to €7 million in fiscal year 2016.

12.9.2.5 Reconciliation

Net sales recorded under Reconciliation amounted to €1,158 million in fiscal year 2017, compared to €1,048 million in fiscal year 2016. EBITDA before special items recorded under Reconciliation amounted to negative €78 million in fiscal year 2017, mainly attributable to Corporate Functions and Consolidation, compared to €114 million in fiscal year 2016.

EBIT recorded under Reconciliation amounted to negative €482 million in fiscal year 2017, mainly attributable to Corporate Functions and Consolidation, compared to negative €414 million in fiscal year 2016. EBIT included special charges of €148 million in fiscal year 2017, compared to €88 million in fiscal year 2016. Special charges in fiscal year 2017 included charges of €60 million connected with provisions for legal risks, €57 million related to restructuring measures and €31 million expenses related to acquisitions.

12.10 Comparison of Fiscal Year 2016 with Fiscal Year 2015

12.10.1 Results of Operations of the Bayer Group

The following discussion is based on the 2015 and 2016 figures contained in the audited consolidated income statement of Bayer and the notes thereto as of and for fiscal year ended December 31, 2016, including the comparative information for fiscal year ended December 31, 2015, which present, Covestro in continuing operations. Since the following 2015 and 2016 figures include results of operations from Covestro, they are not directly comparable with the 2016 and 2017 figures presented and discussed under "*12.8.1 Results of Operations of the Bayer Group*." For further information on the comparability of the information discussed in the following sections, see "*12.5 Comparability of the Financial Information Contained in the Audited Consolidated Financial Statements*."

12.10.1.1 Net Sales

12.10.1.1.1 *Discussion of Factors Affecting Net Sales*

Net sales of the Bayer Group increased by €684 million, or 1.5%, from €46,085 million in fiscal year 2015 to €46,769 million in fiscal year 2016. On a currency- and portfolio-adjusted basis, net sales increased by 3.5% in fiscal year 2016.

Net sales of Life Sciences increased by €840 million, or 2.5%, from €34,103 million in fiscal year 2015 to €34,943 million in fiscal year 2016. On a currency- and portfolio-adjusted basis, net sales of Life Sciences increased by 4.7% in fiscal year 2016.

The table below provides a breakdown of the factors that affected the Bayer Group's and the aggregated Life Sciences' reported net sales in fiscal year 2016, in absolute amounts and as a year-on-year change:

	Group		Life Sciences	
	Fiscal year ended December 31, 2016[1]	Change (year-on-year)	Fiscal year ended December 31, 2016[1]	Change (year-on-year)
	(audited)		(unaudited)	
	(in € million)	(in %)	(in € million)	(in %)
Volume	1,936	4.2	1,306	3.9
Price	(348)	(0.7)	280	0.8
Currency	(913)	(2.0)	(755)	(2.2)
Portfolio	9	0.0	9	0.0
Total	**684**	**1.5**	**840**	**2.5**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

The increase in the Group's net sales in fiscal year 2016 was mainly attributable to a higher sales volume, which resulted in a 4.2% increase in net sales. The impact of the increase in sales volume on net sales was partially offset by unfavorable currency effects and a slight decline in selling prices, which decreased net sales by 2.0% and 0.7%, respectively.

The volume-driven increase in the Group's net sales in fiscal year 2016 was primarily attributable to higher sales volumes in Pharmaceuticals and Covestro. The unfavorable currency effects in fiscal year 2016 were mainly attributable to the Euro strengthening against the Chinese renminbi (CNY), the British pound (GBP), the Canadian dollar (CAD) and the Russian ruble (RUB). The negative effect of selling prices on net sales in fiscal year 2016 was mainly attributable to lower selling prices at Covestro which were mainly due to lower raw material prices.

The increase in the net sales of Life Sciences in fiscal year 2016 was mainly attributable to a higher sales volume, which resulted in a 3.9% increase in net sales. The impact of the increase in sales volume on net sales was partially offset by unfavorable currency effects, which decreased net sales by 2.2%. Selling prices remained level year-on-year.

The volume-driven increase in net sales in fiscal year 2016 was primarily attributable to higher sales volumes in Pharmaceuticals. The unfavorable currency effects in fiscal year 2016 were mainly attributable to the Euro (EUR) strengthening against the Chinese renminbi (CNY), the Argentinian Peso (ARS), the British pound (GBP) and the Mexican Peso (MXN). The decrease in selling prices registered in Reconciliation and Pharmaceuticals was compensated by price increases at Consumer Health, Animal Health and Crop Science.

For more information on our segments, including a breakdown of the factors that affected our segments' net sales, see "*12.9.2 Selected Segment Information*."

12.10.1.1.2 *Discussion of Net Sales by Region*

The following table presents the Bayer Group's and the aggregated Life Sciences' external net sales by region (by market), based on our regional breakdown introduced as of December 31, 2016, for the periods indicated, in absolute amounts and as a percentage of the Bayer Group's and the aggregated Life Sciences' total net sales, as well as the year-on-year change in external net sales by region (by market) on a reported and on a currency-adjusted basis:

	Group				Life Sciences			
	Fiscal year ended December 31,		Change (year-on-year)	Currency-adjusted (year-on-year)	Fiscal year ended December 31,		Change (year-on-year)	Currency-adjusted (year-on-year)
	2015[1]	2016[1]			2015[1]	2016[1]		
	(audited) (in € million, unless otherwise indicated)		(audited) (in %)		(unaudited) (in € million, unless otherwise indicated)		(unaudited) (in %)	
Europe / Middle East / Africa	17,707	17,823	0.7	2.8	12,779	13,062	2.2	5.1
% of net sales[2]	*38.4%*	*38.1%*			*37.5%*	*37.4%*		
North America	12,621	12,806	1.5	2.0	9,736	10,066	3.4	4.1
% of net sales[2]	*27.4%*	*27.4%*			*28.5%*	*28.8%*		
Asia / Pacific	10,263	11,032	7.5	7.9	6,886	7,413	7.7	7.0
% of net sales[2]	*22.3%*	*23.6%*			*20.2%*	*21.2%*		
Latin America	5,494	5,108	(7.0)	0.8	4,702	4,402	(6.4)	1.2
% of net sales[2]	*11.9%*	*10.9%*			*13.8%*	*12.6%*		
Total	**46,085**	**46,769**	**1.5**	**3.5**	**34,103**	**34,943**	**2.5**	**4.7**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.
(2) Unaudited.

The following discussion of net sales by region is presented on a currency-adjusted basis:

The net sales of the Bayer Group in the Europe / Middle East / Africa region increased slightly. This was mainly attributable to an increase in the net sales of Pharmaceuticals. Net sales of the other Life Science segments grew as well. The net sales of Covestro in the Europe/Middle East / Africa region declined.

The increase in net sales of the Bayer Group in the North America region was mainly attributable to increases in net sales of Pharmaceuticals, Crop Science and Animal Health. The net sales of Covestro declined.

The increase in net sales of the Bayer Group in the Asia / Pacific region was attributable to increases in net sales of all segments, particularly of Pharmaceuticals and Covestro.

The net sales of the Bayer Group in the Latin America region remained level (on a currency-adjusted basis) compared to the previous year. Compared to 2015, net sales of Pharmaceuticals and Consumer Health increased significantly and Animal Health's net sales grew slightly, while the net sales of Crop Science decreased. The net sales of Covestro declined slightly compared to the previous year.

12.10.1.2 Cost of Goods Sold

Cost of goods sold of the Bayer Group decreased by €745 million, or 3.5%, from €21,040 million in fiscal year 2015 to €20,295 million in fiscal year 2016. The decrease in cost of goods sold in fiscal year 2016 was mainly due to lower raw material costs at Covestro. Special charges impacting cost of goods sold in fiscal year 2016 amounted to €412 million, compared to €440 million in fiscal year 2015, and mainly included special charges for Pharmaceuticals, due to impairment losses on intangible assets associated with Essure™ as well as, to a lesser degree, special charges for Consumer Health, associated with the integration cost of acquired businesses and efficiency enhancement measures.

12.10.1.3 Gross Profit

Gross profit of the Bayer Group increased by €1,429 million, or 5.7%, from €25,045 million in fiscal year 2015 to €26,474 million in fiscal year 2016. The increase in gross profit in fiscal year 2016 was mainly attributable to the increase in net sales in Pharmaceuticals and the decline in cost of goods sold in Covestro. The ratio of cost of goods sold to total net sales declined year-on-year to 43.4% in fiscal year 2016, compared to 45.7% in fiscal year 2015.

12.10.1.4 Selling Expenses

Selling expenses of the Bayer Group increased by €202 million, or 1.6%, from €12,272 million in fiscal year 2015 to €12,474 million in fiscal year 2016. The increase in selling expenses was mainly attributable to an increase in the physical distribution and warehousing of finished products, an increase in commission and licensing expenses and an increase in internal and external sales force expenses which were slightly offset by decreases in other selling expenses and advertising and customer advice. Special charges impacting selling expenses in fiscal year 2016 amounted to €317 million, compared to €198 million in fiscal year 2015, and mainly reflect impairment losses on intangible assets associated with Triderm™ and Citracal™ in Consumer Health and with Essure™ in Pharmaceuticals as well as efficiency enhancement measures in Pharmaceuticals.

12.10.1.5 Research and Development (R&D) Expenses

R&D expenses of the Bayer Group increased by €392 million, or 9.2%, from €4,274 million in fiscal year 2015 to €4,666 million in fiscal year 2016.

The following table provides a breakdown of our R&D expenses by segment based on the Bayer Group's segment structure in effect from January 1, 2016 up to and excluding September 30, 2017 and aggregated for Life Sciences for the periods presented:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(audited, unless otherwise indicated) (in € million)	
Pharmaceuticals	2,450	2,787
Consumer Health	250	259
Crop Science	1,082	1,164
Animal Health	134	140
Reconciliation[2]	96	55
Life Sciences	**4,012**	**4,405**
Covestro	262	261
Group	**4,274**	**4,666**

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.
(2) Unaudited.

The increase in R&D expenses in fiscal year 2016 was mainly attributable to higher R&D investments in Pharmaceuticals as well as an increased spending on R&D in Crop Science. Special charges impacting R&D expenses in fiscal year 2016 amounted to €84 million, compared to €67 million in fiscal year 2015. They mainly included special charges for Pharmaceuticals, in particular, due to impairment losses on intangible assets associated with Essure™ and efficiency enhancement measures, as well as for Consumer Health associated with the integration of acquired businesses.

12.10.1.6 General Administration Expenses

General administration expenses of the Bayer Group increased by €164 million, or 7.8%, from €2,092 million in fiscal year 2015 to €2,256 million in fiscal year 2016. The increase in administration expenses in fiscal year 2016 was mainly attributable to the establishment of administrative functions at Covestro. Special charges impacting general administration expenses in fiscal year 2016 amounted to €185 million, compared to €203 million in fiscal year 2015, and arose primarily in connection with the Transaction and efficiency improvement measures related to the Group's new corporate structure.

12.10.1.7 Other Operating Income

Other operating income of the Bayer Group decreased by €211 million, or 19.0%, from €1,109 million in fiscal year 2015 to €898 million in fiscal year 2016.

The following table provides a breakdown of the Bayer Group's other operating income for the periods presented:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(audited) (in € million)	
Gains on retirements of noncurrent assets	137	66
Reversal of impairment losses on receivables	32	20
Reversals of unutilized provisions	25	131
Gains from derivatives	272	259
Miscellaneous operating income	643	422
Total	**1,109**	**898**
of which special items	*336*	*115*

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

The decrease in other operating income was mainly attributable to a decrease in miscellaneous operating income and gains on retirements of noncurrent assets, which was partly offset by an increase in reversals of unutilized

provisions. Miscellaneous operating income decreased by €221 million, or 34.4%, from €643 million in fiscal year 2015 to €422 million in fiscal year 2015. Miscellaneous operating income in fiscal year 2015 included special gains of €314 million recorded in Crop Science in connection with a litigation against Dow AgroSciences. Reversals of unutilized provisions increased by €106 million, from €25 million in fiscal year 2015 to €131 million in fiscal year 2016 and reflected special gains of €104 million from the reversal of provisions for the Yasmin™ / YAZ™ litigation.

For further information, see note 10 on other operating income of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-150 et seq. of this Prospectus.

12.10.1.8 Other Operating Expenses

Other operating expenses of the Bayer Group decreased by €341 million, or 26.7%, from €1,275 million in fiscal year 2015 to €934 million in fiscal year 2016.

The following table provides a breakdown of the Bayer Group's other operating expenses for the periods presented:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(audited) (in € million)	
Losses on retirements of noncurrent assets	(32)	(22)
Impairment losses on receivables	(183)	(171)
Expenses related to significant legal risks	(151)	(262)
Losses from derivatives	(626)	(181)
Miscellaneous operating expenses	(283)	(298)
Total	**(1,275)**	**(934)**
of which special items	*(247)*	*(205)*

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

The decrease in other operating expenses in fiscal year 2016 was mainly attributable to lower losses from derivatives due to positive effects from derivatives to hedge planned sales and which was partly offset by higher expenses related to significant legal risks. Special charges impacting other operating expenses in fiscal year 2016 amounted to €205 million and mainly related to impairment losses on receivables and accounting measures taken in connection with legal proceedings related to Xarelto™, Essure™ and Cipro™ / Avalox™.

For further information, see note 11 on other operating expenses of Bayer's consolidated financial statements for fiscal year 2016, set forth on page F-151 of this Prospectus.

12.10.1.9 EBIT

EBIT of the Bayer Group increased by €801 million, or 12.8%, from €6,241 million in fiscal year 2015 to €7,042 million in fiscal year 2016. The increase in Group EBIT in fiscal year 2016 was mainly attributable to an increase in EBIT of Pharmaceuticals and Covestro. EBIT of the Bayer Group included special charges of €1,088 million in fiscal year 2016, compared to €819 million in fiscal year 2015. Special charges in fiscal year 2016 mainly related to €561 million for impairment losses on intangible assets in connection with Essure™ in Pharmaceuticals and Triderm™ and Citracal™ in Consumer Health as well as special charges of €242 million in connection with efficiency improvement programs and of €100 million in integration costs for acquired businesses. In addition, special charges of €94 million related to provisions for litigation, mainly in Pharmaceuticals, while €86 million were connected with the Transaction in Crop Science.

EBIT before special items increased by €1,070 million, or 15.2%, from €7,060 million in fiscal year 2015 to €8,130 million in fiscal year 2016.

The following table provides an overview of special items included in EBIT by segment based on our segment structure in effect from January 1, 2016 up to and excluding September 30, 2017 for the periods presented:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(unaudited, unless otherwise indicated) (in € million)	
EBIT before special items[2] [3]	**7,060**	**8,130**
Special items of Pharmaceuticals	(299)	(558)
Special items of Consumer Health	(237)	(292)
Special items of Crop Science	222	(143)
Special items of Animal Health	(64)	(7)
Special items of Reconciliation	(109)	(88)
Special items of Covestro	(332)	–
Total special items[2]	**(819)**	**(1,088)**
EBIT[2] [3]	**6,241**	**7,042**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.10.1.10 Financial Result

Financial result increased by €150 million, or 14.9%, from negative €1,005 million in fiscal year 2015 to negative €1,155 million in fiscal year 2016. The financial result comprised items including net interest expense of €548 million in fiscal year 2016, compared to €455 million in fiscal year 2015, interest cost of €294 million in fiscal year 2016, compared to €287 million in fiscal year 2015 for pension and other provisions, and currency hedging costs of €193 million in fiscal year 2016, compared to €254 million in fiscal year 2015.

Financial income of the Bayer Group decreased by €220 million, or 59.3%, from €371 million in fiscal year 2015 to €151 million in fiscal year 2016. The decrease was mainly attributable to a decrease in income from interest and similar income by €160 million, or 53.9%, from €297 million in fiscal year 2015 to €137 million in fiscal year 2016.

Financial expenses of the Bayer Group decreased by €87 million, or 6.4%, from €1,367 million in fiscal year 2015 to €1,280 million in fiscal year 2016. The decrease in fiscal year 2016 was mainly attributable to a decrease in interest and similar expenses by €68 million, or 9.0%, from €752 million in fiscal year 2015 to €684 million in fiscal year 2016.

For further information, see note 13 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-152 et seq. of this Prospectus.

12.10.1.11 Income before Income Taxes

Income before income taxes increased by €651 million, or 12.4%, from €5,236 million in fiscal year 2015 to €5,887 million in fiscal year 2016. Income tax expenses of the Bayer Group increased by €106 million, or 8.7%, from €1,223 million in fiscal year 2015 to €1,329 million in fiscal year 2016.

The following table provides a breakdown of our income tax expenses for the periods presented:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(audited) (in € million)	
Taxes paid or accrued	(2,254)	(1,925)
Deferred taxes	1,031	596
Total	**(1,223)**	**(1,329)**

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016, which present Covestro in continuing operations.

The use of tax loss carryforwards reduced income taxes in fiscal year 2016 by €152 million, compared to €136 million in fiscal year 2015. The use of tax credits reduced current income taxes by €18 million in fiscal year

2016, compared to €21 million in fiscal year 2015. The effective tax rate was 22.6% in 2016, compared to 23.4% in 2015.

For further information, see note 14 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-154 et seq. of this Prospectus.

12.10.1.12 Income after Income Taxes

Income after income taxes increased by €728 million, or 17.8%, from €4,098 million in fiscal year 2015 to €4,826 million in fiscal year 2016.

12.10.2 Selected Segment Information

The figures and discussion in the following sections is based on the segment structure that was in effect from January 1, 2016 up to and excluding September 30, 2017, which, apart from the current four reportable segments Pharmaceuticals, Consumer Health, Crop Science and Animal Health, included Covestro as a reportable segment. For further information, see "*12.2.2 Bayer's Corporate Structure in Effect from January 1, 2016.*"

12.10.2.1 Pharmaceuticals

The following table provides an overview of the key data for Pharmaceuticals for the periods indicated, based on our regional breakdown in effect as of December 31, 2016:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**15,308**	**16,420**
Change[2]		7.3%
Currency- and portfolio-adjusted[3]		8.7%
Sales by region	**15,308**	**16,420**
Europe / Middle East / Africa	5,981	6,417
Currency-adjusted change[3]		*9.7%*
North America	3,937	4,194
Currency-adjusted change[3]		*6.7%*
Asia / Pacific	4,319	4,775
Currency-adjusted change[3]		*8.6%*
Latin America	1,071	1,034
Currency-adjusted change[3]		*11.0%*
EBITDA before special items[2] [3]	**4,616**	**5,251**
Depreciation, amortization and impairment losses/loss reversals before special items	(1,289)	(1,304)
Special items	(299)	(558)
of which:		
Restructuring	*(174)*	*(69)*
Litigations	*(16)*	*(88)*
Integration costs	*(2)*	*–*
Impairment losses/impairment loss reversals	*(43)*	*(401)*
Divestments	*3*	*–*
Revaluation of other receivables	*(67)*	*–*
EBIT[2] [3]	**3,028**	**3,389**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.10.2.1.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Pharmaceuticals increased by 8.7% in fiscal year 2016, mainly driven by its key growth products. Total combined net sales of Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™ increased by €1,182 million, or 27.9%, from €4,231 million in fiscal year 2015 to €5,413 million in fiscal year 2016. The Pharmaceuticals business expanded noticeably in all regions.

Reported net sales of Pharmaceuticals increased by €1,112 million, or 7.3%, from €15,308 million in fiscal year 2015 to €16,420 million in fiscal year 2016.

The table below provides a breakdown of the factors that affected Pharmaceuticals' reported net sales in fiscal year 2016, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2016	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	1,377	9.0
Price	(39)	(0.3)
Currency	(226)	(1.4)
Portfolio	0	0.0
Total	**1,112**	**7.3**

The increase in net sales in fiscal year 2016 was attributable to a higher sales volume mainly driven by Pharmaceuticals' key growth products and which resulted in a 9.0% increase in net sales. The impact of the increase in sales volume on net sales was partially offset by unfavorable currency effects and a slight decline in selling prices, which reduced net sales by 1.4% and 0.3%, respectively.

The unfavorable currency effects in fiscal year 2016 were mainly attributable to the Euro strengthening against the Canadian dollar (CAD), the British pound (GBP) and the Argentinian peso (ARS).

The following overview provides information on the net sales of Pharmaceuticals' best-selling products for fiscal year 2016; for a more detailed description of these products, see "*13.4.1.3.1 Overview of Key Products*."

- Xarelto™: On a currency-adjusted basis, net sales of our oral anticoagulant Xarelto™ increased by 30.8% in fiscal year 2016. This increase was mainly attributable to expanded sales volumes in Europe and Japan. We also posted significant gains in license revenues – recognized as sales – in the United States, where Xarelto™ is marketed by a subsidiary of Johnson & Johnson. Reported net sales of Xarelto™ increased by €676 million, or 30.0%, from €2,252 million in fiscal year 2015 to €2,928 million in fiscal year 2016.

- EYLEA™: On a currency-adjusted basis, net sales of our eye medicine EYLEA™ increased by 33.0% in fiscal year 2016. This increase was mainly attributable to the successful development of business in Europe, Canada and Japan. Reported net sales of EYLEA™ increased by €397 million, or 32.3%, from €1,228 million in fiscal year 2015 to €1,625 million in fiscal year 2016.

- Kogenate™ / Kovaltry™: On a currency-adjusted basis, net sales of the blood-clotting medicine Kogenate™ / Kovaltry™ increased by 1.1% in fiscal year 2016. This increase was mainly attributable to the successful introduction of Kovaltry™ in the United States. Reported net sales of Kogenate™ / Kovaltry™ increased by €11 million, or 1.0%, from €1,155 in fiscal year 2015 to €1,166 million in fiscal year 2016.

- Mirena™ product family: On a currency-adjusted basis, net sales of the hormone-releasing intrauterine devices of our Mirena™ product family (Mirena™, Jaydess™ / Skyla™ and Kyleena™) increased by 8.8% in fiscal year 2016. This increase was mainly attributable to the positive development in prices in the United States and the introduction of the new low-dose product Kyleena™. Reported net sales of the Mirena™ product family increased by €75 million, or 7.7%, from €968 million in fiscal year 2015 to €1,043 million in fiscal year 2016.

- Nexavar™: On a currency-adjusted basis, net sales of our cancer drug Nexavar™ decreased by 1.6% in fiscal year 2016. This decrease was mainly attributable to higher competitive pressure in the United States. Reported net sales of Nexavar™ decreased by €22 million, or 2.5%, from €892 million in fiscal year 2015 to €870 million in fiscal year 2016.

- Betaferon™ / Betaseron™: On a currency-adjusted basis, net sales of our multiple sclerosis treatment Betaferon™ / Betaseron™ decreased by 9.9% in fiscal year 2016. This decrease was mainly attributable to a weaker business performance in Europe and the United States. Reported net sales of Betaferon™ / Betaseron™ decreased by €90 million, or 10.9%, from €824 million in fiscal year 2015 to €734 million in fiscal year 2016.

- YAZ™ / Yasmin™ / Yasminelle™: On a currency-adjusted basis, net sales of our YAZ™ / Yasmin™ / Yasminelle™ line of oral contraceptives were level with the previous year. Higher demand in China and Russia was offset by a weaker business development in Europe, Brazil and the United States. Reported net sales of our YAZ™ / Yasmin™ / Yasminelle™ line decreased by €28 million, or 4.0%, from €706 million in fiscal year 2015 to €678 million in fiscal year 2016.

- Adalat™: On a currency-adjusted basis, net sales of Adalat™, our product to treat hypertension and coronary heart disease, increased by 2.7% in fiscal year 2016. This slight increase was mainly attributable to expanded volumes in China. Reported net sales of Adalat™ decreased by €9 million, or 1.4%, from €633 million in fiscal year 2015 to €624 million in fiscal year 2016.

- Aspirin™ Cardio: On a currency-adjusted basis, net sales of Aspirin™ Cardio, for the secondary prevention of heart attacks, increased by 7.4% in fiscal year 2016. This increase was mainly attributable to an improved business situation in China and Latin America. Reported net sales increased by €14 million, or 2.7%, from €524 million in fiscal year 2015 to €538 million in fiscal year 2016.

- Glucobay™: On a currency-adjusted basis, net sales of our diabetes treatment Glucobay™ increased by 3.3% in fiscal year 2016. This increase was mainly due to continuing high demand in China. Reported net sales of Glucobay™ decreased by €8 million, or 1.5%, from €523 million in fiscal year 2015 to €515 million in fiscal year 2016.

- Avalox™ / Avelox™: On a currency-adjusted basis, net sales of our antibiotic Avalox™ / Avelox™ decreased by 2.0% in fiscal year 2016. This slight decrease was mainly attributable to the weak development of business in Canada and Europe, which was only partly offset by higher demand in China. Reported net sales of Avalox™ / Avelox™ decreased by €26 million, or 6.9%, from €379 million in fiscal year 2015 to €353 million in fiscal year 2016.

- Gadavist™ / Gadovist™: On a currency-adjusted basis, net sales of our magnetic resonance imaging ("**MRI**") contrast agent Gadavist™ / Gadovist™ increased by 19.7% in fiscal year 2016. This increase was mainly attributable to the significant expansion of sales volumes in Japan and the United States. Reported net sales of Gadavist™ / Gadovist™ increased by €56 million, or 19.3%, from €290 million in fiscal year 2015 to €346 million in fiscal year 2016.

- Xofigo™: On a currency-adjusted basis, net sales of our cancer drug Xofigo™ increased by 29.3% in fiscal year 2016. This increase was mainly attributable to the positive development of business in the United States and Europe. Reported net sales of Xofigo™ increased by €74 million, or 28.8%, from €257 million in fiscal year 2015 to €331 million in fiscal year 2016.

- Ultravist™: On a currency-adjusted basis, net sales of our x-ray contrast agent Ultravist™ increased by 3.5% in fiscal year 2016. This increase was mainly attributable to higher volumes in Latin America and Europe. Reported net sales of Ultravist™ decreased slightly by €2 million, or 0.6%, from €318 million in fiscal year 2015 to €316 million in fiscal year 2016.

- Stivarga™: On a currency-adjusted basis, net sales of our cancer drug Stivarga™ decreased by 11.7% in fiscal year 2016. This decrease was mainly attributable to stronger competition in the United States. Reported net sales of Stivarga™ decreased by €38 million, or 12.1%, from €313 million in fiscal year 2015 to €275 million in fiscal year 2016.

- Adempas™: On a currency-adjusted basis, net sales of Adempas™ to treat hypertension increased by 39.3% in fiscal year 2016 and included the proportionate recognition of the one-time payment resulting from the sGC collaboration with Merck & Co., Inc. Business developed particularly positive in the United States. Reported net sales of Adempas™ increased by €73 million, or 40.3%, from €181 million in fiscal year 2015 to €254 million in fiscal year 2016.

12.10.2.1.2 *EBITDA before Special Items*

EBITDA before special items of Pharmaceuticals increased by €635 million, or 13.8%, from €4,616 million in fiscal year 2015 to €5,251 million in fiscal year 2016. The substantial growth in earnings was primarily attributable to Pharmaceuticals very good business development. Significantly higher R&D expenses and negative currency effects in an amount of €65 million had an opposing effect.

12.10.2.1.3 *EBIT*

EBIT of Pharmaceuticals increased by €361 million, or 11.9%, from €3,028 million in fiscal year 2015 to €3,389 million in fiscal year 2016. EBIT included special charges of €558 million in fiscal year 2016, compared to €299 million in fiscal year 2015. The special charges in fiscal year 2016 mainly related to special charges of €401 million associated with Essure™, mainly for impairment losses on intangible assets. Further charges were associated with accounting measures of €88 million in connection with litigations and charges of €69 million for efficiency enhancement programs.

12.10.2.2 Consumer Health

The following table provides an overview of the key data for Consumer Health for the periods indicated, based on our regional breakdown in effect as of December 31, 2016:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**6,076**	**6,037**
Change[2]		(0.6)%
Currency- and portfolio-adjusted[3]		3.5%
Sales by region	**6,076**	**6,037**
Europe / Middle East / Africa	1,955	1,918
Currency-adjusted change[3]		*1.5%*
North America	2,635	2,627
Currency-adjusted change[3]		*(0.1)%*
Asia / Pacific	738	781
Currency-adjusted change[3]		*8.1%*
Latin America	748	711
Currency-adjusted change[3]		*17.1%*
EBITDA before special items[2] [3]	**1,456**	**1,411**
Depreciation, amortization and impairment losses/loss reversals before special items	(451)	(424)
Special items	(237)	(292)
of which:		
Restructuring	*(5)*	*(32)*
Integration costs	*(225)*	*(100)*
Impairment losses/impairment loss reversals	*–*	*(160)*
Revaluation of other receivables	*(7)*	*–*
EBIT[2] [3]	**768**	**695**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.10.2.2.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Consumer Health increased by 3.5% in fiscal year 2016. Consumer Health achieved significant gains in the Latin America and Asia / Pacific regions on a currency-adjusted basis, and the Europe / Middle East / Africa region contributed to its net sales growth with a slight increase. Net sales in the North America region came in at the prior year level.

Reported net sales of Consumer Health decreased by €39 million, or 0.6%, from €6,076 million in fiscal year 2015 to €6,037 million in fiscal year 2016.

The table below provides a breakdown of the factors that affected Consumer Health's reported net sales in fiscal year 2016, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2016	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	38	0.6
Price	178	2.9
Currency	(255)	(4.1)
Portfolio	0	0.0
Total	**(39)**	**(0.6)**

The decrease in net sales of Consumer Health in fiscal year 2016 was attributable to unfavorable currency effects which resulted in a 4.1% decrease in net sales. The impact of these unfavorable currency effects on net sales was only partially offset by higher selling prices and a slight increase in sales volume which resulted in a 2.9% and 0.6% increase in net sales, respectively.

The unfavorable currency effects in fiscal year 2016 were mainly attributable to the Euro strengthening against the Argentinian peso (ARS) and the Mexican peso (MXN).

The increases in selling prices and sales volume were mainly attributable to positive price developments in the Latin America region as well as a strong performance with respect to sales volume in the Asia / Pacific region.

The following overview provides information on the net sales of our best-selling Consumer Health products for fiscal year 2016; for a more detailed description of these products, see "*13.4.2.3.1* Overview of Key Products."

- Claritin™: On a currency-adjusted basis, net sales of our antihistamine Claritin™ decreased by 2.6%. This decrease was mainly attributable to a decrease in net sales in our Asia / Pacific region, compared to the strong performance in fiscal year 2015, due to intensified competition and price controls for prescription medicines in Japan. This decrease was only partly offset by an increase in net sales in the United States, attributable to a product line extension with ClariSpray™. Reported net sales of Claritin™ decreased by €22 million, or 3.5%, from €627 million in fiscal year 2015 to €605 million in fiscal year 2016.

- Aspirin™: On a currency-adjusted basis, net sales of our analgesic Aspirin™ increased by 2.4% in fiscal year 2016. This increase was mainly attributable to gains in net sales in the United States and Latin America which more than offset the decrease in net sales in Europe resulting from a weak cold season. Reported net sales of Aspirin™ decreased by €10 million, or 2.1%, from €473 million in fiscal year 2015 to €463 million in fiscal year 2016. Together with Aspirin™ Cardio, reported under Pharmaceuticals, reported net sales increased by €4 million, or 0.4% (and 5.0% on a currency-adjusted basis), from €997 million in fiscal year 2015 to €1,001 million in fiscal year 2016.

- Aleve™: On a currency-adjusted basis, net sales of our analgesic Aleve™ increased by 2.1% in fiscal year 2016. This increase resulted from a very favorable development in the United States, where Consumer Health benefited from the addition of Aleve Tens™ to the product portfolio. Reported net sales of Aleve™ increased by €3 million, or 0.7%, from €413 million in fiscal year 2015 to €416 million in fiscal year 2016.

- Bepanthen™ / Bepanthol™: On a currency-adjusted basis, net sales of our Bepanthen™ / Bepanthol™ wound and skin care products increased strongly by 9.2% in fiscal year 2016. This increase was mainly attributable an increase in net sales in Europe and particularly in France, Germany and Russia. Reported net sales of Bepanthen™ / Bepanthol™ increased by €7 million, or 2%, from €355 million in fiscal year 2015 to €362 million in fiscal year 2016.

- Canesten™: On a currency-adjusted basis, net sales of our skin and intimate health products Canesten™ increased by 13.4% in fiscal year 2016. This increase was attributable to expanded sales volumes in all regions. Business developed especially positive in Germany, due primarily to Canesten Gyn™. Reported net sales of Canesten™ increased by €2 million, or 0.7%, from €267 million in fiscal year 2015 to €269 million in fiscal year 2016.

- Alka-Seltzer™: On a currency-adjusted basis, net sales of the Alka-Seltzer™ product family to treat gastric complaints and cold symptoms increased by 2.2% in fiscal year 2016. This increase was

mainly attributable to a product line extension in the United States. Reported net sales of the Alka-Seltzer™ product family increased by €2 million, or 0.8%, from €251 million in fiscal year 2015 to €253 million in fiscal year 2016.

- Dr. Scholl's™: On a currency-adjusted basis, net sales of our Dr. Scholl's™ foot care products decreased by 6.9% in fiscal year 2016. This decrease was mainly attributable to higher competitive pressure and a weak market environment in the United States. Reported net sales of Dr. Scholl's™ decreased by €18 million, or 7.1%, from €253 million in fiscal year 2015 to €235 million in fiscal year 2016.

- One A Day™: On a currency-adjusted basis, net sales of our One A Day™ vitamin product increased by 5.3% in fiscal year 2016. This increase was attributable to pleasing sales development in the United States due to product line extensions and the expansion of distribution channels. Reported net sales of One A Day™ increased by €11 million, or 5.2%, from €211 million in fiscal year 2015 to €222 million in fiscal year 2016.

- Coppertone™: On a currency-adjusted basis, net sales of our sunscreen product Coppertone™ increased by 1.4% in fiscal year 2016. This increase was attributable to higher demand in our Asia / Pacific and Latin America regions that more than offset declines in net sales in the United States. Reported net sales of Coppertone™ increased by €2 million, or 0.9%, from €217 million in fiscal year 2015 to €219 million in fiscal year 2016.

- Elevit™: On a currency-adjusted basis, net sales of our prenatal vitamin Elevit™ increased by 17.2% in fiscal year 2016. This increase was mainly attributable to double-digit-percentage growth rates in our Asia / Pacific and Europe / Middle East / Africa regions. Reported net sales of Elevit™ increased strongly by €20 million, or 12.3%, from €162 million in fiscal year 2015 to €182 million in fiscal year 2016.

12.10.2.2.2 *EBITDA before Special Items*

EBITDA before special items of Consumer Health decreased by €45 million, or 3.1%, from €1,456 million in fiscal year 2015 to €1,411 million in fiscal year 2016. Earnings were diminished by a higher cost of goods sold and negative currency effects of €63 million. These were partly compensated by the positive development of net sales and cost synergies.

12.10.2.2.3 *EBIT*

EBIT of Consumer Health decreased by €73 million, or 9.5%, from €768 million in fiscal year 2015 to €695 million in fiscal year 2016. EBIT included special charges of €292 million in 2016, compared to €237 million in fiscal year 2015. The special charges in fiscal year 2016 mainly related to special charges of €160 million for impairment losses on intangible assets on Triderm™ and Citracal™, charges of €100 million for the integration of acquired businesses and charges of €32 million for efficiency enhancement measures.

12.10.2.3 Crop Science

The following table provides an overview of the key data for Crop Science for the periods indicated, based on our regional breakdown in effect as of December 31, 2016:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**10,128**	**9,915**
Change[2]		(2.1)%
Currency- and portfolio-adjusted[3]		0.1%
Sales by region	**10,128**	**9,915**
Europe / Middle East / Africa	3,368	3,290
Currency-adjusted change[3]		*1.8%*
North America	2,570	2,616
Currency-adjusted change[3]		*3.9%*
Asia / Pacific	1,530	1,548
Currency-adjusted change[3]		*2.7%*
Latin America	2,660	2,461
Currency-adjusted change[3]		*(6.9)%*
EBITDA before special items[2] [3]	**2,406**	**2,421**
Depreciation, amortization and impairment losses/loss reversals before special items	(534)	(523)
Special items	222	(143)
of which:		
Restructuring	*–*	*(51)*
Litigations	*285*	*(1)*
Acquisition costs	*–*	*(86)*
Divestments	*(50)*	*(5)*
Revaluation of other receivables	*(13)*	*–*
EBIT[2] [3]	**2,094**	**1,755**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.10.2.3.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales growth of Crop Science remained level year-on-year at 0.1%. Crop Protection / Seeds matched the prior-year net sales despite a persisting weak market environment, particularly in Latin America. Environmental Science registered a gratifying growth in net sales.

Reported net sales of Crop Science decreased by €213 million, or 2.1%, from €10,128 million in fiscal year 2015 to €9,915 million in fiscal year 2016.

The table below provides a breakdown of the factors that affected Crop Science's reported net sales in fiscal year 2016, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2016	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	(133)	(1.3)
Price	142	1.4
Currency	(231)	(2.3)
Portfolio	9	0.1
Total	**(213)**	**(2.1)**

The decrease in net sales in Crop Science in fiscal year 2016 was attributable to unfavorable currency effects and a decrease in sales volume which resulted in a 2.3% and 1.3% decrease in net sales, respectively. The impact of these unfavorable effects on net sales was partially offset by higher selling prices and portfolio effects which resulted in a 1.4% and 0.1% increase in net sales, respectively.

The unfavorable currency effects in fiscal year 2016 were mainly attributable to the Euro strengthening against the Canadian dollar (CAD), the Russian ruble (RUB), the British pound (GBP), the Mexican peso (MXN), the Ukrainian hryvni (UAH) and the Indian rupee (INR).

The decrease in sales volume in fiscal year 2016 was mainly attributable to a persistently weak market environment in Brazil. Market volumes decreased in Latin America, due to macroeconomic developments, unfavorable weather conditions and high inventories of crop protection products.

The increase in selling prices was mainly attributable to the performance of the Europe / Middle East / Africa and Latin America regions, of the Crop Protection business as well as the Seeds business.

The favorable portfolio effects were attributable to the acquisition of SeedWorks India Pvt. Ltd. that was completed on July 1, 2015.

The following overview provides information on Crop Science's net sales by region in fiscal year 2016 and on how the business units within Crop Science (Crop Protection / Seeds (i.e., Herbicides, Fungicides, Insecticides, Seed Growth and Seeds) as well as Environmental Science) affected these developments. For more information on Crop Science's business units, see "*13.4.3* Crop Science":

- Europe/Middle East/Africa: On a currency-adjusted basis, net sales increased by 1.8% in fiscal year 2016. Seed Growth registered gains, particularly due to higher demand for products to treat cereal seed. Crop Science also slightly expanded business at Herbicides, while net sales at Insecticides and Fungicides came in at the prior year level. Net sales of Vegetable Seeds developed positively, as did net sales of Environmental Science. Reported net sales in our Europe / Middle East / Africa region decreased by €78 million, or 2.3%, from €3,368 million in fiscal year 2015 to €3,290 million in fiscal year 2016.

- North America: On a currency-adjusted basis, net sales increased by 3.9% in fiscal year 2016. Net sales developed very positively at Seed Growth due to increased demand for products to treat corn and cereal seed. Also, net sales at Fungicides increased. In addition, Crop Science achieved strong, double-digit-percentage growth with soybean seeds. Net sales at Environmental Science increased slightly. However, Crop Science registered a substantial decrease in net sales at Insecticides resulting from weak demand. Reported net sales in our North America region increased by €46 million, or 1.8%, from €2,570 million in fiscal year 2015 to €2,616 million in fiscal year 2016.

- Asia/Pacific: On a currency-adjusted basis, net sales increased by 2.7% in fiscal year 2016. This was mainly attributable to a positive development at Fungicides, particularly in Australia and India. Net sales of Vegetable Seeds increased by a double-digit-percentage. Business at Herbicides receded slightly, as did net sales at Environmental Science. Reported net sales in our Asia / Pacific region increased by €18 million, or 1.2%, from €1,530 million in fiscal year 2015 to €1,548 million in fiscal year 2016.

- Latin America: On a currency-adjusted basis, net sales decreased by 6.9% in fiscal year 2016. Business was mainly held back by the persistently weak market environment in Brazil, particularly at Insecticides, Herbicides and Seed Growth. Lower pest pressure had an additional negative impact on Insecticides. However, Crop Science recorded gains in net sales at Fungicides and Seeds. Business at Environmental Science increased by a double-digit-percentage. Reported net sales in our Latin America region decreased by €199 million, or 7.5%, from €2,660 million in fiscal year 2015 to €2,461 million in fiscal year 2016.

The table below provides a breakdown of the net sales per business unit for the periods indicated, in absolute amounts as well as the year-on-year change in net sales on a reported and on a currency- and portfolio-adjusted basis:

	For fiscal year ended December 31,		Change (year-on-year)	Currency- and portfolio-adjusted
	2015[1]	2016[1]		
	(audited) (in € million)		(audited) (in %)	
Crop Protection / Seeds	**9,548**	**9,317**	**(2.4)**	**(0.2)**
Crop Protection	8,271	7,961	(3.7)	(1.5)
Herbicides	*2,830*	*2,693*	*(4.8)*	*(2.2)*
Fungicides	*2,911*	*2,961*	*1.7*	*4.0*
Insecticides	*1,596*	*1,357*	*(15.0)*	*(13.3)*
SeedGrowth	*934*	*950*	*1.7*	*4.1*
Seeds	1,277	1,356	6.2	8.3
Environmental Science[2]	**580**	**598**	**3.1**	**4.5**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

12.10.2.3.2 *EBITDA before Special Items*

EBITDA before special items for Crop Science increased by €15 million, or 0.6%, from €2,406 million in fiscal year 2015 to €2,421 million in fiscal year 2016. A positive currency effect of €139 million and higher selling prices compensated for lower sales volumes, increased spending on R&D and higher impairment losses on inventories and receivables.

12.10.2.3.3 *EBIT*

EBIT of Crop Science decreased by €339 million, or 16.2%, from €2,094 million in fiscal year 2015 to €1,755 million in fiscal year 2016. EBIT in fiscal year 2016 included special charges of €143 million, compared to special gains of €222 million in fiscal year 2015. Special charges in fiscal year 2016 mainly related to the Transaction as well as efficiency improvement measures.

12.10.2.4 Animal Health

The following table provides an overview of the key data for Animal Health for the periods indicated, based on our regional breakdown in effect as of December 31, 2016:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**1,490**	**1,523**
Change[2]		2.2%
Currency- and portfolio-adjusted[3]		4.8%
Sales by region	**1,490**	**1,523**
Europe / Middle East / Africa	447	445
Currency-adjusted change[3]		*3.8%*
North America	587	621
Currency-adjusted change[3]		*6.0%*
Asia / Pacific	285	300
Currency-adjusted change[3]		*5.6%*
Latin America	171	157
Currency-adjusted change[3]		*1.8%*
EBITDA before special items[2] [3]	**347**	**349**
Depreciation, amortization and impairment losses/loss reversals before special items	(29)	(29)
Special items	(64)	(7)
of which:		
Restructuring	*(64)*	*(7)*
EBIT[2] [3]	**254**	**313**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.10.2.4.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Animal Health increased by 4.8% in fiscal year 2016. The North America and Asia / Pacific regions developed especially positively due to higher demand. Animal Health also registered currency-adjusted net sales growth in the Europe / Middle East / Africa and Latin America regions.

Reported net sales of Animal Health increased by €33 million, or 2.2%, from €1,490 million in fiscal year 2015 to €1,523 million in fiscal year 2016.

The table below provides a breakdown of the factors that affected Animal Health's reported net sales in fiscal year 2016, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2016	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	38	2.6
Price	33	2.2
Currency	(38)	(2.6)
Portfolio	0	0.0
Total	**33**	**2.2**

The increase in net sales in fiscal year 2016 was attributable to a higher sales volume and an increase in selling prices, which resulted in a 2.6% and 2.2% increase in net sales, respectively. The impact of the increase in sales volume and selling prices on net sales was partially offset by unfavorable currency effects, which reduced net sales by 2.6%.

The increase in sales volume in fiscal year 2016 was attributable to the North America and Asia / Pacific regions, which more than offset a decrease in sales volume in Latin America.

The increase in selling prices was mainly attributable to the Europe / Middle East / Africa and Latin America regions. The unfavorable currency effects in fiscal year 2016 were mainly attributable to the Euro strengthening against the British pound (GBP), the Mexican peso (MXN), the Argentine peso (ARS), the Brazilian real (BRL), the Chinese renminbi (CNY) and the South African rand (ZAR).

The following overview provides information on the net sales of Animal Health's best-selling products for fiscal year 2016; for a more detailed description of these products, see "*13.4.4.3.1* Overview of Key Products*.*"

- Advantage™ product family: On a currency-adjusted basis, net sales growth of our Advantage™ family of flea, tick and worm control products was level with the previous year at 0.1%. The positive development in the Europe / Middle East / Africa and the Asia / Pacific region stood against slight declines in net sales in the North America region. Reported net sales of our Advantage™ family decreased by €12 million, or 2.2%, from €547 million in fiscal year 2015 to €535 million in fiscal year 2016.

- Seresto™: On a currency-adjusted basis, net sales of our Seresto™ flea and tick collar increased by 55.4% in fiscal year 2016. This strong increase was mainly attributable to increased demand in the United States and Europe. Reported net sales of Seresto™ increased by €61 million, or 54.0%, from €113 million in fiscal year 2015 to €174 million in fiscal year 2016.

- Drontal™ product family: On a currency-adjusted basis, net sales of our Drontal™ line of de-wormers increased by 7.2% in fiscal year 2016. This increase was mainly attributable to an increase in sales volume in the United States and in the Asia / Pacific region. Reported net sales of our Drontal™ line increased by €6 million, or 4.9%, from €122 million in fiscal year 2015 to €128 million in fiscal year 2016.

- Baytril™: On a currency-adjusted basis, net sales of our antibiotic Baytril™ decreased by 5.0% in fiscal year 2016. This decrease was mainly attributable to lower net sales in the North America region due to a difficult market environment and generic competition. Gains in the Asia / Pacific and Latin America regions were not sufficient to offset this development. Reported net sales of Baytril™ decreased by €7 million, or 5.8%, from €120 million in fiscal year 2015 to €113 million in fiscal year 2016.

12.10.2.4.2 *EBITDA before Special Items*

EBITDA before special items of Animal Health was steady year on year, increasing by €2 million, or 0.6%, from €347 million in fiscal year 2015 to €349 million in fiscal year 2016. Positive earnings contributions from volume and price increases stood against higher selling expenses and an increase in cost of production. In addition, a negative currency effect of €12 million diminished earnings.

12.10.2.4.3 *EBIT*

EBIT of Animal Health increased by a substantial €59 million, or 23.2%, from €254 million in fiscal year 2015 to €313 million in fiscal year 2016. In 2016, EBIT included €7 million in special charges relating to restructuring, compared to €64 million in fiscal year 2015.

12.10.2.5 Covestro

The following table provides an overview of the key data for Covestro for the periods indicated, based on our regional breakdown in effect as of December 31, 2016:

	For fiscal year ended December 31,	
	2015[1]	2016[1]
	(unaudited, unless otherwise indicated) (in € million, unless otherwise indicated)	
Net sales[2]	**11,982**	**11,826**
Change[2]		(1.3)%
Currency- and portfolio-adjusted[3]		0.0%
Sales by region	**11,982**	**11,826**
Europe / Middle East / Africa	4,928	4,761
Currency-adjusted change[3]		*(3.3)%*
North America	2,885	2,740
Currency-adjusted change[3]		*(5.3)%*
Asia / Pacific	3,377	3,619
Currency-adjusted change[3]		*9.8%*
Latin America	792	706
Currency-adjusted change[3]		*(1.8)%*
EBITDA before special items[2] [3]	**1,659**	**1,984**
Depreciation, amortization and impairment losses/loss reversals before special items	(692)	(680)
Special items	(332)	–
of which:		
Restructuring	*(329)*	–
Revaluation of other receivables	*(3)*	–
EBIT[2] [3]	**635**	**1,304**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Audited.
(3) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group.*"

12.10.2.5.1 *Net Sales*

On a currency- and portfolio-adjusted basis, net sales of Covestro remained level year-on-year. Selling prices receded overall, primarily due to lower raw material prices. Sales volumes were above the prior year level.

Reported net sales decreased by €156 million, or 1.3%, from €11,982 million in fiscal year 2015 to €11,826 million in fiscal year 2016.

The table below provides a breakdown of the factors that affected Covestro's reported net sales in fiscal year 2016, in absolute amounts and as a year-on-year change:

	For fiscal year ended December 31, 2016	Change (year-on-year)
	(unaudited)	
	(in € million)	(in %)
Volume	630	5.3
Price	(628)	(5.3)
Currency	(158)	(1.3)
Portfolio	0	0.0
Total	**156**	**(1.3)**

The decrease in net sales at Covestro in fiscal year 2016 was attributable to a decrease in selling prices and unfavorable currency effects, which resulted in a 5.3% and 1.3% decrease in net sales, respectively. The impact of these unfavorable effects on net sales was partially offset by an increase in sales volume, which resulted in a 5.3% increase in net sales.

The decrease in selling prices in fiscal year 2016 was mainly attributable to lower selling prices in almost all regions, due primarily to lower raw material prices. Only in the Asia / Pacific region prices remained at the prior year level. The unfavorable currency effects in fiscal year 2016 were mainly attributable to the Euro strengthening against the Chinese renminbi (CNY) and the Mexican peso (MXN).

The increase in sales volume was mainly attributable to the Asia / Pacific and the North America region. In the Europe / Middle East / Africa region sales volumes were also above the level of fiscal year 2015, whereas sales volumes in Latin America remained at the prior year level.

The following overview provides information on the net sales of Covestro's business units (Polyurethanes; Polycarbonates and Coatings, Adhesives, Specialties) as well as the other Covestro business for fiscal year 2016. For more information on Covestro's business units, see "*13.4.5* Covestro."

- Polyurethanes: On a currency- and portfolio-adjusted basis, net sales decreased by 1.2% in fiscal year 2016. The decrease in net sales was mainly attributable to lower overall selling prices, not fully offset by higher volumes. Reported net sales in the Polyurethanes business unit decreased by €158 million, or 2.6%, from €6,084 million in fiscal year 2015 to €5,926 million in fiscal year 2016.

- Polycarbonates: On a currency- and portfolio-adjusted basis, net sales increased by 5.8% in fiscal year 2016. This increase was mainly attributable to a considerable volume growth, which more than compensated lower selling prices. Reported net sales in the Polycarbonates business unit increased by €128 million, or 4.0%, from €3,169 million in fiscal year 2015 to €3,297 million in fiscal year 2016.

- Coatings, Adhesives, Specialties: On a currency- and portfolio-adjusted basis, net sales decreased by 1.8% in fiscal year 2016. This decrease was mainly attributable to lower selling prices. Reported net sales in the Coatings, Adhesives, Specialties business unit decreased by €53 million, or 2.5%, from €2,092 million in fiscal year 2015 to €2,039 million in fiscal year 2016.

- Other Covestro business: On a currency- and portfolio-adjusted basis, net sales decreased by 11.5% in fiscal year 2016. This decrease was mainly attributable to lower selling prices. Reported net sales of the other Covestro business decreased by €73 million, or 11.5%, from €637 million in fiscal year 2015 to €564 million in fiscal year 2016.

12.10.2.5.2 *EBITDA before Special Items*

EBITDA before special items of Covestro increased by €325 million, or 19.6%, from €1,659 million in fiscal year 2015 to €1,984 million in fiscal year 2016. This increase was mainly attributable to reductions in raw material prices and higher volumes that outweighed lower selling prices as well as a negative currency effect of €21 million.

12.10.2.5.3 *EBIT*

EBIT of Covestro more than doubled compared to the previous year, increasing by €669 million, from €635 million in fiscal year 2015 to €1,304 million in fiscal year 2016. EBIT in fiscal year 2016 did not comprise any special charges or gains.

12.10.2.6 Reconciliation

Net sales recorded under Reconciliation amounted to €1,048 million in fiscal year 2016, compared to €1,101 million in fiscal year 2015. EBITDA before special items recorded under Reconciliation amounted to negative €114 million in fiscal year 2016 and was mainly attributable to Corporate Functions and Consolidation, compared to negative €228 million in fiscal year 2015.

EBIT recorded under Reconciliation amounted to negative €414 million in fiscal year 2016, mainly attributable to Corporate Functions and Consolidation, compared to negative €538 million in fiscal year 2015. EBIT included special charges of €88 million in fiscal year 2016, compared to €109 million in fiscal year 2015. Special charges in fiscal year 2016 included €83 million in restructuring costs and €5 million in litigation costs.

12.11 Information on Consolidated Statement of Financial Position

The following table provides an overview of the Bayer Group's assets as of the dates shown:

	As of December 31,			As of March 31,
	2015[1]	2016[2]	2017[3]	2018
		(audited) (in € million)		(unaudited) (in € million)
Assets				
Noncurrent assets	**50,096**	**51,791**	**45,014**	**42,225**
Goodwill	16,096	16,312	14,751	14,480
Other intangible assets	15,178	13,567	11,674	11,185
Property, plant and equipment	12,375	13,114	7,633	7,330
Investments accounted for using the equity method	246	584	4,007	2,574
Other financial assets	1,092	1,281	1,634	1,737
Other receivables	430	583	400	535
Deferred taxes	4,679	6,350	4,915	4,384
Current assets	**23,821**	**30,447**	**30,073**	**33,169**
Inventories	8,550	8,408	6,550	6,402
Trade accounts receivable	9,933	10,969	8,582	9,498
Other financial assets	756	6,275	3,529	7,315
Other receivables	2,017	2,210	1,276	1,029
Claims for income tax refunds	509	676	474	461
Cash and cash equivalents	1,859	1,899	7,581	5,332
Assets held for sale	197	10	2,081	3,132
Total assets	**73,917**	**82,238**	**75,087**	**75,394**
Equity	**25,445**	**31,897**	**36,861**	**38,384**
Capital stock	2,117	2,117	2,117	2,117
Capital reserves	6,167	9,658	9,658	9,658
Other reserves	15,981	18,558	25,026	26,553
Equity attributable to Bayer AG stockholders	**24,265**	**30,333**	**36,801**	**38,328**
Equity attributable to noncontrolling interest	1,180	1,564	60	56
Noncurrent liabilities	**31,492**	**31,804**	**24,633**	**23,912**
Provisions for pensions and other post-employment benefits	10,873	11,134	8,020	8,096
Other provisions	1,740	1,780	1,366	1,302
Refund liabilities[4]	–	–	–	146
Contract liabilities[4]	–	–	–	799
Financial liabilities	16,513	16,180	12,483	12,273
Income tax liabilities	475	423	495	482
Other liabilities	1,065	957	1,116	228
Deferred taxes	826	1,330	1,153	586
Current liabilities	**16,980**	**18,537**	**13,593**	**13,098**
Other provisions	5,045	5,421	4,344	2,194
Refund liabilities[4]	–	–	–	2,519
Contract liabilities[4]	–	–	–	197
Financial liabilities	3,421	3,401	1,935	1,761
Trade accounts payable	5,945	6,410	5,129	3,943
Income tax liabilities	923	884	422	646
Other liabilities	1,534	2,421	1,652	1,318
Liabilities directly related to assets held for sale	112	–	111	520
Total equity and liabilities	**73,917**	**82,238**	**75,087**	**75,394**

(1) Figures extracted from the audited consolidated statement of financial position of Bayer as of December 31, 2016, in which the assets and liabilities related to Covestro are still recognized within the financial position of the Group. In alignment with IFRS, the information on Bayer's financial position as of December 31, 2015 was not adjusted to reflect the sale of the Environmental Science Consumer Business.

(2) Figures extracted from the audited consolidated statement of financial position of Bayer as of December 31, 2016 in which the assets and liabilities related to Covestro are still recognized within the statement of financial position of the Group. The assets and liabilities related to the Environmental Science Consumer Business are derecognized in the audited consolidated statements of financial position of Bayer as of December 31, 2016. In alignment with IFRS, the information on Bayer's financial position as of December 31, 2016 was not adjusted to reflect the deconsolidation of Covestro.

(3) Figures extracted from the audited consolidated statements of financial position of Bayer as of December 31, 2017 in which the assets and liabilities related to Covestro, including the noncontrolling interest in Covestro, are derecognized. As of October 1, 2017, the remaining interest in Covestro was classified as an associate and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss.

(4) The line items Refund liabilities and Contract liabilities were introduced as of January 1, 2018 and reflect accounting changes due to the first-time application of IFRS 15.

12.11.1 Comparison of March 31, 2018 with December 31, 2017

12.11.1.1 Noncurrent Assets

Noncurrent assets decreased by €2,789 million, or 6.2%, from €45,014 million as of December 31, 2017 to €42,225 million as of March 31, 2018. This decrease was mainly attributable to a decrease of investments accounted for using the equity method and deferred taxes. The decrease in investments accounted for using the equity method by €1,433 million, or 35.8%, from €4,007 million as of December 31, 2017 to €2,574 million as of March 31, 2018, was mainly attributable to the sale of further Covestro shares. Deferred taxes decreased by €531 million, or 10.8%, from €4,915 million as of December 31, 2017 to €4,384 million as of March 31, 2018.

12.11.1.2 Current Assets

Current assets increased by €3,096 million, or 10.3%, from €30,073 million as of December 31, 2017 to €33,169 million as of March 31, 2018. This increase was mainly attributable to an increase in other financial assets, assets held for sale and trade accounts receivable. The increase in other financial assets from €3,529 million as of December 31, 2017 to €7,315 million as of March 31, 2018 was mainly due to additional investments in money market funds. Assets held for sale increased by €1,051 million, or 50.5%, from €2,081 million as of December 31, 2017 to €3,132 million as of March 31, 2018, particularly due to the planned sale of the vegetable seeds business. Trade accounts receivable increased by €916 million, or 10.7%, from €8,582 million as of December 31, 2017 to €9,498 million as of March 31, 2018, mainly resulting from the operating business activity.

Cash and cash equivalents decreased by €2,249 million, or 29.7%, from €7,581 million as of December 31, 2017 to €5,332 million as of March 31, 2018.

12.11.1.3 Equity

Equity increased by €1,523 million, or 4.1%, from €36,861 million as of December 31, 2017 to €38,384 million as of March 31, 2018. Income after income taxes of €1,954 million had a positive effect. Currency effects recognized in other comprehensive income reduced equity by €382 million. A further reduction of €176 million came from the increase in pension provisions recognized in other comprehensive income.

12.11.1.4 Noncurrent Liabilities

Noncurrent liabilities decreased by €721 million, or 2.9%, from €24,633 million as of December 31, 2017 to €23,912 million as of March 31, 2018. Other liabilities decreased by €888 million, or 79.6%, from €1,116 million as of December 31, 2017 to €228 million as of March 31, 2018. This decrease was mainly due to the first-time application of IFRS 15, which required certain amounts to be reclassified from "other liabilities" to "contract liabilities." Contract liabilities resulting mainly from the first-time application of IFRS 15 amounted to €799 million as of March 31, 2018. Deferred taxes decreased by €567 million, or 49.2%, from €1,153 million as of December 31, 2017 to €586 million as of March 31, 2018.

12.11.1.5 Current Liabilities

Current liabilities decreased by €495 million, or 3.6%, from €13,593 million as of December 31, 2017 to €13,098 million as of March 31, 2018. Other provisions decreased by €2,150 million, or 49.5%, from €4,344 million

as of December 31, 2017 to €2,194 million as of March 31, 2018. This decrease was mainly due to the first-time application of IFRS 15, which required certain amounts to be reclassified from "other provisions" to "refund liabilities." Refund liabilities mainly resulting from the first-time application of IFRS 15 amounted to €2,519 million as of March 31, 2018. Trade accounts payable decreased by €1,186 million, or 23.1%, from €5,129 million as of December 31, 2017 to €3,943 million as of March 31, 2018 mainly due to the first-time application of IFRS 15, which required certain amounts to be reclassified from "trade accounts payable" to "contract liabilities" as well as from the operating business activity.

12.11.2 Comparison of December 31, 2017 with December 31, 2016

12.11.2.1 Noncurrent Assets

Noncurrent assets decreased by €6,777 million, or 13.1%, from €51,791 million as of December 31, 2016 to €45,014 million as of December 31, 2017. The decrease was mainly attributable to decreases in property, plant and equipment, other intangible assets and goodwill, which were partially offset by an increase in investments accounted for using the equity method. The decrease in property, plant and equipment by €5,481 million, or 41.8%, from €13,114 million as of December 31, 2016 to €7,633 million as of December 31, 2017 was mainly due to the deconsolidation of Covestro in connection with which an amount of €4,206 million was derecognized as of September 30, 2017. The decrease in other intangible assets by €1,893 million, or 14.0%, from €13,567 million as of December 31, 2016 to €11,674 million as of December 31, 2017 was primarily due to exchange differences, to amortization and to impairment losses mainly in Pharmaceuticals and Consumer Health. The decrease in goodwill by €1,561 million, or 9.6%, from €16,312 million as of December 31, 2016 to €14,751 million as of December 31, 2017 mainly resulted from exchange differences. Goodwill in an amount of €252 million, among others, was derecognized as of September 30, 2017 in connection with the deconsolidation of Covestro. The increase in investments accounted for using the equity method by €3,423 million from €584 million as of December 31, 2016 to €4,007 million as of December 31, 2017 was also mainly due to the deconsolidation of Covestro. The remaining interest in Covestro was recognized at a market value of €3,624 million as investments accounted for using the equity method.

12.11.2.2 Current Assets

Current assets decreased by €374 million, or 1.2%, from €30,447 million as of December 31, 2016 to €30,073 million as of December 31, 2017. The decrease was mainly attributable to decreases in other financial assets, trade accounts receivables and inventories, which were partly offset by an increase in cash and cash equivalents and assets held for sale. The decrease in other financial assets by €2,746 million, or 43.8%, from €6,275 million as of December 31, 2016 to €3,529 million as of December 31, 2017 was mainly due to decreases in investments in debt instruments classified as available-for-sale and a decrease in loans and receivables. The decrease in trade accounts receivables by €2,387 million, or 21.8%, from €10,969 million as of December 31, 2016 to €8,582 million as of December 31, 2017 was mainly due to the deconsolidation of Covestro which reduced trade accounts receivable by €1,943 million as well as exchange differences. Inventories decreased by €1,858 million, or 22.1%, from €8,408 million as of December 31, 2016 to €6,550 million as of December 31, 2017 mainly as a result of the deconsolidation of Covestro, which reduced inventories by €1,831 million. Cash and cash equivalents increased by €5,682 million from €1,899 million as of December 31, 2016 to €7,581 million as of December 31, 2017. For further information on Bayer's cash flow for fiscal year 2017, see "*12.12.3 Comparison of Fiscal Year 2017 with Fiscal Year 2016*." Assets held for sale increased by €2,071 million from €10 million as of December 31, 2016 to €2,081 million as of December 31, 2017 in conjunction with the First BASF Divestiture Package.

12.11.2.3 Equity

Equity increased by €4,964 million, or 15.6%, from €31,897 million as of December 31, 2016 to €36,861 million as of December 31, 2017. Income after income taxes (total) had a positive effect on Bayer's equity of €8.1 billion including effects from the deconsolidation of Covestro and from the revaluation of the residual shares in the capital stock of Covestro AG accounted for as an associate. Currency effects recognized in other comprehensive income reduced equity by €2.2 billion and the dividend payment by Bayer AG also reduced equity by €2.4 billion. An increase of €0.7 billion net of taxes recognized in other comprehensive income resulted from the reduction in post-employment benefit obligations. Effects of the reduction in the interest in Covestro and of the deconsolidation of this company recognized directly in equity increased equity by €0.7 billion.

12.11.2.4 Noncurrent Liabilities

Noncurrent liabilities decreased by €7,171 million, or 22.5%, from €31,804 million as of December 31, 2016 to €24,633 million as of December 31, 2017. This decrease was mainly attributable to decreases in financial liabilities

and provisions for pensions and other post-employment benefits. Noncurrent financial liabilities declined by €3,697 million, or 22.8%, from €16,180 million as of December 31, 2016 to €12,483 million, with a reduction of €1.8 billion from divestments mainly due to the deconsolidation of Covestro, the early repayment of an outstanding bank loan of €900 million that was taken out to finance the acquisition of the Merck OTC business as well as an early repayment of a Debt Issuance Program ("**DIP**") bond of €0.75 billion, which was issued by Bayer AG. Furthermore, in June 2017, Bayer AG issued debt instruments (exchangeable bonds) with a nominal value of €1.0 billion that will mature in 2020, leading to an increase in the noncurrent financial liabilities while some bonds switched to short-term financial liabilities as of December 31, 2017. Provisions for pensions and other post-employment benefits decreased by €3,114 million, or 28.0%, from €11,134 million as of December 31, 2016 to €8,020 million as of December 31, 2017 with €1.2 billion of the amount resulting from the deconsolidation of Covestro, a further €1.2 billion from actuarial gains and €0.5 billion from the transfer of Covestro Shares to Bayer Pension Trust.

12.11.2.5 Current Liabilities

Current liabilities decreased by €4,944 million, or 26.7%, from €18,537 million as of December 31, 2016 to €13,593 million as of December 31, 2017. The decrease in current liabilities was mainly attributable to a decrease in financial liabilities, trade accounts payable and other provisions. Financial liabilities decreased by €1,466 million, or 43.1%, from €3,401 million as of December 31, 2016 to €1,935 million as of December 31, 2017 mainly due to the repayment of issued bonds. Trade accounts payable decreased by €1,281 million, or 20.0%, from €6,410 million as of December 31, 2016 to €5,129 million as of December 31, 2017 mainly due to the deconsolidation of Covestro, which reduced trade accounts payable by €1,286 million.

12.11.3 Comparison of December 31, 2016 with December 31, 2015

12.11.3.1 Noncurrent Assets

Noncurrent assets increased by €1,695 million, or 3.4%, from €50,096 million as of December 31, 2015 to €51,791 million as of December 31, 2016. The increase was mainly attributable to increases in deferred taxes, property plant and equipment and investments accounted for using the equity method, which were slightly offset by a decrease in other intangible assets. The increase in deferred taxes by €1,671 million, or 35.7%, from €4,679 million as of December 31, 2015 to €6,350 million as of December 31, 2016 was mainly due to a lower set-off and increase in deferred taxes on inventories and financial assets. The increase in property, plant and equipment by €739 million, or 6.0%, from €12,375 million as of December 31, 2015 to €13,114 million as of December 31, 2016 was mainly due to capital expenditures that outweighed depreciation charges. The increase in investments accounted for using the equity method by €338 million, or 137.4%, from €246 million as of December 31, 2015 to €584 million as of December 31, 2016 was due to the joint venture Casebia Therapeutics LLC that was established in 2016 together with CRISPR Therapeutics AG, Switzerland. The decrease in other intangible assets by €1,611 million, or 10.6%, from €15,178 million as of December 31, 2015 to €13,567 million as of December 31, 2016 was mainly due to amortization and to impairment losses mainly in Pharmaceuticals and Consumer Health. This decrease was partly offset by capital expenditures and currency effects.

12.11.3.2 Current Assets

Current assets increased by €6,626 million, or 27.8%, from €23,821 million as of December 31, 2015 to €30,447 million as of December 31, 2016. The increase was mainly attributable to an increase in other financial assets by €5,519 million from €756 million as of December 31, 2015 to €6,275 million as of December 31, 2016 due to cash inflows from the issuance of the Mandatory Convertible Notes.

12.11.3.3 Equity

Equity increased by €6,452 million, or 25.4%, from €25,445 million as of December 31, 2015 to €31,897 million as of December 31, 2016. This increase was mainly attributable to increases in capital reserves and other reserves. The increase in capital reserves of €3,491 million, or 56.6%, from €6,167 million as of December 31, 2015 to €9,658 million as of December 31, 2016 was due to the issuance of the Mandatory Convertible Notes. The increase in other reserves by €2,577 million, or 16.1%, from €15,981 million as of December 31, 2015 to €18,558 million as of December 31, 2016 was mainly due to income after income taxes and currency effects recognized in other comprehensive income that were partly offset by the dividend payment of €2,126 million and a negative effect from changes in post-employment benefit obligations recognized in other comprehensive income.

12.11.3.4 Noncurrent Liabilities

Noncurrent liabilities increased by €312 million, or 1.0%, from €31,492 million as of December 31, 2015 to €31,804 million as of December 31, 2016. This increase was mainly attributable to increases in deferred taxes and provisions for pensions and other post-employment benefits which were partially offset by decreases in financial liabilities. The increase in deferred taxes by €504 million, or 61.0%, from €826 million as of December 31, 2015 to €1,330 million as of December 31, 2016 was due to a lower set-off that was partly offset by decreases in deferred tax liabilities on provisions for pension and other post-employment benefits as well as on intangible assets. The increase in provisions for pensions and other post-employment benefits by €261 million, or 2.4%, from €10,873 million as of December 31, 2015 to €11,134 million as of December 31, 2016 was mainly due to losses from the revaluation of the net obligations for defined benefit plans for pensions and other post-employment benefits that more than offset the contribution by Bayer AG of 4.9% of the outstanding Covestro Shares to Bayer Pension Trust and Covestro's contribution of bonds. The decrease in financial liabilities by €333 million, or 2.0%, from €16,513 million as of December 31, 2015 to €16,180 million as of December 31, 2016 was mainly attributable to a decrease in liabilities to banks as well as bonds and notes/promissory notes that more than offset an increase in other financial liabilities due to the placement of the Mandatory Convertible Notes in November 2016.

12.11.3.5 Current Liabilities

Current liabilities increased by €1,557 million, or 9.2%, from €16,980 million as of December 31, 2015 to €18,537 million as of December 31, 2016. This increase was mainly attributable to an increase in other liabilities, trade accounts payable and other provisions. Other liabilities increased by €887 million, or 57.8%, from €1,534 million as of December 31, 2015 to €2,421 million as of December 31, 2016 due to an increase in deferred income mainly attributable to the proceeds from the sale of the Diabetes Care Business as well as due to an increase in miscellaneous liabilities mainly attributable to capital contribution liabilities to the joint venture Casebia Therapeutics LLP established on February 12, 2016 as well as to an increase in liabilities from derivatives. Trade accounts payable increased by €465 million, or 7.8%, from €5,945 million in fiscal year 2015 to €6,410 million in fiscal year 2016, mainly resulting from the operating business activity. Other provisions increased by €376 million, or 7.5%, from €5,045 million as of December 31, 2015 to €5,421 million as of December 31, 2016 mainly due to an increase in trade related commitments as well as in personnel commitments.

12.12 Liquidity and Capital Resources

Bayer finances its activities mainly through cash flows from operating activities and funds raised in the debt capital markets as well as, to a more limited extent, through bank loans. In connection with financing the Transaction, Bayer entered into the Loan Facilities Agreement, issued Mandatory Convertible Notes and Exchangeable Bonds and is conducting this Offering, see also "*12.3.2 The Acquisition of Monsanto and Related Divestitures*." For more information on Bayer's debt financings, see "*12.16.3.1 Financial Liabilities*."

12.12.1 Cash Flows

The following tables provides a summary of our cash flow for the periods shown:

	For fiscal year ended December 31,				For the three months ended March 31,	
	2015[1]	2016[1]	2016[2]	2017	2017[3]	2018
	(audited) (in € million)		(audited) (in € million)		(unaudited) (in € million)	
Income from continuing operations after Income taxes	4,013	4,558	3,756	3,248	1,707	1,946
Income taxes	1,223	1,329	1,017	1,329	424	494
Financial result	1,005	1,155	965	1,326	296	(130)
Income taxes paid	(1,699)	(2,092)	(1,701)	(1,821)	(493)	(388)
Depreciation, amortization and impairments	3,332	3,743	3,063	2,660	572	508
Change in pension provisions	(221)	(285)	(297)	(227)	(63)	(98)
(Gains) losses on retirements of noncurrent assets	(105)	(44)	(45)	(133)	(50)	(20)
Decrease (increase) in inventories	(191)	(3)	(78)	(293)	(100)	(84)
Decrease (increase) in trade accounts receivable	(1,059)	(552)	(385)	(18)	(1,645)	(1,349)
(Decrease) increase in trade accounts payable	400	452	310	265	(728)	(436)
Changes in other working capital, other noncash items	138	(2)	(170)	275	631	215
Net cash provided by (used in) operating activities from continuing operations	**6,836**	**8,259**	**6,435**	**6,611**	**551**	**658**
Net cash provided by (used in) operating activities from discontinued operations	54	830	2,654	1,523	290	–
Net cash provided by (used in) operating activities	**6,890**	**9,089**	**9,089**	**8,134**	**841**	**658**
Cash outflows for additions to property, plant, equipment and intangible assets	(2,517)	(2,578)	(2,578)	(2,366)	(415)	(349)
Cash inflows from sales of property, plant, equipment and other assets	193	111	111	241	54	59
Cash inflows from (outflows for) divestments	2	(18)	(18)	453	–	145
Cash outflows for noncurrent financial assets	(26)	(690)	(690)	(313)	(54)	1,777
Cash inflows from (outflows for) acquisitions less acquired cash	(176)	2	2	(158)	(158)	–
Interest and dividends received	106	89	89	168	20	22
Cash inflows from (outflows for) current financial assets	(344)	(5,645)	(5,645)	1,543	(583)	(3,712)
Net cash provided by (used in) investing activities	**(2,762)**	**(8,729)**	**(8,729)**	**(432)**	**(1,136)**	**(2,058)**
Capital contributions	–	3,300	3,300	–	–	–
Proceeds from shares of Covestro AG	1,490	–	–	3,717	1,460	–
Dividend payments	(1,869)	(2,126)	(2,126)	(2,364)	–	–
Issuances of debt	16,620	15,190	15,190	10,369	292	1,021
Retirements of debt	(19,549)	(15,920)	(15,920)	(12,848)	(1,036)	(1,528)
Interest paid including interest-rate swaps	(812)	(853)	(853)	(801)	(114)	(83)
Interest received from interest-rate swaps	160	59	59	69	9	9
Cash outflows for the purchase of additional interests in subsidiaries	(14)	–	–	(23)	–	–
Net cash provided by (used in) financing activities	**(3,974)**	**(350)**	**(350)**	**(1,881)**	**611**	**(581)**
Change in cash and cash equivalents due to business activities	**154**	**10**	**10**	**5,821**	**316**	**(1,981)**
Cash and cash equivalents at beginning of period	**1,853**	**1,859**	**1,859**	**1,899**	**1,899**	**7,436**
Change in cash and cash equivalents due to changes in scope of consolidation	5	3	3	–	–	1
Change in cash and cash equivalents due to exchange rate movements	(153)	27	27	(139)	9	(118)
Cash and cash equivalents at end of period	**1,859**	**1,899**	**1,899**	**7,581**	**2,224**	**5,338**

(1) Figures extracted from the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2016, which present the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from continuing operations.

(2) Figures extracted from the restated comparative figures for fiscal year ended December 31, 2016 as included in the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2017, which present the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from discontinued operations.
(3) Figures derived from the restated comparative figures for the three months ended March 31, 2017 as included in the unaudited condensed consolidated interim statement of cash flows of Bayer for the three months ended March 31, 2018, which presents the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from discontinued operations separately.

12.12.2 Comparison of Three Months Ended March 31, 2018 with Three Months Ended March 31, 2017

12.12.2.1 Net Cash Provided by (Used in) Operating Activities

Net cash provided by operating activities decreased by €183 million, or 21.8%, from €841 million for the three months ended March 31, 2017 to €658 million for the three months ended March 31, 2018. Net cash provided by operating activities in continuing operations increased by €107 million, or 19.4%, from €551 million for the three months ended March 31, 2017 to €658 million for the three months ended March 31, 2018, mainly due to lower additions to cash tied up in working capital. Operating activities from discontinued operations provided €290 million net cash for the three months ended March 31, 2017, compared to no net cash being provided by operating activities from discontinued operations for the three months ended March 31, 2018. Covestro was still included in the prior-year quarter.

12.12.2.2 Net Cash Provided by (Used in) Investing Activities

Net cash used in investing activities amounted to €2,058 million for the three months ended March 31, 2018 compared to €1,136 million for the three months ended March 31, 2017. Bayer invested €3,712 million in current financial assets in the three months ended March 31, 2018, compared to €583 million in the three months ended March 31, 2017. The sale of further Covestro shares contributed a net cash inflow of €1,802 million in the three months ended March 31, 2018. At €349 million in the three months ended March 31, 2018, cash outflows for additions to property, plant and equipment and intangible assets were 15.9% lower compared to €415 million in the three months ended March 31, 2017 (which included investments in an amount of €74 million at Covestro), and included investment activities of €219 million at Pharmaceuticals (compared to €152 million in the three months ended March 31, 2017), €28 million at Consumer Health (compared to €24 million in the three months ended March 31, 2017), €63 million at Crop Science (compared to €99 million in the three months ended March 31, 2017) and €5 million at Animal Health (compared to €6 million in the three months ended March 31, 2017).

12.12.2.3 Net Cash Provided by (Used in) Financing Activities

Net cash used in financing activities amounted to €581 million for the three months ended March 31, 2018 compared to net cash provided by financing activities of €611 million for the three months ended March 31, 2017 and which included a net inflow of €1,460 million from the sale of Covestro shares while the company remained fully consolidated. Net loan repayments amounted to €507 million in the three months ended March 31, 2018, compared to €744 million in the three months ended March 31, 2017. Net interest payments decreased by €31 million to €74 million.

12.12.3 Comparison of Fiscal Year 2017 with Fiscal Year 2016

The following discussion is based on the 2016 and 2017 figures presented in the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2017, including the comparative information for fiscal year ended December 31, 2016, which presents the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from discontinued operations. The 2016 and 2017 figures discussed and presented here are therefore not directly comparable with the 2015 and 2016 figures presented and discussed under "*12.12.4 Comparison of Fiscal Year 2016 with Fiscal Year 2015.*" For further information on the comparability of the figures in these sections, see "*12.5 Comparability of the Financial Information Contained in the Audited Consolidated Financial Statements*."

12.12.3.1 Net Cash Provided by (Used in) Operating Activities

Net cash provided by operating activities decreased by €955 million, or 10.5%, from €9,089 million for fiscal year 2016 to €8,134 million for fiscal year 2017. The €9,089 million for fiscal year 2016 included inflows from the divestment of the Diabetes Care Business. Net cash provided by operating activities in continuing operations increased by €176 million, or 2.7%, from €6,435 million in fiscal year 2016 to €6,611 million in fiscal year 2017 due to

an improvement in EBIT and a reduction in cash tied up in working capital. This figure included the components of the payments received from Dow Chemical as part of a patent dispute that falls under operating activities. The transfer of Covestro Shares with a value of €504 million to Bayer Pension Trust. in the second quarter of 2017 was a noncash transaction and therefore did not result in an operating cash outflow. Net cash provided by operating activities from discontinued operations decreased by €1,131 million, or 42.6%, from €2,654 million for fiscal year 2016 to €1,523 million for fiscal year 2017.

12.12.3.2 Net Cash Provided by (Used in) Investing Activities

Net cash used in investing activities for fiscal year 2017 amounted to €432 million compared to €8,729 million for fiscal year 2016. This decrease in cash outflows was mainly due to an increase in cash inflows from current financial assets of €7,188 million, from an outflow of €5,645 million in fiscal year 2016 to an inflow of €1,543 million in fiscal year 2017. At €2,366 million for fiscal year 2017, cash outflows for additions to property, plant and equipment and intangible assets were 8.2% lower compared to €2,578 million for fiscal year 2016, and included investment activities of €915 million at Pharmaceuticals, of €178 million at Consumer Health, of €553 million at Crop Science, of €38 million at Animal Health and of €283 million at Covestro. Divestments resulted in a net inflow of €453 million. This includes the proceeds of €999 million from the sale of Covestro Shares on September 29, 2017, less the Covestro cash and cash equivalents of €637 million deducted as a consequence of the Loss of Control. Cash outflows for acquisitions in an amount of €158 million related to the acquisition of the Cydectin™ product portfolio in the United States in the Animal Health segment.

12.12.3.3 Net Cash Provided by (Used in) Financing Activities

Net cash used in financing activities amounted to €1,881 million for fiscal year 2017 compared to €350 million for fiscal year 2016. In fiscal year 2017, we received proceeds of €3,717 million from the sale of Covestro Shares prior to the Loss of Control, while net loan repayments amounted to €2,479 million, compared to €730 million in fiscal year 2016. Cash outflows for dividend payments amounted to €2,364 million for fiscal year 2017, compared to €2,126 million for fiscal year 2016. Net interest expense was €7.8% lower for fiscal year 2017 at €732 million, compared to €794 million in 2016. The transfer of Covestro Shares with a value of €504 million to Bayer Pension Trust in the second quarter of 2017 was a noncash transaction and therefore did not result in a financing cash inflow. In the previous year, the net cash inflow from the issuance of mandatory convertible notes amounted to €3,952 million, reported as a €3,300 million capital contribution and a €652 million borrowing.

12.12.4 Comparison of Fiscal Year 2016 with Fiscal Year 2015

The following discussion is based on the 2015 and 2016 figures presented in the audited consolidated statement of cash flows of Bayer for fiscal year ended December 31, 2016, including the comparative information for fiscal year ended December 31, 2015, which presents the cash flow from operating activities related to Covestro as cash provided by (used in) operating activities from continuing operations. The following 2015 and 2016 figures are therefore not directly comparable with the 2016 and 2017 figures presented and discussed under "*12.12.3 Comparison of Fiscal Year 2017 with Fiscal Year 2016*." For further information on the comparability of the figures in these sections, see "*12.5 Comparability of the Financial Information Contained in the Audited Consolidated Financial Statements*."

12.12.4.1 Net Cash Provided by (Used in) Operating Activities

Net cash provided by operating activities increased by €2,199 million, or 31.9%, from €6,890 million for fiscal year 2015 to €9,089 million for fiscal year 2016. Of this, an increase of €1,423 million, or 20.8%, from €6,836 million for fiscal year 2015 to €8,259 million for fiscal year 2016 was provided by continuing operations. Discontinued operations accounted for an increase in net cash flows by €776 million, mainly attributable to the sale of the Diabetes Care Business.

The increase in net cash provided by operating activities was mainly attributable to a significant improvement of EBITDA and a decrease in additional cash tied up in working capital as well as the aforementioned cash inflow from the sale of the Diabetes Care Business.

12.12.4.2 Net Cash Provided by (Used in) Investing Activities

Net cash used in investing activities for fiscal year 2016 amounted to €8,729 million compared to €2,762 million for fiscal year 2015. Cash outflows for noncurrent and current financial assets, especially for the short-term investment of the cash flows from the Mandatory Convertible Notes, amounted to €6,335 million for fiscal year

2016 compared to €370 million for fiscal year 2015. Inflows from interest and dividends totaled €89 million for fiscal year 2016 compared to €106 million for fiscal year 2015. At €2,578 million for fiscal year 2016, cash outflows for property, plant and equipment and intangible assets were 2.4% higher compared to €2,517 million for fiscal year 2015, and included investment activities of €835 million at Pharmaceuticals, of €215 million at Consumer Health, of €757 million at Crop Science, of €37 million at Animal Health and of €415 million at Covestro.

12.12.4.3 Net Cash Provided by (Used in) Financing Activities

Net cash used in financing activities amounted to €350 million for fiscal year 2016 compared to €3,974 million for fiscal year 2015 and included net loan repayments of €730 million for fiscal year 2016 compared to €2,929 million for fiscal year 2015. At €794 million, net interest payments for fiscal year 2016 were 21.8% higher compared to net interest payments of €652 million for fiscal year 2015. The cash outflow for dividends amounted to €2,126 million in fiscal year 2016 compared to €1,869 million in fiscal year 2015. The net cash inflow from the issuance of the Mandatory Convertible Notes amounted to €3,952 million for fiscal year 2016, reported as a €3,300 million capital contribution and a €652 million borrowing. For fiscal year 2015, the stock market floatation of Covestro resulted in a cash inflow of €1,490 million.

12.13 Capital Expenditures

12.13.1 Significant Capital Expenditures in the Three Months Ended March 31, 2018

Bayer recorded €242 million in capital expenditures (excluding Covestro) for the three months ended March 31, 2018, of which €39 million related to intangible assets and €203 million related to property, plant and equipment. By segment, total capital expenditures, i.e., capital expenditures relating to intangible assets and property, plant and equipment, and, as applicable, principal strategic capital expenditures for property, plant and equipment, for the three months ended March 31, 2018 were as follows:

- Pharmaceuticals: Pharmaceuticals recorded a total of €90 million in capital expenditures for the three months ended March 31, 2018. Pharmaceuticals' principal strategic capital expenditures for property, plant, and equipment for the three months ended March 31, 2018 related to investments in the production capacities for new therapies based on rFactor VIII, a recombinant protein used for the treatment of hemophilia A, in Wuppertal-Elberfeld and Leverkusen (Germany), the expansion of R&D laboratory capacities in Wuppertal (Germany), the modernization of research facilities in Berlin (Germany), the modernization of site infrastructure in Leverkusen (Germany), the construction of a new research building in Wuppertal-Aprath (Germany) and the expansion of production capacities for EYLEA in Berlin (Germany) and in Shiga (Japan).

- Consumer Health: Consumer Health recorded a total of €48 million in capital expenditures for the three months ended March 31, 2018. Consumer Health's principal strategic capital expenditures for property, plant and equipment for the three months ended March 31, 2018 related to investments in the reconstruction and expansion of production sites in Majinpu/Kunming (China) and infrastructure and production upgrades for GMP activities.

- Crop Science: Crop Science recorded a total of €64 million in capital expenditures for the three months ended March 31, 2018. Crop Science's principal strategic capital expenditures for property, plant and equipment for the three months ended March 31, 2018 related to investments in capacity expansions for herbicides in Knapsack (Germany), the expansion of production capacities for fungicides in Dormagen (Germany), the expansion of production and research greenhouses in Nunhem (Netherlands), the construction of a production facility for fungicides in Kansas City, Missouri (United States) and the expansion of production capacities for insecticides in Vapi (India).

- Animal Health: Animal Health recorded a total of €5 million in capital expenditures for the three months ended March 31, 2018. In July 2017, Bayer announced plans to expand the Animal Health production site in Kiel, Germany, for €90 million until 2021, with limited spend in fiscal year 2017 and gaining momentum in the first quarter of 2018.

- Reconciliation: Reconciliation recorded a total of €35 million in capital expenditures for the three months ended March 31, 2018.

For information on our most important investments in progress and our most important future investments to which our management has already committed, see "*13.10 Investments.*"

12.13.2 Significant Capital Expenditures in Fiscal Year 2017

Bayer recorded €2,418 million in capital expenditures (excluding Covestro) for fiscal year 2017, of which €755 million related to intangible assets and €1,663 million related to property, plant and equipment. By segment, total capital expenditures, i.e., capital expenditures relating to intangible assets and property, plant and equipment, and, as applicable, principal strategic capital expenditures for property, plant and equipment, for fiscal year 2017 were as follows:

- Pharmaceuticals: Pharmaceuticals recorded a total of €1,126 million in capital expenditures in fiscal year 2017, of which a significant amount related to upfront payments of US$400 million made under an exclusive global collaboration agreement concluded with the biopharmaceutical company Loxo Oncology, Inc., Stamford, Connecticut, United States, in November 2017. Pharmaceuticals' principal strategic capital expenditures for property, plant, and equipment for fiscal year 2017 related to investments in the production capacities for new therapies based on rFactor VIII, a recombinant protein used for the treatment of hemophilia A, in Wuppertal-Elberfeld and Leverkusen (Germany), the expansion of R&D laboratory capacities in Wuppertal (Germany), the modernization of research facilities in Berlin (Germany), the modernization of site infrastructure in Wuppertal and Leverkusen (Germany), the construction of a new research building in Wuppertal-Aprath (Germany) and the expansion of production capacities for EYLEA in Berlin (Germany).

- Consumer Health: Consumer Health recorded a total of €181 million in capital expenditures in fiscal year 2017. Consumer Health's principal strategic capital expenditures for property, plant and equipment for fiscal year 2017 related to investments in the reconstruction and expansion of production sites in Majinpu/Kunming (China).

- Crop Science: Crop Science recorded a total of €670 million in capital expenditures in fiscal year 2017. Crop Science's principal strategic capital expenditures for property, plant and equipment for fiscal year 2017 related to investments in capacity expansions for herbicides in Muskegon, Michigan, Mobile and Alabama (United States) and in Frankfurt and Knapsack (Germany), the construction of a production facility for insecticides in Dormagen (Germany), the expansion of production capacities for fungicides in Dormagen (Germany), the expansion of research and development facilities in Monheim (Germany), the establishment of breeding stations for various plant species worldwide, the expansion of R&D facilities in Raleigh (North Carolina, United States), the expansion of production and research greenhouses in Nunhem (Netherlands), the construction of a production facility for fungicides in Kansas City, Missouri (United States) and the expansion of production capacities for insecticides in Vapi (India).

- Animal Health: Animal Health recorded a total of €41 million in capital expenditures in fiscal year 2017. In July 2017, Bayer announced plans to expand the Animal Health production site in Kiel, Germany, for €90 million until 2021, with limited spend in fiscal year 2017.

- Reconciliation: Reconciliation recorded a total of €400 million in capital expenditures in fiscal year 2017.

For information on our most important investments in progress and our most important future investments to which our management has already committed, see "*13.10 Investments.*"

12.13.3 Significant Capital Expenditures in Fiscal Year 2016

Bayer recorded €2,627 million in capital expenditures for fiscal year 2016, of which €363 million related to intangible assets and €2,264 million related to property, plant and equipment. By segment (including Covestro) and for the Life Sciences, total capital expenditures, i.e., capital expenditures relating to intangible assets and property, plant and equipment, and, as applicable, principal strategic capital expenditures for property, plant and equipment, for fiscal year 2016 were as follows:

- Pharmaceuticals: Pharmaceuticals recorded a total of €851 million in capital expenditures in fiscal year 2016. Pharmaceuticals' principal strategic capital expenditures for property, plant, and equipment for fiscal year 2016 related to investments in the production capacities for new rFactor

VIII therapies in Wuppertal-Elberfeld and Leverkusen (Germany), the expansion of R&D laboratory capacities in Wuppertal (Germany), the modernization of research facilities in Berlin (Germany), the modernization of site infrastructure in Wuppertal and Leverkusen (Germany), the expansion of production capacities in Beijing (China) and the expansion of Quality Control Biologics in Berkeley (California, United States).

- Consumer Health: Consumer Health recorded a total of €220 million in capital expenditures in fiscal year 2016. Consumer Health's principal strategic capital expenditures for property, plant and equipment for fiscal year 2016 related to investments in the reconstruction and expansion of production facilities in Kunming and Majinpu (China).

- Crop Science: Crop Science recorded a total of €773 million in capital expenditures in fiscal year 2016. Crop Science's principal strategic capital expenditures for property, plant and equipment for fiscal year 2016 related to investments in capacity expansions for herbicides in Muskegon, Michigan, Mobile and Alabama (United States) and in Frankfurt and Knapsack (Germany), the construction of a production facility for insecticides in Dormagen (Germany), the expansion of production capacities for fungicides in Dormagen (Germany), the expansion of R&D facilities in Monheim (Germany), the establishment of breeding stations for various plant species worldwide and the expansion of R&D facilities in Raleigh (North Carolina, United States).

- Animal Health: Animal Health recorded a total of €39 million in capital expenditures in fiscal year 2016.

- Reconciliation: Reconciliation recorded a total of €325 million in capital expenditures in fiscal year 2016.

- Life Sciences: Life Sciences recorded a total of €2,208 million in capital expenditures in fiscal year 2016.

- Covestro: Covestro recorded a total of €419 million in capital expenditures in fiscal year 2016. Covestro's principal strategic capital expenditures for property, plant and equipment for fiscal year 2016 related to investments in the capacity expansion of MDI facility in Brunsbüttel (Germany), the start-up of a production line for CO2-based polyols in Dormagen (Germany), the continuation of capital expenditure projects from 2014, including the doubling of the production capacity for polycarbonate in Shanghai (China) and the doubling of the production capacity for the aliphatic isocyanate HDI in Shanghai (China).

12.13.4 Significant Capital Expenditures in Fiscal Year 2015

Bayer recorded €2,554 million in capital expenditures for fiscal year 2015, of which €388 million related to intangible assets and €2,168 million related to property, plant and equipment. By segment (including Covestro) and for the Life Sciences, total capital expenditures i.e., capital expenditures relating to intangible assets and property, plant and equipment, and, as applicable, principal strategic capital expenditures for property, plant and equipment, for fiscal year 2015 were as follows:

- Pharmaceuticals: Pharmaceuticals recorded a total of €764 million in capital expenditures in fiscal year 2015. Pharmaceuticals' principal strategic capital expenditures for property, plant and equipment for fiscal year 2015 related to investments in the production capacities for new rFactor VIII therapies in Wuppertal (Germany), the expansion of R&D laboratory capacities in Wuppertal (Germany), the modernization of research facilities in Berlin (Germany), the modernization of site infrastructure in Wuppertal and Leverkusen (Germany), the expansion of production capacities in Beijing (China) and the expansion of Quality Control Biologics in Berkeley (California, United States).

- Consumer Health: Consumer Health recorded a total of €182 million in capital expenditures in fiscal year 2015. None of Consumer Health's individual capital expenditures for fiscal year 2015 were classified as a strategic investment.

- Crop Science: Crop Science recorded a total of €735 million in capital expenditures in fiscal year 2015. Crop Science's principal strategic capital expenditures for property, plant and equipment for fiscal year 2015 related to investments in the capacity expansions for herbicides in the United States and Germany, the construction of production facilities for insecticides in Vapi (India) and

Dormagen (Germany), additional capacity expansions for fungicides in Germany, the expansion of R&D facilities in Germany (continued in 2016), the establishment of breeding stations for various plant species worldwide and the expansion of R&D facilities in North America.

- Animal Health: Animal Health recorded a total of €43 million in capital expenditures in fiscal year 2015.

- Reconciliation: Reconciliation recorded a total of €316 million in capital expenditures in fiscal year 2015.

- Life Sciences: Life Sciences recorded a total of €2,040 million in capital expenditures in fiscal year 2015.

- Covestro: Covestro recorded a total of €514 million in capital expenditures in fiscal year 2015. Covestro's principal strategic capital expenditures for property, plant and equipment for fiscal year 2015 related to the construction of a production line for CO2-based polyols in Dormagen (Germany), the continuation and finalization of capital expenditure projects from 2014 including the doubling of the production capacity for polycarbonate in Shanghai (China) and the doubling of the production capacity for the aliphatic isocyanate HDI in Shanghai (China).

12.14 Pension and Other Post-Employment Benefit Obligations

The companies within the Bayer Group provide retirement benefits for most of their employees, either directly or by contributing to privately or publicly administered funds. The benefits vary depending on the legal, fiscal and economic conditions of each country. The obligations relate both to existing retirees' pensions and to pension entitlements of future retirees.

Bayer has set up funded pension plans for its employees in various countries. Since the capital investment strategy for each pension plan is developed individually in light of the risk structure of the obligations (especially demographics, the current funded status, the structure of the expected future cash flows, interest sensitivity and biometric risks), the regulatory environment and the existing level of risk tolerance, the investment strategies for different pension plans may vary considerably. The investment strategies are generally aligned less toward maximizing absolute returns and more toward trying to achieve the maximum probability of being able to finance pension commitments over the long term. For pension plans, stress scenarios are simulated and other risk analyses (such as value at risk) undertaken with the aid of risk management systems.

Bayer-Pensionskasse VVaG (Bayer-Pensionskasse), Leverkusen, Germany, is by far the most significant of the pension plans. It has been closed to new members since 2005. Pension entitlements for people who joined Bayer in Germany in 2005 or later are granted via Rheinische Pensionskasse VVaG, Leverkusen. Future pension payments from this plan are based on contributions and the return on plan assets; a guaranteed interest rate applies. Another important pension provision vehicle is Bayer Pension Trust. This covers further retirement provision arrangements of the Bayer Group, such as deferred compensation, pension obligations previously administered by Schering Altersversorgung Treuhand e. V., and components of other direct commitments. The defined benefit pension plans in the United States have been frozen for some years, and no significant new entitlements can be earned under these plans. The defined benefit pension plans in the United Kingdom have been closed to new members for some years. The other post-employment benefit obligations outside Germany mainly comprised health care benefit payments for retirees in the United States.

Bayer's defined benefit obligations, net defined benefit liability and the funded status of funded obligations developed as follows:

	As of December 31,		
	2015	2016	2017
		(audited) (in € million)	
Defined benefit obligation			
of which unfunded	*1,227*	*1,356*	*1,181*
Pension obligation	*1,126*	*1,231*	*1,117*
Other post-employment benefit obligation	*101*	*125*	*64*
Of which funded	*25,582*	*27,639*	*23,311*
Pension obligation	*24,847*	*26,897*	*22,704*
Other post-employment benefit obligation	*735*	*742*	*607*
Total defined benefit obligation	**26,809**	**28,995**	**24,492**
Fair value of plan assets	(15,998)	(17,936)	(16,539)
Effects of the asset ceiling	32	49	31
Net defined benefit liability	**10,843**	**11,108**	**7,984**

For further information on our pension and other post-employment benefits, see note 25 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-78 et seq. of this Prospectus and note 25 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-171 et seq. of this Prospectus.

12.15 Other Liabilities

Bayer's other liabilities were as follows:

	As of December 31,			As of March 31,
	2015	2016	2017	2018
		(audited) (in € million)		(unaudited) (in € million)
Other tax liabilities	435	544	420	448
Deferred income	1,148	1,463	1,156	70
Liabilities to employees	217	229	181	156
Liabilities for social expenses	174	168	138	137
Accrued interest on liabilities	189	186	149	205
Miscellaneous liabilities	436	788	724	530
Total	**2,599**	**3,378**	**2,768**	**1,546**
of which current	*1,534*	*2,421*	*1,652*	1,318

For further information on our other liabilities, see note 29 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-91 et seq. of this Prospectus and note 29 of Bayer's consolidated financial statements for fiscal year 2016, set forth on page F-185 of this Prospectus.

12.16 Contingent Liabilities and Other Financial Commitments

12.16.1 Contingent Liabilities

The following table provides an overview of Bayer's contingent liabilities as of the dates shown:

	As of December 31,		
	2015	2016	2017
		(audited) (in € million)	
Warranties	99	100	88
Guarantees	123	264	148
Other contingent liabilities	562	444	614
Total	**784**	**808**	**850**

For further information on our contingent liabilities, see note 31 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-100 et seq. of this Prospectus and note 31 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-193 et seq. of this Prospectus.

12.16.1.1 Comparison of December 31, 2017 with December 31, 2016

Bayer's contingent liabilities increased by €42 million, or 5.2%, from €808 million as of December 31, 2016 to €850 million as of December 31, 2017 mainly due to an increase in other contingent liabilities relating to new legal cases and which more than offset the decline in guarantees and warranties. The guarantees mainly comprise a declaration issued by Bayer AG to the trustees of the U.K. pension plans guaranteeing the pension obligations of Bayer Public Limited Company and Bayer Crop Science Limited. Under the declaration, Bayer AG – in addition to the two companies – undertakes to make further payments into the plans upon receipt of a payment request from the trustees. The net liability with respect to these defined benefit plans as of December 31, 2017, declined to €148 million, compared to €264 million as of December 31, 2016.

12.16.1.2 Comparison of December 31, 2016 with December 31, 2015

Bayer's contingent liabilities increased by €24 million, or 3.1%, from €784 million as of December 31, 2015 to €808 million as of December 31, 2016 mainly due to an increase in guarantees, which more than offset the decline in other contingent liabilities. The guarantees mainly comprise a declaration issued by Bayer AG to the trustees of the U.K. pension plans guaranteeing the pension obligations of Bayer Public Limited Company and Bayer Crop Science Limited. Under the declaration, Bayer AG – in addition to the two companies – undertakes to make further payments into the plans upon receipt of a payment request from the trustees. The net liability with respect to these defined benefit plans as of December 31, 2016, increased to €264 million, compared to €123 million as of December 31, 2015 due to a sharp drop in interest rates.

12.16.2 Other Financial Commitments

The following table provides an overview of Bayer's other financial commitments as of the dates shown:

	As of December 31,		
	2015	2016	2017
		(audited) (in € million)	
Operating leases	891	1,101	801
Obligations under purchase agreements for property, plant and equipment[1]	690	479	493
Contractual obligation to acquire intangible assets[1]	–	243	83
Capital contribution commitments	391	182	149
Binding acquisition agreement with Monsanto Company, St. Louis, Missouri, U.S.A.[2]	–	53,000	47,000
Unpaid portion of the effective initial fund	1,213	1,213	1,005
Potential payment obligations under R&D collaboration Agreements	2,887	2,444	2,349
Revenue-based milestone payment commitments	2,241	1,839	1,923
Total	**8,313**	**60,501**	**53,803**

(1) Included under "Orders already placed under purchase agreements" in our audited consolidated financial statements as of and for the fiscal year ended December 31, 2016.

(2) The contingent financial commitment was translated at the EUR/USD closing rate at year end.

For further information on our other financial commitments, see note 31 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-100 et seq. of this Prospectus and note 31 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-193 et seq. of this Prospectus.

12.16.2.1 Comparison of December 31, 2017 with December 31, 2016

Bayer's other financial commitments decreased by €6,698 million, or 11.1%, from €60,501 million as of December 31, 2016 to €53,803 million as of December 31, 2017. This decrease was mainly due to a decrease in the contingent financial commitment to acquire Monsanto Company pursuant to the Merger Agreement from €53 billion to €47 billion due to exchange differences.

12.16.2.2 Comparison of December 31, 2016 with December 31, 2015

Bayer's other financial commitments increased by €52,188 million from €8,313 million as of December 31, 2015 to €60,501 million as of December 31, 2016. This very significant increase was due to, in particular, the signing

of the Merger Agreement in connection with the Transaction, according to which Bayer at the time had a contingent financial commitment in an amount of approximately US$56 billion to acquire Monsanto's entire outstanding capital stock.

12.16.3 Financial Liabilities and Lease Liabilities

12.16.3.1 Financial Liabilities

The following table sets forth Bayer's financial liabilities as of March 31, 2018:

	Less than 1 year	2-5 years	More than 5 years	Total
		(unaudited) (in € million)		
Bonds and notes/promissory notes	559	4,995	6,736	12,290
Liabilities to banks	597	14	–	611
Liabilities under finance leases	36	92	120	248
Liabilities from derivatives	191	8	–	199
Other financial liabilities	378	308	–	686
Total	**1,761**	**5,417**	**6,856**	**14,034**

As of March 31, 2018, Bayer AG and various group companies of Bayer have issued €12,245 million in bonds and notes in addition to €45 million in promissory notes. The Bayer Group has issued a number of bonds under its DIP. In 2014 and 2015, Bayer AG issued hybrid bonds in an aggregate nominal amount of €4,550 million, which are subordinated and treated by Moody's and S&P Global Ratings as 50% equity. They therefore have a more limited effect on the Bayer Group's rating-relevant debt indicators than senior borrowings. In November 2016, Bayer Capital Corporation B.V. placed the Mandatory Convertible Notes in a nominal amount of €4,000 million in reliance on Rule 144A and Regulation S under the Securities Act, which will be converted into no-par shares of Bayer AG at maturity. The Mandatory Convertible Notes represented the first part of the equity component of the financing for the Transaction. Other financial liabilities as of March 31, 2018 contained €528 million related to the Mandatory Convertible Notes. In June 2017, Bayer AG placed Exchangeable Bonds in a nominal amount of €1,000 million maturing in 2020. The bonds bear interest at a rate of 0.05% per annum. Upon exchange of the bonds, Bayer AG will have the flexibility to settle the bonds in cash, by delivery of Covestro Shares or by a combination thereof.

Bayer AG guarantees all the notes and bonds issued by its subsidiaries.

As of March 31, 2018, the Bayer Group had an undrawn €3.5 billion syndicated revolving credit facility with a current maturity of 2020.

For further information on our financial liabilities, see note 27 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-88 et seq. of this Prospectus and note 27 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-128 et seq. of this Prospectus.

12.16.3.2 Lease Liabilities

The following table sets forth Bayer's lease liabilities as of December 31, 2017:

	Less than 1 year	2-5 years[1]	More than 5 years	Total
		(audited, unless otherwise indicated) (in € million)		
Lease payments	49	139	177	**365**
Interest component	17	46	64	**127**
Liabilities under finance leases	32	93	113	**238**

(1) Unaudited.

For further information on our lease liabilities, see note 27 of Bayer's consolidated financial statements for fiscal year 2017, set forth on pages F-88 et seq. of this Prospectus and note 27 of Bayer's consolidated financial statements for fiscal year 2016, set forth on pages F-128 et seq. of this Prospectus.

12.17 Off-Balance Sheet Arrangements

There are no significant off-balance sheet arrangements that are likely to have a current or future effect on Bayer's financial condition, results of operations, liquidity, capital expenditures or capital resources other than the contingent liabilities and other financial commitments disclosed above.

12.18 Additional Information from the Unconsolidated Financial Statements of Bayer AG Prepared in Accordance with HGB

Since the start of 2017, business lease agreements between Bayer AG on the one hand, and Bayer Pharma AG and Bayer CropScience AG – the former parent companies of the respective divisions – on the other, have been in place and govern the transfer of their operational business to Bayer AG. As a result, the business of Bayer AG – previously confined to a holding company function – has expanded considerably and now also comprises the parent company functions of the two divisions. A comparison between the financial statements for 2017 and those of the previous year is therefore only possible to a limited extent. Bayer AG's unconsolidated financial statements as of and for fiscal year 2017 have been prepared in accordance with HGB, the German Stock Corporation Act (AktG) and the German Energy Act (EnWG).

According to these annual financial statements, Bayer AG's equity increased by €2,310 million, or 13.9%, from €16,565 million as of December 31, 2016 to €18,875 million as of December 31,2017. The increase represents the excess of the €4,543 million net income for fiscal year 2017 over the €2,233 million dividend payment for fiscal year 2016. The equity ratio increased to 31.9% as of December 31, 2017, compared to 29.1% as of December 31, 2016, due to the less substantial growth in total assets. Distributable profit increased by €667 million from €2,233 million as of December 31, 2016 to €2,900 million as of December 31, 2017. Total assets of Bayer AG increased by €2,246 million from €56,846 million as of December 31, 2016 to €59,092 million as of December 31, 2017 due particularly to the assumption of the operational business of the Pharmaceuticals and Crop Science Divisions of Bayer Pharma AG and Bayer CropScience AG, respectively, which led especially to an increase in current assets of €4,193 million. Noncurrent assets declined by €1,947 million. Provisions increased by €296 million from €1,905 million to €2,201 million. Among the items transferred to Bayer AG in connection with the assumption of the operational business of Pharmaceuticals and Crop Science and the corresponding transfers of undertaking were pension obligations of €1.0 billion and fund assets of €0.4 billion, thus a net benefit liability of €0.6 billion. Nevertheless, pension obligations declined by €162 million due to the increase in the value of fund assets and additional contributions. Provisions for taxes also decreased, falling by €150 million to €391 million, while miscellaneous provisions rose by €608 million to €1,075 million. The main factors here were a €319 million increase in personnel commitments, which was attributable particularly to the increase in the size of the workforce and a €220 million increase in impending losses, mainly attributable to hedging transactions with regard to currency and interest rate risks.

Other liabilities (including deferred charges) receded by €360 million from €38,376 million as of December 31, 2016 to €38,016 million as of December 31, 2017 (net of deductible receivables). Due to the assumed Pharmaceuticals and Crop Science businesses, significant trade accounts payable of €1,750 million accumulated for the first time, while other operating liabilities declined by €1.7 billion. Financial debt was reduced by €0.5 billion, with a €1.5 billion decline in intra-Group debt being partly offset by a €1.0 billion increase in external financial debt. A €750 million DIP bond maturing in 2018 was redeemed early in fiscal year 2017, while €1.0 billion in debt instruments (exchangeable bond) that can also be paid in Covestro Shares were newly issued. Liabilities to banks and other third parties increased by €0.7 billion and €0.1 billion, respectively. Total financial debt as of December 31, 2017 was €36.0 billion, compared to €36.5 billion as of December 31, 2016. After deduction of cash and cash equivalents of €4.3 billion in fiscal year 2017, compared to €2.7 billion in fiscal year 2016, net debt fell by €2.1 billion to €31.7 billion as of December 31, 2017, compared to €33.8 billion as of December 31, 2016.

12.19 Quantitative and Qualitative Disclosure about Financial Opportunities and Risks

The Bayer Group sees financial opportunities in the market prices it can command, and is exposed to financial risks in the form of liquidity, credit and market price risks, as well as risks resulting from pension obligations.

12.19.1 Liquidity Risk

Liquidity risks reflect the possible inability of Bayer to meet current or future payment obligations. The liquidity risk is determined and managed by the Finance function as part of its same-day and medium-term liquidity planning. The Bayer Group holds sufficient liquidity to ensure the fulfillment of all planned payment obligations at maturity. For unbudgeted shortfalls in cash receipts or unexpected disbursements, furthermore, a reserve is maintained whose amount is regularly reviewed and adjusted. Credit facilities also exist with banks, including, in particular, an undrawn €3.5 billion syndicated revolving credit facility with a current maturity of 2020. For further information on the liquidity risks that Bayer is exposed to, see "*1.1.23 The Bayer Group is exposed to financial risk, including liquidity, credit and market price risks.*"

12.19.2 Credit Risks

Credit risks arise from the possibility that the value of receivables or other financial assets of the Bayer Group may be impaired because counterparties cannot meet their payment or other performance obligations. The maximum

default risk is reduced by existing collateral, especially its global credit insurance programs. To manage credit risks from trade receivables, the respective invoicing companies appoint credit managers who regularly analyze customers' creditworthiness. Some of these receivables are collateralized, and the collateral is used according to local conditions. These include credit insurances and guarantees. Bayer generally agrees reservation of title with its customers. Credit limits are set for all customers. All credit limits for debtors where total exposure is €10 million or more are evaluated locally and submitted to the Group Finance function. Credit risks from financial transactions are managed centrally in the Finance function. To minimize risks, financial transactions are only conducted within predefined exposure limits and with banks and other partners that preferably have investment-grade ratings. For further information on the credit risks that Bayer is exposed to, see "*1.1.23* The Bayer Group is exposed to financial risk, including liquidity, credit and market price risks."

12.19.3 Opportunities and Risks Resulting from Market Price Changes

Opportunities and risks resulting from fluctuating exchange and interest rates in the market are managed by the Finance function. Risks are avoided or mitigated through the use of derivative financial instruments. The type and level of currency and interest-rate risks are explained using sensitivity analyses based on hypothetical changes in risk variables (such as interest curves) to determine the potential effects of market price fluctuations on equity and earnings. The assumptions used in the sensitivity analyses reflect Bayer's view of the changes in currency exchange and interest rates that are reasonably possible over a one-year period. These assumptions are regularly reviewed.

Foreign currency opportunities and risks for the Bayer Group result from changes in exchange rates and the related changes in the value of financial instruments (including receivables and payables) and of anticipated payment receipts and disbursements in the functional currency. Receivables and payables in liquid currencies from operating activities and financial items are generally fully exchange-hedged through cross-currency interest-rate swaps. Anticipated exposure from planned payment receipts and disbursements in the future is hedged through forward exchange contracts and currency options according to management guidelines.

Sensitivities were determined on the basis of a hypothetical scenario in which the euro appreciates or depreciates by 10% against all other currencies compared with the year-end exchange rates. In this scenario, the estimated hypothetical increase or decrease in cash flows from derivative and nonderivative financial instruments would have improved or diminished earnings and equity (other comprehensive income) as of March 31, 2018, by €332 million (December 31, 2017: €346 million). Of this amount, €131 million is related to the U.S. dollar (USD), €65 million to the Chinese renminbi (CYN), €42 million to the Japanese yen (JPY) and €38 million to the Canadian dollar (CAD). Currency effects on anticipated exposure are not taken into account. Derivatives used to hedge anticipated currency exposure that are designated for hedge accounting would have improved or diminished other comprehensive income by €346 million.

Interest-rate opportunities and risks result for the Bayer Group through changes in capital market interest rates, which in turn could lead to changes in the fair value of fixed-rate financial instruments and changes in interest payments in the case of floating-rate instruments. Interest-rate opportunities and risks are managed over a target duration established by management for Bayer Group debt that is subject to regular review. Interest-rate swaps are concluded to achieve the target structure for Bayer Group debt. A sensitivity analysis based on Bayer's net floating-rate receivables and payables position as of March 31, 2018, taking into account the interest rates relevant for its receivables and payables in all principal currencies, produced the following result: A hypothetical increase of 100 basis points or one percentage point in these interest rates (assuming constant currency exchange rates) as of January 1, 2018, would have raised Bayer's interest expense as of March 31, 2018, by €11 million (December 31, 2017: €13 million). For further information on the market price risks that Bayer is exposed to, see "*1.1.23 The Bayer Group is exposed to financial risk, including liquidity, credit and market price risks.*"

12.19.4 Financial Risks Associated with Pension Obligations

The Bayer Group has obligations to current and former employees related to pensions and other post-employment benefits. Changes in relevant measurement parameters such as interest rates, mortality and salary increase rates may raise the present value of Bayer's pension obligations. This may lead to increased costs for pension plans or diminish equity due to actuarial losses being recognized as other comprehensive income in the statement of comprehensive income. A large proportion of Bayer's pension and other post-employment benefit obligations is covered by plan assets including fixed-income securities, shares, real estate and other investments. Declining or even negative returns on these investments may adversely affect the future fair value of plan assets. Both these effects may negatively impact the development of equity and / or earnings and / or may necessitate additional payments by Bayer. Bayer addresses the risk of market-related fluctuations in the fair value of its plan assets through balanced strategic investment, and constantly monitors investment risks in regard to its global pension obligations. For further information on the financial risks that Bayer is exposed to with regard to its pension obligations, see

"*1.1.24 The Bayer Group faces risks from capital market developments in connection with its pension and post-employment benefit obligations.*"

12.19.5 Tax risks

Bayer AG and its subsidiaries operate worldwide and are thus subject to many different national tax laws and regulations. Bayer Group companies are regularly audited by the tax authorities in various countries. Amendments to tax laws and regulations, legal judgments and their interpretation by the tax authorities, and the findings of tax audits in these countries may result in higher tax expense and payments, thus also influencing the level of tax receivables, tax liabilities and deferred tax assets and liabilities. Bayer counters the resulting risks by continuously identifying and evaluating the tax framework. For further information on the tax risks that Bayer is exposed to, see "*1.1.27 Due to a complex multi-level group structure and the extended geographic reach of Bayer's business activities, Bayer could incur greater tax liabilities than expected and be affected by changes to the regulatory framework in particular in relation to the non-deductibility of interest payments, the future tax treatment of dividend payments in various jurisdictions and the introduction of additional taxes.*" and "*1.1.28 Pending and future tax audits and changes to the interpretation of fiscal regulations could lead to additional tax liabilities.*"

12.20 Basic Principles, Methods and Critical Accounting Estimates

The consolidated financial statements of the Group are based on the principle of the historical cost of acquisition, construction or production, with the exception of the items reflected at fair value, such as for example, financial assets held for trading or available for sale, derivatives and liabilities for which Bayer has made use of the fair value option.

In preparing the consolidated financial statements, the management has to make certain assumptions and estimates that may substantially impact the presentation of the Group's financial position and/or results of operations.

Such estimates, assumptions or the exercise of discretion mainly relate to the useful life of noncurrent assets, the discounted cash flows used for impairment testing and purchase price allocations, and the recognition of provisions, including those for litigation-related expenses, pensions and other benefits, taxes, environmental compliance and remediation costs, sales allowances, product liability and guarantees. Essential estimates and assumptions that may affect reporting in the various item categories of the financial statements are described under note 4 to the audited consolidated financial statements as of and for the fiscal year ended December 31, 2017, F-39 et seq. Estimates are based on historical experience and other assumptions that are considered reasonable under given circumstances. They are continually reviewed but may vary from the actual values.

For further information regarding Bayer's critical accounting policies, see note 4 to the audited consolidated financial statements as of and for the fiscal year ended December 31, 2017. For additional information on the effects new financial reporting standards have on Bayer, see pages F-36 et seq. and note 3 to the audited consolidated financial statements as of and for the fiscal year ended December 31, 2017.

13. BUSINESS

13.1 Overview

Bayer is a globally operating life science company with a more than 150-year history and core competencies in the areas of health care and agriculture. With our innovative products, we believe we are helping to find solutions to some of the major challenges of our time. With life expectancy continuing to rise, we are striving to improve quality of life for a growing population by focusing our research and development activities on preventing, alleviating and treating diseases. We are also aiming to make an important contribution to providing a reliable supply of high-quality food, feed and plant-based raw materials.

Our goal is to create value for our customers, stockholders and employees, while at the same time strengthening the group's profitability. We are further committed to operating sustainably and addressing our social and ethical responsibilities. To achieve our goals, we build on our employees as well as our core strengths which include establishing leading businesses and brands, our ability to deliver continuously successful operating performance, our ability to innovate, our strong track record of value creation through portfolio management, process excellence, as well as our ability to attract, develop and retain talented people.

Our operations are currently managed in three divisions, Pharmaceuticals, Consumer Health and Crop Science, and a business unit Animal Health, each of which is also a reportable segment. The operational business is managed by Bayer AG as the parent company of the Bayer Group, represented by the Board of Management, and is supported by the corporate functions, Business Services and the service company Currenta. The operational activities of our three divisions and one business unit may be briefly summarized as follows:

- *Pharmaceuticals*: Pharmaceuticals focuses on researching, developing and marketing prescription products, especially for cardiology and women's health care, and on specialty therapeutics in the areas of oncology, hematology and ophthalmology. The division also comprises the radiology business, which markets diagnostic imaging equipment together with the necessary contrast agents.

- *Consumer Health:* Consumer Health markets nonprescription OTC medicines, medical products and cosmetics in the dermatology, nutritional supplement, analgesic, digestive health, allergy, cold, foot care and sun protection categories, to treat and prevent diseases and to improve well-being through self-care solutions.

- *Crop Science:* Crop Science is an agriculture enterprise with businesses in crop protection, seeds and nonagricultural pest and weed control. Upon completion of the Transaction, which is expected to take place on or about June 7, 2018, and is described in more detail below, Crop Science including Monsanto's business will become Bayer's largest division in terms of net sales. Crop Science markets a broad range of high-value seeds and innovative pest management solutions, while at the same time providing extensive customer service for sustainable agriculture. In addition, it provides products and services for professional nonagricultural applications, such as vector control (i.e., methods for the avoidance or targeted control of pathogens transmitting organisms), pest control and forestry.

- *Animal Health:* The Animal Health business unit develops and markets veterinary products and solutions for the prevention and treatment of diseases in farm and companion animals and ranks among the innovators in its field.

On September 14, 2016, Bayer entered into a Merger Agreement with Monsanto, a global provider of agricultural products, including seeds and trait technologies, herbicides, and digital platforms to give farmers agronomic recommendations. The Merger Agreement provides for Bayer's acquisition (through a merger) of all outstanding shares of Monsanto Company against a payment of US$128.00 per share in cash which at the time corresponded to an expected transaction value of approximately US$66 billion as of May 31, 2016. As of the date of this Prospectus, this corresponds to a transaction value of approximately US$63 billion taking into account Monsanto's debt outstanding as of February 28, 2018. The Transaction, which is subject to customary closing conditions, including the receipt of required antitrust and other regulatory approvals, all of which have been satisfied or waived (other than those conditions that by their nature are to be satisfied at the closing of the Transaction), is expected to be completed on or about June 7, 2018. Following the Transaction, based on its enlarged Crop Science division, Bayer intends to create a global leader committed to transforming agriculture, which offers advanced customized agronomic solutions designed to help farmers achieve the productivity increases needed to feed an ever growing world population. For more information on the Transaction, see "*8. The Acquisition of Monsanto*."

In connection with obtaining required antitrust approvals to complete the Transaction Bayer, in separate transactions entered into in October 2017 and April 2018, respectively, has agreed to sell selected Crop Science businesses to BASF. For more information, see "*8.10 Overview of Transaction-related Divestments.*"

Until its deconsolidation at the end of September 2017, Covestro AG, which is a global provider of high-tech polymer materials and associated application solutions, was an additional reportable segment of Bayer. For summary on the business of Covestro and its deconsolidation, see "*13.4.5 Covestro.*" For information on our recent corporate reorganization see "*12.2 Recent Reorganizations of the Group*."

Apart from the Transaction, Bayer has engaged in a number of strategic acquisitions and divestitures over the past years, including the acquisition of the consumer care business of the U.S. company Merck & Co., Inc. in 2014. For further information on our divestures and acquisitions over the past years, see "*12.3.1 Previous Transactions*."

Bayer AG is the ultimate parent company within the Group, which comprised 237 consolidated companies in 79 countries and employed 99,820 persons (full-time equivalents) as of December 31, 2017. In 2017, Bayer recognized external net sales of €35,015 million (2016: €34,943 million) and EBIT of €5,903 million (2016: €5,738 million). The individual segments contributed to the total external net sales and EBIT in 2017 as follows: Pharmaceuticals: €16,847 million in external net sales (48.1%), €4,325 million in EBIT (73.3%); Consumer Health: €5,862 million in external net sales (16.7%), €518 million in EBIT (8.8%); Crop Science: €9,577 million in external net sales (27.4%), €1,235 million in EBIT (20.9%), and Animal Health: €1,571 million in external net sales (4.5%), €307 million in EBIT (5.2%).

For the three months ended March 31, 2018, Bayer recognized external net sales of €9,138 million (three months ended March 31, 2017: €9,680 million) and EBIT of €2,310 million (three months ended March 31, 2017: €2,427 million). The individual segments contributed to the total external net sales and EBIT in the three months ended March 31, 2018 as follows: Pharmaceuticals: €4,075 million in external net sales (44.6%), €1,163 million in EBIT (50.3%); Consumer Health: €1,409 million in external net sales (15.4%), €211 million in EBIT (9.1%); Crop Science: €2,861 million in external net sales (31.3%), €892 million in EBIT (38.6%) and Animal Health: €414 million in external net sales (4.5%), €129 million in EBIT (5.6%).

In geographical terms and in terms of external net sales by destination, the individual regions contributed to the total external net sales in 2017 as follows: Europe / Middle East / Africa: €13,388 million (38.2%); North America: €10,143 million (29.0%); Asia / Pacific: €7,637 million (21.8%) and Latin America: €3,847 million (11.0%).

For the three months ended March 31, 2018, the individual regions contributed to the total external net sales (by destination) of €9,138 million as follows: Europe / Middle East / Africa: €3,907 million (42.8%); North America: €2,654 million (29.0%); Asia / Pacific: €1,927 million (21.1%) and Latin America: €650 million (7.1%).

13.2 Competitive Strengths

Bayer believes that the development of its business is supported by the following competitive strengths:

13.2.1 Ability to Build and Maintain Leadership Positions in Our Markets of Focus to Create Value

Bayer occupies leading positions in a number of its areas of focus. In this way we create value for our customers, shareholders and employees, while at the same time strengthening the Group's profitability. We believe that Pharmaceuticals has established itself as one of the world's market leaders in the therapeutic areas of cardiology, hematology, radiology and women's health care. Consumer Health, through its strong portfolio of brands, has become a major global seller of nonprescription OTC products. Crop Science, as a result of the Transaction and upon the successful integration of Monsanto, aims to become a global leader committed to transforming agriculture, which offers advanced customized agronomic solutions designed to help farmers achieve the productivity increases needed to feed an ever growing world population. Additionally, Animal Health ranks among the innovators in its field.

13.2.2 Well-Positioned to Deliver Continuously Strong Operating Performance

Bayer has a long-standing record of successful operating performance and a strong reputation for high-quality products, which is underpinned by a stringent, group-wide quality management. Since 2010, the Group has continuously delivered growth in terms of external net sales, EBITDA before special items, EBITDA margin before special items and Core EPS. We strive to maintain and further build on these results in the future, and consider ourselves to be well-positioned to do so. With respect to Pharmaceuticals, we believe the combined peak sales potential of our key growth products, Xarelto™, EYLEA™, Xofigo™, Stivarga™ and Adempas™, to be at above €10 billion, which is expected to drive future growth at Pharmaceuticals. Regarding Crop Science, we expect to benefit from a cyclical upswing and long-term above GDP growth potential due to several macro-economic trends,

such as a growing world population, a decrease in land available for agriculture per capita and a simultaneous increase in demand for yield/productivity increases.

13.2.3 Successful Focus on Innovation to Foster Growth

As a business driven by innovation, we have succeeded in establishing an innovation culture which has driven the success of our key growth products and which we believe will continue to be crucial to our success in the future. The know-how and skills of our employees are our most valuable resource in this regard. We have increased our R&D investments in recent years and Bayer (excluding Monsanto) plans to invest around €4.1 billion in 2018. At Pharmaceuticals, we believe that some of our most promising late-stage pipeline assets, vericiguat, finerenone, vilaprisan, darolutamide (previously ODM-201), anetumab ravtansine and copanlisib, have a combined peak sales potential of equal to or more than €6 billion, assuming that regulatory approvals are obtained, and market launches occur, according to plan. Consumer Health intends to further accelerate innovation by creating more efficient processes, increasing customer-centricity of its innovation efforts and building new digital capabilities. At Crop Science, we are pursuing the advancement of a strong pipeline across crops, indications and technologies. Following completion of the Transaction, we intend to deploy the Combined Agriculture Business' joint innovation capabilities to deliver enhanced solutions for the next generation of farming. We will focus on delivering integrated systems based on technologies optimally designed to work together to increase efficiency in farming for our customers.

13.2.4 Strong Track Record of Value Creation through Portfolio Management

We have a history of delivering value to our shareholders through active portfolio management. In the course of transitioning to a life science business, Bayer has closed around 150 deals since 2005, with a total transaction value of approximately €60 billion. In recent years, Bayer has successfully integrated the Merck Consumer Care Business and has divested most of its interest in Covestro, mainly in connection with Covestro's stock market floatation and through subsequent sales of Covestro's shares; we have also disposed of our Diabetes Care Business and our Environmental Science Consumer Business. Bayer intends to build on this strong track record also with respect to the Transaction, which we expect will be no more complex than previous integrations such as the acquisition of Schering AG in 2006.

Our portfolio management approach is based on clearly defined general portfolio criteria which include our focus on markets with long-term above GDP growth potential, the ability to create attractive returns, success driven by innovation-based business models, or the potential to achieve leadership positions. Our portfolio management decisions are based on regular portfolio review and market opportunity. We consider strong value creation to be imperative, and evaluate key performance indicators such as sales growth relative to market, Core EPS accretion and value generation. In managing our portfolio we also consider whether Bayer is the best owner for a potential target and adhere to the basic principle that no capital should be allocated to one business at the cost of underinvestment in another.

13.2.5 Process Excellence

Our global and local platforms of support functions, as well as a global supply network, are key underlying value drivers for Bayer, which we are continuously enhancing. This enables our businesses to focus on their commercial operations, while relying on the most professional and efficient support functions. Bayer Business Services, for example, provides an array of professional shared services in IT, procurement, human resources, finance and accounting, and also includes an in-house management consulting unit.

13.3 Group Strategy and Targets

Bayer is committed to addressing some of today's most pressing global challenges in health and nutrition by striving to drive the development of better medicines and the production of high-quality food through innovative solutions. Alongside our goal of achieving economic success, we also seek to make a responsible contribution to the United Nations Sustainable Development Goals "Good Health and Well-Being" and "Zero Hunger" within the scope of our entrepreneurial possibilities. We further strive to meet our responsibility to the environment and society, and to continuously develop our businesses such that they assume and maintain leadership positions in their respective industries and segments to achieve long-term success for our Company. We invest in a diversified portfolio of strong businesses that have historically created value and which we expect to create value in the future. Our efforts are sustained by our employees and our core competencies of innovation, customer focus, quality, process excellence and portfolio management. To advance in the consistent implementation of our strategy, we have set ambitious group targets for our company (excluding Monsanto) in the areas of growth and profitability, innovation, sustainability and employees. While the combined business and operations of Bayer and Monsanto will be managed by applying Bayer's principles, business practices and procedures following completion of the Transaction, the specific targets and goals set by Bayer prior to the Transaction will be reevaluated.

13.3.1 Growth & Profitability

One of our prime objectives is to achieve profitable growth in order to steadily increase our enterprise value and sustain Bayer as a going concern. Economic planning and management for Bayer takes place within a framework for the segments determined by the Board of Management in the course of the strategic management process and translated into specific targets during operational planning. Continuous monitoring of business developments complements the planning and management process, and key management and performance indicators are regularly updated. This process also involves implementing strategic objectives and adopting countermeasures in the event of deviations from the budget. Moreover, the Board of Management uses targets and performance indicators to steer the company's sustainable alignment.

For more information on our key performance indicators, which we use to plan, manage and monitor the development of our business, see "*10.4 Additional Key Figures for the Bayer Group*."

13.3.2 Innovation

Innovation is one of our core competencies and therefore a cornerstone of our Group strategy. We define innovations as new solutions that generate added value for our customers and society. The R&D activities we pursue are aligned with the innovation strategies of our segments. At Pharmaceuticals, Crop Science and Animal Health, these activities focus on the research and development of safe and sustainable active ingredients to meet the need for new pharmaceutical and crop protection products as well as of new seed products. Meanwhile, Consumer Health concentrates primarily on the development of new, non-prescription products and solutions, such as improved product formulations, packaging, technical applications and medical devices. Second, the transition of prescription drugs to OTC status is a key tool for meeting the growing desire of customers for self-care products.

Bayer maintains a global network of R&D locations, which employ more than 14,000 researchers. In 2017, we increased our R&D investment by 3.1% on a currency-adjusted basis to €4,504 million. Bayer (excluding Monsanto) plans to invest around €4.1 billion in R&D in 2018.

Globally reliable protection of intellectual property rights is particularly relevant for an innovation company like Bayer. Depending on the legal framework, we therefore endeavor to obtain patent protection for our products and technologies in major markets. When we successfully market patent-protected products, this enables us to reinvest the profits in sustainable research and development. Several years can pass between the time we submit a product approval application and market launch of a product, so only a few years are left for generating a return on the investment in this intellectual property. At the end of 2017, we owned approximately 48,100 valid patent applications and patents worldwide relating to more than 4,700 protected inventions. For more information on Bayer's patent protection strategy and its intellectual property more generally, see "*13.8 Intellectual Property*."

Partnerships are integral to our innovation strategy. We enter into strategic alliances with various partners such as universities, governmental agencies, start-ups, suppliers and industry. This gives us access to complementary technologies and expertise that expand our framework conditions for innovation. Our open innovation network spans all parts of the company along the value chain. Our open innovation portal offers a platform for interdisciplinary collaborations between different organizational units. We also invest in venture capital funds that finance life science start-up companies, among other projects. Our newly established, cross-segment LifeHub in Boston, Massachusetts, United States, reinforces our opportunities to work with leading partners to develop new health care and nutrition solutions.

Another key tool for achieving our strategic goals is the use of new, groundbreaking technologies. We pursue such technologies through the activities of Leaps by Bayer (formerly Lifescience Center) and our Life Science Collaboration program.

In May 2016, ERS Genomics, Ireland ("ERS"), agreed to give Bayer access to ERS's CRISPR-Cas9 genome-editing patents, granting us rights for defined research applications of this technology. In August 2016, Casebia Therapeutics LLC, established by us and CRISPR Therapeutics in March 2016, launched operations to develop new, trend-setting therapeutics to treat blood diseases, blindness and congenital heart disease. In December 2016, Bayer and Versant Ventures established the company BlueRock Therapeutics, which will be active in the area of regenerative medicine. The company plans to develop highly efficient therapies based on induced pluripotent stem cells to cure various cardiovascular diseases, neurological disorders and diseases of the central nervous system.

In 2017, Bayer signed a global exclusive cooperation agreement with the biopharmaceutical company Loxo Oncology, Inc., Stamford, Connecticut, United States ("**Loxo Oncology, Inc**."), for the development and commercialization of larotrectinib (LOXO-101) and LOXO-195. Both compounds are being investigated in global studies for the treatment of patients with cancers harboring tropomyosin receptor kinase (TRK) gene fusions, which are genetic alterations across a wide range of tumors resulting in uncontrolled TRK signaling and tumor growth. Under

the terms of the agreement, Loxo Oncology, Inc., received an upfront payment of USD 400 million and is eligible for USD 450 million in milestone payments upon larotrectinib regulatory approvals and first commercial sale events in certain major markets and an additional USD 200 million in milestone payments upon LOXO-195 regulatory approvals and first commercial sale events in certain major markets. Bayer and Loxo Oncology, Inc. will jointly develop the two products, larotrectinib and LOXO-195, and share development costs on a 50/50 basis. Bayer will lead regulatory activities outside the U.S., and worldwide commercial activities. In the U.S., where Bayer and Loxo Oncology, Inc. will co-promote the products, the parties will share commercial costs and profits on a 50/50 basis. Loxo Oncology, Inc. will remain responsible for the filing in the U.S. Bayer will pay Loxo Oncology tiered double-digit percentage royalties on future net sales outside of the U.S. and milestone payments totaling USD 500 million for sales in U.S. and outside the U.S.

13.3.3 Sustainability

To us, sustainability means safeguarding our future social and economic viability. Understood in this context and as a part of our corporate strategy, sustainability is integrated into our day-to-day procedures. We underline our mission as a company that acts sustainably through our commitment to the U.N. Global Compact (UNGC) and the Responsible Care™ initiative, as well as through our involvement in the World Business Council for Sustainable Development (WBCSD). In our sustainability reporting we have followed the guidelines of the Global Reporting Initiative (GRI) for many years. Bayer is committed to the U.N. Sustainable Development Goals (SDGs) and has published a company position detailing this. Our innovations, products and services aim to contribute to overcoming some of the biggest global challenges, including the goals of “Zero Hunger” (SDG 2) and ”Good Health and Well-Being” (SDG 3) in particular.

Our defined targets with respect to our sustainability efforts involved the evaluation of all strategically important suppliers by 2017 as well as of potentially high-risk suppliers, i.e., those showing a sustainability risk based on a combination of country and category sustainability risks as well as a significant Bayer spend, by 2020. We also aim to achieve significant gains in energy efficiency and decreases in specific greenhouse gas emissions. Further, we have set goals to increase occupational safety and to assess the hazard potential of all substances used in quantities exceeding one metric ton p.a., and have established an annual compliance training for virtually all of our managers.

Responsibility for the Group’s sustainable orientation is concentrated centrally at the level of the Board of Management, as well as at the operational levels throughout the value chain. For further information on how sustainability management is organized at Bayer, refer to “*13.12 Sustainability*.”

We engage in an ongoing and systematic dialogue with our stakeholders since their expectations and viewpoints affect public acceptance of Bayer and thus our commercial success. We also believe this approach enables us to recognize trends and developments in society and our markets at an early stage and provide input for the continuing development of our business activities, risk management and reporting.

13.3.4 Employees

Our business success is based to a large extent on the knowledge, skills, commitment and satisfaction of our employees. As a global life science company, we build on our highly qualified employees and we are constantly striving to attract people, whose personal ambitions, qualifications and values are in line with our own. Our globally established employer branding “Passion to Innovate | Power to Change” describes our work culture and makes clear what we expect of our employees and, at the same time, what we as a company offer them. We use our employer branding internally to enhance employee identification and externally to position the company on the employment market. The Group hired 11,731 new employees on a full-time equivalent basis in 2017. As of December 31, 2017, the Group employed 99,820 employees in total.

To meet the need for skilled employees, Bayer provides sound training in more than 20 different occupations and offers more vocational training places than required to meet its needs. In 2017, 746 young people started a vocational training course at Bayer in Germany alone. In addition, Bayer offers trainee programs in various areas for those embarking on a career and internships for students around the world. Furthermore, employees in all fields are able to take part in extensive ongoing training opportunities. We bundle our Group-wide continuing education offerings in the Bayer Academy, which offers both continuous professional training and systematic development of managerial employees and has received numerous international awards.

As a reflection of our dedication to continuous improvement, we have set ambitious targets regarding our employees. First, we aim to continuously improve employee engagement. Additionally, we intend to increase the proportion of women in senior management and the proportion of senior managers from outside the EU, the U.S. and Canada.

13.4 Business Operations

The following description provides detailed information on the operations of our current segments Pharmaceuticals, Consumer Health, Crop Science, and Animal Health, which together make up our Life Sciences business, as well as summary information on our former segment Covestro.

13.4.1 Pharmaceuticals

13.4.1.1.1 *Introduction*

Pharmaceuticals primarily engages in the therapeutic areas of cardiology, oncology, women's health care, hematology as well as ophthalmology, and until completion of the Transaction will be Bayer's largest individual segment in terms of net sales, accounting for €16.8 billion, or 48.1%, of Bayer's external net sales in fiscal year 2017 and of €4.1 billion, or 44.6%, of Bayer's external net sales in the three months ended March 31, 2018.

The following table presents an overview of the economic performance of Pharmaceuticals for the fiscal years 2015, 2016, 2017 and the three months ended March 31, 2018:

	For the fiscal year ended December 31,			For the three months ended March 31,	
	2015[1]	2016[1]	2017	2017[2]	2018
	(unaudited, unless otherwise indicated) (in € million)			(unaudited) (in € million)	
Net sales (external)	**15,308[3]**	**16,420[3]**	**16,847[3]**	**4,263**	**4,075**
Sales by region					
Europe / Middle East / Africa	5,981	6,417	6,521	1,606	1,611
North America	3,937	4,194	4,229	1,073	923
Asia / Pacific	4,319	4,775	5,013	1,312	1,303
Latin America	1,071	1,034	1,084	272	238
EBITDA[4]	**4,375**	**5,084**	**5,576**	**1,499**	**1,414**
Special Items	(241)	(167)	(135)	(3)	(1)
EBITDA before special items[4]	**4,616[3]**	**5,251[3]**	**5,711[3]**	**1,502**	**1,415**
EBIT[4]	**3,028[3]**	**3,389[3]**	**4,325[3]**	**1,219**	**1,163**
Special Items	(299)	(558)	(340)	(36)	(1)
EBIT before special items[4]	**3,327[3]**	**3,947[3]**	**4,665[3]**	**1,255**	**1,164**
Net cash provided by operating activities	**3,157[3]**	**3,368[3]**	**3,867[3]**	**973**	**1,232**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

(2) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(3) Audited for the fiscal years ended December 31, 2015, 2016 and 2017.

(4) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group*."

13.4.1.2 Strategy

Demographic change is impacting health care systems through the growing number of chronic diseases and the increasing occurrence of multiple conditions. Pharmaceuticals is seeking to contribute to medical progress through its focus on researching, developing and marketing innovative medicines that provide significant clinical benefit and value, primarily in cardiology, oncology, women's health, hematology and ophthalmology.

Pharmaceuticals expects its medium-term growth to be primarily driven by its successfully launched products Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™. To safeguard long-term growth, the business continues to invest in R&D. Here its efforts are focused on the areas in which Pharmaceuticals sees a substantial need for innovation and can make a major impact through the expertise amassed by its researchers. This is true especially for cardiovascular diseases, cancer and certain uses in women's health. To supplement its R&D activities, Pharmaceuticals will continue to expand its portfolio through acquisitions, licensing agreements and external collaborations while maintaining a targeted approach.

In some countries where sections of the population have no access to innovative medicines via health care systems, Pharmaceuticals has established patient assistance programs for selected products. These aim particularly to provide access to oncology and cardiovascular products and products to treat chronic diseases such as multiple sclerosis and hemophilia. Such programs exist in the United States, China, South Africa, a number of countries in Southeast Asia, and other regions.

13.4.1.3 Products

13.4.1.3.1 *Overview of Key Products*

The growth of Pharmaceuticals in 2017 was mainly driven by its key growth products, Xarelto™, EYLEA™, Stivarga™, Xofigo™ and Adempas™, which contributed combined external net sales of €6,196 million in 2017. The combined peak sales potential estimate for these products amounts to more than €10 billion.

In the following, we briefly describe Pharmaceuticals' best-selling products in fiscal years 2015 through 2017 and in the three months ended March 31, 2018 by therapeutic area. The top fifteen best-selling products in each year and in the three months ended March 31, 2018, as presented under "*12.10.2.1.1 Net Sales*," "*12.9.2.1.1 Net Sales*" and "*12.8.2.1.1 Net Sales*," accounted for approximately three-quarters of Pharmaceuticals' sales in each of these periods.

13.4.1.3.1.1 Cardiovascular

Xarelto™ (active ingredient: rivaroxaban): Xarelto™ is an oral anticoagulant for the treatment and prevention of blood clots. Rivaroxaban, the Xarelto™ active ingredient, was invented by Bayer and is being jointly developed with Janssen Research & Development, LLC, United States ("**Janssen R&D**"), a subsidiary of Johnson & Johnson. In the United States, Xarelto™ is marketed by Janssen Pharmaceuticals, Inc. ("**Janssen Pharmaceuticals**"), also a subsidiary of Johnson & Johnson, and Bayer earns royalties on Xarelto™ sales.

For information on ongoing litigation concerning Xarelto™, see "*1.1.13 Bayer is exposed to material risks from legal disputes and proceedings.,"* "*13.15.1 Product-related Litigation*" and "*13.15.2 Patent Disputes*."

Adempas™ (active ingredient: riociguat): Adempas™ is a member of a class of vasodilation agents known as soluble guanylate cyclase (sGC) modulators for the treatment of particular forms of chronic thromboembolic pulmonary hypertension (CTEPH) and pulmonary arterial hypertension (PAH). The development and commercialization of sGC modulators is part of Pharmaceuticals' strategic collaboration with Merck & Co., Inc.

For information on patent infringement suits filed by Bayer regarding Adempas™, see "*13.15.2 Patent Disputes.*"

Adalat™ (active ingredient: nifedipine): Adalat™ is used to treat hypertension and coronary heart disease and is administered orally in tablet form.

Aspirin™ Cardio (active ingredient: acetylsalicylic acid): Aspirin™ Cardio is used for the secondary prevention of heart attacks.

13.4.1.3.1.2 Oncology

Stivarga™ (active ingredient: regorafenib): Stivarga™ is a cancer drug that inhibits various signal pathways that are responsible for tumor growth. Stivarga™ is approved for the treatment of patients with metastatic colorectal cancer (mCRC) and gastrointestinal stromal tumors (GIST). Stivarga™ was developed by Bayer. In 2011, Bayer and Onyx Pharmaceuticals, Inc., a subsidiary of Amgen Inc., United States ("**Onyx Pharmaceuticals**"), agreed that Onyx Pharmaceuticals would receive royalties on global sales of Stivarga™ in the area of cancer treatment.

Regorafenib, the Stivarga™ active ingredient, has also been investigated for treatment of unresectable liver cancer and in the course of 2017 was approved by the United States Food and Drug Administration ("**FDA**"), the Japanese Ministry of Health, Labour and Welfare, the European Commission and the Chinese Food and Drug Administration for the use in the second-line treatment of patients with hepatocellular carcinoma who previously had been treated with sorafenib. For information regarding patent infringement suits filed by Bayer regarding Stivarga™, see "*13.15.2 Patent Disputes*."

Xofigo™ (active ingredient: radium-223 dichloride): Xofigo™ is a cancer drug for the treatment of adult patients with castration-resistant prostate cancer (CRPC) with symptomatic bone metastases but no known visceral metastases.

Nexavar™ (active ingredient: sorafenib): Nexavar™ is a cancer drug that inhibits various signal pathways that are responsible for tumor growth. Nexavar™ is approved for the treatment of patients with certain types of liver, kidney or thyroid cancer. Bayer has worldwide exclusive marketing rights for Nexavar™, with Bayer paying a royalty on U.S. sales to Onyx Pharmaceuticals. Outside the U.S., Bayer and Onyx Pharmaceuticals share profits globally, excluding Japan.

For information regarding patent infringement suits filed by Bayer regarding Nexavar™, see "*13.15.2 Patent Disputes*."

13.4.1.3.1.3 Ophthalmology

EYLEA™ (active ingredient: aflibercept): EYLEA™ is a product jointly marketed with Regeneron Pharmaceuticals, Inc., United States ("**Regeneron Pharmaceuticals**"). The EYLEA™ active ingredient, aflibercept, blocks the natural growth factor VEGF (vascular endothelial growth factor), thus preventing the abnormal formation of new blood vessels that tend to leak fluid. The medication is administered directly into the eye and is approved for the treatment of wet age-related macular degeneration (AMD), visual impairment due to diabetic macular edema (DME), visual impairment due to macular edema secondary to retinal vein occlusion (RVO) (branch RVO or central RVO) and myopic choroidal neovascularization (mCNV). Regeneron Pharmaceuticals holds exclusive rights to the product in the United States, while in other countries it is marketed by Bayer.

13.4.1.3.1.4 Hematology

Kogenate™/Kovaltry™ (active ingredient: antihemophilic factor (recombinant)): Kogenate™ / Kovaltry™ are blood-clotting medicines allowing for prophylactic treatment of hemophilia A patients to prevent or reduce the frequency of bleeding episodes and in connection with peri-operative management (surgical prophylaxis). It has also demonstrated efficacy and tolerability as an on-demand therapy.

13.4.1.3.1.5 Women's Health

Mirena™ product family (levonorgestrel-releasing intrauterine system): The Mirena™ product family (Mirena™, Jaydess™ / Skyla™ and Kyleena™) consists of hormone-releasing intrauterine devices providing long-term reversible contraception. For information on ongoing litigation concerning Mirena™, see "*13.15.1 Product-related Litigation*."

YAZ™/Yasmin™/Yasminelle™ (active ingredient: drospirenone and ethinyl estradiol): YAZ™, Yasmin™ and Yasminelle™ make up a line of combined oral contraceptives. For information on litigation concerning YAZ™ / Yasmin™, see "*1.1.13 Bayer is exposed to material risks from legal disputes and proceedings*." and "*13.15.1 Product-related Litigation*."

13.4.1.3.1.6 Radiology

Gadavist™/Gadovist™ (active ingredient: gadobutrol): Gadavist™ / Gadovist™ is a magnetic resonance imaging ("MRI") contrast agent used for MRI to detect pathologies of the whole body in adults and children of all ages.

Ultravist™ (active ingredient: iopromide): Ultravist™ is a X-ray contrast agent suitable for all modern X-ray techniques requiring contrast enhancement.

Medrad™ Stellant™: Medrad™ Stellant™ is a contrast agent injection system used for the specific purpose of injecting intravenous contrast media for diagnostic studies in computed tomography (CT) applications.

13.4.1.3.1.7 Other

Betaferon™/Betaseron™ (active ingredient: interferon beta-1b): Betaferon™ / Betaseron™ is used for the treatment of multiple sclerosis, particularly to reduce the number of relapses in patients with relapsing forms of multiple sclerosis. For information regarding an ongoing patent dispute regarding Betaferon™, see "*13.15.2 Patent Disputes*."

Glucobay™ (active ingredient: acarbose): Glucobay™ is a diabetes medication that belongs to the class of oral antidiabetic drugs and is used to control blood glucose.

Avalox™/ Avelox™ (active ingredient: moxifloxacin): Avalox™ / Avelox™ is an antibiotic approved for the treatment of infections of the lower and upper airways, the lungs, and in some countries for the treatment of complicated skin and skin structure infections (cSSSI) as well as intraabdominal and pelvic infections.

Levitra™ (active ingredient: vardenafil HCl): Levitra™ is used on demand to treat erectile dysfunction.

Cipro™/Ciprobay™ (active ingredient: ciprofloxacin): Cipro™ / Ciprobay™ is an anti-bacterial drug used for a wide variety of infections.

13.4.1.3.2 *Patent Protection for Key Products*

The following table provides an overview of key products of Pharmaceuticals, which benefit from significant patent protection, distinguishing by patent-protected feature related to the product, key markets and relevant expiration dates.

	Market										
	Germany	France	U.K.	Italy	Spain	Japan	China	Switzerland	Brazil	U.S.A.	Canada
Products											
Adempas™											
Active ingredient	2028	2028	2023[1]	2028	2028	2027-2028[4]	2023	2028	2023[2]	2023[1]	2023
Production process/ intermediate	2030	2030	2030	2030	2030	2030	2030	2030	2030[2]	2030	2030
EYLEA™											
Active ingredient	2025	2025	2020[1]	2025	2025	2021-2023[4]	2020	2025	2020[2]	–	2020
Formulation	2027	2027	2027	2027	2027	2028-2029[4]	2027[2]	2027	2027[2]	–	2027
Kogenate™											
Active ingredient	–	–	–	–	–	–	–	–	–	–	2021
Formulation	2017	2017	2017	2017	2017	2020	2017	2017	2020	–	2017
Kovaltry™											
Active ingredient	–	–	–	–	–	–	–	–	–	–	2021
Formulation	2017	2017	2017	2017	2017	2023[5]	2017	2017	2020	–	2017
Production process	2018	2018	2018	2018	2018	2023[5]	2018	2018	2023	2018[1]	2018
Production process (cell line/ chaperone)	2029[5]	2024[1]	2024[1]	2029[5]	2024[1]	2028[5]	–	–	–	2024	2024
Mirena™											
Inserter	2029	2029	2029	2029	2029	2029	2029	2029	2029[2]	2031[3]	2029
Nexavar™											
Active ingredient	2021	2021	2021	2021	2021	2021-2025[4]	2020	2021	2025	2020	2020
Salt form	2022	2022	2022	2022	2022	–	–	2022	–	–	–
Polymorph	2025	2025	2025	2025	2025	2025-2026[4]	2025	2025	2025[2]	2027	2025
Formulation	2026	2026	2026	2026	2026	2026-2027[4]	2026	2026	2026[2]	2028[3]	2026
Stivarga™											
Active ingredient	2028	2028	2024[1]	2028	2028	2026[4]	2024	2028	2024[2]	2031	2024
Formulation	2025	2025	2025	2025	2025	2026[4]	2025	2025	2025[2]	2031	2025
Production process	2031	2031	2031	2031	2031	2031	2031	2031	2031[2]	2031	2031
Xarelto™											
Active ingredient	2023	2023	2023	2023	2023	2022-2025[4]	2020	2023	2022	2024	2020
Formulation	2024	2024	2024	2024	2024	2025-2028[4]	2024	2024	2024[2]	2024	2024
Xofigo™											
Use	2024	2024	2024	2024	2024	2019[1]	2019	2024	–	2022[5]	2019
Production process	2031	2031	2031	2031	2031	2031	2031	2031	2031[2]	2031	2031[2]

(1) Current expiration date; patent term extension applied for.
(2) Patent application pending.
(3) Patent term revised.
(4) Application-specific term extension(s).
(5) Patent term extension granted.

For more information on Bayer's patent protection strategy and its intellectual property more generally, see "*13.8 Intellectual Property*."

13.4.1.4 R&D

13.4.1.4.1 *Introduction*

Pharmaceuticals focuses its R&D efforts on indications with high medical need in the areas of cardiovascular diseases, oncology, women's health care, hematology and ophthalmology. R&D activities are mainly conducted in Germany, the United States, Japan, China, Finland and Norway.

Pharmaceuticals' spending on R&D has increased every year from 2012 until 2017. In fiscal year 2017, Pharmaceuticals' R&D expenses amounted to 17.1% of Pharmaceuticals' net sales. In addition to conducting clinical trials with drug candidates from its R&D pipeline, Pharmaceuticals' R&D activities focus on strengthening products already on the market through additional development activities to further improve their application and/or expand their spectrum of indications.

In line with Pharmaceuticals' target for 2017, ten new molecular entities ("**NMEs**") from the research pipeline were transitioned into preclinical development in 2017. For 2018 the target will be the transition of nine NMEs and one new indication or formulation project into preclinical development. In preclinical trials these substances are examined further in various models with respect to their suitability for clinical trials and linked "first-in-man" studies. Bayer defines NMEs as new chemical or biological substances that have not been in development to date.

Clinical trials are an essential tool for determining the efficacy and safety of new drugs before they can be used to diagnose or treat diseases. The benefits and risks of new medicinal products must always be scientifically proven and well documented. Further, the nature of drug discovery and development is such that not all compounds can be expected to meet the predefined project goals. It is possible that any or all of the development projects mentioned in the following may have to be discontinued for scientific and/or commercial reasons and will not result in commercialized products. It is also possible that the requisite FDA, European Medicines Agency ("**EMA**") or other regulatory approvals will not be granted for the compounds being tested. For more information on the regulatory framework governing product development processes at Pharmaceuticals and the typical stages in the development process, see "*14.1.1 Development of Drugs*." See also "*1.1.6 There can be no assurance that Bayer will identify a sufficient number of research candidates and that Bayer's products will receive and maintain any necessary regulatory approvals, and any increase in regulatory and legal requirements, including as a result of higher public expectations, could lead to more costly and lengthy registration or approval procedures and could impair or preclude Bayer's product development and commercialization efforts*."

13.4.1.4.2 *Drug Development Pipeline and Drug Candidates Submitted for Approval*

The following tables show Pharmaceuticals' most important drug candidates currently in Phase II or Phase III of clinical testing.

R&D Projects (Phase II)[1]

Projects	Indication
Anetumab Ravtansine (mesothelin ADC)	Malignant pleural mesothelioma[2]
BAY 1128688 (AKR1C3 inhibitor)	Endometriosis
Fulacimstat (BAY 1142524, chymase inhibitor)	Heart failure
Fulacimstat (BAY 1142524, chymase inhibitor)	Chronic kidney disease
BAY 1193397 (AR alpha 2c rec ant.)	Peripheral artery disease (PAD)
BAY 1213790 (anti-FXIa antibody)	Prevention of thrombosis
BAY 2306001 (IONIS-FXIRx)	Prevention of thrombosis[3]
Neladenoson bialanate	Chronic heart failure
Nesvacumab (Ang2 antibody) + aflibercept	Serious eye diseases[4]
Radium-223 dichloride	Breast cancer with bone metastases
Radium-223 dichloride	Multiple myeloma
Riociguat	Systemic sclerosis
Vilaprisan (S-PRM)	Endometriosis

(1) As of April 5, 2018
(2) This trial did not meet its primary endpoint. However, it has not yet been terminated. Additional studies investigating anetumab ravtansine as a treatment for different forms of solid tumors are ongoing.
(3) Sponsored by Ionis Pharmaceuticals, Inc.
(4) Sponsored by Regeneron Pharmaceuticals.

R&D Projects (Phase III)[1]

Projects	Indication
Copanlisib (PI3K inhibitor)	Various forms of non-Hodgkin lymphoma (NHL)
Darolutamide (ODM-201, AR antagonist)	Castration-resistant nonmetastatic prostate cancer
Darolutamide (ODM-201, AR antagonist)	Hormone-sensitive metastatic prostate cancer
Finerenone (MR antagonist)	Diabetic kidney disease
Molidustat (HIF-PH inhibitor)	Renal anemia

R&D Projects (Phase III)[1]

Projects	Indication
Radium-223 dichloride	Combination treatment of castration-resistant prostate cancer[2]
Rivaroxaban	Anticoagulation in patients with chronic heart failure[3]
Rivaroxaban	Prevention of venous thromboembolism in high-risk patients after discharge from hospital[3]
Rivaroxaban	Peripheral artery disease (PAD)
Rivaroxaban	Venous thromboembolism (VTE) treatment in children
Vericiguat (sGC stimulator)	Chronic heart failure[4]
Vilaprisan (S-PRM)	Symptomatic uterine fibroids

(1) As of April 5, 2018
(2) This trial was unblinded ahead of schedule and there are no patients who are still receiving active treatment. Otherwise, however, the trial is continuing, especially with regard to per protocol patient monitoring. The final assessment has not yet been completed.
(3) Sponsored by Janssen R&D
(4) Sponsored by Merck & Co., Inc.

Pharmaceuticals regularly evaluates its R&D pipeline in order to prioritize its most promising projects. Following the completion of all required studies with a number of these drug candidates, applications to one or more regulatory agencies for approvals or approval extensions are submitted. The most important drug candidates currently in the approval process are:

Main Products Submitted for Approval[1]

Projects	Indication
Damoctocog alpha pegol (long-acting rFVIII)	Europe, U.S.A., Japan: hemophilia A
Rivaroxaban	Europe, U.S.A.: prevention of major adverse cardiac events (MACE), COMPASS trial
Rivaroxaban[2]	U.S.A.: secondary prophylaxis of acute coronary syndrome (ACS), Rivaroxaban in combination with dual antiplatelet therapy (DAPT); ATLAS trial
Larotrectinib (LOXO-101, TRK fusion inhibitor)	U.S.A.: Solid tumors with NTRK gene fusions[3]

(1) As of April 5, 2018
(2) Submitted by Janssen R&D
(3) Submitted by Loxo Oncology, Inc.

13.4.1.4.3 *Key Pipeline Assets*

The following table highlights some of Pharmaceuticals' key pipeline assets together with their indication, peak sales potential and expected year of launch. Bayer's Board of Management believes that the pipeline projects described below have a combined peak sales potential of €6 billion or more.

Key Pharma Pipeline Assets With Combined Peak Sales Potential of ≥ €6 billion

Pipeline Project	Indication	Peak Sales Potential	Expected Launch Date
Vericiguat[1]	Worsening chronic heart failure	~ €0.5bn	2021
Finerenone	Diabetic kidney disease	≥ €1.0bn	2021
Vilaprisan	Uterine fibroids	≥ €1.0bn	2021
Darolutamide (previously: ODM-201, AR antagonist)	Non-metastatic castration-resistant prostate cancer; metastatic hormone-sensitive prostate cancer	≥ €1.0bn	2019
Anetumab Ravtansine	Various cancer types, including ovarian cancer and mesothelioma	≥ €2.0bn	2019
Copanlisib	Lymphoma	≥ €0.5bn	2018

(1) Sponsored by Merck & Co.

13.4.1.4.4 *Collaborations and Strategic Alliances*

While Pharmaceuticals operates its own science and innovation centers, Pharmaceuticals also augments its own research capacities through collaborations and strategic alliances with external industrial and academic research partners. This enables it to gain access to complementary technologies and external innovation potential.

The following table provides summary information on Pharmaceuticals' current main collaborations:

Main Cooperations

Partner	Cooperation objective
Broad Institute	Strategic partnership in the field of genome and drug research in cardiology aimed at using findings from human genetics to develop new cardiovascular therapies and in the field of oncology to identify and develop active ingredients that target tumor-specific gene alterations
German Cancer Research Center (DKFZ)	Strategic partnership for the investigation and development of new therapeutic options in oncology, especially in immunotherapy
Evotec AG	Collaboration to identify development candidates for the treatment of endometriosis and kidney diseases
ImmunoGen Inc.	Development of antibody-drug conjugates (ADCs) for novel tumor therapies
Janssen Research & Development, LLC of Johnson & Johnson	Development of Xarelto™ (rivaroxaban)
Loxo Oncology, Inc.	Development and marketing of larotrectinib (LOXO-101) and LOXO-195 for the treatment of cancer patients with a mutation of the TRK gene
Merck & Co., Inc.	Development and marketing collaboration in the field of soluble guanylate cyclase (sGC) modulation
MorphoSys AG	Development of antibody-drug conjugates using MorphoSys's HuCAL technology
Orion Corporation	Development of darolutamide (previously ODM-201) for the treatment of patients with prostate cancer
PeptiDream Inc.	Active ingredient research in various therapeutic areas and target classes with the help of PeptiDream's Peptide Discovery Platform System technology
Regeneron Pharmaceuticals Inc.	Development of EYLEA™ (aflibercept) to treat various eye diseases
	Development of a combination therapy of the anti-angiopoietin-2 (Ang-2) antibody nesvacumab and aflibercept for the treatment of serious eye diseases
Vanderbilt University Medical Center	Strategic research alliance to identify and develop new potential active ingredients for the treatment of kidney diseases

For information on two significant cooperations with CRISPR Therapeutics and Versant Ventures and conducted at Leaps by Bayer and further information on the cooperation with Loxo Oncology, Inc., refer to "*13.3.2 Innovation*."

13.4.1.5 Markets and Distribution

13.4.1.5.1 *Markets and Competition*

Growth in the global pharmaceuticals market was below the prior-year level at 3% in 2017[17] (2016: 5%[18]). Intensified pricing pressure caused by generic competition and health care reforms led to lower growth in all regions compared with the prior year. The pharmaceuticals market is forecasted to post slightly higher growth in 2018 (4%)

[17] CBI – IQVIA Market Prognosis
[18] Quintiles IMS – Market Prognosis March 2017 Update

than in 2017.[19] In Bayer's view, the main growth drivers are likely to be new product launches. The expiration of patents is expected to have a negative impact as it could result in increased competition from generics. Bayer expects a positive development in the United States, Europe, Latin America and Asia, but slower growth in the Japanese pharmaceuticals market.

In general, the increase in quality of life and life expectancy is leading to a heightened focus on the medical care needs of elderly patients. Accordingly, Bayer believes that Pharmaceuticals' concentration on certain partly age-related diseases such as cancer or chronic cardiovascular disorders harbors opportunities for the business. In response to the growing demand for innovative health care products to treat age-related diseases, Pharmaceuticals is concentrating its research and development activities on relevant therapeutic areas.

There is a risk that Pharmaceuticals' growth and market share could be impeded by continued increasing global cost pressure on health care systems, price regulations and pressure on prices due to aggressive price policies by competitors and generic suppliers. Price controls and pricing pressure reduce earnings from the business' pharmaceutical products and may occasionally make the market launch of a new product unprofitable. Bayer expects the current extent of regulatory controls and pricing pressure to persist or increase. For more information on the regulatory environment, in which Pharmaceuticals operates, see "*14.1 Pharmaceuticals"* and "*1.1.17 Pharmaceuticals is exposed to pricing pressure resulting from regulation and market conditions, which may negatively impact Bayer's business and results of operations.*"

A further factor is that Pharmaceuticals operates in the highly competitive life science markets, see also "*1.1.4 The industries in which Bayer operates are highly competitive, and competitive pressure could increase. Furthermore, disruptive technologies or changes to competitors' business models may adversely affect Bayer's business.*" Pharmaceuticals encounters competition in all of its geographical markets from large national and international competitors. Furthermore, corporate mergers, along with business practices such as aggressive pricing strategies – not only in the field of generic competition – may adversely affect Pharmaceuticals' earnings.

In the following, we provide an overview of Pharmaceuticals' main competitors by therapeutic areas with a focus on some of its key products:

- Cardiovascular: Actelion (a Janssen Pharmaceuticals company of Johnson and Johnson), Boehringer Ingelheim, Bristol-Myers Squibb and Pfizer (as partners with respect to selected products), Daiichi Sankyo.
- Oncology: Astellas Pharma, Bristol-Myers Squibb, Janssen Pharmaceuticals (a Johnson & Johnson company), Merck, Pfizer, Roche, Sanofi.
- Ophthalmology: Allergan, Novartis.
- Hematology: Bioverativ, CSL Behring, Novo Nordisk, Octopharma, Pfizer, Shire (formerly Baxalta), Swedish Orphan Biovitrum (SOBI).
- Women's Health: Allergan, Gedeon Richter, Merck, Teva.
- Radiology: Bracco, General Electric, Guerbet.

13.4.1.5.2 *Distribution*

The products of Pharmaceuticals are primarily distributed through wholesalers, pharmacies and hospitals as well as, to a limited extent, directly to patients. Pharmaceuticals is further bound by all codes of the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), which serve as a minimum global standard for all of Bayer's pharmaceutical products. In addition, Bayer observes the codes of the European Federation of Pharmaceutical Industries and Associations (EFPIA) for dealings with health care professionals and patient organizations. The WHO's Ethical Criteria for Medicinal Drug Promotion, together with national ethical standards that are usually also enshrined in industry codes at the local level, represent the minimum standard for the advertising of human pharmaceutical products at Bayer. For further information on regulation with respect to the marketing of drugs see "*14.1.2 Promotional and Pricing Practices, Marketing and Distribution of Drugs*." Pharmaceuticals is actively engaged in dialogues with patient organizations and groups so as to improve disease awareness and access to innovative therapies.

[19] CBI – IQVIA Market Prognosis

13.4.2 Consumer Health

13.4.2.1 Introduction

Consumer Health markets nonprescription OTC medicines, medical products and cosmetics in the dermatology, nutritional supplement, analgesic, digestive health, allergy, cold, foot care and sun protection categories, to treat and prevent diseases and to improve well-being through self-care solutions. These products include globally known brands such as Claritin™, Aspirin™, Aleve™, Bepanthen™ / Bepanthol™, Canesten™, Dr. Scholl's™ (only in the Americas) and Coppertone™.

Consumer Health has successfully integrated a number of acquired businesses since 2005, including the Merck Consumer Care Business and Dihon Pharmaceutical Group Co. Ltd., China, a pharmaceutical company specializing in the manufacture and marketing of OTC and herbal traditional Chinese medicine products, both of which it acquired in 2014.

The following table presents an overview of the economic performance of Consumer Health for the fiscal years 2015, 2016 and 2017 and the three months ended March 31, 2018:

	For the fiscal year ended December 31,			For the three months ended March 31,	
	2015[1]	2016[1]	2017	2017[2]	2018
	(unaudited, unless otherwise indicated) (in € million)			(unaudited) (in € million)	
Net sales (external)	**6,076[3]**	**6,037[3]**	**5,862[3]**	**1,601**	**1,409**
Sales by region					
Europe / Middle East / Africa	1,955	1,918	1,962	538	496
North America	2,635	2,627	2,480	701	596
Asia / Pacific	738	781	738	220	177
Latin America	748	711	682	142	140
EBITDA[4]	**1,222**	**1,296**	**1,145**	**384**	**308**
Special Items	(234)	(115)	(86)	(8)	(5)
EBITDA before special items[4]	**1,456[3]**	**1,411[3]**	**1,231[3]**	**392**	**313**
EBIT[4]	**768[3]**	**695[3]**	**518[3]**	**278**	**211**
Special Items	(237)	(292)	(300)	(9)	(5)
EBIT before special items[4]	**1,005[3]**	**987[3]**	**818[3]**	**287**	**216**
Net cash provided by operating activities	**816[3]**	**874[3]**	**1,059[3]**	**265**	**173**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

(2) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.

(3) Audited for the fiscal years ended December 31, 2015, 2016 and 2017.

(4) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group*."

13.4.2.2 Strategy

Increasing cost pressure on public health care systems and consumers taking greater personal responsibility for their health are increasingly putting the spotlight on the benefits of self-care. In addition, advancing digitization in the health care market necessitates a stronger focus on digital products and services.

Consumer Health is responding to these changes by investing in innovation to reinforce its core brands Claritin™, Aspirin™, Aleve™, Bepanthen™, Canesten™, Alka-Seltzer™, Dr. Scholl's™, One a Day™, Coppertone™, Elevit™ and Berocca™. Consumer Health is also expanding its digital range as well as its e-commerce activities.

Furthermore, Consumer Health is focusing on increasing its presence in key markets such as the United States, Germany, Brazil, Russia and China, as well as additional countries. It is also promoting the transfer of prescription medicines and active ingredients to nonprescription status (Rx-to-OTC switch), enabling them to be used in self-care.

13.4.2.3 Products

13.4.2.3.1 *Overview of Key Products*

The ten best-selling Consumer Health products made up 53% of Consumer Health's total net sales, at €3,229 million and €3,226 million for fiscal years 2015 and 2016, respectively, 54% at €3,153 million for fiscal year 2017 and 56% at €783 million for the three months ended March 31, 2018.

In the following, we briefly present Consumer Health's best-selling products in fiscal years 2015 through 2017 and in the three months ended March 31, 2018. The products are presented by categories. For a discussion of the best-selling products' contribution to Consumer Health's net sales in fiscal years 2015 through 2017 and in the three months ended March 31, 2018, see "*12.10.2.2.1 Net Sales,*" "*12.9.2.1.1 Net Sales*" *and* "*12.8.2.2.1 Net Sales."*

13.4.2.3.1.1 Allergy

Claritin™ (active ingredient: loratadine): The Claritin™ portfolio consists of allergy medicines in tablet and spray forms. Claritin™ is Consumer Health's largest brand, with its product family being available in more than 100 countries worldwide, for various indications and under different trademarks. It was acquired in connection with the acquisition of the Merck Consumer Care Business and is being steadily supplemented and expanded through new innovations. In 2016, Consumer Health introduced ClariSpray™, a 24-hour nasal spray, to the U.S. market.

13.4.2.3.1.2 Analgesics

Aspirin™ (active ingredient: acetylsalicylic acid): Our analgesic Aspirin™ has been on the market for more than 115 years. Its active ingredient's anti-platelet and blood thinning properties distinguish it from all other category ingredients. Aspirin™ is widely regarded as a benchmark product for pain relief and as a cornerstone therapy for preventing cardiovascular events such as heart attack or ischemic stroke.

For information on Aspirin™ Cardio, which is reported under Pharmaceuticals, see "*13.4.1.3.1.1 Cardiovascular*."

Aleve™ (active ingredient: naproxen sodium): Aleve™ is a pain relief medicine that is provided in tablet form and marketed in more than 20 countries as Aleve™ (North & Central America), Flanax™ (Mexico & Brazil), Aptonax™ (Latin America), and Lasonil™ (Italy).

13.4.2.3.1.3 Dermatology

Bepanthen™/Bepanthol™ (active ingredient: dexpanthenol): Bepanthen™ / Bepanthol™ is a medicated wound and skin care brand offering a range of healing and protection products for demanding skin conditions. The brand is over 70 years old and has enjoyed significant compound annual growth over the past decade, with sales almost quadrupling between 2005 and 2015. The brand continues to perform strongly across large markets such as Germany, Russia, Switzerland, Mexico and Turkey, driven by growth in the nappy rash and wound healing portfolios.

Canesten™ (main active ingredients: clotrimazole, bifonazole): Canesten™ is a skin and intimate health product. Its products are used for diagnosis, treatment and prevention of discomforting and embarrassing skin and intimate health conditions and contain the original active ingredient clotrimazole developed by Bayer. Clotrimazole – a fungicide – was first introduced on the global market in 1973. In recent years, the brand performed particularly well in large markets like the UK, Germany, Spain, Mexico and Brazil, driven by the positive performance of the women's intimate health portfolio.

13.4.2.3.1.4 Cough and Cold

Alka-Seltzer™ product family (active ingredients: anhydrous citric acid, sodium bicarbonate, analgesic, potassium bicarbonate, calcium carbonate, simethicone): Alka-Seltzer™ treats gastric complaints and Alka-Seltzer™ Plus treats cold symptoms.

13.4.2.3.1.5 Foot Care

Dr. Scholl's™: Dr. Scholl's™ is a series of foot care products sold by Bayer in the Americas. The brand was acquired in connection with the Merck Consumer Care Business acquisition. After net sales of Dr. Scholl's™ foot care products decreased in recent years, Consumer Health is now reinvesting in the brand in order to achieve its turnaround. Consumer Health plans to evolve Dr. Scholl's™ from a strictly foot care-focused brand to a brand that helps people move better.

13.4.2.3.1.6 Nutrition

One A Day™: One A Day™ consists of a line of vitamin products geared toward gender-specific formulas for the different nutritional concerns of women and men, prenatal support for women before, during and after pregnancy and nutritional support for people over the age of 50 and growing teens.

Elevit™: Elevit™ is a prenatal nutritional supplement with a 30-year history and has recorded significant compound annual growth over the past decade. Consumer Health launched the new two-phase system for Elevit™

(Elevit™1 and Elevit™2) in Germany in October 2016. These two complementary products for the healthy development of babies are specially tailored to the increased nutrient requirements of women in the conception and pregnancy phases. Consumer Health has also been working to stretch Elevit™ beyond conception and pregnancy to fertility (including men's fertility) and to provide nutritional support for breast-feeding mothers.

Supradyn™: Supradyn™ is a dietary supplement that contains 12 vitamins as well as minerals and trace elements and is available in many formats. The brand was acquired as part of the Roche acquisition in 2005 and launched in 1959 as one of Europe's first multivitamin products. Today, Supradyn™ is the leading multivitamin product in Europe[20].

13.4.2.3.1.7 Sun care

Coppertone™: Coppertone™ is a line of sunscreen products, with a 70-year history of providing sun protection for the entire family. The brand was acquired as part of the Merck Consumer Care Business acquisition. As Coppertone™ sales have decreased in recent years, Consumer Health is now reinvesting in the business to achieve its turnaround, with a focus on building long-term brand health through new positioning, consumer-centric innovation and a comprehensive new media marketing campaign.

13.4.2.4 R&D

Consumer Health concentrates on developing new nonprescription (OTC) products and solutions that improve the health and well-being of consumers in the areas of pain relief, dermatology, nutritional supplements, digestive health, allergy relief and cold symptoms, as well as foot care and sun care. The focus lies on product developments that are aligned to the desires and needs of consumers. Consumer Health's innovations range from new product formulations and packaging to technical applications and medical devices. Consumer Health maintains a global network of research and development facilities, with sites in the United States, France, Germany and China. Another important part of Consumer Health's strategy is transferring current prescription medicines that are suitable for self-care to OTC status (Rx-to-OTC switches).

In fiscal year 2017, Consumer Health's R&D expenses amounted to 4.1% of Consumer Health's net sales. Consumer Health was able to realize around 50 new consumer-validated concepts and thus significantly exceeded the target of 25 set for 2017. For 2018, the target has again been set at 25.

13.4.2.5 Markets and Distribution

13.4.2.5.1 *Markets and Competition*

According to Bayer's calculations, growth of the global consumer health market came in at slightly below 4% in 2017 (2016: 4%). Important growth drivers included steady demand for self-care products and a strong cold season in Europe. In contrast, a weaker allergy season, pricing pressure in the e-commerce distribution channel, and intensified competition weighed on growth. Bayer anticipates growth of 3 – 4% in 2018. The market is likely to remain difficult as a result of rising pricing pressure from e-commerce and consolidation of the retail sector.

Generally, weather conditions and other seasonal factors may impact the demand for some of Consumer Health's best-selling products in the cold, allergy, sinus & flu and sun protection categories, which could significantly affect Consumer Health's results of operations. For further information see also "*1.1.18 Bayer's business operations and financial performance may be affected by variations of weather conditions and other seasonal factors as well as by resistances.*"

The Consumer Health segment is exposed to the risk of existing business models being disrupted by digitalization or new digital products. Digitalization is a key factor in gaining a competitive advantage. If Consumer Health fails to adequately integrate this development into its existing business models, it could lose customers or market share. In the context of initiatives, Consumer Health monitors the market very closely and develops strategies to illustrate developments in its business models. However, increased competition and a difficult economic environment has had, and could in the future continue to have, a dampening effect on customer demand. Product demand may be significantly impacted by economic conditions in key markets, such as the United States, Consumer Health's most important market in terms of single-country sales, and emerging markets, such as China, Brazil and Russia. Due to Consumer Health's focus on key emerging markets, Bayer's results of operations may also become more volatile since the economic development in these markets, be it positive or negative, is often characterized by a greater sensitivity to trends in the global economy. For further information see also "*1.1.1 Sales and growth of the Bayer Group are dependent on the conditions of the global economy in general and of the economies where the*

[20] Quintiles IMS – MAT Q3 2016

Bayer Group operates in particular." and "*1.1.4 The industries in which Bayer operates are highly competitive, and competitive pressure could increase. Furthermore, disruptive technologies or changes to competitors' business models may adversely affect Bayer's business.*"

Consumer Health encounters competition in all of its geographical markets from large national and international competitors, such as Sanofi (in relation to digestive health; nutritionals and analgesics); Johnson & Johnson (in relation to digestive health; dermatology; cold, allergy, sinus, flu and sun care); GlaxoSmithKline and Novartis (as partners) (in relation to digestive health; dermatology; cold, allergy, sinus, flu and analgesics); Procter & Gamble (in relation to digestive health); Pfizer (in relation to nutritionals and analgesics); Reckitt Benckiser (in relation to cold, allergy, sinus, flu); L'Oreal (in relation to sun care); and Beiersdorf (in relation to sun care).[21]

13.4.2.5.2 *Distribution*

The nonprescription products of Consumer Health are generally sold in pharmacies, with supermarket chains, online specialists and other large retailers also playing a significant role in certain markets such as the United States.

Consumer Care is in constant dialogue with all customer groups and engages in market research to optimize its distribution processes. Consumer Health has now successfully introduced its excellence program to improve customer orientation in 22 countries. With this program the business is aiming to make Bayer the leading health care company in the areas of market development strategies, distribution and trading.

13.4.3 Crop Science

13.4.3.1 Introduction

Crop Science is an agriculture enterprise with businesses in crop protection, seeds and nonagricultural pest and weed control. Upon completion of the Transaction, which is expected to take place on or about June 7, 2018, Crop Science will become Bayer's largest division in terms of net sales. Bayer believes that the Transaction is an important step towards defining its position as an agricultural innovator. In addition, the Transaction will balance Bayer's life science portfolio with an enlarged Crop Science division, complementing Bayer's health care businesses, Pharmaceuticals and Consumer Health. For more information, see "*8. The Acquisition of Monsanto*."

In connection with the Transaction and related antitrust clearance proceedings, Bayer and BASF, in separate transactions entered into in October 2017 and April 2018, have agreed on the Transaction-related Divestments with respect to selected Crop Science businesses. The First Bayer Divestiture Package agreed upon in October 2017 includes Bayer's global glufosinate-ammonium herbicide business and the related LibertyLink™ technology for herbicide tolerance as well as respective R&D capabilities. The seeds businesses being divested include the global cotton seed business (excluding India and South Africa), as well as essentially the entire canola and soybean seed business. The Second Bayer Divestiture Package agreed upon in April 2018 in particular includes Bayer's global vegetable seeds business, certain seed treatment products, Bayer's research platform for wheat hybrids and certain glyphosate-based herbicides in Europe that are predominantly used in industrial applications. In addition, three research projects in the field of total herbicides and Bayer's digital farming business will be transferred. Bayer may license back, on a non-exclusive basis, technology needed for Bayer to sell certain digital agriculture products outside North America. The businesses covered by the Transaction-related Divestitures generated total sales of €2.2 billion for the fiscal year ended December 31, 2017. Following completion of the Transaction and the Transaction-related Divestments, Bayer will remain active in the areas covered by the Transaction-related Divestments as a result of the programs, products and offerings of Monsanto that it will acquire as part of the Transaction. For more information, see "*8.10 Overview of Transaction-related Divestments.*"

[21] Nicholas Hall – Full Year 2016; Euromonitor – Sun Care 2016

The following table presents an overview of the economic performance of Crop Science for the fiscal years 2015, 2016 and 2017 and the three months ended March 31, 2018:

	For the fiscal year ended December 31,			For the three months ended March 31,	
	2015[1]	2016[1]	2017	2017[2]	2018
	(unaudited, unless otherwise indicated) (in € million)			(unaudited) (in € million)	
Net sales (external)	**10,128[3]**	**9,915[3]**	**9,577[3]**	**3,120**	**2,861**
Sales by region					
Europe / Middle East / Africa	3,368	3,290	3,335	1,462	1,294
North America	2,570	2,616	2,772	1,042	969
Asia / Pacific	1,530	1,548	1,563	366	368
Latin America	2,660	2,461	1,907	250	230
EBITDA[4]	**2,628**	**2,280**	**1,716**	**1,091**	**981**
Special Items	222	(141)	(327)	(24)	(61)
EBITDA before special items[4]	**2,406[3]**	**2,421[3]**	**2,043[3]**	**1,115**	**1,042**
EBIT[4]	**2,094[3]**	**1,755[3]**	**1,235[3]**	**970**	**892**
Special Items	222	(143)	(408)	(37)	(61)
EBIT before special items[4]	**1,872[3]**	**1,898[3]**	**1,643[3]**	**1,007**	**953**
Net cash provided by operating activities	**749[3]**	**2,071[3]**	**1,884[3]**	**(679)**	**(703)**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

(2) Figures derived from the restated comparative figures for the three months ended March 31, 2017 as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018, which present Covestro as discontinued operations.

(3) Audited for the fiscal years ended December 31, 2015, 2016 and 2017.

(4) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group*."

Until December 31, 2017, Crop Science marketed its broad range of high-value seeds and innovative pest management solutions and provided extensive customer service for sustainable agriculture through its Crop Protection / Seeds unit. In addition, following the divestiture of the Environmental Science Consumer Business in 2016, Crop Science through its Environmental Science operating unit provided products and services exclusively for professional nonagricultural (i.e., non-crop) applications, such as vector and pest control and forestry. In connection with the Transaction and in preparation for the Combined Agriculture Business, the structure of Crop Science was adjusted as of January 1, 2018. In the new structure, all the strategic business entities – including the Herbicides, Fungicides, Insecticides and SeedGrowth businesses – are organizationally located directly below the Crop Science segment. The Crop Protection / Seeds unit has ceased to exist, as has the intermediate Crop Protection level below it. In addition, the business entities within Seeds (including Traits) are now regarded individually and not jointly. In line with this, Vegetable Seeds is reported separately. In view of the current size, the other Seeds businesses – comprising Corn Seed & Traits, Soybean Seed & Traits, Cotton Seed & Traits, Oilseeds & Traits and Other Seeds & Traits – are grouped together under Other (Seeds & Traits). Environmental Science continues to be managed as a separate entity, on the same level as the other strategic business entities. The new reporting structure is expected to be reviewed again, and may be modified, in light of the completion of the Transaction.

13.4.3.2 Strategy

The need for food, animal feed and renewable raw materials is growing worldwide. At the same time, however, the available arable land is limited and is increasingly endangered by the impact of climate change. In addition, there is a growing demand for sustainable farming practices. This requires innovative solutions that can be leveraged to boost agricultural productivity and guarantee food security. Crop Science's strategy as described in the following was formulated prior to completion of the Transaction and highlights certain strategic expectations in connection with the Transaction. While Crop Science currently expects the strategic considerations outlined below to also remain valid following completion of the Transaction, Crop Science is working on developing a new strategy for the Combined Agriculture Business, which will be communicated in due course.

As part of Crop Science's strategy to develop holistic solutions, Crop Science aims to build on its expertise in the integration of seed technology with chemical and biological crop protection. The business is also striving to drive digitization. In the field of digital farming, Crop Science plans to develop a proprietary range of services with specific data models to provide farmers with tailored recommendations on the targeted and correct use of its products, thus helping them to improve their yields.

In line with Crop Science's commitment to sustainable agriculture, the business promotes cost-effective and socially viable farming practices that use resources efficiently and protect the environment. By providing tailored

solutions, Crop Science aims to help smallholder farmers in developing and emerging countries to optimize agricultural production and improve their living standards. Moreover, as part of the Bayer ForwardFarming initiative, Crop Science develops and promotes innovative solutions for sustainable agricultural practices in collaboration with farmers. As part of these efforts, Crop Science is continuously expanding its network of model operations known as "ForwardFarms."

Following the successful integration of Monsanto and taking into account the Transaction-related Divestments, we see additional opportunities for combining the complementary innovative expertise of Bayer and Monsanto. Feeding a growing global population in an ecologically sustainable way is among the challenges faced by agriculture and requires a new approach that more systematically integrates expertise across seeds, traits and crop protection including biologicals. We believe the merger will enable us to offer a broader portfolio of innovative products tailored to meet farmers' individual needs and the many challenges they face. The range and depth of the combined research and development activities should make it possible to optimize the various technologies so that we can accelerate the time-to-market of enhanced innovations. We further believe that by combining the two companies' innovation capacities and research and development budget, we will be able to more effectively tackle the challenges faced in developing and introducing innovations in agriculture, including longer and more costly development cycles and stricter regulatory requirements. In the medium to long term, we plan to leverage the strengths of the combined R&D platform to deliver pioneering technologies faster and to provide our customers with advanced, customized product solutions on the basis of agricultural analysis, along with supporting digital farming applications. These developments are expected to result in significant and lasting benefits for farmers: from improved sourcing and increased convenience to higher yield, better environmental protection and sustainability. We believe the Combined Agriculture Business will be very well-positioned to tap the considerable long-term growth potential of the agricultural sector. For further information on the Transaction and its strategic rationale, see "*8. The Acquisition of Monsanto*."

13.4.3.3 Products

13.4.3.3.1 *Introduction*

In fiscal year 2017, Crop Protection's products accounted for €7,403 million in external net sales, followed by Seeds with €1,503 million in external net sales, and Environmental Science, now only comprising the business for professional users, which contributed €671 million in external net sales. In the three months ended March 31, 2018, Crop Science's combined products accounted for €2,861 million in external net sales. For a further discussion of Crop Science's net sales in fiscal years 2015 through 2017 and in the three months ended March 31, 2018, see "*12.10.2.3.1* Net Sales", "*12.9.2.3.1* Net Sales" *and* "*12.8.2.3.1* Net Sales." The following description briefly presents Crop Science's strategic business entities and their products in more detail. While material effects of the completion of the Transaction and the expected impact of the Transaction-related Divestments have generally been taken into account for the description, it should be noted that overall Bayer will remain active in the areas covered by the Transaction-related Divestments as a result of the programs, products and offerings of Monsanto that it will acquire as part of the Transaction. The presentation of Crop Science's operations and key products may be subject to change over the coming months, however, as a result of the completion of the Transaction-related Divestments and the integration of the new product portfolio acquired in connection with the Transaction.

13.4.3.3.2 *Overview of Operations and Key Products*

Crop Science's strategic business entities related to crop protection, i.e., Insecticides, Fungicides, Herbicides, SeedGrowth, are engaged in researching, producing, marketing and distributing safe and effective active ingredients for use as insecticides, fungicides, herbicides and crop efficiency products for foliar and soil application as well as seed treatment. In addition to a wide range of chemical solutions, Crop Science's crop protection offering includes biological products derived from plants, bacteria and fungi. These products have unique plant protection properties, improve plant health and promote yield. We believe biologicals are a vital tool in sustainable agriculture, providing benefits to growers and the food chain. The products range from the Serenade™ fungicide product family used in fruit and vegetable crops, oilseed rape, legumes and other crops in more than 30 countries worldwide, to Requiem™, a flexible-to-use insecticide which improves the quality of harvests and produce such as fruits, vegetables, vines and nuts.

Crop Science's insecticides aim to control damaging insects and nematodes in a variety of crops. Cost-effective and degraded quickly, Bayer believes these insecticides are a key part of integrated pest management programs. In addition to warding off pests, certain Bayer insecticides promote cell growth and plant restoration, activate plants' natural defense mechanisms and safeguard crops from many environmental stresses. The portfolio consists of long-established brand families such as Confidor™ and Decis™, as well as more recently launched brand families, such as Movento™ and Sivanto™ with a unique mode of action for sucking pest control, as well as Velum™ for nematode control.

Crop Science's fungicides aim to provide control of a broad spectrum of crop diseases, with a view to leading to healthier plants and higher yields. We believe these products offer a wide variety of fungicidal benefits, with multiple modes of action that protect crops from leaf surface to plant core. The business has developed new formulations with a view to making its fungicides easier to handle, lowering use rates and providing tankmix compatibility with a wide range of crop protection products. The Nativo™ product family, the Prosaro™ product family, the Xpro™ product family and the Luna™ product family are Crop Science's key fungicides brands, which we believe have high sales potential.

Crop Science's herbicides are used to fight weeds by controlling weed pressure and providing reliable, season-long control and burndown solutions. The herbicides may utilize multiple modes of action to help combat glyphosate-tolerant and resistant grass and broadleaf weeds. The portfolio of selective herbicides includes well-established brands like Atlantis™, Liberator™, Puma™, Sencor™ and Betanal™ as well as recently launched brands such as Laudis™, Adengo™ and Capreno™. While Crop Science will divest its global glufosinate-ammonium herbicide business and the related LibertyLink™ technology for herbicide tolerance as well as respective R&D capabilities as a result of the Transaction, the Monsanto manufactured glyphosate-based herbicides marketed under the *Roundup* brand, which represents the world's leading agrochemical[22] as well as other herbicides for use by farmers, have been added to Crop Science's product portfolio. Furthermore, *Roundup* agricultural herbicides combined with Monsanto's seeds with *Roundup Ready* technology (glyphosate-tolerance) provide growers with a weed management system designed to deliver enhanced weed control. For information on certain risks associated with glyphosate-based herbicides marketed under the Roundup brand, see "*1.2.5 The lack of public understanding and acceptance or perceived public acceptance of Monsanto's biotechnology and other agricultural products as well as of the merits of the Transaction could harm Bayer's reputation and, as a consequence, negatively affect Bayer's business, results of operations and share price.*"

Crop Science's SeedGrowth offering extends from seed-applied solutions that aim to maximize seed investment and improve per-acre profits by protecting plants both above and below the ground, to seed treatment equipment and seed enhancers like coatings. This includes technical support, testing, training and advice provided by Bayer SeedGrowth. Taking into account the Transaction-related Divestments, pursuant to which Crop Science will have to divest seed treatment assets and products sold under the Poncho/VOTiVO, COPeO and ILeVO brands, Crop Science's most important SeedGrowth products following completion of the Transaction are CropStar™ and Sonido™. As a result of the Transaction Crop Science will also acquire Monsanto's Nemastrike assets, which relate to seed treatments to protect against nematodes.

Crop Science's Other (Seeds & Traits) strategic business entity researches, develops and markets high-performance varieties and hybrids in cotton, oilseed rape/canola, soybeans, rice and wheat that aim to increase yields and enhance quality. In connection with the Transaction-related Divestments, Crop Science has agreed to divest a significant part of the seed assets it had assigned to this strategic business entity as of January 1, 2018. As a result of the Transaction, however, Crop Science will also acquire high-quality seeds for row crops like corn, soybean, cotton and canola, which are marketed under Monsanto's major brands *DEKALB*, *Asgrow* and *Deltapine* to farmers globally. In addition, Monsanto develops and produces biotechnology traits which are marketed under various brands including *Roundup Ready*, *Bollgard* and *Xtend*. These products offer weed and pest control and ultimately aim to enhance yields for farmers by enabling crops to protect themselves against a variety of agricultural pest species and/or to be tolerant of specific herbicides.

Crop Science's Vegetables Seeds business currently includes Nunhems, a widely known brand in the hybrid seed industry with over 1,200 seed varieties in about 25 vegetable crops, suited to different climates, growing conditions and cultural preferences, which will be divested in its entirety as part of the Transaction-related Divestments. As a result of the Transaction, however, Crop Science will also acquire seeds for a wide variety of vegetable crops, which are predominantly marketed under Monsanto's brands Seminis and De Ruiter in more than 150 countries.

Crop Science's Environmental Science strategic business entity develops substances for professional uses in non-agricultural (i.e., non-crop) areas, e.g., solutions for controlling pests such as cockroaches or rodents in public areas and the food industry, or to control weeds on roads or railways. Crop Science's most important Environmental Science products include Ficam™, an insecticide used for malaria control in indoor residual spray with a broad spectrum of activity, controlling mosquitoes and various other pests. Maxforce™ is a further insecticide used in baits and gels for cockroach and ant control. Esplanade™ is a non-selective herbicide used in vegetation management. K-Othrine™ is an insecticide which is used in sprays and applicable to a broad spectrum of activity and has a long lasting efficacy.

[22] Phillips Mc Dougall – AgriService 2017

13.4.3.3.3 *Product Innovation Pipeline and Recent Launches*

Crop Science's product pipeline contains numerous new crop protection products, seed varieties and enhanced products (life cycle management). The most recent product innovation pipeline report published by Bayer for the three months ended March 31, 2018, did not take the Transaction and the Transaction-related Divestments into account and, accordingly, is not presented in this Prospectus. The product innovation pipeline of the Combined Agriculture Business is currently being assessed. The following descriptions highlight selected recent developments in the area of product innovation and product launches.

In April 2017, Bayer received regulatory approval for the biological nematicide BioAct™ Prime DC in Greece. The new substance is intended for use in a variety of fruit and vegetables and directly targets eggs and larvae from nematode pests. Further approvals are planned in other European countries. For further information on the regulatory environment that Crop Science conducts its business in, see "*14.3 Crop Science*."

In May 2017, Bayer launched a new rice seed in India that offers pest resistance and disease tolerance. In June 2017, Bayer also launched a rice seed in Bangladesh that offers flood tolerance.

Environmental Science also launched new products in 2017. These included the Exteris™ fungicide for the maintenance of golf courses, as well as Altus™, which is designed to protect ornamental plants against insect pests. Environmental Science also expanded its Maxforce™ product range by adding insecticides for pest control. Bayer BEYOND, a new digital service platform, automates the work performed by pest controllers and enhances rodent monitoring through predictive analysis.

13.4.3.4 R&D

Crop Science's R&D strategy as described in the following was formulated prior to completion of the Transaction. As a result of the Transaction and the Transaction-related Divestments and the associated changes in Crop Science's product portfolio, there could be changes to Crop Science's R&D strategy, although Bayer overall expects to remain active in the areas covered by the Transaction-related Divestments as a result of the programs, products and offerings of Monsanto that it will acquire as part of the Transaction.

Crop Science pursues the goal of identifying and developing innovative, safe and sustainable active ingredients for use as insecticides, fungicides, herbicides and crop efficiency products by foliar and soil application as well as seed treatment. These substances also undergo further development for professional applications outside of farming (i.e., in the non-crop segment)(Environmental Science), such as in pest control and vector control to combat diseases transmitted by mosquitoes. They are also used to control weeds and maintain sport facilities and public parks. In the area of seeds, Crop Science is conducting research and development for optimized plant traits and is developing new varieties in cotton, oilseed rape / canola, soybeans, rice, wheat and vegetables. Crop Science's scientists are working on increasing the yield potential of crops, enhancing their quality and developing new herbicide tolerance and insect resistance traits based on novel modes of action, and improving tolerance against disease and extreme weather conditions.

Crop Science maintains a global network of research and development facilities. While research is carried out centrally at a number of dedicated sites, development of crop protection products as well as plant breeding and trait development activities take place both at these sites and at numerous field testing and breeding stations in all regions. Crop Science's scientists working across the areas of seed traits, seed technology, seed breeding, agricultural chemistry and biologics closely collaborate as part of its integrated research approach. This optimally combines Crop Science's complementary expertise in chemistry and biology.

In fiscal year 2017, Crop Science's R&D expenses amounted to 12.2% of Crop Science's net sales.

To provide farmers with sustainable agronomic recommendations, Crop Science develops digital products and services that support them through the use of specific data models, among other things, in evaluating conditions in the field. The business' long-term goal is to help farmers to improve their yields by providing them with tailored recommendations.

In 2017, Crop Science launched confirmatory technical proof-of-concept field studies for two new active ingredients. For 2018 Crop Science had set itself the target of launching confirmatory technical proof-of-concept field studies for three to four NMEs, plant traits or biologics. Following completion of the Transaction, this target could be subject to change.

Crop Science conducts its R&D activities as part of a global network of partners from various parts of the agricultural industry and academic research. The following table provides summary information on Crop Science's

most significant long-term cooperations after taking into account the Transaction-related Divestments, but excluding any cooperations assumed in connection with completing the Transaction:.

Partner	Cooperation objective
Citrus Research Development Foundation	Search for solutions to citrus greening disease, which currently threatens the global citrus production and juice industry
Embrapa	Cooperation on several R&D objectives in various areas of relevance for agriculture in Brazil, e.g., Asian soybean rust
Innovative Vector Control Consortium	Joint development of new substances to control mosquitoes that transmit diseases such as malaria and dengue fever
Targenomix GmbH	Development and application of systems biology approaches to achieve a better understanding of metabolic processes in plants and facilitate the development of new herbicides and safeners

Crop Science expects to further improve and complement its R&D capabilities as a result of the Transaction. For further information, see "*8. The Acquisition of Monsanto*."

13.4.3.5 Markets and Distribution

13.4.3.5.1 *Markets and Competition*

According to Bayer's calculations, the global seed and crop protection market expanded slightly in 2017, growing by around 1% (2016: 0%). While demand for high-quality seed increased, sales of crop protection products stagnated worldwide. Positive growth momentum in 2017 came from the North America and Eastern Europe regions. Market volumes in Latin America declined as a result of high inventories of crop protection products and unfavorable macroeconomic conditions in Brazil. Stabilizing global stocks-to-use ratios for major broad acre crops corn and soy as well as a recovering Latin American agricultural market, suggest a slight recovery in the market. The Western European market also contracted, primarily as a result of relatively low fungal infestation levels. Bayer expects the global seed and crop protection market to develop positively in 2018 (+3%). In Bayer's view, the principal growth momentum will come from Latin America, mainly due to the expected normalization of inventories of crop protection products in Brazil and a further increase in the area of soybean acreages. Bayer also expects the market to grow in the Asia/Pacific region and in Eastern Europe. The persistently low price of agricultural commodities in North America and Western Europe is likely to be reflected in sluggish growth, which will lag behind the overall global development.

Bayer believes that current global market trends, among them global population and middle class growth and the increasing demand for food, provide opportunities for Crop Science in the medium to long term. In addition, consumer behavior in some regions is shifting toward higher demand for food products of animal origin. We also anticipate that agricultural productivity will need to increase significantly in view of declining per-capita acreages, the challenges presented by climate change, and increasing pest and weed resistance. We expect the demand for high-quality seed and crop protection products to rise in light of the need to produce sufficient food and animal feed to meet the growing demand in spite of limited acreages. In response, Crop Science is developing processes to more effectively protect plants against climatic and environmental influences and raise crop yields, for example.

Modern agricultural methods, the application of certain classes of crop protection products and the use of genetic engineering are repeatedly the subject of intense public debate, which could potentially lead to legislative and regulatory decisions that significantly limit the use of Crop Science's products or even result in voluntary or mandated product withdrawals. See also "*1.1.12 Bayer is subject to extensive and increasingly stringent environmental, health and safety laws, regulations and standards, which may result in restrictions on production or marketing of its products, increased costs to ensure compliance, damage to Bayer's reputation, legal liability and remediation efforts.*" In addition, regulatory decisions in one jurisdiction may also affect agricultural imports from other parts of the world and therefore Bayer's business in those regions. Accordingly, Crop Science is engaged in a constant dialogue with interest groups and regulators to promote a scientifically founded, rational and responsible discussion and decision-making process. For further information on this topic, see also "*14.3.1 Regulation on Genetically Modified Organisms*."

Risks for the crop protection and seeds businesses may also arise from variations of weather conditions and other seasonal factors, market volatility for agricultural products and its customers' financial situations, for example, see also "*1.1.16 Bayer's production and procurement activities are exposed to various risks, including in connection*

with technical failures, natural disasters, regulatory action or legislative changes." and "*1.1.18 Bayer's business operations and financial performance may be affected by variations of weather conditions and other seasonal factors as well as by resistances.*"

Finally, the current global mergers and acquisitions activities in the seeds and crop protection industry could alter Crop Science's future competitive environment significantly, see also "*1.1.4 The industries in which Bayer operates are highly competitive, and competitive pressure could increase. Furthermore, disruptive technologies or changes to competitors' business models may adversely affect Bayer's business.*" Crop Science is responding to this trend with acquisitions, collaborations and the expansion of in-house R&D capacities.

Crop Science encounters competition in all of its geographical markets from international competitors, such as Syngenta (in relation to Crop Science's seeds and traits, crop protection and non-crop product offering); BASF SE (in relation to Crop Science's crop protection and non-crop product offering, and upon completion of the Second BASF Divestiture package in relation to Crop Science's seeds and traits product offering); DowDuPont Inc. Agriculture (in relation to Crop Science's seeds and traits, crop protection and non-crop product offering); and FMC Corp. (in relation to Crop Science's crop protection and non-crop product offering).

13.4.3.5.2 *Distribution*

Crop Science's crop protection products are offered in more than 120 countries and marketed primarily through wholesalers, directly to retailers or, in limited cases, directly to farmers. Its seeds are sold to growers, seedling companies, specialist retailers and the processing industry. Plant traits developed using modern breeding methods are either incorporated into proprietary seed varieties or licensed to other seed companies. Environmental Science's range of pest and weed control products is marketed through wholesalers and specialist retailers to professional users in the green industry, forestry, industrial vegetation management and pest control. Environmental Science also markets its products in the area of public health, mainly through tendering by government agencies and non-governmental organizations.

The requirements of Crop Science's customers vary according to product, region and culture and range from rising demands in terms of food safety and quality to trends such as digital farming. Crop Science's marketing activities ("field marketing") are therefore aligned particularly to the local needs of its customers, whose satisfaction is individually determined by the country organizations using standardized questionnaires.

To strengthen customer centricity along the entire value chain, Crop Science is intensifying its direct cooperation with farmers through initiatives such as Bayer ForwardFarming. On Bayer ForwardFarms, the Company cooperates with farmers to demonstrate innovative crop solutions and services for sustainable agriculture to interested stakeholders. Bayer expanded the network of ForwardFarms in 2017 to include Brazil and Argentina. The food chain partnership model successfully developed by Crop Science is also being steadily expanded. Crop Science has initiated over 500 food chain partnership projects for 76 crops in more than 40 countries, mainly in Asia, Latin America and Europe. The goal is, together with participants in the food chain such as farmers, the processing industry, exporters and dealers, to develop integrated solutions for sustainable agriculture so as to safeguard and increase yields and to improve the quality of harvested produce.

Crop Science follows the guidelines of its Product Stewardship Policy with regard to the distribution and use of its crop protection products. This policy, which also satisfies the requirements of the Corporate Policy "Responsible Marketing & Sales," is based on the International Code of Conduct issued by the Food and Agriculture Organization of the United Nations ("**FAO**").

13.4.4 Animal Health

13.4.4.1 Introduction

The Animal Health business unit develops and markets veterinary products and solutions for the prevention and treatment of diseases in companion and farm animals.

The following table presents an overview of the economic performance of the Animal Health business unit for the fiscal years 2015, 2016 and 2017 and the three months ended March 31, 2018:

	For the fiscal year ended December 31,			For the three months ended March 31,	
	2015[1]	2016[1]	2017	2017[2]	2018
	(unaudited, unless otherwise indicated) (in € million)			(unaudited) (in € million)	
Net sales (external)	**1,490[3]**	**1,523[3]**	**1,571[3]**	**440**	**414**
Sales by region					
Europe / Middle East / Africa	447	445	442	144	136
North America	587	621	655	177	160
Asia / Pacific	285	300	317	76	77
Latin America	171	157	157	43	41
EBITDA[4]	**317**	**343**	**352**	**135**	**139**
Special Items	(30)	(6)	(29)	–	–
EBITDA before special items[4]	**347[3]**	**349[3]**	**381[3]**	**135**	**139**
EBIT[4]	**254[3]**	**313[3]**	**307[3]**	**126**	**129**
Special Items	(64)	(7)	(31)	–	–
EBIT before special items[4]	**318[3]**	**320[3]**	**338[3]**	**126**	**129**
Net cash provided by operating activities	**348[3]**	**193[3]**	**209[3]**	**(31)**	**13**

(1) Figures extracted or derived from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.
(2) Figures derived from the restated comparative figures for the three months ended March 31, 2017, which present Covestro as discontinued operations, as included in the unaudited condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018.
(3) Audited for the fiscal years ended December 31, 2015, 2016 and 2017.
(4) Alternative Performance Measure used by Bayer, for more information see "*10.4 Additional Key Figures for the Bayer Group*."

13.4.4.2 Strategy

We believe the development of the animal health market to be primarily driven by a growing global population and higher average incomes. In the companion animals segment, we expect this to lead to rising pet ownership levels. In the farm animals segment, moreover, a growing aspiration to adopt Western lifestyle habits is expected to lead to higher meat consumption. Effective and safe animal medicines should therefore increasingly be in demand in both areas.

In the companion animals business, Animal Health holds a strong position in the global parasiticide segment. Animal Health is focusing on maintaining the strong performance of the Seresto™ flea and tick collar, opening up new distribution channels and leveraging the brand equity of the Advantage™ flea, tick and worm control product family.

In the farm animals business, Animal Health is focusing on antiparasitics and anti-infectives for the treatment of infectious diseases. In addition to the products developed in-house, Animal Health also explores opportunities to strengthen its business through acquisitions. In January 2017, for example, Animal Health has expanded its antiparasitics business in the United States with the acquisition of the Cydectin™ endectocide portfolio which comprises the CYDECTIN Pour-On, CYDECTIN Injectible and CYDECTIN Oral Drench endectocides for cattle and sheep.

13.4.4.3 Products

13.4.4.3.1 *Overview of Key Products*

In 2017, Animal Health's four best-selling products contributed €951 million in overall external net sales, amounting to 61% of the Animal Health external net sales (down from 62% in 2016). The Animal Health business has generally demonstrated strength in life-cycle management over the past decades, and offers a number of top-selling brands in the industry.

In the following, we briefly present the Animal Health business unit's best-selling products in fiscal years 2015 through 2017 and in the three months ended March 31, 2018. For a discussion of the best-selling products' contribution to Animal Health's external net sales in fiscal years 2015 through 2017 and for the three months ended March 31, 2018, see "*12.10.2.4.1 Net Sales*", "*12.9.2.4.1 Net Sales*" *and* "*12.8.2.4.1 Net Sales.*"

Advantage™ product family: The Advantage™ product family consists of flea, tick and worm control products for the protection of pets and residential space.

Seresto™: Seresto™ is a flea and tick collar for cats and dogs, with a duration of up to eight months.

Drontal™ product family: The Drontal™ product family is a line of de-wormers for the elimination of every type of intestinal worm that is commonly found in dogs and cats.

Baytril™: Baytril™ is an antibiotic for veterinary use in various indications in companion animals (dogs, cats, exotic animals) and farm animals (poultry, cattle, sheep, pigs).

13.4.4.4 R&D

At Animal Health, R&D activities focus on antiparasitics, antibiotics, medicines to treat noninfectious disorders and nonantibiotic alternatives for infectious diseases. The business' central research activities are conducted in close cooperation with the research departments at Pharmaceuticals and Crop Science.

Animal Health endeavors to improve the health and well-being of companion and farm animals through innovations. Animal Health pursues the "one health" concept: it offers animal health products that reduce the risk of transmission of disease pathogens to humans, such as endoparasiticides for cats and dogs or ectoparasiticides to protect especially against fleas and ticks. Through Animal Health's initiative focusing on companion vector-borne diseases (CVBD™) and with the global scientists who participate in this initiative, Animal Health believes it is setting trends in basic research and the fight against vector-borne diseases.

In fiscal year 2017, Animal Health's R&D expenses amounted to 9.9% of Animal Health's net sales.

In January 2017, the European regulatory authorities approved PolyVar™ yellow, a new product to protect honey bees against the Varroa mite. This decision was implemented in national law in more than 20 countries during the year.

Animal Health also aims to reinforce its business by continually identifying further product development candidates through new and existing collaborations. Animal Health works closely together with its partners in areas such as the development of innovative technologies, application innovations and lead structure optimizations.

13.4.4.5 Markets and Distribution

13.4.4.5.1 *Markets and Competition*

According to Bayer's calculations, the animal health market expanded by around 2% in 2017 (2016: 5%), with growth significantly lagging behind previous years. Alongside a difficult market environment in the farm animals business in Europe and North America, growth rates in the companion animals business, and in the important parasiticides market in particular, were also lower than in previous years. The slight recovery of the farm animals business in the core markets and an upturn in the American companion animals business at the end of the year were unable to offset the weaker market development in the first half of the year. Bayer expects growth to increase to 4% in 2018. In Bayer's view, the main factors here are likely to be an improvement in market conditions in the farm animals sector, along with further robust demand in the companion animals business.

Generally, Bayer believes that the animal health market, driven by an increasing world population and higher incomes, remains very attractive.

Animal Health encounters competition in all of its geographical markets from large national and international competitors, such as Zoetis, Merck, Elanco, Boehringer Ingelheim, Ceva, and Virbac. For information on the competitive risks facing Animal Health, see "*1.1.4 The industries in which Bayer operates are highly competitive, and competitive pressure could increase. Furthermore, disruptive technologies or changes to competitors' business models may adversely affect Bayer's business.*"

13.4.4.5.2 *Distribution*

Depending on national regulatory frameworks, Animal Health markets its products through veterinarians and other distribution channels such as pharmacies or retail stores. Depending on the respective market segment, Animal Health conducts studies on customer satisfaction and customer retention.

In the marketing and use of its products, Animal Health not only observes statutory regulations, but also further-reaching Group-wide policies and voluntary industry-wide commitments. Where several regulations are applicable, Animal Health principally observes the more stringent requirements.

13.4.5 Covestro

Our former segment Covestro is a global provider of high-tech polymer materials and associated application solutions for many areas of modern life, and supplies key industry sectors such as the automotive, construction,

electronics and wood/furniture industries. Covestro's business is divided into three business units. The Polyurethanes business unit focuses on the development, production and marketing of polyurethane raw materials, either on a stand-alone basis or as a formulation of an isocyanate and a polyether polyol, i.e., a system. The Polycarbonates business unit's focus is on the development, production and marketing of polycarbonates, which are an engineering thermoplastic that may be easily worked, molded and thermoformed. The Coatings, Adhesives and Specialties business unit is a global provider of high performance materials to the industrial coatings, adhesives, sealants and other specialties industry segments.

Covestro was legally and financially separated from Bayer on September 1, 2015, and subsequently was floated on the stock exchange in connection with its initial public offering of shares in October 2015. Following the gradual reduction of its equity interest in Covestro since Covestro's separation, as of the date of this Prospectus, Bayer directly holds 6.8% of Covestro Shares. As a result of the reductions of the equity stake and the conclusion of a control termination agreement at the end of September 2017, Covestro ceased to be a reportable segment and fulfilled the conditions for presentation as discontinued operations for the first nine months of 2017. As of October 1, 2017, Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss. The comparative information for fiscal year ended December 31, 2016 (with the exception of the consolidated statement of financial position as of December 31, 2016) was restated accordingly to present Covestro as discontinued operations for the full fiscal year ended December 31, 2016.

13.5 Corporate Functions/Business Services/Technology Services/Currenta

Business activities that cannot be allocated to any of the Life Science businesses described above are reported under "All Other Segments." These primarily include the services provided by the service areas Business Services, Technology Services and Currenta. The corporate functions and Business Services operate as group-wide competence centers in which business support services are bundled. Business Services' activities range from development and implementation of IT-based solutions and design, build and execution of end-to-end process operations to in-house management consulting. Technology Services supports the Group through providing technology and engineering services. Currenta is the service company responsible for managing and operating the Chempark sites in Leverkusen, Dormagen and Krefeld-Uerdingen, Germany.

13.6 Procurement and Supplier Management

Procurement at Bayer is a corporate function, the head of which reports directly to the chief financial officer. Bayer has a diverse procurement portfolio due to the varying nature of its segments. Procurement acts centrally on behalf of all segments and leverages synergies by pooling know-how and procurement spend.

Procurement operates according to uniformly established procurement and supplier management processes. Long-term contracts and active supplier management for strategically important goods and services are important elements of these processes. The goal is to not only minimize procurement-specific risks such as supply bottlenecks or significant price fluctuations, but also to safeguard Bayer's competitiveness and ensure smooth production processes. Close cooperation with and systematic integration of selected suppliers in innovation processes gives Bayer access to innovative solutions.

The following table provides key information on Bayer's procurement activities.

Procurement Activities	2016	2017
Procurement spend (in € billion)	14.8	14.9
Spend in OECD countries (mainly Germany and United States) (in € billion)	12.2	12.2
Spend in non-OECD countries (mainly Brazil, India and China) (in € billion)	2.6	2.7
Number of suppliers	97,270	93,330
Number of countries	151	148

Bayer purchases locally wherever possible in order to respond promptly to the requirements of its sites, thereby simultaneously strengthens local economies. In 2017, this applied to 71% (2016: 71%) of Bayer's procurement spend at its main business locations, and to 71% (2016: 71%) of procurement spend in all countries worldwide.

The following table shows the main direct procurement materials for each of Bayer's current segments.

	Main Direct Procurement Materials
Pharmaceuticals	Active ingredients (e.g., small molecules, biologics), radioactive ingredients (e.g., actinium, radium), intermediates (e.g., epoxy phthalimide), raw materials (e.g., iodine, cell culture media, solvents), pharmaceutical excipients (e.g., celluloses, starches), packaging materials, medical devices, finished products (e.g., Zetia)
Consumer Health	Active ingredients (e.g., naproxen sodium, loratadine, paracetamol), vitamins (e.g., vitamin C and B), excipients and operating materials, finished products (e.g., Canesten™, Dr. Scholl's™, Berocca™), packaging materials
Crop Science	Active ingredients (e.g., mancozeb), excipients and solvents (e.g., rapeseed oil, toluene, ammonia), complex intermediates (e.g., pyridine polyfluoride), packaging materials
Animal Health	Finished products, active ingredients (e.g., moxidectin, praziquantel, Baycox-Isocyanate), packaging materials (e.g., Seresto™ tins, spot-on tubes), raw materials, excipients

As of the date of this Prospectus, Bayer is not aware of any single supply risk of material significance to the whole Group. For further information on risks with regard to procurement, see "*1.1.16 Bayer's production and procurement activities are exposed to various risks, including in connection with technical failures, natural disasters, regulatory action or legislative changes.*"

13.7 Production and Logistics

13.7.1 Production

As of December 31, 2017, Bayer operated production facilities at more than 130 sites in 34 countries. For information on each segment's most important production sites see "*13.9 Real Property and Main Facilities*." Through its group policies Bayer aims to ensure the safety of its sites and employees, and the protection of the environment and efficient energy use throughout its production processes. For more information on how we establish and organize sustainable conduct throughout the Group, see also "*13.12 Sustainability*." Group policies additionally stipulate that new production sites must not be set up in areas that are statutorily protected with regard to natural characteristics, biodiversity or other factors.

Pharmaceuticals and Consumer Health operate their own production sites around the world at which active ingredients are manufactured and formulation and packaging services are performed for their respective product portfolios. The manufacturing of pharmaceutical and medical devices is subject to extraordinarily stringent quality requirements that are based on internationally recognized standards, as well as on rules for good working practice in the development and manufacture of pharmaceuticals. For information on a Warning Letter issued by the FDA in relation to Bayer's Leverkusen Supply Center, a production site in Leverkusen, Germany, that is engaged in the process of drug manufacturing including solid oral dosages forms, see "*1.1.16 Bayer's production and procurement activities are exposed to various risks, including in connection with technical failures, natural disasters, regulatory action or legislative changes.*"

The crop protection products of Crop Science (excluding Monsanto) are mainly produced at the segment's own production sites. By maintaining numerous decentralized formulation and filling sites, Bayer believes that it is in a position to quickly react to the needs of local markets. At these sites the active ingredients are processed and packaged according to local requirements and application areas. Production of seeds takes place at locations close to Bayer's customers in Europe, Asia, and North and South America at Bayer's own farms or under contract. Crop Science's products are manufactured according to high quality standards. All of the Crop Science's products are reviewed and registered by relevant national authorities in various countries with a view to fulfilling applicable requirements for quality and user safety.

Animal Health procures the active ingredients for its products both from internal sources within Bayer and external suppliers worldwide. The unit's globally marketed animal health products are mainly manufactured at sites in Kiel, Germany, and Shawnee, Kansas, United States.

For further information on the regulatory requirements that Bayer's production sites may be subject to, or that Bayer is required to adhere to in connection with the manufacturing of its products, see "*14. Regulatory Environment*." For information on Bayer's future, pending and past investments in production sites, see "*13.10 Investments*" and "*12.13 Capital Expenditures*."

13.7.2 Logistics

Logistics at Bayer comprises not just the transport and warehousing of goods, but in fact the entire steering and monitoring of all flows of goods and logistics data for the Bayer Group. We work continuously to develop logistics

concepts that aim to account for safety, environmental and cost aspects in equal measure. Areas of focus in the ecological field include the reduction of energy consumption and CO_2 emissions, for example by minimizing air transport or using logistic concepts that include rail- and waterways.

Our logistics organization operates according to management systems and directives with global validity. We use both internal capacities and external logistics partners for storage and transport services. Bayer selects these according to strict safety, environmental and quality criteria. Alongside the Corporate Supply Chain unit, each segment maintains its own logistics activities that are aligned toward the unique circumstances of the respective business model and products.

13.8 Intellectual Property

Bayer's global intellectual property strategy aims to protect and enhance Bayer's competitive position in the various geographical regions in which it operates. This is achieved by effective management of Bayer's intellectual property rights, including patents, trademarks and know-how. A high priority is placed on protecting innovation and the actual and future business value that Bayer can derive therefrom. Apart from the intellectual property rights mentioned in the following, and not taking into consideration Bayer's information technology systems, Bayer does not hold any significant intellectual property rights and does not depend on patents or licensed materials in order to conduct its business.

13.8.1 Patents

Globally reliable protection of intellectual property rights is particularly relevant for an innovation company like Bayer. Depending on the legal framework, we therefore endeavor to obtain patent protection for our products and technologies in major markets. The Bayer Group has a portfolio that contains a considerable amount of patent protected products. As of the end of 2017, we (excluding Monsanto) owned approximately 48,100 valid patent applications and patents relating to more than 4,700 protected inventions worldwide.

Patent terms vary according to the laws of the country granting the patent. In view of the high investment required for product research and development, the EU member states, the United States, Japan and some other countries extend patent terms or issue supplementary protection certificates to compensate for the shortening of the effective patent protection period due to regulatory approval processes for new drugs. The term of a patent is normally 20 years. Since it takes an average of 12 years to develop a new medicine, only eight years of patent protection generally remain following the product's approval. In most cases it would be impossible to cover the high costs incurred in the research and development of innovative medicines or of new indications or dosage forms for existing drugs without this protection. We are therefore committed worldwide to protecting both the international patent system and our own intellectual property.

Due to the long period of time between the patent application and the market launch of a product, Bayer generally only has a few years in which to earn an adequate return on its investment in research and development. This makes effective and reliable patent protection all the more important. See also "*1.1.5 Patents protecting products that are currently profitable for Bayer are subject to expiration, and there can be no assurance that Bayer will be successful in developing new products that upon market approval will achieve the commercial success to counterbalance the expected decline in revenues generated by such products upon the expiration of their patents*." Our patents department regularly reviews the patent situation in collaboration with the respective operating units and monitors for potential patent infringements so that legal action can be taken if necessary. For information regarding ongoing patent-related legal proceedings, see "*13.15.2 Patent Disputes*." See also "*1.1.7 Bayer's business and results of operations may be adversely affected if Bayer is unable to obtain or defend its intellectual property or if the rights associated with its intellectual property do not provide effective protection.*"

While patent protection is essential to Bayer's entire business, its relative importance varies by segment. In general, patents are most important for Pharmaceuticals, followed by Animal Health and Crop Science. For Consumer Health, trademarks are very important, while it is almost independent of patents. In Pharmaceuticals, the core protection is frequently provided by a limited number of patents for a small number of compounds or, sometimes, even a single compound. With respect to Animal Health the situation is similar. In Crop Science, there is typically a bundle of products containing a patent-protected compound or trait in combination with some or many other compounds or traits. Accordingly, a single patent in Crop Science is typically of much less value than in Pharmaceuticals or Animal Health, meaning that the pricing premium to be achieved for patented products in Crop Science is generally lower. In addition, Crop Science's customers are more price sensitive and quite reluctant to pay higher prices for the benefits offered by patented products if somewhat less effective but much cheaper generic products are available. As a result, while the loss of exclusivity for Crop Science products has a detrimental effect on the pricing of the product concerned, such effect would typically be more significant for Pharmaceuticals or Animal Health products. Consumer Health has almost no patented products and Consumer Health products that offer

patent-protected benefits face pressure from customers that is similar to that described for Crop Science. Consumer Health's business depends more on reputation and brand recognition, which accounts for the greater importance of trademarks. For more information on our trademarks, see "*13.8.2 Trademarks*" below.

Given the large number of patents held by Bayer, we do not consider any single specified patent to be of material importance for the continuity of the entire Group. Particular products and technologies are typically covered by a number of patents following a careful consideration of aspects relevant to the product, its production process, and its various fields of application, as well as to technological alternatives and variations. This approach ensures that Bayer is less exposed to the fate of individual patents, meaning that if a single patent expires or is not granted, there are usually others that can help provide a level of protection. As described above, the relative importance of patent protection varies by segment, and patent protection generally is most important for Pharmaceuticals. For further information on the expiration dates for the Bayer Group's significant patents, see "*13.4.1 Pharmaceuticals*."

13.8.2 Trademarks

As of mid-April 2018, the portfolio of trademark rights of the Group (excluding Monsanto) consisted of more than 57,000 national registrations and applications in multiple jurisdictions around the world, more than 1,300 European trademarks, as well as more than 1,500 additional international trademarks. The business name "Bayer," the Bayer logo and numerous product markings are trademark protected. Except for the "Bayer" and the "Bayer Cross" trademarks, we do not consider any further trademarks essential for our economic success. Trademark protection is of particular importance for Consumer Health.

13.8.3 Licenses

The Bayer Group has numerous active licensing agreements with third parties under which it obtains or grants licenses in connection with R&D and/or the distribution, marketing and sale of products. For example, Rivaroxaban, the Xarelto™ active ingredient, was invented by Bayer and is being jointly developed with Janssen R&D. In the United States, Xarelto™ is marketed by Janssen Pharmaceuticals, and Bayer earns royalties on Xarelto™ sales. Another significant example is the agreement with Regeneron Pharmaceuticals to jointly develop EYLEA™. For information on Pharmaceuticals and Crop Science's main R&D collaborations, see "*13.4.1.4.4 Collaborations and Strategic Alliances*" and "*13.4.3.4 R&D*."

In connection with these agreements, Bayer depends upon its successful cooperation with third parties, given that inadequate performance by collaboration partners could adversely affect the development of Bayer's sales and costs. See also "*1.1.15 Bayer's dependence on external partnerships, including with suppliers, could adversely impact Bayer's business, operations and reputation.*"

13.8.4 Domains

As of mid-April 2018, the portfolio of domains of the Bayer Group (excluding Monsanto) consisted of more than 21,500 domains, which are managed centrally at the group level. The most well-known of our domains are "bayer.com" and "bayer.de." We do not consider any of our domains to be essential for our economic success.

13.9 Real Property and Main Facilities

Bayer operates production and research facilities worldwide and uses land with office buildings, warehouses and other facilities in a large number of countries as either owner or lessee.

Bayer is currently represented at approximately 1,198 locations, of which approximately 874 are leased. As of the date of the Prospectus, Bayer owns approximately 377 million m^2 of land.

The following table provides an overview of our main facilities as of the date of the Prospectus:

	As of the date of the Prospectus		
Sites by segments	Land area in thousand square meters[1]	Owned/Leased	Key Site Uses
Pharmaceuticals			
Bergkamen, Germany	1,113 / 528	Owned	Active ingredient production
Berkeley, California, U.S.A.	174	Owned	Active ingredient production based on biotechnological processes
Berlin, Germany	206 / 200	Owned	Headquarters of Pharmaceuticals division, formulation and packaging, Research & Development

Sites by segments	As of the date of the Prospectus: Land area in thousand square meters[1]	Owned/Leased	Key Site Uses
Leverkusen, Germany	936 / 99	Owned	Formulation and packaging
Pittsburgh, Pennsylvania, U.S.A.	57	Owned	Manufacture of medical devices such as contrast agent injectors and consumables
Turku, Finland	165	Owned	Formulation and packaging of intrauterine systems
Weimar, Germany	114 / 114	Owned	Formulation and packaging
Wuppertal, Germany	1,582 / 541	Owned	Active ingredient production, Research & Development
Whippany, New Jersey, U.S.A.	785	Owned	U.S. headquarters of Pharmaceuticals division
Consumer Health			
Basel, Switzerland	N/A[2]	Leased	Consumer Health headquarters
Bitterfeld-Wolfen, Germany	530 / 53	Owned	Formulation and packaging
Cimanggis, Indonesia	101	Owned	Formulation and packaging
Darmstadt, Germany	10 / 10	Owned	Formulation, filling and packaging
Grenzach, Germany	15 / 15	Owned/Leased	Formulation, filling and packaging
Myerstown, Pennsylvania, U.S.A.	251	Owned/Leased	Formulation and packaging
Whippany, New Jersey, U.S.A.	see Pharmaceuticals above		U.S. headquarters of Consumer Health division
Crop Science			
Dormagen, Germany	2,197 / 170	Owned	Development of new production processes and manufacture of Crop Protection and Environmental Science products
Frankfurt am Main, Germany[3]	161 / 119	Land Lease	Manufacture of Crop Protection and Environmental Science products
Gatersleben, Germany[4]	78 / 78	Owned	Research & Development for wheat
Ghent, Belgium[4]	18	Land Lease	Research & Development for seeds and traits
Kansas City, Missouri, U.S.A.	955	Owned	Manufacture of Crop Protection and Environmental Science products
Knapsack, Germany[3]	67 / 59	Land Lease	Manufacture of Crop Protection and Environmental Science products
Marbach, Germany	23 / 23	Owned	Research & Development and production of Vegetable Seeds
Monheim, Germany	6,233 / 624	Owned	Headquarters of Crop Science division, Research & Development for fungicides and insecticides
Nunhem (Haelen), Netherlands[4]	920	Owned	Research & Development, production of Vegetable Seeds
Research Triangle Park, North Carolina, U.S.A.[4]	283	Owned	Crop Science North America Headquarters, Research & Development for seeds and traits
Vapi, India	348	Owned	Development of new production processes and manufacture of Crop Protection and Environmental Science products
West Sacramento, California, U.S.A.	61	Owned	Research& Development for Biologics and Vegetable Seeds

Sites by segments	As of the date of the Prospectus: Land area in thousand square meters[1]	Owned/Leased	Key Site Uses
Wismar, Germany	24 / 24	Owned	Research & Development for Biologics
Animal Health			
Kiel, Germany	96 /96	Owned	Formulation and packaging of animal health products
Monheim, Germany	see Crop Science above		Headquarters of Animal Health, Research & Development for Animal Health products
Shawnee, Kansas, U.S.A.	210	Owned	Research & Development, formulation and packaging of animal health products

(1) For the facilities located in Germany, the secondary figures provided relate to the developed parts of land areas.
(2) Not applicable because only office space leased at this site.
(3) Site to be partially transferred as part of the Transaction-related Divestments.
(4) Site to be completely transferred as part of the Transaction-related Divestments.

The headquarters of the Bayer Group are located in Leverkusen, Germany, while the headquarters of Pharmaceuticals is located in Berlin, Germany, the headquarters of Consumer Health in Basel, Switzerland and the headquarters of Crop Science and Animal Health in Monheim, Germany.

13.10 Investments

Currently, Pharmaceuticals is investing in production capacities for the manufacture of rFactor VIII therapy products at the Wuppertal and Leverkusen sites in Germany in connection with the currently biggest capital expenditure program of Pharmaceuticals with a total volume of around €800 million. The R&D laboratory capacities in Wuppertal, Germany, are also being considerably expanded with a capital expenditure volume of approximately €135 million. In addition, Pharmaceuticals is investing in production and R&D site upgrades and expansions in Germany. A major intangible investment relates to the exclusive global cooperation with Loxo Oncology, Inc., which was concluded in 2017. For more information on Bayer's agreement with Loxo Oncology, Inc., including payments due thereunder, see "*13.3.2 Innovation*."

Consumer Health's largest investment project for a production site comprises the multiyear modification and expansion of the facilities in Majinpu/Kunming (China).

Between 2014 and 2017 Bayer invested some €2.6 billion overall in property, plant and equipment to satisfy increased demand for crop protection products and seeds. This included investment in the replacement and expansion of production capacities and in research and development facilities. Here the focus was on the United States, Germany and India, and on expanding the network of breeding stations for various crops, particularly from the Netherlands and Brazil.

In 2017, Bayer undertook initial capital expenditures totaling some €90 million through 2021 at the Animal Health production site in Kiel in connection with a site expansion that will take several years. We manufacture some 60 percent of the Animal Health products we market worldwide in Kiel.

The approval of future investments by Bayer's relevant management bodies occurs in due course prior to their execution, following a defined stage gate process. As of the date of this Prospectus, apart from future investments to be made in connection with the pending investments described above, there are no principal future investments which Bayer's relevant management bodies have approved. Bayer funds the pending investments described above through its free operating cash flow.

For information on our investments for fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017 and for the three months ended March 31, 2018, see "*12.13 Capital Expenditures*"

13.11 Employees

As of the date of this Prospectus, Bayer employs approximately 100,110 people worldwide on a full-time equivalent basis. Upon completion of the Transaction-related Divestments this figure is expected to decline by approximately 4,600 employees who are expected to move to BASF. At December 31, 2017, Monsanto had

approximately 20,270 employees on a full-time equivalent basis. Accordingly, following completion of the Transaction and the Transaction-related Divestments, Bayer expects to employ more than 115,000 people on a full-time equivalent basis.

As of December 31, 2017, 2016 and 2015, Bayer employed 99,820, 115,170 and 116,583 people, respectively. The decline in the number of employees from 2016 to 2017 was due to the deconsolidation of Covestro at the end of September 2017. In each of the years ended December 31, 2017, 2016 and 2015 as well as the three months ended March 31, 2018, roughly a third of our workforce was based in Germany.

As of December 31, 2017, our employees had worked for the Bayer Group for an average of ten years. The rate of voluntary fluctuation (employee-driven terminations) in 2017 at 4.8% was level with the figure for 2016. The overall fluctuation rate was 10.4%, a decrease of 2.8% percentage points compared with 2016. This figure includes all employer- and employee-driven terminations, retirements and deaths. Our workforce includes only a small number of employees on temporary contracts (4.4%) and hardly any temporary employees from staffing agencies. At our significant locations of operation, the average is 3.5%. Bayer uses temporary personnel from staffing agencies primarily in response to short-term personnel requirements, fluctuations in order levels, temporary projects or long-term illness.

The following table provides an overview of the distribution of our employees by region on a full-time equivalent basis as of the dates set forth below:

	As of December 31,				As of March 31,
	2015[1]	2016[1]	2016[2]	2017[3]	2018[3]
	(audited)		(unaudited)		(unaudited)
Europe / Middle East / Africa	58,839	59,483	50,970	52,380	53,095
North America	15,961	15,788	13,001	13,001	12,813
Asia / Pacific	28,818	27,407	22,852	22,852	22,457
Latin America	12,965	12,492	11,582	11,587	11,745

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

(2) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2017, where the comparative employee figures for fiscal year ended December 31, 2016 have been restated to account for the deconsolidation of Covestro.

(3) Figures do not include Covestro, which was deconsolidated at the end of September 2017.

The following table provides an overview of the distribution of our employees by current reportable segment as well as for our former segment Covestro on a full-time equivalent basis as of the dates set forth below:

	As of December 31,			As of March 31,
	2015[1]	2016[1]	2017	2018
	(audited)		(unaudited)	(unaudited)
Pharmaceuticals	40,504	40,093	38,295	38,433
Consumer Health	13,513	12,821	11,760	11,594
Crop Science	23,268	22,399	20,736	20,661
Animal Health	3,804	3,957	3,527	3,677
Reconciliation	19,724	20,322	25,502	25,745
Covestro	15,770	15,578	–	–

(1) Figures extracted from the audited consolidated financial statements of Bayer as of and for fiscal year ended December 31, 2016.

For the fiscal years ended December 31, 2015 and 2016, 100,813 and 99,592 of our employees, respectively, worked in the Life Sciences.

In fiscal year 2017, there was a reduction in the number of employees in the Latin America, Asia / Pacific, and North America regions, but an increase in the Europe / Middle East / Africa region. While the number of employees in the segments decreased, there was an increase in the number included in Reconciliation, i.e., at group level. This change was mainly due to the reorganization of the Group with effect from January 1, 2016, see also "*12.2.2 Bayer's Corporate Structure in Effect from January 1, 2016*." Employees in the service functions, which were previously part of a segment, were assigned to the respective units in the corporate functions and country platforms in 2017. The breakdown by function shows more employees working in administration and a slight decrease in the number of employees working in production and R&D. The proportion of women in the workforce increased by 0.5 percentage points to 40.2%. In 2017, there was no significant change in the age structure compared with the previous year.

Bayer offers a number of pension and other post-employment benefit plans and a company pension plan is available to 75% of Bayer employees worldwide. The benefits provided depend on the legal, fiscal and economic

conditions in each country, employee compensation and years of service. The value of total pension obligations at the end of 2017 was €24,492 million. Further information hereto is contained in "*12.14 Pension and Other Post-Employment Benefit Obligations*" as well as in Note 25 to the consolidated financial statements as of and for the fiscal year ended December 31, 2016 and in Note 25 to the consolidated financial statements as of and for the fiscal year ended December 31, 2017.

Bayer offers stock-based compensation programs collectively to different groups of employees. Further information on the different share-based compensation plans of Bayer is contained in Note 26 to the consolidated financial statements of Bayer for the fiscal year 2017 which are contained in "*22. Financial Information*" of this Prospectus.

Employees at all Bayer sites around the world have the right to elect their own representatives. In 2017, the working conditions for around 63% of our employees worldwide were governed by collective or company agreements. At various country companies, the interests of the workforce are represented by elected employee representatives who have a right to be consulted on certain personnel-related decisions. The contractually agreed working hours of our employees do not exceed 48 hours a week in any country.

13.12 Sustainability

We regard sustainability as a means to safeguard our future viability and, accordingly, have made it a fundamental part of our corporate strategy and strive to integrate it into everyday procedures.

Responsibility for the Group's sustainable orientation lies with the Board of Management member responsible for Human Resources, Technology and Sustainability, currently Mr. Klusik, in his role as Chief Sustainability Officer, and with the Sustainable Development Committee (SDC) under the auspices of the Health, Safety & Sustainability function introduced in 2016. The SDC sets targets and draws up initiatives, management systems and corporate policies, and is responsible for their implementation. Operational implementation is effected with the help of nonfinancial targets and performance indicators throughout the value chain, based on a clear definition of responsibilities in the corporate structure and the identification of major areas of activity using a materiality analysis. Corporate policies aim to ensure our sustainability principles are firmly established in business operations and are implemented through corresponding management systems, committees and processes. The review and revision of these regulations and internal audits seek to ensure that our management systems are continuously improved and aligned to the respective requirements.

The following table shows how Sustainability Management is structured at Bayer:

Structure of Sustainability Management

Sustainability management		
Organization	**Major areas of activity**	**Steering, measurement and documentation**
> Member of the Board of Management responsible for Human Resources, Technology and Sustainability > Corporate Health, Safety & Sustainability function > Sustainable Development Committee	> Product and process innovation > Access to medicine > Sustainable food supply > Employee relations & development > Business ethics > Product stewardship > Safety > Environmental protection / resource efficiency > Supplier management > Stakeholder engagement / partnering > Societal engagement	> Corporate policies on, for example, – human rights – compliance – sustainable development – responsible marketing > Targets / indicators > HSEQ management systems and audits > Opportunity and risk management > Integrated Annual Report with independent auditing
Legal requirements such as the CSR Implementation Directive and initiatives such as WBCSD, GRI, UNGC and Responsible Care		

We underline our mission as a company that acts sustainably through our commitment to the U.N. Global Compact and the Responsible Care™ initiative, as well as through our involvement in the World Business Council for Sustainable Development (WBCSD). Bayer is committed to the U.N. Sustainable Development Goals (SDGs) and has published a company position detailing this. Our innovations, products and services make a contribution to overcoming some of the biggest global challenges, including the goals of zero hunger (SDG 2) and healthy lives and wellbeing (SDG 3) in particular.

Our supply chain is designed at both a global and regional level according to clear, sustainability-oriented criteria and standards. Bayer regards adherence to these standards as a crucial value-adding factor and an important lever for minimizing risks. A four-step process is thus established throughout the Group to improve sustainability practices in the supply chain, comprising the elements awareness-raising and supplier selection, evaluation and development.

Our sustainability requirements are established in the Bayer Supplier Code of Conduct (the "**Code of Conduct**"), which is based on the principles of the U.N. Global Compact and our Human Rights Position. It is available in 14 languages and covers the areas of ethics, labor, health, safety, environment & quality and management systems. The code lays out the general basis of cooperation with our suppliers and is applied in their selection and evaluation. The Supplier Code of Conduct is integrated into electronic ordering systems and contracts throughout the Bayer Group. Furthermore, our standard supply contracts contain clauses that authorize Bayer to verify suppliers' compliance with our sustainability requirements, which we validate, e.g., through online assessments and on-site audits by external auditors.

Bayer's goal was to have evaluated all strategically important suppliers by the end of 2017. This group includes those suppliers with a major influence on business in terms of, for example, procurement spend and long-term collaboration prospects (3-5 years). All in all, 99.5% (2016: 98%) of these suppliers were evaluated, the missing coverage being due to fluctuations inherent in the business. The remaining evaluations are scheduled to take place in the first quarter of 2018. By 2020, furthermore, we aim to evaluate all those suppliers with a significant procurement spend (> €1 million p.a.) that are regarded as potentially high-risk suppliers due to their combined country and category risk. Our target attainment as of 2017 was 93% (2016: 83%). In the case of new suppliers of this type Bayer reserves the right to review their sustainability performance through an online assessment or an on-site audit. Bayer auditors evaluate selected new and existing suppliers particularly with regard to health, safety and environmental protection. These audits are performed, e.g., on contract manufacturing suppliers with an increased risk. A total of 115 suppliers were evaluated by Bayer auditors in 2017.

Bayer reserves the right to terminate a supplier relationship if especially critical sustainability weaknesses have been identified during an online assessment or on-site audit and no improvement is observed during a follow-up evaluation. In 2017, Bayer was not prompted to end any supplier relationship due solely to sustainability performance.

13.13 Risk Management & Compliance

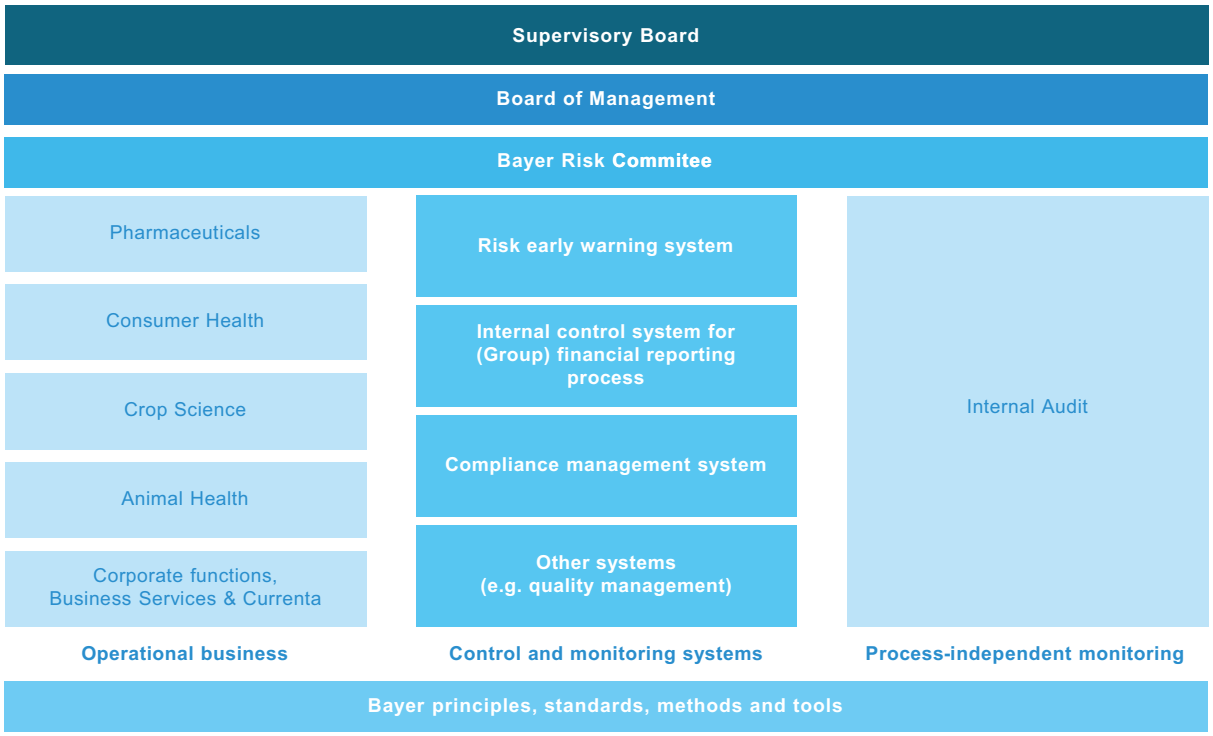
13.13.1 Risk Management

As a global life science enterprise, the Bayer Group is constantly exposed to a wide range of internal or external developments and events that could significantly impact the achievement of our financial and nonfinancial objectives. Opportunity and risk management is therefore an integral part of corporate management at Bayer. We regard opportunities as positive deviations, and risks as negative deviations, from projected or target values for potential future developments.

As Covestro AG is no longer a reportable segment in the Bayer Group, the opportunity and risk management of Covestro is no longer analyzed. The operational risks of Covestro are no longer part of Bayer's risk profile.

The following graph gives an overview of the Group's risk management structure overseen by the Bayer Risk Committee.

Structure of the Risk Management System



We identify opportunities as part of the annual strategic planning cycle, during which the segments analyze internal and external factors that may positively affect the development of our business. These may be factors of a social, economic or environmental nature. The core phase of our strategic planning process normally takes place in the first half of the year and starts with a comprehensive analysis of the markets. The segments build on this by analyzing their respective market environments to identify their opportunities. They base these analyses on different time periods to take into account the fact that trends or developments may impact our business over the short, medium or long term. In addition, opportunities are identified by the management and employees through daily observation of internal processes and markets. We have already taken account in our planning of opportunities that we believe are highly probable to materialize.

In connection with the reorganization of the Bayer Group initiated at the beginning of 2016, coordination of risk management activities was combined within the Group Risk Management function, which reports directly to the chief financial officer, and the risk management system was comprehensively and extensively realigned. This realignment involved, among other things, the adjustment of the risk management process – Enterprise Risk Management (ERM) process – to include a revised risk catalogue (Bayer Risk Universe) and a modified assessment system. The Bayer Group has implemented a holistic and integrated risk management system designed to ensure the continued existence and future target attainment of the Group through the early identification, assessment and treatment of risks. The Bayer Group's risk management system is aligned to internationally recognized standards and principles.

To enable the Board of Management and the Supervisory Board to monitor material business risks as required by law, the Bayer Group has implemented a risk early warning system pursuant to Section 91 para. 2 of the German Stock Corporation Act (AktG), an internal control system ("**ICS**") for (Group) accounting and financial reporting processes and a compliance management system.

Bayer has an ICS in place for the accounting and financial reporting process. This process comprises defined structures and workflows implemented throughout the organization. The purpose of our ICS is to ensure proper and effective accounting and financial reporting in accordance with Section 289 para. 4 of the HGB (formerly Section 289 para. 5 of the HGB) and Section 315 para. 4 of the HGB (formerly Section 315 para. 2 No. 5 of the HGB). The ICS is designed to guarantee timely, uniform and accurate accounting for all business transactions based on applicable statutory regulations, accounting and financial reporting standards and the internal Group policies that are binding upon all consolidated companies. Risks are identified and assessed, and mitigated using suitable countermeasures. Mandatory ICS standards such as system-based and manual reconciliation processes and functional separation have been derived from these frameworks and promulgated throughout the Group by the Group

Risk Management function on behalf of the chief financial officer of Bayer AG. The ICS standards are implemented by the Group companies and their compliance overseen by the respective management. Using Bayer's shared service centers, these companies prepare their financial statements locally and transmit them with the aid of a standard Group data model. This data model is based on the Group accounting policy and thus ensures the regulatory compliance of the consolidated financial statements. The Board of Management has confirmed the effective functioning of the ICS and the relevant criteria for the 2017 fiscal year. However, it should be noted that an internal control system, irrespective of its design, cannot provide absolute assurance that material misstatements in the financial reporting will be avoided or identified.

13.13.2 Compliance

Our compliance management system is aimed at ensuring lawful and responsible conduct by our employees. It is designed to identify potential violations in advance and systematically prevent their occurrence. The compliance management system thus contributes significantly to the integration of compliance into our operating units and their processes.

To create a positive compliance culture in our Company, we support all employees in conducting their professional activities with integrity and avoiding potential violations before they can occur. Bayer therefore organizes Group-wide training programs tailored to requirements and target groups, along with extensive communications activities on relevant compliance issues and risks. In addition, compliance managers are available worldwide to answer questions from all employees regarding lawful and ethical behavior in business-related situations. Employees can also discuss such matters with their supervisors, who serve as role models for compliance. We have set a Group target for nearly all of Bayer's managerial employees worldwide to complete at least one compliance training program each year. In 2017, 35,159 employees, or around 96.6%, completed such a program.

Our compliance principles apply throughout the Bayer Group and are established in our Corporate Compliance Policy, in which we commit to uphold the following ten principles:

- Antitrust: fair competition in our markets
- Anticorruption: integrity in our business dealings at all times
- Corporate responsibility: sustainability, safety and product stewardship
- Foreign trade law: observance of relevant trade controls
- Insider trading: safeguarding of equal opportunity in securities trading
- Accurate books and records: complete and detailed recording of our business activities and financial transactions
- Fairness and respect at work: treating one another with fairness and respect
- Intellectual property: safeguarding our own intellectual property and respecting that of others
- Avoiding conflicts of interest: separation of business and personal interests
- Privacy: precautions to protect and secure personal data

13.14 Insurance

Bayer has taken out insurance policies it considers usual and necessary in the industry such as but not limited to public-, product and environmental liability insurance, Directors & Officers liability insurance, property and business interruption insurance, transport and marine cargo insurance and trade credit insurance.

13.15 Litigation

As a global company with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks, particularly in the areas of product liability, competition and antitrust law, anticorruption, patent disputes, tax assessments and environmental matters. The outcome of any current or future proceedings cannot normally be predicted. It is therefore possible that legal or regulatory judgments or future settlements could give rise to expenses that are not covered, or not fully covered, by insurers' compensation payments and could significantly affect our revenues and earnings. Legal proceedings considered to involve, or to have involved in the course of the last twelve months, material risks are outlined below. The legal proceedings referred to do not represent an exhaustive list. For further information on the risks involved in legal proceedings, see also "*1.1.13 Bayer is exposed to material risks from legal disputes and proceedings.*" For information on legal proceedings that Monsanto is involved in, see "*1.2.4 As a result of the Transaction, Bayer will assume the litigation risk arising in connection with Monsanto's pending and future litigation. Adverse outcomes in legal proceedings, including environmental remediation matters, could subject the Bayer Group to substantial damages and adversely affect the Bayer Group's results of operations and profitability."* and pages M-14, M-94, M-134 and M-153 of this Prospectus.

13.15.1 Product-related Litigation

Yasmin™ / *YAZ*™: Bayer is or has been involved in a number of lawsuits and claims in the United States concerning Bayer's drospirenone-containing oral contraceptives Yasmin™ and YAZ™ or their generic versions, most of which have been resolved in recent years. Claimants allege that users have suffered personal injuries, some of them fatal, from the use of Yasmin™ and/or YAZ™ or their generic versions, and seek compensatory and punitive damages, claiming, in particular, that Bayer had not adequately warned of the alleged risks.

As of January 30, 2018, Bayer had reached agreements, without admission of liability, to settle approximately 10,600 claims in the U.S. for venous clot injuries (primarily deep vein thrombosis or pulmonary embolism) for a total amount of approximately US$2.1 billion.

Bayer believes that it has meritorious defenses and will continue to defend itself vigorously against all claims that are not considered for settlement. Bayer believes the litigation risks in connection with Yasmin™ / YAZ™ are no longer material as of the date of this Prospectus.

Mirena™: As of April 13, 2018, lawsuits from approximately 3,100 users of Mirena™, a levonorgestrel-releasing intrauterine system providing long-term contraception, had been served upon Bayer in the United States (excluding lawsuits no longer pending). Plaintiffs allege personal injuries resulting from the use of Mirena™, including perforation of the uterus, ectopic pregnancy or idiopathic intracranial hypertension, and seek compensatory and punitive damages. Plaintiffs claim, inter alia, that Mirena™ is defective and that Bayer knew or should have known of the risks associated with it and failed to adequately warn its users. Additional lawsuits are anticipated. In April 2017, most of the cases pending in U.S. federal courts in which plaintiffs allege idiopathic intracranial hypertension were consolidated in a multidistrict litigation ("**MDL**") proceeding for common pre-trial management. As of April 13, 2018, lawsuits from approximately 480 users of Mirena™ alleging idiopathic intracranial hypertension had been served upon Bayer in the United States. Another MDL proceeding concerning perforation cases has, in the meantime, been dismissed. The Second Circuit Court of Appeals affirmed the perforation MDL district court's summary judgment order of 2016 dismissing approximately 1,230 cases pending before that court, and the Supreme Court of the United States rejected a petition for review. In August 2017, Bayer reached an agreement in principle with plaintiffs' counsel leadership for global settlement of the perforation litigation, for a total amount of US$12.2 million. This agreement was executed in April 2018. Bayer may withdraw from the agreement if fewer than 98% of those who are eligible choose to participate. As of April 13, 2018, a total of approximately 4,100 cases would be included in the settlement. The idiopathic intracranial hypertension MDL proceeding is not included in the settlement.

As of April 13, 2018, five Canadian lawsuits relating to Mirena™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Xarelto™: As of April 13, 2018, U.S. lawsuits from approximately 23,200 recipients of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Xarelto™, including cerebral, gastrointestinal or other bleeding and death, and seek compensatory and punitive damages. They claim, among other things, that Xarelto™ is defective and that Bayer knew or should have known of these risks associated with the use of Xarelto™ and failed to adequately warn its users. Additional lawsuits are anticipated. Cases pending in U.S. federal courts have been consolidated in an MDL for common pre-trial management. In May, June and August 2017, the first three MDL trials resulted in complete defense verdicts; plaintiffs have appealed all three verdicts. In January 2018, after the first trial to proceed in Pennsylvania state court had initially resulted in a judgment in favor of the plaintiff, the trial judge vacated the jury's verdict and granted judgment in favor of Bayer. In April 2018, the second Pennsylvania state court jury trial resulted in a complete defense verdict; plaintiff will appeal. Further Pennsylvania state court trials are currently scheduled for the third and fourth quarter of 2018. Bayer anticipates that additional trials will be scheduled. As of April 13, 2018, ten Canadian lawsuits relating to Xarelto™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Essure™: As of April 13, 2018, U.S. lawsuits from approximately 16,800 users of Essure™, a medical device offering permanent birth control with a nonsurgical procedure, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Essure™, including hysterectomy, perforation, pain, bleeding, weight gain, nickel sensitivity, depression and unwanted pregnancy, and seek compensatory and punitive damages. Additional lawsuits are anticipated. As of January 30, 2018, two Canadian lawsuits relating to Essure™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Class actions over neonicotinoids in Canada: Proposed class actions against Bayer were filed in Quebec and Ontario (Canada) concerning crop protection products containing the active substances imidacloprid and clothianidin (neonicotinoids). Plaintiffs are honey producers, who have filed a proposed nationwide class action in Ontario and a Quebec-only class action in Quebec. Plaintiffs claim for damages and punitive damages and allege Bayer and another crop protection company were negligent in the design, development, marketing and sale of neonicotinoid pesticides.

The proposed Ontario class action is in a very early procedural phase. In Quebec, the court certified a class in late February 2018. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

In connection with the above-mentioned proceedings, Bayer is insured against statutory product liability claims against Bayer to the extent customary in the respective industries and has, based on the information currently available, taken appropriate accounting measures for anticipated defense costs. However, the accounting measures relating to Yasmin™ / YAZ™ and Essure™ claims exceed the available insurance coverage.

13.15.2 Patent Disputes

Adempas™: In January 2018, Bayer filed patent infringement lawsuits in a U.S. federal court against Alembic Pharmaceuticals Limited, Alembic Global Holding SA, Alembic Pharmaceuticals, Inc. and INC Research, LLC (together "**Alembic**"), against MSN Laboratories Private Limited and MSN Pharmaceuticals Inc. (together "**MSN**") and against Teva Pharmaceuticals USA, Inc. and Teva Pharmaceutical Industries Ltd. (together "**Teva**"). In December 2017, Bayer had received notices of an abbreviated new drug application with a paragraph IV certification ("**ANDA IV**") pursuant to which Alembic, MSN and Teva each seek approval of a generic version of Bayer's pulmonary hypertension drug Adempas™ in the United States.

Betaferon™ / *Betaseron*™: In 2010, Bayer filed a complaint against Biogen Idec MA Inc. ("**Biogen**") in a U.S. federal court seeking a declaration by the court that a patent issued to Biogen in 2009 is invalid and not infringed by Bayer's production and distribution of Betaseron™, Bayer's drug product for the treatment of multiple sclerosis. Biogen is alleging patent infringement by Bayer through Bayer's production and distribution of Betaseron™ and Extavia™ and has sued Bayer accordingly. Bayer manufactures Betaseron™ and distributes the product in the United States. Extavia™ is also a drug product for the treatment of multiple sclerosis; it is manufactured by Bayer, but distributed in the United States by Novartis Pharmaceuticals Corporation, another defendant in the lawsuit. In 2016, the U.S. federal court decided a disputed issue regarding the scope of the patent in Biogen's favor. Bayer disagrees with the decision, which may be appealed at the conclusion of the proceedings in the U.S. federal court. In February 2018, a jury decided that Biogen's patent is invalid at the end of a trial regarding Biogen's claims against EMD Serono, Inc. and Pfizer Inc. for infringement of the same patent. Biogen has challenged the jury's verdict. Unless the jury's verdict is overturned, Biogen cannot assert its claims against Bayer.

Damoctocog alfa pegol (BAY 94-9027, long-acting recombinant factor VIII): In August 2017, Bayer filed a lawsuit in a U.S. federal court against Nektar Therapeutics ("**Nektar**"), Baxalta Incorporated and Baxalta U.S., Inc. (together "**Baxalta**") seeking a declaration by the court that a patent by Nektar is invalid and not infringed by Bayer's drug candidate BAY 94-9027 for the treatment of hemophilia A. In September 2017, Baxalta and Nektar filed a complaint in a different U.S. federal court against Bayer alleging that BAY 94-9027 infringes seven other patents by Nektar. Regarding the complaint by Bayer, Nektar and Baxalta gave Bayer a covenant not to make any claims against Bayer for infringement of that patent. Bayer amended the complaint to now seek a declaration by the court that the seven other patents by Nektar are not infringed by BAY 94-9027. The patents are part of a patent family registered in the name of Nektar and further comprising European patent applications with the title "Polymer-factor VIII moiety conjugates" which are at issue in a lawsuit Bayer filed against Nektar in 2013 in the district court of Munich, Germany. In this proceeding, Bayer claims rights to the European patent applications based on a past collaboration between Bayer and Nektar in the field of hemophilia. However, Bayer believes that the patent family does not include any valid patent claim relevant for Bayer's drug candidate BAY 94-9027 for the treatment of hemophilia A.

Nexavar™: In 2015, Bayer filed patent infringement lawsuits in a U.S. federal court against Mylan Pharmaceuticals Inc. and Mylan Inc. (together "**Mylan**"). In 2014 and 2015, Bayer had received notices of an ANDA IV application pursuant to which Mylan seeks approval of a generic version of Bayer's cancer drug Nexavar™ in the United States. In October 2017, Bayer reached an agreement with Mylan to settle this patent dispute. Under the settlement terms, Mylan will obtain a license to sell its generic version of Nexavar™ in the United States at a date after the expiration of the patent for the active ingredient expiring in January 2020. In 2016, Bayer had received another notice of such an ANDA IV application by Teva Pharmaceuticals USA, Inc. Bayer filed a patent infringement lawsuit against Teva in the same U.S. federal court. In January 2018, Bayer reached an agreement with Teva to settle this patent dispute. Under the settlement terms, Teva will obtain a license to sell its generic version of Nexavar™ in the United States at a date after the expiration of the patent for the active ingredient expiring in January 2020.

Stivarga™: In 2016, Bayer filed patent infringement lawsuits in a U.S. federal court against Apotex, Inc. and Apotex Corp. (together "**Apotex**") and against Teva. Bayer had received notices of an ANDA IV application pursuant to which Apotex and Teva each seek approval of a generic version of Bayer's cancer drug Stivarga™ in the United States.

Xarelto™: In 2015, Bayer and Janssen Pharmaceuticals filed a patent infringement lawsuit in a U.S. federal court against Aurobindo Pharma Limited, Aurobindo Pharma USA, Inc. (together "**Aurobindo**"), Breckenridge

Pharmaceutical Inc. ("**Breckenridge**"), Micro Labs Ltd., Micro Labs USA Inc. (together "**Micro Labs**"), Mylan, Prinston Pharmaceutical Inc. ("**Prinston**"), Sigmapharm Laboratories, LLC ("**Sigmapharm**"), Torrent Pharmaceuticals, Limited and Torrent Pharma Inc. (together "**Torrent**"). Bayer had received notices of an ANDA IV application by Aurobindo, Breckenridge, Micro Labs, Mylan, Prinston, Sigmapharm and Torrent, each seeking approval to market a generic version of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, in the United States. In 2016, Bayer received another notice of such an ANDA IV application by InvaGen Pharmaceuticals, Inc. ("**InvaGen**"). Bayer and Janssen Pharmaceuticals filed a patent infringement lawsuit against InvaGen in the same U.S. federal court.

Bayer believes it has meritorious defenses in the above ongoing patent disputes and intends to defend itself vigorously.

For further information on the legal risks arising in connection with patent disputes, see "*1.1.7 Bayer's business and results of operations may be adversely affected if Bayer is unable to obtain or defend its intellectual property or if the rights associated with its intellectual property do not provide effective protection*." and "*1.1.8 Bayer may inadvertently infringe on the intellectual property rights of third parties and could be enjoined from using or selling the infringing products or technology and/or required to pay monetary damages or royalties.*"

13.15.3 Further Legal Proceedings

Trasylol™ / Avelox™: A qui tam complaint relating to marketing practices for Trasylol™ (aprotinin) and Avelox™ (moxifloxacin) filed by a former Bayer employee is pending in the United States District Court in New Jersey. The U.S. government has declined to intervene at the present time.

Newark Bay Environmental Matters: In the United States, Bayer is one of numerous parties involved in a series of claims brought by federal and state environmental protection agencies. The claims arise from operations by entities which historically were conducted near Newark Bay or surrounding bodies of water, or which allegedly discharged hazardous waste into these waterways or onto nearby land. For more information on this legal dispute, see "*1.1.12 Bayer is subject to extensive and increasingly stringent environmental, health and safety laws, regulations and standards, which may result in restrictions on production or marketing of its products, increased costs to ensure compliance, damage to Bayer's reputation, legal liability and remediation efforts.*"

Asbestos: A further risk may arise from asbestos litigation in the United States. In many cases, the plaintiffs allege that Bayer and co-defendants employed third parties on their sites in past decades without providing them with sufficient warnings or protection against the known dangers of asbestos. Additionally, a Bayer affiliate in the United States is the legal successor to companies that sold asbestos products until 1976. Union Carbide has agreed to indemnify Bayer for this liability. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

13.15.4 Tax Proceedings

Stamp taxes in Greece: In 2014, 2016 and 2017, a Greek administrative court of first instance dismissed Bayer's lawsuits against the assessment of stamp taxes and contingent penalties in a total amount of approximately €130 million on certain intra-Group loans to a Greek subsidiary. Bayer is convinced that the decisions are wrong and either has appealed the relevant decisions or plans to do so in due course. Bayer believes it has meritorious arguments to support its legal position and intends to defend itself vigorously.

13.16 Material Agreements

The following section provides an overview of material agreements to which any member of the Group is a party.

13.16.1 Material Agreements entered into in Connection with the Transaction

On September 14, 2016, we entered into an agreement and plan of merger with Monsanto Company, which provides for our acquisition (through a merger) of all outstanding shares of Monsanto Company against a payment of US$128.00 per share in cash. This agreement is described under "*8.8 Key Terms of the Merger Agreement*."

In connection with financing of the Transaction, Bayer entered into the Loan Facilities Agreement, which is described in "*8.9 Financing of the Transaction*."

For information on the Divestiture Agreements entered into with BASF in connection with the Transaction-related Divestments, see "*8.10.1 The First BASF Divestiture Package.*"

For information on the NSA, which Bayer entered into with the United States Government as part of the CFIUS review process, see "*8.7 Transaction Timeline and Regulatory Approval Processes.*"

13.16.2 Other Agreements

Bayer entered into a €3.5 billion syndicated credit facility that is undrawn as of yet and was arranged by Bayer AG and its U.S. subsidiary Bayer Corporation. This credit facility is available until December 2020. The participating banks are entitled to terminate the credit facility in the event of a change of control at Bayer and demand repayment of any loans that may have been granted under this facility up to that time.

On November 22, 2016, Bayer Capital Corporation B.V. issued Mandatory Convertible Notes in a nominal amount of €4.0 billion, excluding subscription rights for existing shareholders, guaranteed by Bayer AG and maturing in November 2019. The terms on which holders may convert the notes into shares before the maturity date are more favorable in the event of a change of control than they would be otherwise.

On June 14, 2017 Bayer AG issued Exchangeable Bonds in a nominal amount of €1.0 billion, maturing in 2020, which may either be settled in cash or by delivery of Covestro Shares or by a combination thereof. In the event of a change of control and the occurrence of a rating downgrade, bondholders have a put option to demand redemption of any or all of their bonds for which they did not yet exercise their exchange right.

For information on Pharmaceuticals' current main collaborations in R&D, see "*13.4.1.4.4 Collaborations and Strategic Alliances*" and for Crop Science's most significant long-term cooperations, see "*13.4.3.4 R&D*."

14. REGULATORY ENVIRONMENT

The business of our three divisions Pharmaceuticals, Consumer Health and Crop Science and our business unit Animal Health is subject to significant governmental regulation. Applicable rules and regulations include, for example, provisions on the development, manufacturing, approval process, labeling, distribution, pricing and/or marketing of our products, which include drugs, consumer care products, veterinary products, seeds, pesticides (for plant and non-plant protection) and chemical products. In addition, our operations are subject to significant environmental regulation. The regulatory frameworks affecting the Group vary depending on the jurisdictions where Bayer carries out its operations and markets its products.

*While relevant regulations are typically of a national scope, within the European Union ("**EU**"), a considerable degree of regulatory harmonization exists in a number of areas relevant to our operations, such as in the approval process of pharmaceuticals, veterinary drugs, and the active ingredients in plant protection products. In some instances, the EU has created a common regulatory framework that applies in all EU member states ("**Member States**") (and that sometimes allows Member States to adopt more detailed and more stringent regulations), and has indirect harmonizing effects in certain other European countries.*

14.1 Pharmaceuticals

The primary emphasis of pharmaceutical and drug regulation is to assure the safety and effectiveness of products. Accordingly, in conducting the business of Pharmaceuticals, the Group is required to comply with various laws and regulations, including rules implemented by regulatory agencies and by other national or supra-national regulatory authorities, as well as, with industry standards. These regulations and the industry standards in the different countries where the Group develops, manufactures and/or markets drugs, contain, among others, provisions on the testing, safety, efficacy, labeling (including warnings), approval, manufacturing, promotion, marketing and post-marketing surveillance of prescription pharmaceuticals. Also see "*1.1.6 There can be no assurance that Bayer will identify a sufficient number of research candidates and that Bayer's products will receive and maintain any necessary regulatory approvals, and any increase in regulatory and legal requirements, including as a result of higher public expectations, could lead to more costly and lengthy registration or approval procedures and could impair or preclude Bayer's product development and commercialization efforts*." Non-compliance with any such laws may result in regulatory action or law suits, relating to, for example, product liability, anti-competition or patent infringements. In the U.S. and France as well as any other countries in which class actions for pharmaceutical products are permitted, the litigation risk and exposure is significantly higher than in countries where class actions aren't permitted. Also see "*1.1.13 Bayer is exposed to material risks from legal disputes and proceedings.*" Notable competent authorities implementing these regulations include the EMA, the FDA, the Pharmaceuticals and Medicals Devices Agency in Japan and the China Food and Drug Administration.

14.1.1 Development of Drugs

14.1.1.1 General

Specific rules are applicable to the development of new drugs and the conduct of the trials involved in such development. The regulatory requirements typically follow stringent standards that vary by country. In almost all countries, finished drugs (that is, products manufactured and marketed in packaging ready for distribution to consumers) can only be placed on the market for a specific medical indication after receipt of marketing authorizations ("**MA**") by the competent authorities. In order for a drug candidate to qualify for MA, most jurisdictions require a dossier in the form of a "common technical document" ("**CTD**") to be submitted to the relevant competent authority for review and evaluation in a registration process. The CTD contains detailed information about the drug candidate, including its efficacy, safety and quality. In addition, it provides details about the manufacturing process, the production facilities and information to be provided to patients. Supporting data is collected in pre-clinical and clinical trials prior to the application for MA, as outlined below. This registration process can last from a few months to a few years and depends on the nature and proposed use of the drug candidate under review, the quality of the submitted data and the efficiency of the relevant competent authority.

The preclinical and clinical development paths are broadly similar in the EU and in the U.S. At the beginning of the development phase for a new drug, pre-clinical in vitro and in vivo laboratory studies are conducted to evaluate the potential effects of substances and examine chemical-physical properties, toxicological data and other information. Upon successful completion of such pre-clinical studies, a request for a clinical trial authorization in the EU or an investigational new drug application in the U.S. must be approved by the relevant competent authorities before clinical trials may begin.

Clinical trials are typically conducted sequentially, beginning with Phase I (typically lasting one year), followed by Phase II (typically lasting an additional two to three years) and Phase III (typically lasting an additional two to five years) and continuing to Phase IV studies which are conducted after marketing approval has been received. These phases may be compressed, may overlap or may be omitted in some circumstances, but can generally be described as follows:

- In Phase I, clinical studies are initially conducted in a limited clinical trial population to evaluate the safety profile of a drug candidate and the range of doses that can be administered, including the maximum tolerated dose that can be given to patients. The active ingredient is usually tested on healthy volunteers to determine tolerability as well as to study the effects of pharmacologically active molecules at their tissue sites of action (i.e., pharmacodynamic effects) and to study the absorption, distribution, metabolism and excretion of a pharmacologically active molecule in the body (i.e., pharmacokinetic effects).
- In Phase II, testing takes place on a few hundred voluntary patients. The results in this phase allow evaluation of the efficacy of the drug candidate for specific indications, determination of the drug candidate's optimal dosage and further collection of data to describe the drug candidate's safety profile. Efforts in this phase also aim to determine pharmacokinetic differences between healthy and ill persons.
- Phase III is the most important one in the development of a new drug. In Phase III, the drug candidate is usually tested in randomized trials comparing the drug candidate to an approved form of therapy in an expanded and well-defined patient population, usually recruited from a large number of hospitals and medical practices. When no alternative is available, drug candidates may be tested against a placebo. Stringent criteria of statistical significance apply to Phase III trials. These studies, which are sometimes referred to as "registration" or "pivotal studies," are usually undertaken once Phase II clinical trials suggest that the drug candidate is effective and has an acceptable safety profile, and an effective dosage has been identified. The goal of Phase III studies is to demonstrate evidence of a clinical benefit, usually expressed as a positive benefit-risk assessment for the drug candidate in a patient population with a given disease and stage of illness.
- Phase IV studies close the trial sequence after the approval of a drug has been obtained. They aim to ensure safety for patients based on ongoing and long-term recordings, e.g., to identify rare side effects or side effects attributable to previously unknown outside influences.

Clinical studies are subject to the strict requirements of good clinical practice by the International Council on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use ("**ICH**") in the U.S., EU and Japan. The same requirements also apply in many other countries in the world that have implemented the guidelines of the ICH, which, among other matters, harmonize and provide technical standards for the design and conduct of clinical trials.

Many countries also regulate the publication of the results of clinical trials. Since January 1, 2014, the joint Principles for Responsible Clinical Trial Data Sharing by the European Federation of Pharmaceutical Industries and Associations and the Pharmaceutical Research and Manufacturers of America must be adhered to in Europe and the U.S. These principles provide that researchers are able to submit applications to receive access to patient level data, protocols, and clinical study reports for new drugs approved in the U.S. and the EU.

In some jurisdictions, clinical data from the actual country in which approval is being sought is required for approval. In Japan, for example, additional clinical studies on Japanese patients are necessary. Such requirements may increase the time required for drug development.

If a drug candidate meets the approval requirements, the relevant competent authority will grant a product license for marketing. In some countries, negotiation on pricing and reimbursement follow the grant of the product license for marketing. The process of developing a pharmaceutical product from discovery through testing, registration and initial product launch can take up to approximately ten years, but the exact duration may vary considerably depending on the type of drug candidate and the countries involved. Once drugs are being marketed, in most countries, pharmaceutical companies are required to monitor adverse reactions and submit periodic reports on such reactions, if any, to the appropriate authorities. Regulatory agencies review the results of such studies and newly observed signals from post-approval reporting on a continued basis. In addition, safety committees of these regulatory agencies may restrict the marketing authorization, request changes to the labeling, withdraw approval or demand specific public safety communication at any point in time.

To ensure drug safety, many countries have also adopted legislation to combat drug counterfeits, such as European Directive 2011/62/EU[23] amending Directive 2001/83/EC[24]. The directives provide for obligatory safety features on the outer packaging of drugs such as unique identifiers (barcodes) and anti-tampering devices, a common EU-wide logo to identify legal online pharmacies, tougher rules on controls and inspections of producers of active pharmaceutical ingredients and strengthened record-keeping requirements for wholesale distributors.

14.1.1.2 Regulatory Specifics in the EU

In the EU, drug approval and manufacturing is comprehensively regulated at both the EU level and the national level in each Member State. The EU legal framework for drug approval and manufacturing has been developed and amended in recent decades on numerous occasions, with a tendency to increasingly shift decision-making and proceedings from a national to the EU level.

In terms of drug approval procedures, four registration procedures with different regional coverages are available in the EU: a European centralized procedure which is mandatory for several therapeutic fields of high medical need such as, for example, oncology, and three different types of national procedures, two of which are based on mutual recognition of either an already existing marketing authorization or an application for marketing being assessed on behalf of all involved countries by one rapporteur country and the third being a purely national procedure. In the European centralized procedure, after the dossier is submitted to the EMA, the Committee for Medicinal Products for Human Use ("**CHMP**") carries out a scientific evaluation. The CHMP opinion is then transmitted to the European Commission for its opinion, which, if also favorable, results in a binding decision for marketing authorization in all Member States. A company is obliged to use the mutual recognition or decentralized procedure, if it intends to sell a medicinal product in more than one Member State, but not necessarily throughout the entire EU. After MA has been granted for a product in one Member State selected by the company (a so-called reference Member State, "**RMS**"), this RMS has to produce an assessment report. The authorities in the other Member States, where the product is to be approved, receive a copy of the original dossier and a copy of the assessment report. They then "mutually recognize" the decision of the RMS. If a company wishes to license a product in just one Member State, it may proceed to obtain only a national license under applicable national law.

Simplified procedures apply with regard to the approval of European imports and generics, i.e., drugs whose active ingredient and therapeutical efficacy is the same as those of a drug that has already been approved. For the approval of generics, the pharmacological, toxicological and clinical trials which are normally required before a drug may be marketed are replaced by proof of therapeutic equivalence (bio-equivalence) to a drug that has already been approved and which contains the same amount of the active ingredient in a similar form to the generic.

Preparing a dossier for approval in the EU takes specific know-how, considerable investment and a time commitment of several years given that the ultimate approval of a drug is only granted in the final stages of the drug development process. The conditions for MA also include requirements for the manufacturer of the drug to comply with applicable legislation, including good manufacturing practices, related implementing measures and applicable guidelines that involve, among other matters, the ongoing inspection of manufacturing and storage facilities. After MA for a drug has been obtained, the marketed product and its manufacturer continue to be subject to regulations and monitoring. The competent authorities must be notified of changes to the product, responsible parties, manufacturing processes, and, depending on the type of change, the product may be subject to variations to the existing MA or may even have to apply for a new MA. Safety-relevant information is compiled using post-authorization safety studies conducted after approval, the results of which are entered into a registry in compliance with European laws on pharmacovigilance.

14.1.1.3 Regulatory Specifics in the U.S.

In the U.S., pharmaceutical companies and their products are subject to regulation by the FDA and, to a lesser extent, supervision by the authorities of the respective U.S. states. Drug products with new active ingredients and new combinations, indications and administration methods for active ingredients or drugs that have already been registered, must nevertheless be reviewed and approved under the new drug application ("**NDA**") procedure before they may be distributed in the United States. After completion of the required clinical testing, a NDA is prepared and submitted to the FDA for in-depth review and approval before the product may be marketed in the U.S. The NDA must include the results of all preclinical, clinical, and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture and control. The cost of preparing and submitting a NDA is substantial. The

[23] Directive 2011/62/EU of the European Parliament and of the Council of 8 June 2011 amending Directive 2001/83/EC on the Community code relating to medicinal products for human use, as regards the prevention of the entry into the legal supply chain of falsified medicinal products.

[24] Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for the human use.

process, beginning with drug discovery and development and continuing through final FDA approval, can take up to ten years or longer. As in Europe, the reason for this is the obligation to submit extensive documentation on the results of pre-clinical and clinical studies, safety, efficacy and manufacturing and quality assurance for the proposed drug.

Generic drug approvals and changes to drugs that have already been approved are subject to a detailed regulatory scheme pursuant to the Hatch-Waxman Act of 1984. Applicants seeking approval of a generic drug, typically do so through the abbreviated new drug application ("**ANDA**"), which is similar to the simplified European procedure. However, if the original drug or its use is covered by patents, generic marketing approval is effective only after patent protection has expired or if the ANDA applicant certifies that the new product will not infringe the patent of the original drug of the branded manufacturer, or that such patents are invalid (paragraph IV certification). Once the ANDA application has been accepted for filing by the FDA, the ANDA applicant must also send notice of the paragraph IV certification to the patent and NDA holders, who may then initiate a patent infringement lawsuit in response to the notice.

Pharmaceutical companies that have received FDA approval under a NDA for a new chemical entity ("**NCE**") receive a five-year period of marketing exclusivity during which the FDA cannot approve any application seeking approval of a generic version of that drug. A NCE is a drug that contains a drug substance or an active ingredient that has not been previously approved by the FDA. In case a drug does not qualify as a NCE, certain changes to a drug, if supported by clinical studies essential to the approval conducted or sponsored by the applicant, can secure a three-year period of marketing exclusivity, during which the FDA cannot approve an application for a generic drug that includes the same change.

The FDA is also responsible for periodic inspections of production facilities and supervision of products. If the FDA finds that a manufacturer has significantly violated FDA regulations, the FDA may issue a "Warning Letter" to give a drug manufacturer the opportunity to take voluntary and prompt corrective action before initiating an enforcement action. Non-compliance with and breach of official orders can result in fines, product recalls, suspension of production, import or distribution bans, suspension of NDA or ANDA processing, court orders or criminal prosecution. Under certain circumstances, the FDA will revoke approvals that have already been granted. For information on a Warning Letter issued by the FDA in relation to Bayer's Leverkusen Supply Center, a production site in Leverkusen, Germany, that is engaged in the process of drug manufacturing including solid oral dosages forms, see "*1.1.16 Bayer's production and procurement activities are exposed to various risks, including in connection with technical failures, natural disasters, regulatory action or legislative changes.*"

14.1.1.4 Biologicals

We market, among others, substances known as "biologicals." Biologicals are derived from biological sources (e.g., from human plasma or from cell lines genetically engineered to produce a specific protein). In the U.S. and other markets, unique requirements apply specifically to biologicals. For example, in order to minimize the risk of infectious disease transmission, human plasma-derived products require donor screening and plasma testing, as well as multiple manufacturing steps designed to remove viruses and other infectious agents. Biological products are chemically complex, often depending on a precise structure for their effectiveness (e.g., the specific folding of a molecule). Regulations require us to subject these products to rigorous testing to ensure stability throughout their shelf life. Because biological products cannot withstand conventional sterilization techniques, we must use special processes to ensure sterility. Under applicable regulatory requirements, we must submit detailed documentation to demonstrate appropriate controls over our manufacturing facilities, including associated equipment and supporting utilities such as water supply and climate control.

14.1.2 Promotional and Pricing Practices, Marketing and Distribution of Drugs

The promotional and pricing practices of pharmaceutical manufacturers and their interaction with purchasers and prescribers of drugs are subject to various legal restrictions and limitations, including anti-kickback and anti-corruption laws, regulation governing false claims and unfair trade practices and consumer protection laws. Many of the agencies administering these laws and regulations have increased their enforcement activities in the pharmaceutical sector in the past years, in particular in the U.S. Potential investigations and prosecutions in this regard carry the risk of significant civil and criminal penalties.

The marketing and distribution of drugs, including through wholesale and mail order, is also subject to regulation. Different rules generally apply, depending on whether drugs are only available for consumer purchase through a pharmacy, or not. In some countries, with respect to drugs only available through a pharmacy, an additional distinction is drawn between prescription only and non-prescription drugs. Since the allocation of active ingredients to the categories described in the preceding sentences is based on national legislation, the applicable rules differ by

jurisdiction. Dispensing and advertising of drugs, in particular, is also typically subject to specific restrictions, in addition to general restrictions on advertising deriving, e.g., from EU and antitrust laws and regulations.

In many countries drugs are generally still distributed to consumers via pharmacies or other legal entities requiring a wholesaler license. In addition, product-specific regulations may prohibit advertising under certain circumstances (e.g., outside professional circles). Advertising for some drugs may even be completely prohibited in certain countries. Irrespective of the product category, health-related representations in product advertising may be subject to regulation. To the extent this is the case, the advertising company must be able to provide scientific proof of the accuracy of relevant representations.

14.1.3 Consumer Costs and Reimbursement Regulations

In a number of countries, prices for drugs are subject to governmental regulation in the form of direct or indirect price controls, including reference pricing, budget allocations or patient contribution requirements. Otherwise or in addition to price regulations, costs for prescribed pharmaceutical therapies may be fully or partially borne by social security or health insurance programs. In addition, governments may impose compulsory licenses or require generic substitution. The different national regulations that apply to the reimbursement or assumption of costs significantly influence the pricing of drugs on the respective markets. The price and reimbursement level for new drugs often depends on the strength of the clinical data set for a particular drug. In most countries, national competent authorities ensure that the prices of registered medicinal products sold in their territory are not excessive, notwithstanding acceptable margins for wholesalers and pharmacies. In making this judgment, competent authorities usually compare the proposed national price to either the prices of existing treatments and/or the prices of the same drug in other countries and taking into account the type of treatment (preventive, curative or symptomatic), the degree of innovation, the therapeutic breakthrough, volume of sales, sales forecast, size of the target population and/or the improvement (including cost savings) over comparable treatments.

In the EU, pricing and reimbursement for drugs are not harmonized and fall within the exclusive jurisdiction of national authorities, provided that basic transparency requirements are met at the European level. As a consequence, reimbursement mechanisms by private and public health insurers vary from country to country. In public health insurance systems, reimbursement is determined by guidelines established by the legislator or a competent national authority. In general, inclusion of a product in reimbursement schemes is dependent upon proof of such product's efficacy, medical necessity, and the economic benefits of the product to patients and to the health care system in general. Acceptance for reimbursement comes with restrictions relating to cost, use and often volume of production and distribution, which also vary from country to country.

In contrast, the price of drugs in the U.S. is largely unregulated. Nevertheless, reimbursements may be available from third party payers, such as government payer programs at the federal or state level like Medicare (a health care program administered by the U.S. government for persons over 65 years of age) and Medicaid (a health care program for low income families and individuals that is funded by the U.S. government and the states, and administered by the states), or from managed care providers, private health insurers or other organizations. The process for determining whether a payer will provide coverage for a drug product may be separate from the process for setting the price or reimbursement rate that the payer will pay for the drug product. Third party payers may limit coverage to specific drug products on an approved list, which might not include all of the FDA-approved drug products for a particular indication. Also, third party payers are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy.

In March 2010, the U.S. Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 ("**PPACA**") was enacted. Among other things, the PPACA increased the minimum rebates owed by manufacturers under the Medicaid drug rebate program, extended manufacturers' Medicaid rebate liability, expanded eligibility for Medicaid, and established annual fees and taxes on manufacturers of certain drugs. However, the current U.S. administration, may make changes or even repeal the PPACA. In addition, the current U.S. administration may make changes to legislation that could affect the amounts federal and state governments or third party payers will pay for health care products or directly or indirectly affect drug prices or drug imports into the U.S. Bayer will closely monitor these legislative proposals. Also, see "*1.1.17 Pharmaceuticals is exposed to pricing pressure resulting from regulation and market conditions, which may negatively impact Bayer's business and results of operations.*"

14.2 Consumer Health

Our consumer health products are mostly OTC nonprescription products in the dermatology, nutritional supplements, analgesic, digestive health, allergy, cold, sinus and flu, foot care, sun protection and cardiovascular risk prevention categories. Depending on the product and/or market the products are sold as drugs, medical devices,

food supplements or cosmetics. OTC drugs and medical devices are subject to regulations similar to the drugs and medical devices marketed by our Pharmaceuticals division with regard to labeling, storage, record keeping, distribution, advertising, promotion and pricing. In some countries, food supplements and cosmetics do not require formal approval, but must meet standards that have been established by the relevant health authorities. In the U.S., the FDA and, in part, the Federal Trade Commission, oversee the marketing, manufacturing, labeling and advertising of consumer health products. Also see "*1.1.6 There can be no assurance that Bayer will identify a sufficient number of research candidates and that Bayer's products will receive and maintain any necessary regulatory approvals, and any increase in regulatory and legal requirements, including as a result of higher public expectations, could lead to more costly and lengthy registration or approval procedures and could impair or preclude Bayer's product development and commercialization efforts*."

14.3 Crop Science

Our Crop Science products are generally subject to approval procedures, manufacturing requirements and environmental protection laws. In tests required by law, Crop Science examines its products during the research and the development phase with regard to their mode of action, their (eco)toxological properties and the extent of potential remaining trace concentration in plants and the environment. Each new crop protection active ingredient and each new technology must undergo these studies and tests to ensure that the active ingredient can be applied effectively as a product and that its use or that of the relevant technology is safe for people and causes no undue harm to the environment.

The number of countries that have regulatory frameworks concerning plant technology has increased significantly over the past years. Also, the approval procedures have become significantly more complex and regulatory controls have become stricter, which has resulted in materially higher development and maintenance costs and longer approval procedures. Against this background, Bayer has invested on an ongoing basis keeping dossiers up to date in order to continue to be able to meet the standards required to be met by even the most demanding regulatory regimes, including the U.S., Canada, the EU, Brazil and Japan and in order to comply with the standards, codes of practice, guidelines or recommendations pertaining to, among others, the registration process or safety evaluation of genetically modified products, plant protection products or biocidal products, issued by specialized international agencies such as the WHO, the FAO or the Organisation for Economic Cooperation and Development.

14.3.1 Regulation on Genetically Modified Organisms

Seed products that have been genetically modified ("**GM**") are subject to regulatory approval procedures in certain jurisdictions. Prior to receiving regulatory authorization, permits for release into the environment, interstate movement or importation of the GM seed products may need to be obtained. Once it has been confirmed GM seed products are safe for food, feed and the environment, the regulatory authorization for the respective GM seed product is granted. The GM seed products can then be grown in certain countries. Additionally, national authorizations are needed so that the grain grown from such GM seed products is permitted to be moved freely in international commerce. The most important jurisdictions for Crop Science due to their production and/or importation of GM seed products, include the U.S., Canada, the EU, Japan, Brazil, Argentina, Mexico, Australia, Korea, Taiwan and China.

Before GM seed products may be sold in a specific country they are subject to an approval procedure for cultivation in the countries where the GM plant is being grown and subject to an import approval procedure in the countries that only import the product of the GM plant. The timeframe for obtaining approvals varies significantly by jurisdiction and even within jurisdictions, depending on resources and political circumstances. The development of a global regulatory dossier that is necessary for preparing a country-specific application takes two to three years. Once a dossier is complete, the regulatory review will typically take another one to two years, in countries such as the U.S., Canada and Japan. In other countries, the review period takes even longer.

Several international agreements are relevant in transnational environmental contexts concerning GM organisms ("**GMOs**"). The most important agreements include, the Convention on Biological Diversity, that entered into force in December 1993 ("**CBD**") and its subsidiary agreement, the Cartagena Protocol on Biosafety, that entered into force in September 2003 ("**Cartagena Protocol**"). The CBD focuses on the conservation of biological diversity and the management of risks associated with GMOs. The Cartagena Protocol sets out the risk assessment framework for ensuring an adequate level of protection regarding the transfer, handling and use of GMOs. In addition, the Cartagena Protocol includes methods to demonstrate that food and feed from GMOs is as safe as that from traditionally bred, non-GMO counterparts. A supplementary agreement to the Cartagena Protocol that may soon enter into force is the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress. This agreement mainly focuses on administrative rules and procedures regarding liability and redress in the event of GMO-related damages to biological diversity.

14.3.1.1 Regulatory Specifics in the EU

In the EU, GMOs and GM food or feed are topics that have been given a lot of political and legislative attention in the past years. The EU's legislation and policy on GMOs is based on the precautionary principle enshrined in EU and international legislation and is designed to prevent any adverse effects on the environment, the health and safety of humans and animals. It reflects concerns expressed by certain consumers, farmers, and environmentalists, who are critical of GM technology. Food or feed from GMOs may be marketed in or imported into the EU, provided that they are authorized after passing evaluation and safety assessment requirements. GMOs and GM food or feed consisting of or containing GMOs are assigned a unique identifier and are labeled as such to ensure traceability and enable consumers to make informed choices.

Before GMOs and GM food or feed may be placed on the market, they must obtain an authorization from the European Commission. The risk assessment of GMOs and GM food or feed is carried out by the European Food Safety Authority ("**EFSA**") in cooperation with the relevant scientific bodies of the respective Member States. Directive 2015/412/EU[25] permits Member States to restrict or prohibit the cultivation of authorized GMOs on their territory for reasons other than the risk to human or animal health and the environment. To complement Directive 2015/412/EU, the European Commission made a parallel proposal in April 2015 with regard to GM food or feed (for which the majority of authorizations are granted in the EU). In both cases, the opt-out applies or would apply to already authorized GMOs and GM food or feed as well as to those to be authorized in the future.

14.3.1.2 Regulatory Specifics in the U.S.

The U.S. does not have federal legislation that specifically addresses GMOs. Instead, the U.S. address GMOs under the Coordinated Framework for Regulation of Biotechnology pursuant to which existing legislation on food, feed, and environmental safety governing conventional products shall apply. Thus, plant GMOs are regulated by the U.S. Department of Agriculture's ("**USDA**") Animal and Plant Health Inspection Service under the Plant Protection Act. GMOs in food and drugs are regulated by the FDA under the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act. Pesticides and microorganisms containing GMOs are regulated by the EPA pursuant to the Federal Insecticide, Fungicide and Rodenticide Act and the TSCA. Compared to other countries, approvals for GMOs in the U.S., which is not a party to the Cartagena Protocol on Biosafety, is relatively favorable for the development of GMOs.

14.3.1.3 Other Jurisdictions

Over 65 countries around the globe have approval procedures for the cultivation or importation of GM seed products in place. In all of these countries, a rigorous scientific review is performed to show that the GM products are as safe as traditionally bred, non-GMO counterparts for food, feed, and the environment.

14.3.2 Pesticide Regulation

Pesticides comprise plant protection products such as herbicides, plant growth regulators, fungicides, insecticides, nematicides (i.e., pesticides used to kill roundworms), repellents and pest control substances, and non-plant protection products, also referred to as biocidal products, i.e., chemical substances or microorganisms intended to destroy or control organisms harmful to human or animal health (like pests or bacteria). In virtually all countries, pesticides or the active ingredients in pesticides must obtain regulatory approval prior to marketing. Such approval, is often only valid for a certain amount of time and then must be renewed or reassessed. However, due to different ways of exposure to plant protection products as opposed to non-plant protection products, in many countries the laws and competent authorities for these two categories of pesticides differ.

In addition, the active ingredient in a pesticide can be a chemical element. Therefore, legislation on chemicals regarding, for example, the classification, transportation, manufacturing and other aspects of chemicals is also applicable to pesticides in many countries. For further information on the regulation of chemical substances, see "*14.5 Regulation of Chemical Products*."

Notwithstanding the foregoing, the U.S. has pesticide regulation in place that generally does not differentiate between plant and non-plant protection products. Residues from pesticides in food must also be approved both with respect to products grown nationally as well as imported products. The EPA is responsible for registering and overseeing the marketing of pesticides in the U.S. in accordance with the Federal Insecticide, Fungicide and Rodenticide Act, the Federal Food, Drug and Cosmetic Act and the Food Quality Protection Act. In addition, the

[25] Directive EU 2015/412 of the European Parliament and of the Council of 11 March 2015 amending Directive 2001/18/EC as regards the possibility for the Member States to restrict or prohibit the cultivation of genetically modified organisms (GMOs) in their territory.

United States Department of Agriculture and the FDA monitor the levels of pesticide residue that is allowed on or in crops. Existing pesticides must be monitored once placed on the market and, following a data call-in process, must be re-registered every 15 years to ensure they still meet the appropriate safety standards. The criteria for pesticide tolerances are reassessed every ten years. When assessing these risks, the EPA takes into account ecological and human health risks as well as cumulative risks due to multiple sources of exposure.

14.3.2.1 Regulation Specific to Plant Protection Products

In most countries, manufacturers of plant protection products, such as herbicides, fungicides and insecticides must submit a dossier and obtain government regulatory approval prior to marketing with a view to protecting human and animal health and the environment. Strict standards are applied in the U.S., Japan, the EU and many other countries. On average, it takes nine to ten years from discovery of a new plant protection product until the dossier is submitted to the appropriate regulatory authority for product approval. The authorities then need up to five years to evaluate the data submitted in order to decide whether a registration may be granted. Many authorities follow separate procedures, depending on whether they are evaluating active substances or plant protection products. The relatively long evaluation period, which may include new requirements being imposed on a company after it has submitted a dossier for approval, shortens a company's utilizable patent protection period quite considerably. However, in some jurisdictions, part of the patent period lost due to the long regulatory approval process may be compensated by being granted additional data protection in the form of a "supplemental protection certificate" that extends the time of market exclusivity for a product. The approval of a plant protection product may not be valid indefinitely and has to be renewed after certain time intervals, in some countries. In the EU, for example, the maximum duration for an approval granted under Regulation 1107/2009/EC[26] ("**Plant Protection Regulation**") is five to fifteen years, depending on the type of substance. In addition, legislation requires the submission of updates in case of significant changes such as manufacturing modifications or new uses in other crops.

The EU has one of the strictest regulatory regimes in the world for the assessment and approval of plant protection products. The Plant Protection Regulation requires that every active component of a plant protection product is evaluated for hazard-based safety before it can be placed on the market. In addition, the introduction of new regulations, data requirements or test guidelines is a normal part of enhancing safety assessments for plant protection products. Especially glyphosate-based herbicides, including certain important products of Monsanto, which we are planning to acquire, such as the herbicide *Roundup*, have been under scrutiny by legislators beyond the regulatory process due to their alleged negative effects on human health (see "*1.2.5 The lack of public understanding and acceptance or perceived public acceptance of Monsanto's biotechnology and other agricultural products as well as of the merits of the Transaction could harm Bayer's reputation and, as a consequence, negatively affect Bayer's business, results of operations and share price.*"). The Committee for Risk Assessment of the European Chemicals Agency concluded that the available scientific evidence did not meet the criteria to classify glyphosate as a carcinogen, as a mutagen or as toxic for reproduction. The Committee did conclude, however, that it is a substance causing serious eye damage and is toxic to aquatic life with long-lasting effects. Considering the pertinent aspects relevant to the European Commission's proposal to renew the approval of glyphosate, the Member States voted by qualified majority in favor of a renewal of the approval of glyphosate for a period of five years. Following the renewal of approval of glyphosate, Member States are responsible for the authorization of plant protection products containing glyphosate. This may lead to restrictions in some countries within the EU, subject to certain provisions and assessments they have to take into account in their decision making. Honey bee mortality or colony losses observed in some regions have also raised concerns with regulators and legislators and have led them to take a very restrictive approach for neonicotinoids used in certain insecticides, including Bayer products. In the EU, for example, after an assessment by the EFSA, the European Commission restricted the use of three pesticides in 2018, two of which are manufactured by Bayer. The restrictions go beyond some measures already in place since 2013. As a result, all outdoor use of the three substances will be banned and the neonicotinoids in question will only be allowed in permanent greenhouses. The full scope of the ban will come into effect by the end of 2018.

The sustainable use of plant protection pesticides has also been of concern for the European legislator. In accordance with Directive 2009/128/EC[27], the Member States released national action plans to achieve the sustainable use of pesticides, to reduce the risks and impacts of pesticide use on human health and the environment and to promote the use of integrated pest management and of alternative, including non-chemical, approaches or techniques to pesticides.

[26] Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC.
[27] Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides.

Bayer has made a voluntary commitment to market only those plant protection products whose active ingredients are registered in at least one OECD country. In its sale and application of plant protection products and technologies, Crop Science observes the International Code of Conduct on Pesticide Management by the FAO from June 2013 which provides standards of conduct that serve as a point of reference in relation to sound pesticide life cycle management practices.

In addition, Bayer develops and places on the market biologic crop protection agents using living organisms such as bacteria and fungi, which offer highly targeted ways of controlling pests and diseases. Like conventional pesticides, these products are subject to approval procedures, manufacturing requirements and environmental protection laws with the respective guidelines being adapted to the specificities of this particular technology.

14.3.2.2 Regulation Specific to Non-Plant Protection Products

Non-plant protection products, such as rodenticide products or vector control products (particularly in African countries), play a major role in protecting human health worldwide. In most countries, pesticides that are not plant protection products must go through an approval or registration procedure for both active ingredients and related products. In this regard, the standards, guidelines or recommendations issued by the WHO and FAO play a major role in supporting regulators in the adequate registration and evaluation of non-plant protection products. The review period for the registration of non-plant protection products depends on the country and may vary from two to five years for a product containing a new active ingredient. To some extent, regulatory studies developed for plant protection products with the same active ingredients may be used for regulatory purposes in the environmental science area.

In the EU, certain products sold in the professional pest control area, such as insecticides (except for those used for plant protection purposes), insect repellents and rodenticides fall under Regulation 528/2012/EU[28] (the "**Biocidal Products Regulation**"). The Biocidal Products Regulation requires that complete regulatory dossiers for both active ingredients and related products are developed before placing these products on the EU market. Certain forestry, stored grain, vegetation management or industrial (e.g., train track) or turf-related products are also governed by the Plant Protection Regulation, which requires authorization before products can be placed on the market (see "*14.3.2.1 Regulation Specific to Plant Protection Products*").

14.4 Animal Health

Veterinary drugs and other animal products developed and manufactured by Animal Health must be evaluated and approved by regulatory agencies for product quality, safety and efficacy before they may be marketed. In the U.S., the FDA's Center for Veterinary Medicine is responsible for ensuring that animal drugs are safe and effective for their intended uses and that food from treated animals is safe for human consumption. Veterinary products in the U.S. are also regulated by the USDA for biologicals and the EPA for certain ectoparasiticides (i.e., certain antiparasitic drugs).

In the EU, animal health products are subject to regulations similar to those governing the pharmaceutical sector. The EMA is responsible for the scientific evaluation of applications for a centralized marketing authorization. Once granted by the European Commission, the centralized marketing authorization is valid in all Member States as well as Iceland, Norway and Liechtenstein. The EU also provides the option of decentralized and national procedures for obtaining product marketing authorizations.

14.5 Regulation of Chemical Products

A comprehensive regulatory framework on the manufacturing, handling and marketing of chemical products, subjects the chemical products manufactured within our Group, to various stipulations and requirements. The regulatory framework in the chemical industry and related industries is subject to constant change. Relevant provisions are continually adjusted in order to keep them aligned with technical progress, increased safety needs and environmental protection efforts. Tightening of the current framework could have a negative impact on the production costs and product portfolio of the Group.

We must comply with relevant statutes and provisions applicable in individual countries, such as provisions on production, processing, registration, labeling, marketing, use and disposal of chemicals, other dangerous substances and biocidal products. In addition, regulations on technical safety, environmental protection, notification requirements, labor law and occupational safety provisions as well as stipulations by emissions laws must be adhered

[28] Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products.

to. Also, the manufacturing, introduction and distribution of chemicals are subject to strict legal requirements, such as the obligation to provide safety data sheets ("**SDS**"). In addition to statutorily required safety information, additional information such as safety summaries within the scope of the global product strategy of the International Council of Chemical Associations ("**ICCA**") is provided. Since 1994, Bayer has supported the voluntary Responsible Care initiative of the chemical industry and the associated Responsible Care Global Charter. In addition, Bayer supports the global product strategy, a voluntary commitment of the chemical industry initiated by the ICCA, the objective of which is to improve knowledge about chemical products, especially in emerging markets and developing countries.

As a contribution to the safe handling of chemicals, risk assessments are conducted according to recognized scientific principles. In case of a chemical emergency, facilities must notify agencies of chemical releases and provide annual public disclosures regarding toxic and hazardous chemical emissions and usage.

14.5.1 Regulatory Specifics in the EU

A major pillar of the regulatory framework for chemical products is Regulation 1907/2006/EC[29] ("**REACH**"), which was adopted to improve the protection of human health and the environment from potential risks posed by chemicals, while enhancing the competitiveness of the EU chemicals industry.

REACH provides for a general registration obligation for substances that are manufactured or imported in quantities of one ton or more. Depending on the quantity involved, the registration obligations include different data requirements, which are intended to permit findings on the physical-chemical, toxicological and eco-toxicological properties of the substance to be registered. In the EU, approximately 30,000 substances are subject to the registration obligation. If a substance is not registered, it may not be manufactured in or imported into the EU.

Under REACH, an authorization system is applicable to the use or distribution of certain listed substances of very high concern. These substances of very high concern include substances in the "carcinogen, mutagen or reproduction-toxic," "persistent, bio-accumulative and toxic" and "very persistent and very bio-accumulative" groups. The requirements for the use or distribution of these substances are determined based on the respective risks involved. The applicant must prove that it can adequately control the risks related to the substance or, if not, that the risks are outweighed by the socio-economic benefits. If appropriate alternatives are available, a substitution plan for recommended measures, including an implementation timetable, must be presented and the hazardous chemicals replaced by safe alternatives in due course. See also *"1.1.16 Bayer's production and procurement activities are exposed to various risks, including in connection with technical failures, natural disasters, regulatory action or legislative changes."*

Parallel to REACH, the United Nations introduced a globally harmonized system on the classification and labeling of chemicals ("**GHS**"). GHS aims to harmonize communication with respect to the transport and labeling of hazardous substances, occupational safety, SDS requirements and provisions concerning hazardous substances as they may affect end consumers. In the EU, the GHS is implemented through Regulation 1272/2008/EC[30] (the "**CLP Regulation**"). Under the comprehensive information system of the CLP Regulation, for example, if a substance qualifies as hazardous, the recipient of any shipment of the substance must be provided with a label and a SDS that includes information on the hazards and exposures associated with the substance, as well as potential precautionary and remedial measures against those hazards. In addition, all hazardous substances have to be notified into the classification and labeling inventory at the European Chemical Agency.

14.5.2 Regulatory Specifics in the U.S.

The TSCA administered by the EPA regulates pre-manufacture notices for new industrial chemicals and polymers and may also regulate existing chemicals under test rules. Furthermore, the EPA registers biocidal products for use in antimicrobial applications in addition to those for agricultural uses. For industrial chemicals and polymers, in order to ensure proper use and handling, product safety is regulated by the Occupational Safety and Health Administration ("**OSHA**"). The OSHA Hazard Communication Standard requires information concerning the hazards of chemicals to be transmitted to our workers and customers through SDS and precautionary product labels.

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[29] Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

[30] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

14.6 Waste, Environmental Damages, Soil Contamination, Emissions Regulation and Occupational Health and Safety Requirements

The production and distribution of Bayer products involves the use, storage, transportation, handling and disposal of toxic and hazardous materials. It is our policy to comply with all applicable health, safety and environmental requirements. We track, check and evaluate all environmental regulatory initiatives and laws regarding their potential impact on our current and past activities in order to develop appropriate compliance measures in a timely and effective manner. When necessary, we incur capital expenditures to ensure our compliance with applicable health safety and environmental regulations. While the observance of our compliance obligations has, historically, not adversely affected our competitive position or business, we cannot predict the impact of potential future regulations. We expect Bayer to continue to be subject to increasingly stringent environmental regulations, which address, among other matters:

- the disposal of pharmaceutical and veterinary products, the disposal of waste and wastewater, as well as, recycling;
- environmental damages and soil contamination;
- emissions into the air; and
- occupational health and safety requirements

14.6.1 Disposal of Pharmaceutical and Veterinary Products, of Waste and Wastewater, as well as, Recycling

We are subject to regulations that may require us to remove or mitigate the effects of the disposal or release of human and veterinary pharmaceuticals or chemical substances into the environment. Active pharmaceutical ingredients can enter the environment through human or animal excreta, through improper disposal or during production. In case of a release, investigations regarding the release and the extent of damage as well as remediation works generally become necessary which are associated with significant costs.

For their own active ingredients, Pharmaceuticals and Consumer Health and Animal Health carry out eco-toxicological investigations of pharmaceutical residues and degradation products to assess the potential environmental impact of these products. In connection with the approval process for human and veterinary pharmaceuticals in the EU and the U.S., an environmental risk assessment takes place for all new active ingredients.

Our goal is to minimize emissions into wastewater and all wastewater is subject to strict controls before it is discharged into the various disposal channels. Recycling and treatment is impossible for a large proportion of our materials, especially pharmaceuticals and crop protection products. However, throughout the Group, we make use of opportunities for recycling within the framework of legal regulations. In accordance with Bayer's corporate policies, all production sites are obliged to prevent, recycle and reduce waste and dispose of it safely and in line with good environmental practices.

14.6.2 Environmental Damages and Soil Contamination

We are subject to environmental liability laws with regard to the prevention and remedying of environmental damage and soil contamination, such as Directive 2004/35/EC[31] on the remediation of damage to water, protected species, natural habitats or of land damage. In certain countries, such as Germany, soil contamination laws hold a current or previous owner or operator of property liable for the costs of remediation on, under, or in the property, regardless of whether it knew of or caused the release of the hazardous substances or the contaminants, regardless of whether the releases or contaminations resulted from common or best practices or practices of third parties and regardless of whether the practices were legal at the time they occurred. As many of our industrial sites have long histories, we cannot predict the full impact of applicable soil contamination regulation.

In the U.S., we are subject to potential liability under the U.S. Federal Comprehensive Environmental Response, Compensation, and Liability Act (commonly known as "**Superfund**"), the U.S. Resource Conservation and Recovery Act and related state laws for investigation and clean-up costs at a number of sites. At many of these sites, companies including Bayer have been notified that the EPA or private individuals consider such companies to potentially be responsible parties under the Superfund or related laws. The proceedings relating to these sites are in various stages. The clean-up process at many sites is ongoing. We regularly review the liabilities for these sites and have made accruals for currently quantifiable costs. Also see "*13.15 Litigation*."

[31] Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage.

14.6.3 Emissions into the Air

As a pure life science company, our Group is still affected by air emissions regulation. In the EU, our Group is subject to the emissions trading system. Member States need to meet the carbon dioxide emissions targets set for each Member State under EU legislation based on the Kyoto II Protocol. During 2013-2020 (phase 3 of the EU emissions trading system), the emissions cap decreases each year by a linear reduction factor of 1.74% of the average total quantity of allowances issued annually between 2008-2012. To achieve the target of cutting EU emissions by 40%, by 2030, compared to 1990, the cap will need to be lowered by 2.2% per year from 2021 onwards.

In the U.S., the Clean Air Act, as amended (the "**Clean Air Act**"), regulates emissions of air pollutants. The Clean Air Act establishes national limits for six priority pollutants (carbon monoxide, lead, nitrogen oxides, particulate matter, ozone and sulfur dioxide) and regulates the emission of other designated air pollutants. The Clean Air Act requires emissions sources to obtain permits and to periodically certify compliance with permitted standards. Owners and operators of facilities that handle quantities of listed flammable and toxic substances above certain threshold limits must implement detailed risk management plans, which are filed with and approved by the EPA.

14.6.4 Occupational Health and Safety Requirements as well as Transportation Safety

Occupational health and safety requirements must be adhered to by the Group to keep employees or third-party providers working in hazardous environments safe from physical and/or health hazards. Thresholds for specific hazards and exposures, such as airborne chemical exposure levels must be adhered to and rules of conduct regarding the proper use of equipment and of hazardous substances in the workplace must be observed. Also, facilities and work places must be assessed for the presence of asbestos containing materials and certain notice and work practice requirements must be followed to prevent employee exposure. Furthermore, preparedness trainings for employees and individuals engaged in clean-up operations, facility operations related to the treatment, storage and disposal of hazardous wastes, and emergency responses to uncontrolled releases of hazardous substances must be carried out.

In addition, transportation safety plays a role both in the transportation of our products on public routes and in loading, unloading, classification, labeling and packaging, particularly of hazardous goods. We have independent corporate policies aiming to ensure that materials are handled and transported in line with applicable regulations and the hazards they pose.

15. GOVERNING BODIES

15.1 Overview

The Company's governing bodies are the Board of Management, the Supervisory Board and the stockholders' meeting. The powers and responsibilities of these governing bodies are governed by the AktG (German Stock Corporation Act), the Articles of Incorporation and respective rules of procedure (*Geschäftsordnungen*) for the Board of Management and Supervisory Board.

The Board of Management is responsible for the management of Bayer's business; the Supervisory Board supervises and advises the Board of Management and appoints its members. The two boards are separate, and no individual may simultaneously be a member of both boards.

Both the members of the Board of Management and the members of the Supervisory Board owe a duty of loyalty and care to Bayer AG. In exercising their duties, the applicable standard of care is that of a diligent and prudent businessperson. Both the members of the Board of Management and the members of the Supervisory Board must take into account a broad range of considerations when making decisions, including the interests of Bayer AG and its stockholders as well as of its employees and creditors.

The members of the Board of Management and the Supervisory Board may be held personally liable to Bayer AG for breaches of their duties of loyalty and care. Bayer AG must bring an action for breach of duty against the Board of Management or Supervisory Board upon a resolution of the stockholders passed at a stockholders' meeting by a simple majority of the votes cast. Furthermore, minority shareholders representing at least 1% of the company's share capital or shares with a nominal value of €100,000 can file an application in court requesting an action to be admitted against members of either of the company's boards on behalf of the company or in their own name.

Under the AktG, neither individual shareholders nor any other person may use its influence on the Company to cause a member of the Board of Management or the Supervisory Board to act in a manner that would be detrimental to the Company. Persons using their influence to cause a member of the Board of Management or the Supervisory Board, an authorized signatory (*Prokuristen*) or an assistant manager (*Handlungsbevollmächtigter*) to act in a manner that causes harm to the Company or its shareholders, are liable to compensate the Company for any resulting losses. Moreover, in this case, the members of the Board of Management and Supervisory Board are jointly and severally liable in addition to the person using its influence if they have acted in breach of their obligations to the Company.

With the exception of stockholders of companies that (unlike Bayer AG) are under the control of another company, individual stockholders of German companies cannot sue directors on behalf of the company in a manner analogous to a stockholder's derivative action under U.S. law. Under German law, directors may be liable for breach of duty to stockholders (as opposed to a duty to the company itself) only where a breach of duty to the company also constitutes a breach of a statutory provision enacted specifically for the protection of stockholders. In practice, stockholders are able to assert liability against directors for breaches of this sort only in unusual circumstances. The German Securities Trading Act (*Wertpapierhandelsgesetz*, "**WpHG**") provides for damage claims of stockholders against the issuer under certain circumstances, if the issuer violates the provisions on publication of inside information with intent or gross negligence.

The Board of Management is responsible for managing the business of Bayer AG in accordance with the AktG and Bayer AG's Articles of Incorporation and its rules of procedure. It also represents Bayer AG in its dealings with third parties and in court. According to the Articles of Incorporation, the Board of Management consists of a minimum of two members. The Supervisory Board determines the number of and appoints the members of the Board of Management. Members of the Board of Management are appointed for a maximum term of five years and are eligible for reappointment after the completion of their term in office.

Bayer AG is legally represented by two members of the Board of Management acting together, or by one member of the Board of Management together with a person possessing a special power of attorney (*Prokura*).

The Board of Management must report regularly to the Supervisory Board, particularly on proposed business policy and strategy, on profitability and on the current business of Bayer AG, as well as on any exceptional matters that may arise from time to time. If not otherwise required by law, the Board of Management makes decisions by a simple majority of the votes cast. In case of deadlock, the chairman has the casting vote.

Under certain circumstances, such as a serious breach of duty or a vote of no confidence by the stockholders at an annual stockholders' meeting, a member of the Board of Management may be removed by the Supervisory Board prior to the expiration of his/her term. A member of the Board of Management may not deal with, or vote on, matters relating to proposals, arrangements or contracts between himself/herself and Bayer AG.

Individual members of the Board of Management serve as representatives with primary responsibility for Bayer's various corporate functions and as representatives for the various geographic regions in which Bayer operates.

Under the AktG, the German Co-Determination Act (*Mitbestimmungsgesetz*) of 1976 and Bayer AG's Articles of Incorporation, the Supervisory Board consists of 20 members. The principal function of the Supervisory Board is to oversee the work of the Board of Management and to appoint its members. The Supervisory Board oversees Bayer's business policy, corporate planning and strategy. It also approves the annual budget as well as the unconsolidated financial statements of Bayer AG and the consolidated financial statements of the Bayer Group. The Supervisory Board may not make management decisions, but the Board of Management's rules of procedure (*Geschäftsordnung*) require the prior consent of the Supervisory Board for specified transactions above specified thresholds, including:

- the acquisition or disposition of assets;
- the acquisition, disposition or encumbrance of real property;
- the acquisition or disposition of shares; and
- the issuance of bonds, conclusion of credit agreements, or grant of guarantee, sureties (*Bürgschaften*) or loans, except to subsidiaries.

Bayer's stockholders elect ten members of the Supervisory Board at the annual stockholders' meeting. Pursuant to the German Co-Determination Act of 1976, Bayer's employees elect the remaining ten members. The term of a Supervisory Board member expires at the end of the annual stockholders' meeting in which the stockholders ratify the actions of the Supervisory Board members for the fourth fiscal year following the year in which the member was elected.

The Supervisory Board endeavors to ensure that its members together possess the necessary expertise, skills and professional experience to properly perform their duties. It strives particularly to ensure that the members of the Supervisory Board possess expertise, skills and professional experience in the following areas: management and leadership of international companies, a business understanding with regard to the company's main areas of activity, research and development, finance, controlling/risk management, human resources and governance/compliance. The Supervisory Board has also resolved to pursue diversity in its composition, for instance with regard to age, gender, education and professional background. With respect to the international business alignment of Bayer AG, the Supervisory Board strives to ensure at all times that several of its members have international business experience or an international background in other respects. Further objectives concerning the composition of the Supervisory Board are that different age groups are suitably represented on the Supervisory Board and that, absent special circumstances, a member should not hold office beyond the end of the next annual stockholders' meeting following his or her 72nd birthday, in accordance with the German Corporate Governance Code (the "**Code**") (*Deutscher Corporate Governance Kodex*). With a view to avoiding potential conflicts of interest and taking into account the ownership structure of the Company and the number of independent Supervisory Board members, the Supervisory Board has set itself the goal that more than half of the stockholder representatives be independent. In addition, the Supervisory Board aims for at least three quarters of its total membership (stockholder and employee representatives) to be independent.

Any member of the Supervisory Board elected by the stockholders at the annual stockholders' meeting may be removed by a vote of at least three quarters of the votes cast by the stockholders in such meeting. Any member elected by the employees may be removed by a majority of three quarters of the votes cast by the employees. Unless otherwise required by law or by the Articles of Incorporation of Bayer AG, resolutions of the Supervisory Board are passed by a simple majority of the votes cast. According to the Articles of Incorporation, in the case of a deadlock, a second vote is held. Should the second vote result in a deadlock as well, the chairman of the Supervisory Board has the casting vote. If, at a meeting of the Supervisory Board, the number of stockholder representatives and the number of employee representatives who participate in voting are not equal, a re-vote shall be taken if so requested by two members of the Supervisory Board. In order to constitute a quorum, at least half of the total members of the Supervisory Board must participate in the voting.

15.2 Board of Management

15.2.1 Current Composition of Board of Management

The following table shows the members of Bayer's current Board of Management, their ages and positions and the years in which their current terms expire.

Name and Age	Position	Current Term Expires
Werner Baumann (55)	Chairman	2021
Liam Condon (50)	Member	2018
Dr. Hartmut Klusik (61)	Member	2018
Kemal Malik (55)	Member	2022
Wolfgang Nickl (49)	Member	2021
Heiko Schipper (48)	Member	2021
Dieter Weinand (57)	Member	2018

Werner Baumann became chairman of the Board of Management in May 2016 and has been a member of the Board of Management since January 2010. Prior to joining the Board of Management, Baumann served in various positions with increasing responsibilities in Leverkusen, Barcelona, Spain and Tarrytown, New York. In 2002, Baumann became a member of the executive committee and Head of Central Administration & Organization at Bayer HealthCare. In 2003 he was appointed a member of the management board of the newly formed Bayer HealthCare AG. From December 2006 to September 2009 he also served as member of the management board and labor director of Bayer Pharma AG. From April 2015 to July 2016, Baumann was chairman of the management board of Bayer HealthCare AG.

Liam Condon joined the former Schering AG and held various sales and marketing positions in its gynecology business in Germany. He then served five years as head of a business unit in Osaka, Japan. On his return to Germany, Condon became regional marketing and medical director for the Asia-Pacific and Middle East regions at Schering in Berlin. In February 2005, he was appointed managing director of Schering in China. Following Bayer's acquisition of Schering, Condon was named vice president of Bayer HealthCare China in November 2006. Between 2007 and 2009, he was managing director of Bayer HealthCare and general manager of Bayer Pharma in China. In January 2010, Liam Condon was appointed managing director of Bayer Vital GmbH in Germany and country representative for Bayer Schering Pharma in Germany. From December 1, 2012 until May 31, 2017, Condon was chairman of the board of management of Bayer CropScience AG and since December 1, 2012, he has also been chairman of the Crop Science executive committee. Condon is a member of the board of directors of CropLife International, an agricultural industry association. He is further responsible for the Animal Health business unit. He joined the Board of Management in January 2016.

Dr. Hartmut Klusik began his professional career at Bayer's Wolff Walsrode AG subsidiary in 1984 as a laboratory manager. He then worked as head of operations in various production areas at Wolff Walsrode. In 1990, he transferred to Bayer AG and was appointed head of the company's crop protection production in Brazil. This was followed by assignments in the United States and Australia. In 1997, Klusik took charge of crop protection active ingredient production in Dormagen and Elberfeld, assuming global responsibility for active ingredient production at Bayer Crop Science in Monheim from 2002. In early 2005, he transferred to Bayer HealthCare as head of the Technical Operations Committee. He was appointed to the Bayer HealthCare executive committee in July 2005 and was responsible for Product Supply. From November 2005 until his appointment to the Board of Management of Bayer AG in January 2016, for which he is also the acting labor director, Klusik was a member of the management board of Bayer HealthCare AG and became labor director as of October 2009. Klusik was further a member of the supervisory board of Bayer Material Science Aktiengesellschaft (now Covestro Deutschland AG) from May 2006 until September 2015. From March 2011 until December 2015 he was also labor director and member of the management board of Bayer Pharma AG.

Kemal Malik joined Bayer in 1995 as Head of Metabolism and Oncology Europe in the then Pharmaceuticals Business Group. He subsequently served as Head of Global Medical Development before being appointed Head of Global Development. Kemal Malik was a member of the executive committee of Bayer HealthCare AG from 2007 until his appointment to the Board of Management of Bayer AG in February 2014. He was also Head of Global Development and chief medical officer in the Pharmaceuticals Division. Before joining Bayer, Malik studied medicine at Charing Cross and Westminster Medical School (University of London), graduating as a bachelor of medicine, bachelor of surgery (MBBS) in 1987. Malik subsequently spent several years in clinical medicine at the Northwick Park Clinical Research Centre and at Hammersmith Hospital, London. He then held various positions of increasing responsibility in medical affairs and clinical development at Bristol-Myers Squibb in the United Kingdom. Kemal Malik is also responsible for Innovation and the Latin America region.

Wolfgang Nickl completed a Bachelor of Business Administration (BBA) at the University of Cooperative Education Stuttgart in 1992 and obtained a Master of Business Administration (MBA) from the Marshall School of Business at the University of Southern California in Los Angeles, United States, in 2005. Starting in 1992, he acquired his first professional experience as a consultant and controller for German IT service provider SerCon. In 1995, he joined Western Digital Corporation, San José, California, a leading manufacturer of hard disk drives and other data storage products. His first roles at this company were as Business Planning Manager in the Netherlands and then as Director Business Solutions in the United States. In 2000, Nickl was appointed CFO at IT company Converge (a Western Digital joint venture) in the United States. Two years later, he returned to Western Digital where he held a number of finance positions with increasing responsibility, including as executive vice president and chief financial officer. Nickl also headed World Business Operations at this company for a number of years before being promoted to Chief Financial Officer in 2010. From December 2013 to April 2018, Nickl was executive vice president and chief financial officer at ASML in the Netherlands. He joined the Management Board in April 2018 and succeeded Johannes Dietsch as chief financial officer on June 1, 2018. As of June 1, 2018, Nickl is also chairman of the supervisory board of Bayer Business Services GmbH.

Heiko Schipper was deputy executive vice president of Nestlé S.A. and a member of its executive board based in Vevey, Switzerland until December 31, 2017. He was appointed to the Board of Management on March 1, 2018. He was also head of Nestlé Nutrition, a global leader in the infant nutrition category. He started his career as an international marketing trainee at Nestlé 21 years ago and held key management positions in Southeast Asia, Switzerland and China. He has held global responsibility for Nestlé's infant nutrition division since 2013. Heiko Schipper completed his master in Business Economics at the Erasmus University in Rotterdam, the Netherlands. Starting in 1994, he acquired his first professional experience at Heineken. He joined Nestlé as an international marketing trainee in 1996, developing his career in sales and marketing management roles in Bangladesh and Indonesia and at the company's global headquarters in Switzerland. He then took up general management roles of increasing importance in the Philippines and, from 2007 to 2013, in the Greater China Region with the aim of developing Nestlé's position in this key market. In 2013, Schipper moved back to Switzerland to lead the global Infant Nutrition Division, a business with both consumer and medical characteristics. He was appointed to the Nestlé Group executive board in October 2014. From 2014 to 2017, Schipper also worked as director at Glycom A/S.

Dieter Weinand has held various responsibilities in commercial, operational and strategic areas of the pharmaceutical industry during his career stretching back over 25 years. These positions included heading business operations in markets in the Asia-Pacific region, Europe, the Middle East, Africa, Latin America and the United States for companies including Pfizer and Bristol-Myers Squibb. He has also been in charge of product marketing in various therapeutic areas, including cardiovascular diseases, oncology, dermatology, immunology, and respiratory and inflammatory diseases. Before moving to Bayer HealthCare, he was president of Global Commercialization & Portfolio Management at Otsuka Pharmaceutical Development & Commercialization Inc. in Princeton, New Jersey, U.S.A. From August 1, 2014, until his appointment to the Board of Management of Bayer AG in January 2016, Weinand was a member of the Bayer HealthCare executive committee and head of the Pharmaceuticals Division. From August 1, 2014 until February 10, 2017, Weinand was also chairman of the board of management of Bayer Pharma AG. Additionally, Weinand was a member on the board of directors of HealthPrize Technologies LLC.

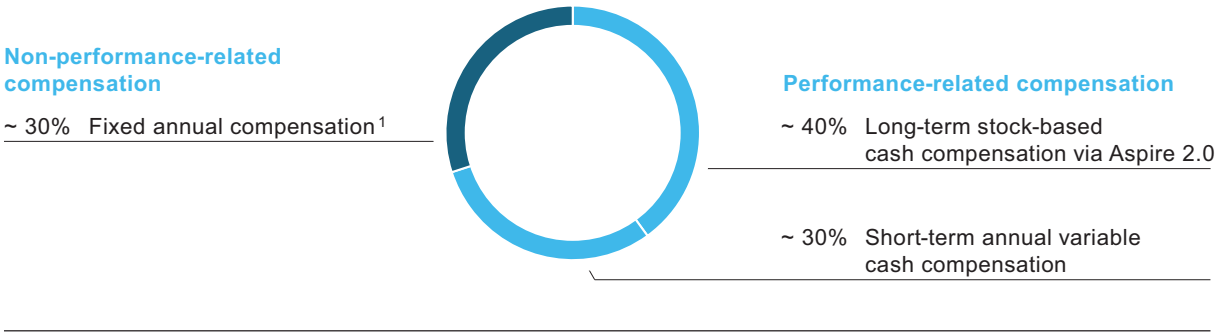
15.2.2 Compensation

15.2.2.1 Principles of Compensation System

Bayer's compensation system for the Board of Management was approved by a large majority at the annual stockholders' meeting on April 29, 2016. The Group's compensation system is aligned to the corporate strategy and geared toward performance-driven, sustainable corporate governance and an appropriate compensation structure and level. The nature and appropriateness of the compensation system for the members of the Board of Management are determined by the full Supervisory Board on the proposal of the Human Resources Committee of the Supervisory Board, regularly reviewed and adjusted as necessary. All of the assessment criteria recommended in Section 4.2.2 of the German Corporate Governance Code are taken into account. An independent compensation consultant has confirmed that the compensation is appropriate and on a customary level. The compensation structure in the Bayer Group is, in principle, the same for the Board of Management as for all other managerial employees.

The compensation system was adjusted effective January 1, 2016. The compensation paid to members of the Board of Management of Bayer AG comprises a non-performance-related component of about 30% and a performance-related variable component of about 70%. The compensation components under the system are as follows, assuming 100% target attainment by a member of the Board of Management:

Compensation Structure Based on 100% Target Attainment



[1] Excluding fringe benefits and pension entitlements

The non-performance-related compensation component comprises the fixed annual compensation along with fringe benefits. The variable performance-related compensation components comprise a variable annual cash payment (short-term incentive ("**STI**")) based on target attainment, which is paid out in cash in the following year, and a long-term variable cash payment (long-term incentive ("**LTI**")). The system for the LTI program is based on stockholder return. The individual performance-related components are capped upon payment. There is also a cap on the total cash compensation. This amounts to 1.8 times the respective target compensation and is determined annually when the fixed compensation is set.

The members of the Board of Management also receive pension entitlements for themselves and their surviving dependents.

15.2.2.1.1 *Non-Performance-Related Components*

15.2.2.1.1.1 Fixed Annual Compensation

The level of the non-performance-related, fixed annual compensation takes into account the functions and responsibilities assigned to the members of the Board of Management as well as market conditions. The fixed compensation is regularly reviewed by the Supervisory Board in light of the consumer price indexes and adjusted if necessary. It is paid out in twelve monthly installments.

15.2.2.1.1.2 Fringe Benefits

This component mainly includes perquisites such as a company car with driver or the use of the company carpool, payments toward the cost of security equipment, and the reimbursement of the cost of annual health screening examinations. Fringe benefits are reported at cost or the amount of the pecuniary advantage gained.

15.2.2.1.2 *Performance-Related Components*

15.2.2.1.2.3 Short-Term Variable Cash Compensation (STI)

The STI depends on the company's business success in the respective year. The level of the STI is determined by the target attainment for three subcomponents – the Group component, the divisional component and the individual performance component – each of which is given a one-third weighting in the performance evaluation. The performance evaluation takes into account both positive and negative developments.

- The Group component is based on the core earnings per share of the Group and is capped at 200%.
- The divisional component is incentivized based on the weighted average performance of the three divisions and is capped at 300%. For the members of the Board of Management with functional responsibility, this component is based on the average performance of the divisions, weighted as

follows: Pharmaceuticals 50%, Consumer Health 20%, Crop Science (including Animal Health) 30%. For the members of the Board of Management with divisional responsibility, however, this one-third of the STI is incentivized entirely on the basis of the respective division's earnings. The assessment of divisional performance comprises a 70% component linked to the attainment of financial targets in relation to the EBITDA margin before special items and divisional sales growth, and a 30% component based on the attainment of qualitative goals in areas such as innovative progress, safety, compliance and sustainability.

- The target attainment criteria for the individual performance component are based on the duties and resulting personal targets of the respective member of the Board of Management, as well as on his or her individual contribution to the attainment of the Group targets. The individual targets for the members of the Board of Management are determined annually by the Supervisory Board, which also assesses their attainment.

The entire amount of the STI is paid out in cash in the second quarter of the following year and is capped at 200%.

15.2.2.1.2.4 Long-Term Stock-Based Cash Compensation (LTI)

Members of the Board of Management are eligible to participate in the annual tranches of the LTI program "Aspire" on condition that they purchase a certain number of Bayer shares – determined for each individual according to specific guidelines – as a personal investment and hold them for as long as they continue in the service of the Bayer Group.

The target amounts for the Aspire 2.0 tranches issued since 2016 are generally based on a contractually agreed target percentage of the fixed annual compensation. The starting value is also partly determined by the individual STI payment factor for the Board member concerned for the year prior to the issuance of the respective tranche. The cash payment amounts are determined after four years based on the average share price calculated over the last 30 trading days of the fiscal year, the performance of Bayer stock relative to the EURO STOXX 50 and the dividends paid in the meantime (total stockholder return approach). As with the other management levels, the cap for Aspire 2.0 is 250%. For the Board of Management, however, an additional performance measure has been included in the LTI program in the form of the comparison with the EURO STOXX 50 mentioned above. This increases or decreases the payout by the percentage of overperformance or underperformance, respectively.

The payments made under the tranches of the Aspire program issued in the years up to 2015 continue to be based until their expiration on the Aspire Target Opportunity, which is a contractually agreed percentage of fixed annual compensation. Depending on the performance of Bayer stock, both in absolute terms and relative to the EURO STOXX 50 benchmark index, participants are granted an award of between 0% and 300% of their individual Aspire Target Opportunity at the end of the respective performance periods.

If a member of the Board of Management enters retirement during the year or steps down from the Board of Management during the year due to the nonextension of his or her service contract by mutual agreement or by the company's decision, the Aspire tranche granted for that year is reduced on a prorated basis according to the duration of the member's active service on the Board of Management during this first year of the tranche. In this case, tranches granted for previous years remain in effect without any changes.

15.2.2.1.2.5 Share Ownership Guidelines

As a condition for receiving payments under the LTI program, members of the Board of Management must meet certain requirements regarding their personal investment in Bayer stock. As of 2016, they have been required to build a position in Bayer shares to the value of 75% of their fixed annual compensation within four years and hold these shares until the end of their service on the Board of Management. The Board of Management members must provide documentary evidence of their compliance with this obligation, first at the end of the four-year position-building period and then yearly thereafter. In the event of significant changes in fixed annual compensation, the value to which shares must be held is adjusted accordingly.

15.2.2.1.2.6 Pension Entitlements (Retirement and Surviving Dependents' Pensions)

The annual pension entitlement for members of the Board of Management is based on contributions. Each year Bayer provides a hypothetical contribution amounting to 42% of the respective fixed annual compensation. This percentage is comprised of a basic contribution of 6% and a matching contribution of 36%, which is four times the member's personal contribution of 9%. The total annual contribution is converted into a pension module according to

the annuity table for the applicable tariff of the Rheinische Pensionskasse VVaG pension fund. The annual pension entitlement upon retirement is the total amount of the accumulated pension modules including an investment bonus. The investment bonus is determined annually based on the net return on the assets of the Rheinische Pensionskasse VVaG minus the minimum return on the contributions that is guaranteed under the tariff and approved by the German Financial Supervisory Authority (BaFin). Future pension payments are annually reviewed and adjusted to take into account the development of consumer prices.

In addition, special individual arrangements exist for the following members of the Board of Management:

- Werner Baumann – has been granted a vested entitlement to an annual pension of €200 thousand starting on his 60th birthday. This is subject to a pro-rated reduction in the event that his term of office ends prior to his 60th birthday under certain conditions.
- Kemal Malik – has been granted a vested entitlement to an annual pension of €80 thousand starting on his 65th birthday. This is subject to a pro-rated reduction in the event that his term of office ends prior to his 65th birthday under certain conditions.

Certain assets are administered by Bayer Pension Trust under a contractual trust arrangement to cover pension entitlements resulting from direct commitments in Germany. This provides substantial additional security – beyond the benefits from the Pension Insurance Association – for the respective pension entitlements of the members of the Board of Management in Germany.

15.2.2.1.3 *Benefits Upon Termination of Service on the Board of Management*

15.2.2.1.3.7 Post-Contractual Noncompete Agreements

Post-contractual noncompete agreements exist with the members of the Board of Management, providing for compensatory payments to be made by the company for the two-year duration of these agreements. The compensatory payment amounts to 100% of the average fixed compensation for the twelve months preceding their departure.

15.2.2.1.3.8 Change of Control

Agreements exist with the members of the Board of Management providing for severance indemnity in certain circumstances in the event of a change in control. The amount of any possible severance indemnity in the case of early termination of service on the Board of Management as a result of a change in control is limited to the value of three years' compensation in line with the recommendation in Section 4.2.3 of the Code. Such payments do not exceed the compensation payable for the remaining term of the service contract.

15.2.2.1.3.9 Unfitness for Work

In the event of temporary unfitness for work, members of the Board of Management continue to receive the contractually agreed compensation. Bayer AG may early terminate the service contract if the member of the Board of Management has been continuously unfit for work for at least 18 months and is likely to be permanently incapable of fully performing his or her duties (permanent incapacity to work). A disability pension is paid in the event of contract termination before the age of 60 due to permanent incapacity to work. For members of the Board of Management, the amount of the disability pension under the service contract corresponds to the entitlement accrued on the date of contract termination, taking into account a fictitious period of service between that date and the member's 55th birthday, where applicable.

15.2.2.2 Compensation of the Board of Management in 2017

The aggregate compensation for the members of the Board of Management in 2017 totaled €24,324 thousand (2016: €28,445 thousand), comprising €6,414 thousand (2016: €7,049 thousand) in non-performance-related components and €17,910 thousand (2016: €21,396 thousand) in performance-related components according to HGB. The pension service cost amounted to €2,546 thousand (2016: €2,887 thousand).

As of December 31, 2017, the Board of Management of Bayer AG consisted of seven members. There were no changes in the membership of the Board of Management in 2017.

The following table shows the aggregate compensation of the individual members of the Board of Management who served in 2016 and/or 2017 according to HGB:

	Fixed Annual Compensation		Fringe Benefits		Short-term variable cash compensation		Long-term stock-based cash compensation (Aspire)[1]		Aggregate compensation		Pension Service cost[2]	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
	(in € thousand)											
Serving members of the Board of Management as of December 31, 2017												
Werner Baumann (Chairman)	1,285	1,487	47	49	2,329	1,335	1,983	3,530	5,644	6,401	764	809
Liam Condon	800	806	44	43	1,106	519	1,624	1,677	3,574	3,045	330	320
Johannes Dietsch	750	756	83	42	978	679	1,522	1,483	3,333	2,960	318	305
Dr. Hartmut Klusik	750	756	140	40	1,053	565	1,522	1,597	3,465	2,958	316	305
Kemal Malik	775	781	35	36	1,050	604	1,573	1,591	3,433	3,012	318	310
Erica Mann[3]	750	756	182	24	798	378	1,522	1,210	3,252	2,368	219	257
Dieter Weinand	800	806	34	32	1,274	810	1,623	1,932	3,731	3,580	240	240
Former member												
Dr. Marijn Dekkers[4]	475	–	99	–	475	–	964	–	2,013	–	382	–
Total	**6,385**	**6,148**	**664**	**266**	**9,063**	**4,890**	**12,333**	**13,020**	**28,445**	**24,324**	**2,887**	**2,546**

(1) Fair value at grant date, for Dr. Marijn Dekkers, 4/12 of the grant amount for Aspire 2.0 was shown in 2016.
(2) Including company contributions to Bayer-Pensionskasse VVaG, Rheinische Pensionskasse VVaG and to a pension fund outside Germany.
(3) Is has been agreed that Erica Mann will receive a severance payment of €1,978 thousand in view of her leaving the Company effective March 31, 2018. This will put her in the same position as if she had held office until December 31, 2018, and had then retired.
(4) Dr. Marijn Dekkers additionally received a severance payment of €4,341 thousand. This puts him in the same position as if he had held office regularly until December 31, 2016 and had then retired.

15.2.2.2.1 *Fixed Annual Compensation*

The fixed annual compensation of the members of the Board of Management was adjusted in 2017. The total fixed annual compensation of all the members was €6,148 thousand (2016: €6,385 thousand).

15.2.2.2.2 *Short-Term Variable Cash Compensation*

The total short-term variable cash compensation for all the members of the Board of Management in 2017 totaled €4,890 thousand (2016: €9,063 thousand) after deduction of the solidarity contribution. Provisions of €4,890 thousand (2016: €8,588 thousand) were established for payment of this compensation component to the members of the Board of Management serving as of December 31, 2017. The solidarity contribution is made by all employees of the companies covered by the respective agreements with the employee representatives to help safeguard jobs at the German sites. For 2017 it amounted to 0.25% (2016: 0.27%) of each person's STI award.

15.2.2.2.3 *Long-Term Variable Cash Compensation Based on Virtual Bayer Shares*

This compensation component no longer exists following the adjustment of the compensation system for the Board of Management effective January 1, 2016. The conversion of 50% of the STI into virtual Bayer shares took place for the last time in 2015 and was based on an average price of €119.17. The aggregate compensation for 2017 according to the IFRS includes a change of €538 thousand (2016: minus €1,275 thousand) in the value of existing entitlements. Provisions of €6,841 thousand (2016: €7,777 thousand) existed as of December 31, 2017, for the future cash disbursements to currently serving members of the Board of Management based on the virtual Bayer shares granted in previous years. This amount also contains the dividend entitlements attributable to the respective prior years.

15.2.2.2.4 *Long-Term Stock-Based Cash Compensation (Aspire)*

The long-term stock-based cash compensation under the Aspire program is included in the aggregate compensation according to HGB at its fair value of €13,020 thousand (2016: €12,333 thousand) at the respective grant date.

The aggregate compensation according to the IFRS includes the fair value of the partial entitlement earned in the respective year. Grants of stock-based compensation with a four-year performance period are therefore expensed at their respective fair values over four years starting with the grant year. The stock-based compensation according to the IFRS also includes the change in the value of existing entitlements under ongoing Aspire tranches granted in prior years.

		Serving members of the Board of Management as of December 31, 2017							Former members	
		Werner Baumann (Chairman)	Liam Condon	Johannes Dietsch	Dr. Hartmut Klusik	Kemal Malik	Erica Mann	Dieter Weinand	Dr. Marijn Dekkers	Total
		(in € thousand)								
Stock-based compensation entitlements earned in the respective year[1]	2017	1,528	871	2,083	819	830	2,049	947	–	9,082
	2016	715	506	413	414	431	848	369	1,521	5,217
Change in value of existing entitlements[2]	2017	(120)	(77)	(51)	(42)	(58)	(240)	(53)	–	(641)
	2016	(120)	(83)	(57)	(47)	(98)	(165)	(69)	(284)	(923)
Total	**2017**	**1,408**	**794**	**1,987**	**777**	**772**	**1,809**	**894**	**–**	**8,441**
	2016	**595**	**423**	**356**	**367**	**333**	**683**	**300**	**1,237**	**4,294**

(1) The newly earned entitlements are derived from the 2014 – 2017 (2016: 2013 – 2016) tranches of the Aspire program because this compensation was or is being earned over a four-year period. They are stated at their prorated fair values in 2016 and 2017, respectively. Johannes Dietsch and Erica Mann earned their entitlements at an accelerated rate until leaving the Company on May 31, 2018 and March 31, 2018, respectively. Accordingly, the proportion earned in 2017 is higher than in the prior year. The Aspire entitlements earned in 2016 and 2017 and the value changes for Liam Condon, Johannes Dietsch, Dr. Hartmut Klusik, Kemal Malik, Erica Mann and Dieter Weinand relate in part to Aspire tranches granted to them before they joined the Board of Management but not yet fully earned.

(2) This line shows the change in the value of the entitlements already earned in 2014, 2015 and 2016 (2016: 2013, 2014 and 2015).

Provisions of €11,747 thousand (2016: €7,288 thousand) were established for the Aspire entitlements of the members of the Board of Management serving as of December 31, 2017. Of this amount, €6,048 thousand relates to the tranches issued up to 2016 and €5,699 thousand to the 2017 tranche.

15.2.2.2.5 *Pension Entitlements*

The pension service cost recognized for the members of the Board of Management in 2017 according to HGB was €2,546 thousand (2016: €2,887 thousand), while the current service cost for pension entitlements recognized according to the IFRS was €3,907 thousand (2016: €3,902 thousand). The following table shows the service cost and the settlement or present value of the pension obligations attributable to the individual members of the Board of Management.

	German Commercial Code				IFRS			
	Pension service cost[1]		Settlement value of pension obligation as of December 31,[2]		Current service cost for pension entitlements		Present value of defined benefit pension obligation as of December 31,	
							(in € thousand)	
	2016	2017	2016	2017	2016	2017	2016	2017
Serving members of the Board of Management as of December 31, 2017								
Werner Baumann (Chairman)	764	809	7,452	9,044	1,054	1,290	12,429	13,544
Liam Condon	330	320	2,151	2,345	487	563	3,860	4,038
Johannes Dietsch	318	305	2,854	3,951	431	483	4,882	5,919
Dr. Hartmut Klusik	316	305	4,533	5,302	399	435	6,782	7,285
Kemal Malik	318	310	1,990	2,186	438	493	2,507	2,697
Erica Mann	219	257	7,199	7,492	288	275	7,232	7,532
Dieter Weinand	240	240	468	700	322	368	735	988
Former member								
Dr. Marijn Dekker(3)	382	–	–	–	483	–	–	0
Total	**2,887**	**2,546**	**26,647**	**31,020**	**3,902**	**3,907**	**38,427**	**42,003**

(1) Including company contribution to Bayer-Pensionskasse VVaG, Rheinische Pensionskasse VVaG and a pension fund outside Germany.

(2) The pension obligations of foreign subsidiaries and foreign Bayer pension funds are included at present value according to IFRS.

(3) Dr. Marijn Dekkers stepped down from the Board of Management as of midnight on April 30, 2016.

The difference between the pension service cost according to HGB and the service cost for pension entitlements according to the IFRS arises from the difference in the valuation principles used in calculating the settlement value according to HGB and the present value of the defined benefit pension obligation according to the IFRS.

15.2.2.2.6 *Benefits upon Termination of Service on the Board of Management*

It was agreed with Erica Mann that she be granted a severance package worth €1,978 thousand in light of the mutually agreed early termination, effective March 31, 2018, of her service contract, which originally ran until December 31, 2018. This package primarily comprises severance payments for fixed compensation, short-term variable compensation components, Aspire and payments for pension entitlements, each for the period April 1, 2018, through December 31, 2018. Erica Mann's entitlements under the company pension plan and the Aspire program were set at the levels they would have reached if she had been eligible to participate until December 31, 2018. The severance payment for her fixed compensation and the short-term variable compensation component, together amounting to €1,172 thousand, was paid in April 2018. The payments from the Aspire tranches will be made upon expiration of each tranche based on the respective Aspire program parameters. In addition, a noncompete agreement ending on December 31, 2018, exists with Erica Mann.

It was agreed with Dr. Marijn Dekkers that he be granted benefits of €4,341 thousand according to HGB and €4,542 thousand according to the IFRS in light of the mutually agreed early termination, effective April 30, 2016, of his service contract, which originally ran until December 31, 2016. These comprised the fixed compensation, the short-term variable compensation components, Aspire and the pension service cost, each for the period May 1, 2016, through December 31, 2016. Dr. Dekkers' entitlements under the company pension plan and the Aspire program were set at the levels they would have reached if he had been eligible to participate until December 31, 2016. The fixed compensation and the short-term variable compensation component, together amounting to €1,900 thousand, were paid in May 2016. The payments from the Aspire tranches will be made upon expiration of each tranche based on the respective Aspire program parameters.

The aggregate Board of Management compensation according to the IFRS is shown in the following table:

	2016	2017
	(in € thousand)	
Fixed annual compensation	6,385	6,148
Fringe benefits	664	266
Total short-term non-performance-related compensation	**7,049**	**6,414**
Short-term performance-related cash compensation	9,063	4,890
Total short-term compensation	**16,112**	**11,304**
Change in value of existing entitlements to stock-based compensation (virtual Bayer shares)	(1,275)	538
Stock-based compensation (Aspire) earned in the respective year	5,217	9,082
Change in value of existing entitlements to stock-based compensation (Aspire)	(923)	(641)
Total stock-based compensation (long-term incentive)	**3,019**	**8,979**
Service cost for pension entitlements earned in the respective year	3,902	3,907
Total long-term compensation	**6,921**	**12,886**
Severance indemnity in connection with the termination of a service contract	4,542	1,978
Aggregate compensation (IFRS)	**27,575**	**26,168**

15.2.3 Shareholdings

As of the date of the Prospectus, Werner Baumann holds 15,730 shares – and his wife holds 15,000 shares – in the Company, Liam Condon holds 5,035 shares in the Company, Dr. Hartmut Klusik holds 7,202 shares in the Company, Kemal Malik holds 4,877 shares in the Company, Dieter Weinand holds 8,044 American Depositary Receipts ("**ADRs**") representing 2,011 shares in the Company and Wolfgang Nickl holds 2,880 shares in the Company.

Heiko Schipper does not hold any shares in the Company.

15.3 Supervisory Board

15.3.1 Current Supervisory Board Members

As of the date of this Prospectus the members of the Supervisory Board were (including other directorships held):

Name	Position	Principal Occupation	First Elected	Membership on other Supervisory Boards
Werner Wenning	Chairman	Chairman of the Supervisory Board of Bayer AG	2012	Henkel Management AG, Siemens AG (Vice Chairman), Henkel AG & Co. KGaA (Member of the Shareholders' Committee)
*Oliver Zühlke	Vice Chairman	Chairman of the Bayer Central Works Council	2007	
Dr. Paul Achleitner	Member	Chairman of the supervisory board of Deutsche Bank AG	2002	Daimler AG, Deutsche Bank AG (Chairman), Henkel AG & Co. KGaA (Member of the Shareholders' Committee)
Dr. rer. nat. Simone Bagel-Trah	Member	Chairwoman of the supervisory board of Henkel AG & Co. KGaA and Henkel Management AG and of the Shareholders' Committee of Henkel AG & Co. KGaA	2014	Henkel AG & Co. KGaA (Chairwoman), Henkel Management AG (Chairwoman), Heraeus Holding GmbH, Henkel AG & Co. KGaA (Chairwoman of the Shareholders' Committee)
Dr. Norbert W. Bischofberger	Member	Independent Consultant	2017	InCarda Therapeutics, Inc. (Board of Directors)
*André van Broich	Member	Chairman of the Bayer Group Works Council and Chairman of the Works Council of the Dormagen site	2012	
Thomas Ebeling	Member	Independent Consultant	2012	GfK SE, Cullinan Oncology, LLC (Board of Directors), ClearVAT Aktiengesellschaft, Heilpflanzenwohl AG (Board of Directors), Moonfare GmbH (Board of Directors), Apleona GmbH
*Dr. Thomas Elsner	Member	Chairman of the Bayer Group Managerial Employees' Committee and Chairman of the Managerial Employees' Committee of Bayer AG, Leverkusen	2017	
Johanna W. (Hanneke) Faber	Member	President Europe at Unilever N.V./plc	2016	

Name	Position	Principal Occupation	First Elected	Membership on other Supervisory Boards
Colleen A. Goggins	Member	Independent Consultant	2017	The Toronto-Dominion Bank (Board of Directors), IQVIA Holdings Inc. (formerly QuintilesIMS Holdings, Inc.) (Board of Directors)
*Heike Hausfeld	Member	Chairwoman of the Works Council of the Leverkusen site	2017	Bayer Business Services GmbH (Vice Chairwoman)
*Reiner Hoffmann	Member	Chairman of the German Trade Union Confederation	2006	
*Frank Löllgen	Member	North Rhine District Secretary of the German Mining, Chemical and Energy Industrial Union	2015	Evonik Industries AG, IRR-Innovationsregion Rheinisches Revier GmbH
Prof. Dr. Wolfgang Plischke	Member	Independent Consultant	2016	Evotec AG (Chairman)
*Petra Reinbold-Knape	Member	Member of the Executive Committee of the German Mining, Chemical and Energy Industrial Union	2012	Lausitz Energie Kraftwerk AG (Vice Chairwoman), Lausitz Energie Bergbau AG (Vice Chairwoman), DGB Rechtsschutz GmbH
*Detlef Rennings	Member	Chairman of the Central Works Council of CURRENTA, Chairman of the Works Council of CURRENTA of the Uerdingen site	2017	Currenta Geschäftsführungs-GmbH
*Sabine Schaab	Member	Vice Chairwoman of the Works Council of the Elberfeld site	2017	
*Michael Schmidt- Kießling	Member	Chairman of the Works Council of the Elberfeld site	2012	
Prof. Dr. Norbert Winkeljohann(1)	Member	Chairman of the Management Board of PwC	2018	
Prof. Dr. Dr. h.c. Otmar D. Wiestler	Member	President of the Helmholtz Association of German Research Centers	2014	

* Employee representatives

(1) Expert member pursuant to paragraph 5 of Section 100 AktG.

The following description provides summaries of the curricula vitae of the current members of the Supervisory Board and indicates their principal activities outside Bayer to the extent those activities are significant with respect to the Group:

Werner Wenning has been chairman of the Supervisory Board of Bayer AG since October 1, 2012. He previously was chairman of the Board of Management of Bayer AG from April 2002 until September 30, 2010, and has worked for Bayer in various capacities since 1966.

Alongside his office as chairman of the Supervisory Board, Wenning is, or has within the last five years been, a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Currently: member of the supervisory board of Henkel Management AG; member of the supervisory board of Siemens AG (vice chairman); member of the shareholders' committee of Henkel AG & Co. KGaA.

Previously: member of the supervisory board of Deutsche Bank AG; member of the supervisory board of E.ON SE (chairman), member of the shareholders' committee of Freudenberg & Co.; member of the supervisory board of HDI V.a.G., member of the supervisory board of Talanx AG.

Oliver Zühlke has been vice chairman of the Supervisory Board of Bayer AG since July 2015. He previously was vice chairman of the Works Council of the Leverkusen site from 2002 until 2010, and has also been a member of the Economics Committee of Bayer AG.

Dr. Paul Achleitner has been a member of the Supervisory Board of Bayer AG since April 2002. He has worked in several positions for Goldman Sachs and was a member of the management board of Allianz SE until 2012.

Alongside his office as member of the Supervisory Board, Achleitner is, or has within the last five years been, a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Currently: member of the supervisory board of Daimler AG; member of the supervisory board of Deutsche Bank AG (chairman); member of the shareholders' committee of Henkel AG & Co. KGaA.

Previously: member of the supervisory board of RWE AG.

Dr. rer. nat. Simone Bagel-Trah has been a member of the Supervisory Board of Bayer AG since April 2014. She completed her studies in biology at the University of Bonn in 1993 and received her doctorate degree in microbiology in 1998. Additionally, she worked as an independent consultant and project manager for the Association of Applied Microbiology from 1998 until 2000.

Alongside her office as member of the Supervisory Board, Bagel-Trah currently is a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Member of the supervisory board of Henkel AG & Co. KGaA (chairwoman); member of the supervisory board of Henkel Management AG (chairwoman); member of the supervisory board of Heraeus Holding GmbH; member of the shareholders' committee of Henkel AG & Co. KGaA (chairwoman); partner and managing director of Antiinfectives Intelligence GmbH; partner of Siba Vermögensverwaltung GmbH & Co. KG; managing director of Siba Beteiligung GmbH; partner of Friba Vermögensverwaltung GmbH & Co. KG; managing director of Friba Beteiligung GmbH.

Dr. Norbert W. Bischofberger has been a member of the Supervisory Board of Bayer AG since April 2017. Dr. Bischofberger completed his studies in chemistry at the University of Innsbruck and received his doctorate degree at the ETH Zurich in 1983. Since 1990, Dr. Bischofberger has worked for Gilead Sciences, Inc. in different management positions and is now a part-time employee since the end of April 2018.

Alongside his office as member of the Supervisory Board, Bischofberger currently is a member of the board of directors of InCarda Therapeutics, Inc. and chief executive officer and president of Kronos Bio, Inc.

Previously: executive vice president research & development and chief scientific officer of Gilead Sciences Inc.

André van Broich has been a member of the Supervisory Board of Bayer AG since April 2012. He previously was vice chairman of the Works Council of the Dormagen site from 2006 until 2010. He has been chairman of the Works Council of the Dormagen site since 2010, and a member of the Central Operations Committee and the Bayer European Forum since 2006.

Thomas Ebeling has been a member of the Supervisory Board of Bayer AG since April 2012. After receiving his degree in psychology in Hamburg in 1986, Ebeling worked in various roles for Reemtsma, Pepsi-Cola, Novartis and ProSiebenSat1 Media.

Alongside his office as member of the Supervisory Board, Ebeling is, or has within the last five years been, a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Currently: member of the supervisory board of GfK SE; member of the board of directors of Cullinan Oncology, LLC; member of the supervisory board of ClearVAT Aktiengesellschaft; member of the board of directors of

Heilpflanzenwohl AG; chairman of the management board of TE Convest AG; chairman of the management board of Remagine Ventures LP; member of the board of directors of Moonfare GmbH and member of the supervisory board of Apleona GmbH.

Previously: member of the supervisory board of Lonza Group AG; chairman of the executive board of ProSiebenSat1 Media SE.

Dr. Thomas Elsner has been a member of the Supervisory Board of Bayer AG since April 2017. He completed his studies in chemical technology at the University of Dortmund in 1984 and received his doctorate degree in 1987. He has joined Bayer in 1988 and has held various management positions. Additionally, he has been a member of the Group Managerial Employees' Committee since 2010.

Johanna W. (Hanneke) Faber has been a member of the Supervisory Board of Bayer AG since April 2016. She received her bachelor of journalism in 1990 and in 1992 completed her master of business administration at the University of Houston. Afterwards, Faber assumed several management positions at Procter & Gamble.

Alongside her office as member of the Supervisory Board, Faber is, or has within the last five years been, a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Currently: President Europe at Unilever N.V./plc.

Previously: chief e-commerce and innovation officer and member of the executive committee of Koninklijke Ahold Delhaize N.V.

Colleen A. Goggins has been a member of the Supervisory Board of Bayer AG since April 2017. Goggins studied Food Chemistry at the University of Wisconsin-Madison and received a masters in management degree from the Kellogg Business School at Northwestern University. From 1981 until 2011, she worked for Johnson & Johnson in various management positions, and from 2001 to 2011, served as a member of the executive committee.

Alongside her office as member of the Supervisory Board, Goggins is, or has within the last five years been, a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Currently: member of the board of directors of The Toronto-Dominion Bank; member of the board of directors of IQVIA Holdings Inc. (formerly QuintilesIMS Holdings, Inc.).

Previously: member of the supervisory board of Krauss Maffei Group GmbH; member of the board of directors of Valeant Pharmaceuticals International, Inc.

Heike Hausfeld has been a member of the Supervisory Board of Bayer AG since April 2017. Since 1998, she has been full-time member of the Works Council and since 2015 she has been chairwoman of the Works Council of the Leverkusen site.

Reiner Hoffmann has been a member of the Supervisory Board of Bayer AG since October 2006. He received his degree in economics at the University of Wuppertal in 1982 and held various roles at the Hans Böckler Foundation in Dusseldorf from 1984 until 1994. He has also held leading positions in several trade unions and is chairman of the German Trade Union Confederation since 2014.

Alongside his office as member of the Supervisory Board, Hoffmann has previously, within the last five years been, a member of the supervisory board of Evonik Services GmbH (vice chairman) and member of the supervisory board of SASOL Germany GmbH (vice chairman).

Frank Löllgen has been a member of the Supervisory Board of Bayer AG since November 2015. He has been the North Rhine District chairman of the German Mining, Chemical and Energy Industrial Union since 2014 and an honorary judge at the Federal Labor Court in Erfurt since 2006.

Alongside his office as member of the Supervisory Board, Löllgen is, or has within the last five years been, a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Currently: member of the supervisory board of Evonik Industries AG; member of the supervisory board of IRR- Innovationsregion Rheinisches Revier GmbH.

Previously: member of the supervisory board of AGFA Gevaert AG für Altersversorgung; member of the supervisory board of Abbott Management GmbH.

Prof. Dr. Wolfgang Plischke has been a member of the Supervisory Board of Bayer AG since April 2016. He previously was head of the Pharmaceuticals Business at Bayer in North America from 2000 until 2002, head of the Pharmaceuticals Division and member of the executive committee of Bayer HealthCare Aktiengesellschaft from 2003 until 2006, as well as a member of the Board of Management of Bayer AG, responsible for Technology, Innovation and Sustainability and for Asia/Pacific, from 2006 until 2014.

Alongside his office as member of the Supervisory Board, Plischke currently is a member of the supervisory board of Evotec AG (chairman).

Petra Reinbold-Knape has been a member of the Supervisory Board of Bayer AG since April 2012. She studied at the Academy of Labor in Frankfurt from 1982 until 1983 and has served as trade union secretary at the German Chemical, Paper and Ceramics Industrial Union in Hesse and North Rhine-Westphalia from 1983 until 1997. Afterwards, she was District Secretary, Deputy District Secretary and Northeast District Secretary of the German Mining, Chemical and Energy Industrial Union.

Alongside her office as member of the Supervisory Board, Reinbold-Knape is, or has within the last five years been, a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Currently: member of the supervisory board of Lausitz Energie Kraftwerk AG (vice chairwoman); member of the supervisory board of Lausitz Energie Bergbau AG (vice chairwoman); managing director of BWS Gesellschaft für Bildung, Wissen, Seminar of the IGBCE GmbH, Hanover; member of the supervisory board of DGB Rechtsschutz GmbH.

Previously: member of the supervisory board of envia Mitteldeutsche Energie AG; member of the supervisory board of MDSE Mitteldeutsche Sanierungs- und Entsorgungsgesellschaft mbH.

Detlef Rennings has been a member of the Supervisory Board of Bayer AG since June 2017. He has been a member of the IG BCE union since 1983. Since 1990, he has further been a member of the Works Council and from 2002 to 2006 he was a full-time member of the Works Council. In 2006, Rennings became a member of the Group Works Council of Bayer.

Alongside his office as member of the Supervisory Board, Rennings currently is a member of the supervisory board of Currenta Geschäftsführungs-GmbH.

Sabine Schaab has been a member of the Supervisory Board of Bayer AG since October 2017. From 1990 to 2013, she worked as a biology laboratory technician at the Bayer site in Wuppertal. In 2006, Schaab received a bachelor degree in molecular biology. She has been a member of the Works Council since 1994 and deputy chairwoman of the Works Council of the Wuppertal site since 2014. Since 2014, Schaab is also a member of the Company's joint Works Council and a member of the economic affairs committee.

Michael Schmidt-Kießling has been a member of the Supervisory Board of Bayer AG since April 2012. He has been a member of the Works Council of the Elberfeld site since 1981 and is chairman of the Works Council of the Elberfeld site since 2014.

Prof. Dr. Norbert Winkeljohann has been a member of the Supervisory Board of Bayer AG since May 2018. He studied business administration and economics at the University of Münster and later earned his doctorate in economics. Winkeljohann has worked in auditing and has been a member of the management board of PwC since 1999.

Alongside his office as member of the Supervisory Board, Winkeljohann is, or has within the last five years been, a member of the administrative, management or supervisory bodies of and/or a partner in the following companies and partnerships outside Bayer Group:

Currently: chairman of the management board of PwC (until June 30, 2018, at which time Winkeljohann will retire from the company); elected to join the supervisory board of Deutsche Bank Aktiengesellschaft in August 2018.

Prof. Dr. Dr. h.c. Otmar D. Wiestler has been a member of the Supervisory Board of Bayer AG since October 2014. He received his doctoral degree from the University of Freiburg in 1984, and holds a habilitation in pathology since 1990. Wiestler has been active in medical research for decades and has been president of the Helmholtz Association of German Research Centers since 2015.

The business address of each member of the Board of Management and the Supervisory Board is Bayer Aktiengesellschaft, Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Germany.

There are no potential conflicts of interest between any duties of the members of the Board of Management or the Supervisory Board toward Bayer and their respective private interests and/or other duties.

15.3.2 Supervisory Board Committees

Currently, the Supervisory Board has the following committees:

- The Presidial Committee (*Präsidium*) was established pursuant to Section 27 para. 3 of the German Co-Determination Act and consists of the chairman and vice chairman of the Supervisory Board, as well as of one stockholder representative and one employee representative. It serves as Bayer's mediation committee (*Vermittlungsausschuss*) with respect to nominations to the Board of Management. The purpose of this committee is to nominate persons for election to the Board of Management by a simple majority of the votes of the Supervisory Board in the event that the Supervisory Board is unable to appoint members of the Board of Management with the votes of at least a two-thirds majority of the Supervisory Board. The Presidial Committee also prepares the general meetings of the full Supervisory Board. The current members of the Presidial Committee are Wenning (chairman), Achleitner, Reinbold-Knape and Zühlke.
- The Human Resources Committee (*Personalausschuss*) consists of four members of the Supervisory Board. The chairman of the Supervisory Board acts as chairman of the Human Resources Committee. The Human Resources Committee resolves on behalf of the Supervisory Board on the service contracts of the members of the Board of Management. However, it is the task of the full Supervisory Board to resolve on the total compensation of the individual members of the Board of Management and the respective compensation components, as well as to regularly review the compensation system on the basis of recommendations submitted by the Human Resources Committee. Further main responsibilities of the Human Resources Committee include the legal representation of Bayer AG in matters concerning Board of Management members pursuant to Section 112 AktG, the approval of agreements with Supervisory Board members pursuant to Section 114 AktG and the approval of loans granted to Supervisory Board and Board of Management members and other persons pursuant to Section 89 and Section 115 AktG. The current members of the Human Resources Committee are Wenning (chairman), Achleitner, van Broich and Hausfeld.
- The Audit Committee (*Prüfungsausschuss*) consists of six members of the Supervisory Board. The main responsibilities of the Audit Committee are oversight of financial accounting, risk management, the preparation of the resolutions of the Supervisory Board with respect to the annual financial statements, the review of all non-audit services to be performed by the independent auditor, oversight over the independent auditors including scope of services, fees and schedules, the direct receipt of the audit reports, and the direct receipt of reports on any accounting irregularities. The current members of the Audit Committee are Winkeljohann (chairman), Elsner, Wenning, Löllgen, Plischke and Zühlke.
- In 2007, a Nominations Committee (*Nominierungsausschuss*) was established in line with the recommendation in the Code of June 2007 to carry out preparatory work when an election of stockholder representatives to the Supervisory Board is to be held. It suggests suitable candidates for the Supervisory Board to propose to the annual stockholders' meeting for election. The Nominations Committee comprises the chairman of the Supervisory Board and the other stockholder representative on the Presidial Committee. The current members of the Nominations Committee are Wenning (chairman) and Achleitner.
- The Innovation Committee (*Innovationsausschuss*) was established in September 2015. It is primarily concerned with the innovation strategy and innovation management, the strategy for protection of intellectual property, and major R&D projects. Within its area of responsibility, the Innovation Committee advises and oversees the management and prepares any Supervisory Board decisions. The Innovation Committee comprises the chairman of the Supervisory Board and seven other members of the Supervisory Board, with parity of representation between stockholder and employee representatives. The current members of the Innovation Committee are Plischke (chairman), Bischofberger, van Broich, Reinbold-Knape, Schaab, Wenning, Wiestler and Zühlke.

15.3.3 Compensation

15.3.3.1 Principles of Compensation System

The Supervisory Board is compensated based on the relevant provisions of the Articles of Incorporation, which were approved by a large majority at the annual stockholders' meeting on April 28, 2017. The compensation of the Supervisory Board was thus increased by 10% with effect from April 29, 2017.

The members of the Supervisory Board now receive a fixed annual compensation of €132 thousand (2016: €120 thousand) plus reimbursement of their expenses.

In accordance with the recommendations of the German Corporate Governance Code, additional compensation is paid to the Chairman and Vice Chairman of the Supervisory Board and for chairing and membership of committees. As of April 29, 2017, the Chairman of the Supervisory Board receives fixed annual compensation of €396 thousand (2016: €360 thousand), the Vice Chairman €264 thousand (2016: €240 thousand). These amounts also cover membership and chairmanship of committees. The other members receive additional compensation for committee membership. The chairman of the Audit Committee receives an additional €132 thousand (2016: €120 thousand), the other members of the Audit Committee €66 thousand (2016: €60 thousand) each. The chairmen of the remaining committees receive €66 thousand (2016: €60 thousand) each, the other members of those committees €33 thousand (2016: €30 thousand) each. As before, no additional compensation is paid for membership of the Nominations Committee. A Supervisory Board member who is a member of more than two committees receives compensation only for the two committees with the highest compensation. If changes are made to the Supervisory Board and / or its committees during the year, members receive compensation on a prorated basis. As in the past, the members of the Supervisory Board also receive an attendance fee of €1 thousand each time they personally attend a meeting of the Supervisory Board or a committee. The attendance fee is limited to €1 thousand per day.

The members of the Supervisory Board have given a voluntary pledge that they will each purchase Bayer shares for 25% of their pretax fixed compensation, including any additional compensation for committee membership, and hold these shares for as long as they remain members of the Supervisory Board. This does not apply to members who are prevented from purchasing shares due to a service or employment contract with a company or who transfer at least 85% of their fixed compensation to the Hans Böckler Foundation in accordance with the rules of the German Trade Union Confederation or whose service or employment contract with a company requires them to transfer such compensation to that company. If less than 85% of the fixed compensation is transferred, the voluntary pledge applies to the portion not transferred. The obligation to purchase Bayer shares was adjusted in 2017, and now only applies for the first five years of membership of the Supervisory Board; these shares must then be held until membership of the Supervisory Board ceases. Bayer shares acquired prior to 2017 in connection with the voluntary pledge are taken into account for this purpose. By voluntarily pledging to invest in and hold Bayer shares, the Supervisory Board members reinforce their interest in the long-term, sustainable success of the Company.

15.3.3.2 Compensation of the Supervisory Board in 2017

The following table shows the components of each Supervisory Board member's compensation for 2017.

	For fiscal year ended December 31,					
	Fixed Compensation		Attendance Fee		Total	
	(in € thousand)					
	2016	2017	2016	2017	2016	2017
Members of the Supervisory Board as of December 31, 2017						
Dr. Paul Achleitner	180	192	5	5	185	197
Dr. Simone Bagel-Trah	120	128	5	3	125	131
Dr. Norbert W. Bischofberger[1]	–	92	–	3	–	95
André van Broich	150	170	5	6	155	176
Thomas Ebeling	120	128	4	4	124	132
Dr. Thomas Elsner[1]	–	134	–	7	–	141
Johanna W. (Hanneke) Faber	81	128	2	4	83	132
Colleen A. Goggins[1]	–	90	–	3	–	93
Heike Hausfeld[1]	–	112	–	4	–	116
Reiner Hoffmann	127	128	5	2	132	130
Frank Löllgen	173	192	8	8	181	200
Prof. Dr. Wolfgang Plischke	162	256	5	8	167	264
Petra Reinbold-Knape	180	192	5	4	185	196
Detlef Rennings[2]	–	76	–	3	–	79
Sabine Schaab[3]	–	36	–	3	–	39
Michael Schmidt-Kießling	120	128	4	5	124	133
Dr. Klaus Sturany	240	256	9	9	249	265
Werner Wenning (Chairman)	360	384	9	10	369	394
Prof. Dr. Otmar D. Wiestler	150	160	4	6	154	166
Oliver Zühlke (Vice Chairman)	240	256	9	8	249	264

	For fiscal year ended December 31,					
	Fixed Compensation		Attendance Fee		Total	
			(in € thousand)			
	2016	2017	2016	2017	2016	2017
Members who left the Supervisory Board in 2016 and 2017						
Dr. Clemens Börsig[4]	120	39	5	2	125	41
Dr. Thomas Fischer[4]	180	58	9	4	189	62
Yüksel Karaaslan[5]	150	65	5	2	155	67
Petra Kronen[6]	150	105	4	3	154	108
Dr. Helmut Panke[7]	59	–	4	–	63	–
Sue H. Rataj[4]	120	39	5	2	125	41
Heinz Georg Webers[4]	120	39	5	2	125	41
Prof. Dr. Dr. Ernst-Ludwig Winnacker[7]	59	–	2	–	61	–
Total	**3,361**	**3,583**	**118**	**120**	**3,479**	**3,703**

(1) Member of the Supervisory Board since April 28, 2017.
(2) Member of the Supervisory Board since June 4, 2017.
(3) Member of the Supervisory Board since October 1, 2017.
(4) Member of the Supervisory Board until April 28, 2017.
(5) Member of the Supervisory Board until June 4, 2017.
(6) Member of the Supervisory Board until September 30, 2017.
(7) Member of the Supervisory Board until April 29, 2016.

In addition to their compensation as members of the Supervisory Board, those employee representatives who are employees of Bayer Group companies receive compensation unrelated to their service on the Supervisory Board. The total amount of such compensation in 2017 was €767 thousand (2016: €939 thousand).

No compensation was paid or benefits granted to members of the Supervisory Board for personally performed services such as consultancy or agency services. The company has purchased insurance for the members of the Supervisory Board to cover their personal liability arising from their service on the Supervisory Board.

15.3.4 Shareholdings

As of the date of the Prospectus, Werner Wenning holds 21,972 shares in the Company, Oliver Zühlke holds 26.27 shares in the Company, Dr. Paul Achleitner holds 2,224 shares in the Company, Dr. rer. nat. Simone Bagel-Trah holds 1,090 shares in the Company, Dr. Norbert W. Bischofberger holds 10,000 ADRs representing 2,500 shares in the Company, André van Broich holds 56 shares in the Company, Thomas Ebeling holds 1,482 shares in the Company, Dr. Thomas Elsner holds 872 shares in the Company, Johanna W. (Hanneke) Faber holds 880 shares in the Company, Heike Hausfeld holds 44.95 shares in the Company, Sabine Schaab holds 360 shares in the Company, Prof. Dr. Wolfgang Plischke holds 5,082 shares in the Company, Michael Schmidt-Kießling holds 1,491 shares in the Company and Colleen A. Goggins holds 1,050 ADRs representing 262.5 shares in the Company.

Reiner Hoffmann, Frank Löllgen, Petra Reinbold-Knape, Detlef Rennings, Prof. Dr. Dr. h.c. Otmar D. Wiestler and Prof. Dr. Norbert Winkeljohann do not hold any shares in the Company.

15.4 Certain Information Regarding the Members of Board of Management and Supervisory Board

In the last five years, no member of the Board of Management or the Supervisory Board has been convicted of fraudulent offences. In the last five years, no member of the Board of Management or the Supervisory Board has been associated with any bankruptcy, receivership or liquidation acting in its capacity as a member of any administrative, management or supervisory body or as a senior manager. In the last five years, no official public incriminations and/or sanctions have been made by statutory or legal authorities (including designated professional bodies) against the members of the Board of Management or the Supervisory Board, nor have sanctions been imposed by the aforementioned authorities. No court has ever disqualified any of the members of the Board of Management or the Supervisory Board from acting as a member of the administrative, management or supervisory body of an issuer, or from acting in the management or conduct of the affairs of any issuer for at least the previous five years.

As a precaution, attention is drawn to the following in accordance with Section 5.4.1, paragraphs 6 to 8 of the Code: Prof. Dr. Winkeljohann is a partner at PwC, which provides advisory services to Bayer. Prof. Dr. Winkeljohann will cease to be a partner at PricewaterhouseCoopers effective June 30, 2018. Beyond this,

the Supervisory Board does not consider there to be any personal or business relationships between Prof. Dr. Winkeljohann on the one hand, and the companies of the Group, the governing bodies of Bayer AG, or any stockholder that directly or indirectly holds more than 10 percent of the voting shares of Bayer AG on the other that are of material significance to the decision of the stockholders' meeting regarding their election.

That stated, there are no conflicts of interest or potential conflicts of interest between the members of the Board of Management and Supervisory Board vis à vis the Company and their private interests, membership in governing bodies of companies, or other obligations.

15.5 Stockholders' Meeting

According to the Articles of Incorporation, the stockholders' meeting of the Company is held at the Company's registered office or in a German city with over 100,000 inhabitants. It is convened by the Board of Management. Each no-par value share confers one vote.

Resolutions of the Company's stockholders' meeting are adopted by a simple majority of the votes cast and, should a majority of the share capital be required, a simple majority of the share capital present at the adoption of the resolution, absent mandatory laws or Articles of Incorporation to the contrary. Under German stock corporation law, certain resolutions of fundamental importance require a majority of at least three quarters of the share capital present at the adoption of a resolution in addition to a majority of the votes cast. Such resolutions include the following in particular:

- amendments changing the business objectives;
- capital increases that exclude subscription rights;
- capital reductions;
- creation of authorized or conditional capital;
- dissolution of the Company;
- actions involving legal conversion such as mergers, spin-offs and changes in legal form;
- transfer of all assets of the Company;
- integration of another company; and
- specific intercompany agreements (in particular, controlling and profit-transfer agreements).

A stockholders' meeting is usually called once a year. The annual stockholders' meeting is held within the first eight months of each fiscal year. In addition, the Board of Management can call an extraordinary stockholders' meeting if such is required in the interest of the Company. Stockholders who have combined shareholdings of at least 5% of the share capital can request the Board of Management to call a stockholders' meeting. Such request must be made in writing and provide details of the purpose and reasons for calling such meeting. Shareholders who are registered with the Company's share register and have registered for the stockholders' meeting in due time are entitled to participate in the respective stockholders' meeting and exercise their voting rights. The registration must be received by the Company at the address specified in the notice calling the meeting in written or electronic form at least six days before the meeting. The day of receipt is not to be counted. The stockholders' meeting must be convened at least 30 days before the end of the day, on which the shareholders are required to register, unless the law provides for a shorter notice period. The notice period does not include the day on which the meeting convenes nor the final day of the registration period.

15.6 Corporate Governance Code

The Code, last amended on February 7, 2017, contains recommendations and suggestions for the management and supervision of German companies listed on a stock exchange. The Code incorporates nationally and internationally recognized standards of good and responsible corporate governance. The purpose of the Code is to make the German system of corporate governance and supervision transparent for investors. The Code includes recommendations and suggestions for management and supervision with regard to shareholders and stockholders' meetings, management and supervisory boards, transparency, accounting and auditing.

There is no obligation to comply with the recommendations or suggestions of the Code. However, the AktG requires that the management board and supervisory board of a German listed company declare, every year, either that the recommendations have been or will be applied, or which recommendations have not been or will not be applied and explain why the management board and the supervisory board do not/will not apply the recommendations that have not been or will not be applied. This declaration is to be made permanently accessible to shareholders. However, deviations from the suggestions contained in the Code need not be disclosed.

The Board of Management and Supervisory Board issued the last declaration of conformity regarding the Code in accordance with Section 161 of the AktG in December 2017 as follows:

"*Under Section 161 of the German Stock Corporation Act, the Board of Management and the Supervisory Board of Bayer AG are required to issue an annual declaration that the company has been, and is, in compliance with the recommendations of the "Government Commission on the German Corporate Governance Code" as published by the Federal Ministry of Justice in the official section of the Federal Gazette (Bundesanzeiger), or to advise of any recommendations that have not been, or are not being, applied and the reasons for this. An annual declaration was last issued in December 2016.*

With respect to the past, the following declaration refers to the May 5, 2015 version of the Code. With respect to present and future corporate governance practices at Bayer AG, the following declaration refers the February 7, 2017 version of the Code.

Pursuant to Section 161 of the German Stock Corporation Act, the Board of Management and Supervisory Board of Bayer AG hereby declare as follows:

1. *The company has been in compliance with the recommendations of the Code since issuance of the last annual compliance declaration in December 2016.*

2. *All the recommendations of the Code will be complied with in full in the future."*

In May 2018 the declaration of conformity issued in December 2017 was amended as follows:

"In December 2017, the Board of Management and the Supervisory Board issued a declaration that shall now be amended in two points: The following recommendations of the German Corporate Governance Code as amended on February 7, 2017, will not be complied with on one occasion:

1. Section 7.1.2, Sentence 3

The consolidated financial statements and consolidated management report shall be made publicly accessible within 90 days of the end of the fiscal year, and the mandatory interim financial information within 45 days of the end of the reporting period.

The interim report for the second quarter of 2018 is not scheduled to be published until September 5, 2018, and thus not within 45 days of the end of the reporting period as recommended. The reason for this is that, with the acquisition of the Monsanto Company expected to close in the second quarter, a multitude of measures need to be undertaken as part of the first-time consolidation of that company. Despite all the preparations undertaken, the work required in this connection cannot be carried out within 45 days of the end of the reporting period as recommended.

The Board of Management and Supervisory Board therefore consider a one-time deviation from the recommendation in question to be an appropriate course of action to ensure proper financial reporting for the second quarter of 2018.

2. Section 4.2.3, Paragraph 2, Sentence 8

Changing performance targets or the comparison parameters retroactively shall be excluded.

The performance targets for the short-term variable components of the Board of Management's compensation for 2018 were set by the Supervisory Board at the beginning of 2018 on the basis of the 2018 budget. The imminent closing of the acquisition of the Monsanto Company results in substantial deviations from the original planning for the current fiscal year of Bayer AG. This relates to parameters and structural aspects that are relevant for the short-term compensation of members of the Board of Management of Bayer AG. To ensure that the short-term variable components of compensation of the Board of Management continue to be based on appropriate and challenging performance targets after the closing of the Monsanto acquisition, the relevant performance targets and structural aspect of short-term variable compensation are set to be adjusted.

The Supervisory Board believes that these changes are necessary to ensure short-term variable compensation is appropriate."

16. TRANSACTIONS AND LEGAL RELATIONSHIPS WITH RELATED PARTIES

Related parties as defined in IAS 24 (Related Party Disclosures) are those legal entities and natural persons that are able to exert influence on Bayer AG and its subsidiaries or over which Bayer AG or its subsidiaries exercise control or joint control or have a significant influence. They include, in particular, nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, post-employment benefit plans and the corporate officers of Bayer AG.

Transactions with nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, and post-employment benefit plans are carried out on an arm's-length basis.

The following table shows the volume of transactions with related parties included in the consolidated financial statements of the Bayer Group at amortized cost or using the equity method, and with post-employment benefit plans:

	Sales of goods and services			Purchases of goods and services			Receivables			Liabilities		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
						(in € million)						
Non-consolidated subsidiaries	21	4	5	4	5	6	11	9	6	22	19	16
Joint Ventures	25	24	25	–	–	–	4	4	3	1	243	164
Associates	36	34	84	645	557	84	–	3	119	4	6	87
Post-employment benefit plans	–	–	–	–	–	–	822	907	974	68	63	70

Intercompany profits and losses for companies accounted for in the consolidated financial statements using the equity method were immaterial in 2017, 2016 and 2015 and in the three months ended March 31, 2018.

In the second quarter of 2016, Bayer AG increased the coverage of Bayer Pension Trust with the deposit of ten million Covestro Shares held by it. The number of Covestro Shares deposited amounted to 4.9% of the issued Covestro Shares at the time and had a value of €337 million. In the second quarter of 2017, Bayer AG further increased the coverage of Bayer Pension Trust through a deposit of eight million Covestro Shares held by it. The number of Covestro shares deposited amounted to 4.0% of the issued Covestro Shares at the time and had a value of €504 million. In May 2018, Bayer AG acquired 6.8% of the issued Covestro Shares from Bayer Pension Trust at market value for a total amount of €1.1 billion, which it intends to use to repay the Exchangeable Bonds that mature in 2020. Bayer Pension Trust now no longer holds any Covestro Shares.

Due to the Loss of Control at the end of the third quarter of 2017, Covestro was accounted for as an associate. Consequently, compared with December 31, 2016, receivables from and payables to associates both increased from €0.0 billion to €0.1 billion. In this connection, goods and services received from associates declined from €0.6 billion to €0.1 billion. From the end of the third quarter of 2017, goods and services between Covestro and its associates are no longer reflected in the consolidated financial statements of the Bayer Group. Since May 2018 Covestro is no longer accounted for as an associate as Bayer changed the accounting method from at-equity to fair value accounting due to the sell-down of further Covestro Shares.

Bayer AG has undertaken to provide jouissance right capital (*Genussrechtskapital*) in the form of an interest-bearing loan with a nominal volume of €150 million as of December 31, 2017 for Bayer-Pensionskasse VVaG. The entire amount remained drawn as of December 31, 2017. The carrying amount as of December 31, 2017, was €152 million (2016: €154 million; 2015: €153 million). Loan capital was first provided to Bayer-Pensionskasse VVaG in 2008 for its effective initial fund. This capital had a nominal volume of €595 million as of December 31, 2017 (unchanged compared to 2016 and 2015). The carrying amount as of December 31, 2017, was €605 million (2016: €612 million; 2015: €610 million). The outstanding receivables, comprised of different tranches, are each subject to a five-year interest-rate adjustment mechanism. Interest income of €15 million was recognized for 2017 (2016: €18 million; 2015: €22 million).

€2 million in impairment losses on receivables from associates were recognized in 2017 (none in 2016 or 2015).

As of March 31, 2018, liabilities to joint ventures declined by €0.1 billion to €0.1 billion compared with December 31, 2017, and primarily pertained to the joint venture Casebia Therapeutics Limited Liability Partnership, Ascot, United Kingdom, which was established together with CRISPR Therapeutics AG, Basel, Switzerland.

The Company's related parties also include the members of our Board of Management and Supervisory Board, and the members of governing bodies of subsidiaries, in each case including their family members, as well as

those entities over which members of our Board of Management or Supervisory Board of the Company or their close family members are able to exercise a significant influence or in which they hold a significant share of voting rights.

With regard to the compensation of the members of the Board of Management and Supervisory Board, see "*15.2.2.2 Compensation of the Board of Management in 2017*" and "*15.3.3.2 Compensation of the Supervisory Board in 2017*."

Apart from the above, we are not aware of any material related parties nor related party transactions as of the date of this Prospectus.

17. GENERAL INFORMATION ON THE COMPANY AND THE GROUP

17.1 Name, Corporate Identity and Commercial Register Entry

The Company's legal name is "Bayer Aktiengesellschaft." The Company primarily operates under the commercial name "Bayer." It is organized under German law as a stock corporation (*Aktiengesellschaft)* and registered in the commercial register of the district court of Cologne, Germany (*Amtsgericht Köln*), under the number HRB 48248.

17.2 History of Bayer

The Company was originally founded on August 1, 1863, by dye salesman Friedrich Bayer and master dyer Johann Friedrich Weskott as a general partnership called "Friedr. Bayer et comp." The objective of the company was the manufacturing and selling of synthetic dyestuffs. In 1881, Bayer was transformed into a joint stock company called "Fabrikenfarben vorm. Friedr. Bayer & Co." Subsequently, the Company developed into an increasingly international chemical company. In 1925, the Company and other companies of the German tar dyes industry merged, before "Farbenfabriken Bayer AG" was newly founded after the second world war. The rapid growth in the following years led to the reorganization of the Group in 1971, when a divisional corporate structure replaced the functional organization that had been implemented in the early 1950s. In June 1972, the Company changed its name to "Bayer Aktiengesellschaft." In 2001, a further reorganization established independent operating subsidiaries under the umbrella of a management holding company.

Following the stock market floatation of Covestro AG (formerly Bayer Material Science), a provider of high-tech polymer materials which Bayer carved-out with effect from September 1, 2015, in October 2015, the Bayer Group's business was reorganized effective January 1, 2016, to focus on its Life Science activities. Effective January 1, 2017, Bayer Pharma Aktiengesellschaft and Bayer CropScience Aktiengesellschaft as lessors each concluded a business lease agreement with Bayer AG as lessee. While both entities continue to exist and receive a lease fee from Bayer AG, their operations are now carried out by Bayer AG in its own name and for its own account. In a series of transactions that followed the stock market floatation of Covestro AG, Bayer gradually decreased its direct interest in Covestro AG from 69% to currently 6.8%. As a result of the reductions of the equity stake and the conclusion of a control termination agreement at the end of September 2017, Covestro ceased to be a reportable segment and was deconsolidated from Bayer's financial statements and reported as discontinued operations for the quarters preceding the deconsolidation. As of October 1, 2017, Covestro was classified as an associate due to Bayer's remaining significant influence and accounted for using the equity method until May 2018, when Bayer reduced its interest in Covestro AG to 6.8%, which has since been accounted for as other financial asset measured at fair value through profit or loss.

Following the deconsolidation of Covestro, Bayer's operations are currently managed in three divisions – Pharmaceuticals, Consumer Health and Crop Science – and the Animal Health business unit. The operational business is supported by the corporate functions – including Technology Services, which was integrated into Bayer AG effective July 1, 2016 – Business Services and the service company Currenta. For further information on the reorganization of Bayer, see also "*12.2. Recent Reorganizations of the Group*."

17.3 Registered Office, Fiscal Year, Duration and Purpose of the Company

The Company has its registered office at Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Germany (telephone: +49-214-30-1).

The Company's fiscal year is the calendar year. The duration of the Company is unlimited.

Pursuant to Section 2(1) of the Articles of Incorporation, the purpose of the Company is manufacturing, marketing and other industrial activities or the provision of services in the fields of health care and agriculture. The Company may also perform these activities in the fields of polymers and chemicals. Pursuant to Section 2(2) of the Articles of Incorporation, the Company is authorized to undertake all business which is related to, or directly or indirectly serves, the object of the Company. To this end, the Company may, in particular, establish branches, acquire or take participating interests in other companies, in particular those whose objects fully or partially cover the aforementioned areas. It may bring companies in which it holds participating interests under its uniform control, or confine itself to the administration thereof. It may transfer their operations in full or in part to newly established or existing subsidiaries.

17.4 Group Structure and Significant Subsidiaries

Bayer AG is the parent company of the Bayer Group. Its subsidiaries are companies over which Bayer AG exercises control because it is exposed, or has rights, to variable returns and has the ability to use its power to affect

those companies' returns. As of March 31, 2018, the Bayer Group included 237 consolidated companies worldwide, of which 50 were German companies.

The following table presents an overview of the Group's significant subsidiaries as of the date of this Prospectus, determined by quantitative and qualitative criteria, which are held by Bayer AG, either directly or indirectly, as well as key company information relating to these subsidiaries. The figures presented are extracted from the respective financial statements and/or accounts prepared under local GAAP, unless otherwise indicated.

Name and country of incorporation	Company share of capital[1]	Issued capital as of March 31, 2018	Capital reserves as of March 31, 2018	Net income/loss for the fiscal year ended December 31, 2017	Payables to Bayer AG as of March 31, 2018[2]	Receivables from Bayer AG as of March 31, 2018[2]
	(in %)	(unaudited and in € million)				
Bayer HealthCare LLC, U.S.A.[3]	100	0.0	11,748.6	(67.1)	38.4	5.7
Bayer Pharma Aktiengesellschaft, Germany	100	194.0	1,245.9	0.0	110.9	129.2
Bayer U.S. LLC, U.S.A.[3]	100	0.0	46.3	343.5	0.2	1.9
Bayer Intellectual Property GmbH, Germany	100	0.0	0.0	0.3	2.1	196.6
Bayer Oy, Finland	100	2.0	2.0	537.6	7.0	54.9
Bayer CropScience Aktiengesellschaft, Germany	100	501.0	2,612.3	383.1	30.4	101.8

(1) In %. Directly or indirectly held as of the date of this Prospectus.
(2) Figures prepared in accordance with IFRS. Figures represent trade accounts payable/receivable.
(3) Figures prepared in accordance with IFRS.

Upon completion of the Transaction, Bayer AG's significant subsidiaries will further include Monsanto Company, U.S.A. as well as Monsanto Technology LLC, U.S.A.

17.5 Auditors

Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Rosenheimer Platz 4, 81669 Munich, Germany, has audited the consolidated financial statements of Bayer as of and for the fiscal year ended December 31, 2017, prepared in accordance with IFRS and the additional requirements of German commercial law pursuant to Section 315e para. 1 of the HGB (formerly Section 315a para. 1 of the HGB), in accordance with Section 317 of the HGB, the German generally accepted standards for the audit of financial statements promulgated by the German Institute of Public Auditors (*Institut der Wirtschaftsprüfer* "**IDW**") and in accordance with the EU Audit Regulation (No. 537/2014) and issued an unqualified audit opinion thereon. Deloitte has further audited the unconsolidated financial statements of Bayer AG as of and for the fiscal year ended December 31, 2017, prepared in accordance with the applicable provisions of the HGB and the AktG, in accordance with Section 317 of the HGB and the German generally accepted standards for the audit of financial statements promulgated by the IDW, and issued an unqualified audit opinion thereon.

Deloitte has also performed a review in accordance with the German generally accepted standards for the review of financial statements promulgated by the IDW as well as in supplementary compliance with the International Standard on Review Engagements "*Review of Interim Financial Information performed by the Independent Auditor of the Entity Historical Financial Statements*" (ISRE 2410 on the condensed consolidated interim financial statements of Bayer as of and for the three months ended March 31, 2018, prepared in accordance with IFRS for interim financial reporting (IAS 34) and issued an unqualified review report (*Bescheinigung*) thereon.

Deloitte is a member of the German Chamber of Public Accountants (*Wirtschaftsprüferkammer*), Rauchstraße 26, 10787, Berlin, Germany.

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (*formerly PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft*), Friedrich-List-Straße 20, 45128 Essen, Germany ("**PwC**"), has audited the consolidated financial statements of Bayer as of and for the fiscal years ended December 31, 2015 and December 31, 2016, each prepared in accordance with IFRS and the additional requirements of German commercial law pursuant to Section 315e para. 1 of the HGB (formerly Section 315a para. 1 of the HGB), in accordance with Section 317 of the HGB and German generally accepted standards for the audit of financial statements promulgated by the IDW and, in each case, issued unqualified audit opinions thereon.

PwC is a member of the German Chamber of Public Accountants (*Wirtschaftsprüferkammer*).

The auditor's reports of Deloitte for the consolidated financial statements of Bayer as of and for the fiscal year ended December 31, 2017, and the unconsolidated financial statements of Bayer AG as of December 31, 2017

and for the year then ended refer to group management reports. The auditor's reports of PwC for the consolidated financial statements of Bayer as of and for the fiscal years ended December 31, 2015 and December 31, 2016 refer to group management reports. The examinations of and the audit reports upon such group management reports are required under German auditing standards. Those examinations were not made in accordance with generally accepted auditing or attestation standards in the United States. Accordingly, Deloitte and PwC do not express any opinion on this information or on the consolidated financial statements included in this Prospectus, in each case in accordance with U.S. generally accepted auditing standards or U.S. attestation standards.

The decision to change auditors was made due to an early adoption of Regulation (EU) No. 537/2014 on specific requirements regarding statutory audit of public-interest entities and repealing Commission Decision 2005/909/EC, which provides for mandatory audit firm rotation. The Company conducted a public tender process, which resulted in the Supervisory Board proposing Deloitte as auditor for the review of the first three months of 2017 at the annual stockholders' meeting on April 29, 2016. At the annual stockholders' meeting on April 28, 2017, Deloitte was appointed as auditor for the fiscal year 2017.

17.6 Admission to Stock Exchange Trading

The Company's shares have been admitted to the regulated market (*regulierter Markt*) and the sub-segment of the regulated market with additional obligations arising from admission (Prime Standard) of the Frankfurt Stock Exchange (*Frankfurter Wertpapierbörse*) as well as to the regulated market of the six other German stock exchanges (Berlin, Dusseldorf, Hamburg, Hanover, Munich and Stuttgart). In addition, the Company's shares are listed on the Barcelona Stock Exchange (*Bolsa de Barcelona*) and the Madrid Stock Exchange (*Bolsa de Madrid*).

17.7 Announcements, Paying Agent and Registrar

Pursuant to the Company's Articles of Incorporation, its announcements are published in the German Federal Gazette (*Bundesanzeiger*). To the extent permitted by law, announcements may also be sent by registered mail. Notices concerning the Company's shares are published in the German Federal Gazette. Stock market announcements are also published in the German Federal Gazette. Pursuant to Section 14 para. 2 of the German Securities Prospectus Act (*Wertpapierprospektgesetz*), the Prospectus, as well as any supplements to the Prospectus, are published on the Company's website (www.investor.bayer.com). Printed copies of the Prospectus are available at the Company free of charge during normal business hours at the following addresses: Bayer Aktiengesellschaft, Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Germany.

The paying agent and registrar is Deutsche Bank Aktiengesellschaft, Taunusanlage 12, 60325 Frankfurt am Main, Germany.

17.8 Designated Sponsors

BNP Paribas Arbitrage SNC is acting as designated sponsor for the Company's shares. Designated sponsors ensure, in particular, greater liquidity in the market for the shares by issuing fixed ask and bid prices.

18. DESCRIPTION OF THE SHARE CAPITAL

The following is a summary of material information relating to Bayer AG's share capital, including certain provisions of its Articles of Incorporation and relevant German and European law.

18.1 Share Capital and Shares

18.1.1 Share Capital

The Company's share capital as of the date of this Prospectus, as recorded in the commercial register, amounts to €2,196,346,388.48 and is divided into 857,947,808 registered shares. The shares of the Company are no-par value shares and each share represents a notional value of €2.56 in Bayer AG's share capital. Bayer AG's share capital is fully paid up. Each share confers one voting right.

Section 5(1) of the Articles of Incorporation stipulates that the shareholders' right to the issuance of share certificates representing their respective shares shall be excluded. The Company is entitled to issue share certificates representing individual shares or multiples of shares. Pursuant to Section 5(2) of the Articles of Incorporation, the Board of Management shall have the right to decide on any issuance of share certificates and all details of such issuance.

18.1.2 Developments in Bayer AG's Share Capital

The Company's registered share capital was increased to €2,116,986,388.48 and was divided into 826,947,808 registered shares effective July 2, 2009. As of April 18, 2018, the Company's registered share capital was increased to €2,196,346,388.48, divided into 857,947,808 registered shares, as a result of the Company's issuance of 31 million new shares out of its authorized capital against cash contributions and excluding the subscription rights of existing Bayer shareholders for subscription by a subsidiary of the investment company Temasek Holdings (Private) Limited, which is wholly-owned by the Government of Singapore.

18.1.3 Authorized Capital

Bayer AG's authorized capital of €530,000,000.00 was approved by the annual stockholders' meeting on April 29, 2014. It expires on April 28, 2019. It can be used to increase the capital stock by issuing new no-par value registered shares against cash contributions and/or contributions in kind, but capital increases against noncash contributions may not exceed a total of €423,397,120.00 ("**Authorized Capital I**"). Stockholders must generally be granted subscription rights. However, the Board of Management is authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights

- where the subscription ratio gives rise to fractions in the case of capital increases against cash or noncash contributions;
- to the extent necessary to grant the holders of bonds with warrants or conversion rights or obligations issued by the Company or the Group companies a right to subscribe for new shares to the extent to which they would be entitled after exercise of their warrants or conversion rights, or performance of their exercise or conversion obligations;
- if the shares are issued in connection with the admission of shares to a foreign stock exchange and the total interest in the capital stock attributable to the new shares for which subscription rights are excluded does not exceed 10% of the existing capital stock on the date of entry of the authorization in the commercial register or, in the event that this amount is lower, 10% of the existing capital stock on the date of issuance of the new shares;
- if capital is increased against noncash contributions to issue shares either for the purpose of acquiring companies, parts of companies, interests in companies, or other assets;
- to implement a scrip dividend, in which stockholders are given the option of contributing their dividend entitlements to Bayer (either in whole or in part) as a noncash contribution against the issuance of new shares from the Authorized Capital I.

The interest in the capital stock attributable to those shares issued against cash or noncash contributions while excluding stockholders' subscription rights may not exceed a total of 20% of the Company's existing capital stock on the date of the resolution by the annual stockholders' meeting.

The Authorized Capital I has not been used so far.

Additional authorized capital of €211,698,560.00 was approved by the annual stockholders' meeting on April 29, 2014 ("**Authorized Capital II**"). It expires on April 28, 2019. The Board of Management was originally authorized, with the consent of the Supervisory Board, to increase the capital stock by up to a total of €211,698,560.00 by issuing new no-par value registered shares against cash contributions. Following partial use of the Authorized Capital II for the capital increase described above (see "*18.1.2 Developments in Bayer AG's Share Capital*"), €132,338,560.00 that may be used remain. Stockholders must be granted subscription rights. However, the Board of Management is authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights

- where the subscription ratio gives rise to fractions;
- if capital is increased against cash contributions and the total interest in the capital stock attributable to the new shares for which subscription rights are to be excluded does not exceed 10% of the existing capital stock on the date of entry in the commercial register of the authorization or, in the event that this amount is lower, 10% of the existing capital stock on the date of issue of the new shares and the issue price of the new shares issued against cash consideration is not materially lower than the market price of the Company's existing listed shares of the same class at the time when the issue price is finalized by the Board of Management within the meaning of Section 203 para. 1 and 2, in conjunction with Section 186 para. 3 clause 4 AktG. In accordance with Section 71 para. 1 No. 8 sentence 5 in conjunction with Section 186 para. 3 sentence 4 of the AktG, all treasury shares sold while excluding stockholders' subscription rights on or after April 29, 2014, are counted towards the above-mentioned 10% limit. This limit also includes those shares that have been or will be issued to settle bonds with warrants or conversion rights or obligations, provided that the bonds are issued while excluding subscription rights on or after April 29, 2014, by application of Section 186 para. 3 sentence 4 of the AktG, with the necessary modifications.

18.1.4 Conditional Capital

The annual stockholders' meeting on April 29, 2014 approved the creation of conditional capital, authorizing a conditional increase of up to €211,698,560.00 in the capital stock through the issuance of up to 82,694,750 new shares ("**Conditional Capital 2014**"). The conditional capital increase will only be implemented to the extent that the holders of options or conversion rights, or those persons obliged to exercise options or perform conversions under bonds with warrants or convertible bonds, profit participation certificates, or income bonds (or combinations of these instruments), which will be issued or guaranteed on the basis of the authorization resolved by the annual stockholders' meeting on April 29, 2014, by Bayer or a Group company within the meaning of Section 18 of the AktG in which Bayer has a direct or indirect interest in a minimum of 90% of the votes and capital, exercise their options or conversion rights, or, to the extent that they are obliged to exercise the option or conversion, fulfill their obligation to exercise the option or perform the conversion and to the extent that no other forms of settlement are employed. The new shares will be issued at the option premium or conversion price to be determined in accordance with the authorizing resolution preferred to above. The authorization of the Board of Management to issue, with the consent of the Supervisory Board, such debt instruments is limited to an aggregate principal amount of €6,000,000,000.00 on one or more occasions in the period up to April 28, 2019.

In principle, stockholders have a statutory right to be granted subscription rights to such instruments. However, the Board of Management is authorized, with the consent of the Supervisory Board, to exclude fractions resulting from the subscription from stockholders' subscription rights and also to exclude subscription rights to the extent necessary to allow holders of previously issued bonds with warrants or conversion rights or obligations to be granted subscription rights to the extent to which they would be entitled as stockholders after exercising the options or conversion rights or fulfilling the exercise or conversion obligations. Furthermore, the Board of Management is authorized, with the consent of the Supervisory Board, to fully exclude stockholders' subscription rights to debt instruments with options or conversion rights or obligations issued against cash contributions if the Board of Management, after due examination, reaches the opinion that the issue price of the debt instruments is not significantly below their hypothetical fair value determined in accordance with accepted methods and, in particular, valuation techniques. This authorization to exclude subscription rights applies to bonds with warrants or conversion rights or exercise or conversion obligations for shares with a proportionate interest in the capital stock not exceeding 10% of the total capital stock either at the date when the resolution is adopted or, in the event that this amount is lower, at the date on which this authorization is exercised. New shares that are issued on or after April 29, 2014, while excluding stockholders' subscription rights in accordance with Sections 203 para. 1 and 2, in conjunction with Section 186 para. 3 clause 4 AktG as well as such treasury shares as are sold on or after April 29, 2014, while excluding stockholders' subscription rights pursuant to Section 71 para. 1 number 8 clause 5, in conjunction with Section 186 para. 3 clause 4, AktG also count toward this 10% limit.

The interest in the capital stock attributable to shares issued against cash or noncash contributions while excluding stockholders' subscription rights may not exceed a total of 20% of the Company's existing capital stock on the date of the resolution by the annual stockholders' meeting. The Board of Management shall decide, with the consent of the Supervisory Board, on the details of the rights attached to the shares and all additional conditions governing their issuance, including the issue price.

On November 22, 2016, Bayer partially utilized the Conditional Capital 2014, by issuing mandatory convertible bonds in the amount of €4,000 million without granting subscription rights to existing shareholders of the Company. The bonds, denominated in units of €100,000, were issued by Bayer Capital Corporation B.V. under the subordinated guarantee of Bayer AG. At maturity, the outstanding amount of the bonds will be mandatorily converted into registered no-par value shares of Bayer AG.

18.1.5 Authorization to Purchase and Sell Treasury Shares

Bayer does currently not hold any treasury shares, nor does a third party on behalf or for account of the Company. Section 71 para. 1 number 8 AktG gives stock corporations the possibility to acquire treasury shares of up to a total of 10% of their share capital on the basis of an authorization by the annual stockholders' meeting. A resolution was adopted at the annual stockholders' meeting on April 29, 2014 with the following content:

a) The Board of Management is authorized until April 28, 2019, to acquire treasury shares with a proportionate interest in the capital stock totaling up to 10% of Bayer AG's capital stock existing at the date of the resolution, subject to the proviso that the shares acquired as a result of this authorization, together with other shares that the Company has already acquired and still holds, or which are attributable to it under Sections 71d and 71e AktG, at no time exceed 10% of the capital stock of the Company. The provisions in Section 71 para. 2 clauses 2 and 3 AktG must be complied with.

b) The acquisition may only take place via the stock exchange or by means of a public purchase offer and must satisfy the principle of equal treatment of stockholders (Section 53a AktG). If the acquisition takes place via the stock exchange, the purchase price paid by the Company (excluding transaction costs) may neither exceed, nor be lower than, Bayer AG's share price, as determined by the opening auction in Xetra trading (or a comparable successor system) on the Frankfurt Stock Exchange on the trading day, by more than 10%. If the acquisition takes place by means of a public purchase offer, the offer price paid by the Company (excluding transaction costs) may neither exceed, nor be lower than, Bayer AG's share price, as determined by the closing auction in Xetra trading (or a comparable successor system) on the Frankfurt Stock Exchange on the last trading day before the publication of the purchase offer, by more than 10%. If the total number of the shares tendered in response to a public purchase offer exceeds the offer volume, purchases may be made in proportion to the number of shares tendered (tender ratios); in addition, preferential acceptance of small numbers of shares (up to 50 shares per stockholder), as well as rounding in accordance with commercial principles to avoid notional share fractions, may be provided for. Any further stockholder tender rights are excluded to this extent.

c) The authorization may be exercised in full, or in a number of partial amounts split across several acquisition dates, until the maximum purchase volume has been reached. The acquisition may also be carried out by group companies that are dependent on Bayer AG within the meaning of Section 17 AktG, or by third parties on behalf of Bayer AG or such group companies. The authorization may, subject to compliance with the statutory requirements, be exercised for any purpose permissible by law, especially in pursuit of one or more of the purposes listed in the sections c), d), e) and f). Trading in treasury shares is not permitted.

d) If the treasury shares acquired are used for one or more of the purposes described under section c) or d), the stockholders' subscription rights are excluded. The Board of Management is authorized to exclude subscription rights if the treasury shares acquired are used for the purpose specified in section f). Stockholders also do not have any subscription rights if the treasury shares acquired are sold via the stock exchange. In the event that the treasury shares acquired are sold by means of a public offer to stockholders and this public offer complies with the principle of equal treatment, the Board of Management is authorized to exclude the stockholders' subscription rights for fractions.

e) The Board of Management is also authorized to sell the treasury shares acquired under the above authorization in a manner other than via the stock exchange or via an offer to all stockholders, provided that the sale takes place against cash consideration and at a price which, at the date of sale, is not significantly lower than the market price for the same class of shares. This authorization concerning the use of shares is restricted to shares whose proportionate interest in the capital stock may not in total exceed 10% of the capital stock either at the date when this authorization becomes effective or, if this

amount is lower, at the date when the present authorization is exercised. The upper limit of 10% of the capital stock is reduced by the proportionate interest in the capital stock which is attributable to those shares which are issued or sold while excluding subscription rights under or in accordance with Section 186 para. 3 clause 4 AktG on or after April 29, 2014. The upper limit of 10% of the capital stock is further reduced by the proportionate interest in the capital stock which is attributable to those shares which are to be issued to service bonds with warrants or conversion rights or obligations, provided that these bonds are issued while excluding subscription rights in application of Section 186 para. 3 clause 4 AktG, with the necessary modifications, on or after April 29, 2014.

f) The Board of Management is also authorized to transfer the treasury shares acquired under the above authorization to third parties, provided this is done for the purpose of acquiring companies, parts of companies, equity interests in companies, or other assets, or to effect business combinations.

g) The Board of Management is further authorized to retire the treasury shares acquired under the above authorization without a further resolution by the annual stockholders' meeting. The treasury shares may also be retired without reducing the capital by adjusting the proportionate interest of the remaining shares in the capital stock of the Company. In this case, the Board of Management is authorized to amend the number of shares in the Articles of Incorporation.

h) The Board of Management is also authorized to use the treasury shares acquired as a result of the above-mentioned authorization to pay a scrip dividend.

i) The Board of Management may only use the authorizations in sections c), d) and f) with the consent of the Supervisory Board. Moreover, the Supervisory Board can determine that the measures taken by the Board of Management on the basis of this annual stockholders' meeting resolution may only be implemented with its consent.

j) The authorizations for the use of treasury shares in section c) to f) apply, with the necessary modifications, to treasury shares acquired as a result of an authorization to acquire shares granted previously by the annual stockholders' meeting. Stockholders' subscription rights are also excluded to this extent. With regard to the requirement of the consent of the Supervisory Board, section g) applies with the necessary modifications.

k) Overall, the above authorizations concerning the use of shares may be utilized on one or several occasions, individually or together, in relation to partial volumes of the treasury shares or all treasury shares held in total.

Pursuant to the resolution, the purchase of treasury shares on the basis of this authorization may also be effected by using put or call options. In this case, the trading in options has to be settled by an independent credit institution or a company acting pursuant to Section 53 para. 1 clause 1 or Section 53b para. 1 clause 1 or para. 7 of the German Banking Act (*Gesetz über das Kreditwesen*) provided that the relevant financial institution, upon the exercise of the relevant option, will only deliver shares which it previously acquired on the stock exchange, subject to compliance with the principle of equal treatment, at a market-driven price.

The acquisition of shares using put or call options is limited to shares accounting for a maximum of 5% of Bayer AG's capital stock in existence when the resolution is adopted by the annual stockholders' meeting or—if this figure is lower—at the exercise of the authorization.

The option premium paid or received by the Company for exercising the call or put options may not be materially lower than the theoretical fair value of the respective option calculated by using accepted valuation techniques. The agreed exercise price of the option trade (each without incidental transaction costs, but including the received or paid option premium) may not exceed or fall below, by more than 10%, the market price on the relevant trading day in Xetra-trading (or in a functionally comparable successor system taking the place of the Xetra system) on the Frankfurt Stock Exchange as determined by the opening auction.

The term of the individual derivatives is not permitted to, in each case, exceed 18 months, must end on April 28, 2019, at the latest, and must be chosen in such a way that the acquisition of the shares upon the exercise of derivatives will take place no later than April 28, 2019.

18.2 General Provisions Relating to Profit Allocation and Dividend Payments

Distributions of dividends on shares for a given fiscal year are generally determined by a process in which a management board and a supervisory board of a stock corporation submit a proposal to the annual stockholders' meeting held in the subsequent fiscal year and such annual stockholders' meeting adopts a resolution on the distribution of dividends. German law provides that a resolution concerning dividends and distributions thereof may be

adopted only if the Company's unconsolidated financial statements prepared in accordance with HGB show a net retained profit (*Bilanzgewinn*). In determining the profit available for distribution, the result for the relevant fiscal year must be adjusted for profits and losses carried forward from the previous fiscal year and for withdrawals from or transfers to reserves. Certain reserves are required by law, and must be deducted to a certain extent when calculating the profit available for distribution.

Dividends on shares resolved by the annual stockholders' meeting are paid annually, three business days after the annual stockholders' meeting, unless provided otherwise in the dividend resolution, in compliance with the rules of the respective clearing system. Dividend payment claims are generally subject to a three-year statute of limitation. Details concerning any dividends resolved by the annual stockholders' meeting and the respective paying agent(s) will be published in the German Federal Gazette (*Bundesanzeiger*). See also "*6.2 Earnings (Loss) per Share and Dividend Policy*."

18.3 General Provisions Governing a Liquidation of Bayer AG

Apart from liquidation as a result of insolvency proceedings, the Company may be liquidated only with a vote of 75% or more of the share capital represented when the shareholders' resolution is passed. Pursuant to the AktG, in the event of the Company's liquidation, any assets remaining after all of the Company's liabilities have been settled will be distributed pro rata among its shareholders. The AktG further stipulates certain protections for creditors which must be observed in the event of liquidation.

18.4 General Provisions Relating to a Change in the Share Capital

In the event of a capital increase, the AktG provides that the share capital of a stock corporation may be increased by a resolution adopted at the annual stockholders' meeting. Such resolution must be adopted by a majority of at least 75% of the share capital represented when the resolution is passed, unless the stock corporation's articles of association provide for a different majority. The Articles of Incorporation provide in Section 17 para. 2 that the resolutions of the stockholders' meeting are adopted by a simple majority of the votes cast and, where a capital majority is required in addition, resolutions may be adopted by a simple majority of the share capital represented at the meeting, except as otherwise provided by law or the Articles of Incorporation. The dividend entitlement of the new shares may be determined in deviation from Section 60 AktG according to Section 4(5) of the Articles of Incorporation. Section 60 para. 2 AktG provides that, if contributions to share capital have not been made in the same proportion for all shares, shareholders shall first be paid from the distributable profit an amount of 4% of the contributions made, and, if the profit is insufficient to make such payment, the amount to be paid shall be determined on the basis of an appropriately lower percentage (contributions which have been made during the course of the fiscal year shall be taken into account in proportion to the time which has elapsed since the date of such contributions).

In addition, shareholders may resolve to issue authorized capital, upon a vote of 75% of the share capital represented at the passing of the resolution authorizing the Board of Management to issue shares, up to a specific amount within a period not exceeding five years. The nominal amount of such issuance may not exceed 50% of the share capital in existence at the time the resolution of the annual stockholders' meeting is registered with the commercial register.

The authorized capital for the Company is described above under "*18.1.3 Authorized Capital*."

Additionally, shareholders may resolve to create conditional capital for the purpose of issuing shares (i) to holders of convertible bonds or other securities convertible into shares, (ii) as consideration in connection with a merger with another company or (iii) to executives and employees. A resolution to create conditional capital must be adopted by at least 75% of the share capital represented at the passing of the resolution. The nominal amount of the conditional capital created for the purpose of share issuances to executives and employees may not exceed 10% of the nominal share capital in existence at the time such resolution is passed, while the nominal amount of the contingent capital created for the purpose of share issuances to holders of convertible bonds or other securities convertible into shares or as consideration in connection with a merger with another company may not exceed 50% of the nominal share capital in existence at the time such resolution is passed. However, there is in general no limitation with respect to a time period during which the conditional capital may be used. The authorization of the Board of Management to issue convertible bonds or other securities convertible into shares must be limited to a period not exceeding five years as of the respective shareholder resolution.

The conditional capital for the Company, resolved solely for the purpose of issuing shares to holders of convertible bonds or other securities convertible into shares, is described above under "*18.1.4 Conditional Capital*." In general, a resolution to reduce the share capital must be adopted by at least 75% of the share capital represented at the passing of the resolution.

18.5 General Provisions Governing Subscription Rights

In principle, the AktG grants all shareholders the right to subscribe for new shares to be issued in a capital increase. The same applies to convertible bonds, bonds with warrants, profit participation rights and participating bonds. Subscription rights are freely transferable and may be traded on German stock exchanges for a prescribed period before the deadline for subscription expires. However, shareholders do not have a right to request admission to trading of subscription rights. The stockholders' meeting may, subject to a majority of at least 75% of the share capital represented at the vote, resolve to exclude subscription rights. Exclusion of shareholders' subscription rights also requires a report from the management board, which must justify and demonstrate that the stock corporation's interest in excluding subscription rights outweighs the interest of the shareholders in being granted subscription rights. Excluding shareholders' subscription rights when new shares are issued is specifically permissible where:

- the Company is increasing share capital against cash contributions;
- the amount of the capital increase does not exceed 10% of the share capital at issue; and
- the price at which the new shares are being issued is not materially lower than the stock exchange price.

18.6 Exclusion of Minority Shareholders

Under Section 327a *et seq.* AktG, which governs the so-called "squeeze-out under stock corporation law," upon the request of a shareholder holding 95% of the share capital (the "**Principal Shareholder**"), the stockholders' meeting of a stock corporation may resolve to transfer the shares of minority shareholders to the Principal Shareholder against payment of adequate compensation in cash. The amount of the cash payment that must be offered to minority shareholders has to reflect "the circumstances of the company" at the time the stockholders' meeting passes the resolution. The amount of the cash payment is based on the full value of the company, which is generally determined using the capitalized earnings method. The minority shareholders are entitled to file for a valuation proceeding, in the course of which the adequacy of the cash payment is reviewed.

Under Sections 39a and 39b German Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*; "**WpÜG**"), in the case of a so-called "squeeze-out under takeover law," a bidder holding at least 95% of the voting share capital of a target company (as defined in the WpÜG) after a takeover bid or mandatory offer, may, within three months of the expiration of the deadline for acceptances, petition the Regional Court of Frankfurt am Main, Germany (*Landgericht Frankfurt am Main*) for a court order transferring the remaining voting shares to it against the payment of adequate compensation. A resolution passed by the stockholders' meeting is not required. The consideration paid in connection with a takeover offer or a mandatory bid is deemed adequate if the bidder has, on the basis of the offer, obtained at least 90% of the share capital that was subject to the offer. The kind of compensation must be the same as the consideration paid under the takeover bid or mandatory offer; a cash alternative must always be offered. In addition, after a takeover bid or mandatory offer, shareholders in a target company who have not accepted the offer may do so up to three months after the deadline for acceptances has expired, provided the bidder is entitled to petition for the transfer of the outstanding voting shares in accordance with Section 39a WpÜG (Section 39c WpÜG). The provisions for a squeeze-out under stock corporation law cease to apply once a bidder has petitioned for a squeeze-out under takeover law, and only apply again when these proceedings have been completed by way of final decision.

In addition, under the provisions of Section 62 para. 5 of the German Reorganization and Transformation Act (*Umwandlungsgesetz*), within three months after the conclusion of a merger agreement, the stockholders' meeting of a transferring company may pass a resolution pursuant to Section 327a para. 1 clause 1 AktG, i.e., a resolution on the transfer of shares held by the remaining shareholders (minority interests) to the transferee (Principal Shareholder) in exchange for an adequate cash settlement if the Principal Shareholder holds at least 90% of the share capital. The result of this "squeeze-out under reorganization law" is the exclusion of the minority shareholders in the transferring company. The entitlement to consideration is based on the provisions of Section 327a *et seq.* AktG.

Under Section 319 *et seq.* AktG, the stockholders' meeting of a stock corporation may vote for integration with another stock corporation that has its registered office in Germany, provided the prospective parent company holds at least 95% of the shares of the company to be integrated. The former shareholders of the integrated company are entitled to adequate compensation, which must generally be provided in the form of shares in the parent company. In case the compensation takes the form of shares in the parent company, it is considered appropriate if the shares are issued in the same proportion as shares of the parent company would have been issued per share in the integrated company if a merger had taken place. Fractional amounts may be paid out in cash.

18.7 Shareholder Notification Requirements; Mandatory Takeover Bids; Managers' Transactions

Shares are admitted to trading on the regulated market of the Frankfurt Stock Exchange. Accordingly, they are subject to the provisions of the WpHG, as amended by, among others, the German Act for the Implementation of the Transparency Directive Amendment Directive (*Gesetz zur Umsetzung der Transparenzrichtlinie-Änderungsrichtlinie*) with effect as of November 26, 2015, governing disclosure requirements for significant shareholdings, the Market Abuse Regulation (EU) No. 596/2014 governing, among other things, directors' obligations to disclose transactions in shares, debt instruments, or related financial instruments, the German First Act for the Amendment of Financial Markets Provisions Following European Legislation (*Erstes Gesetz zur Novellierung von Finanzmarktvorschriften auf Grund europäischer Rechtsakte*) with effect as of July 2, 2016, and the provisions of the WpÜG.

Pursuant to Section 33 para. 1 WpHG, anyone who acquires, sells or whose shareholding in any other way reaches, exceeds or falls below 3%, 5%, 10%, 15%, 20%, 25%, 30%, 50% or 75% of the total number of voting rights in the Company, as an issuer whose country of origin is Germany, is required to notify the Company and BaFin at the same time. Notifications must be submitted without undue delay, and no later than within four trading days. The four-day notification period starts at the time the person or entity subject to the notification requirement has knowledge of or, in consideration of the circumstances, should have had knowledge of his proportion of voting rights reaching, exceeding or falling below the aforementioned thresholds. The WpHG contains a conclusive presumption that the person or entity subject to the notification requirement has knowledge two trading days after such an event occurs. Moreover, a person or entity is deemed to already hold shares as of the point in time such person or entity has an unconditional and due claim of transfer related to such shares pursuant to Section 33 para. 2 WpHG. In case a threshold has been reached or crossed due to a change in the total number of voting rights, the notification period starts at the time the person or entity subject to the notification requirement has knowledge about such change, or upon the publication of the revised total number of voting rights by the Company, at the latest.

In connection with these requirements, Section 34 WpHG contains various attribution rules. For example, voting rights attached to shares held by a subsidiary are attributed to its parent company. Similarly, voting rights attached to shares held by a third party for the account of a person or entity are attributed to such person or entity. Voting rights which a person or entity is capable of exercising as a proxy according to such person's or entity's discretion are also attributed to such person or entity. Further, any coordination by a person or entity with a third party on the basis of an agreement or in any other way generally results in an attribution of the full amount of voting rights held by, or attributed to, the third party as well as to such person or entity. Such acting in concert generally requires a consultation on the exercise of voting rights or other efforts designed to effect a permanent and material change in the business strategy of the Company. Accordingly, the exercise of voting rights does not necessarily have to be the subject of acting in concert. Coordination in individual cases, however, is not considered as acting in concert.

Similar obligations to notify the Company and BaFin apply pursuant to Section 38 para. 1 WpHG to anyone who reaches, exceeds or falls below the aforementioned thresholds, except for the 3% threshold, by directly or indirectly holding instruments either (i) giving their holder the unconditional right or discretion to acquire already issued shares to which voting rights are attached, or (ii) relating to such shares and having a similar economic effect, whether or not conferring a right to a physical settlement. Pursuant to Section 38 para. 2 WpHG, such instruments include, in particular, transferable securities, options, futures, swaps, forward rate agreements and contracts for difference.

In addition, anyone whose aggregate number of voting rights and instruments pursuant to Section 33 para. 1 and Section 38 para. 1 WpHG reaches, exceeds or falls below the aforementioned thresholds, except for the 3% threshold, has to notify the Company and BaFin pursuant to Section 39 para. 1 WpHG.

If any of the aforementioned reporting obligations are triggered, the notifying person or entity is required to fully complete the notification form set forth as an annex to the Securities Trading Reporting and Insider List Regulation (*Wertpapierhandelsanzeige- und Insiderverzeichnisverordnung*). The notice can be submitted either in German or English, in writing or via fax. The notice must include, irrespective of the event triggering the notification, (i) the number and proportion of voting rights, (ii) the number and proportion of instruments and (iii) the aggregate number and proportion of voting rights and instruments held by or attributed to the notifying person or entity. In addition, the notice must include certain attribution details, among other things, the first name and surname of the notifying individual or the legal name, seat and state of the notifying entity, the event triggering the notification, the date on which the threshold was reached or crossed and if voting rights or instruments are attributed.

As a domestic issuer, the Company must publish such notices without undue delay, but no later than three trading days as of receipt, via media outlets or outlets where it can be assumed that the notice will be disseminated in the entire European Union and in the non-European Union member states that are parties to the agreement on the European Economic Area. The Company must also transmit the publication to BaFin, specifying the time of publication and the media used and to the commercial register for storage.

There are certain exceptions to the notice requirements. For example, a company is exempt from its notification obligation if its parent company, or if its parent company is itself a subsidiary, the parent's parent company, has filed a group notification pursuant to Section 37 para. 1 WpHG. Moreover, shares or instruments held by a credit institution or a credit securities services company with a registered seat in the European Union or in a non-European Union member state that is a party to the agreement on the European Economic Area are not taken into account for determining the notification obligation or proportion of voting rights held, provided (i) they are held on such credit institution's or credit securities services company's trading book, (ii) they amount to no more than 5% of the voting shares, do not grant the right to acquire more than 5% of the voting shares, or do not have a similar economic effect and (iii) it is ensured that the voting rights held by them are not exercised or otherwise made use of.

If a shareholder fails to file a notice or provides false information with regard to shareholdings pursuant to Sections 33 and 34 WpHG, the rights attached to shares held by or attributed to such shareholder, particularly voting and dividend rights, do not exist for the duration of the failure. This does not apply to entitlements to dividend and liquidation gains if the notifications were not omitted willfully and have since been made. If the shareholder fails to disclose the correct proportion of voting rights held and the shareholder acted willfully or was grossly negligent, the rights attached to shares held by or attributed to such shareholder do not exist for a period of six months after such shareholder has correctly filed the necessary notification, except if the variation in the proportion of the voting rights notified in the preceding incorrect notification was less than 10% of the actual voting right proportion and no notification with respect to reaching, exceeding or falling below the aforementioned thresholds pursuant to Section 33 para. 1 WpHG was omitted. The same rules apply to shares held by a shareholder, if such shareholder fails to file a notice or provides false information with regard to holdings in instruments or aggregate holdings in shares and instruments pursuant to Sections 38 para. 1, 39 para. 1 WpHG. In addition, a fine may be imposed for failure to comply with notification obligations.

A shareholder who reaches or exceeds the threshold of 10% of the voting rights, or a higher threshold, is obligated to notify the Company within 20 trading days regarding the objective being pursued through the acquisition of voting rights, as well as regarding the source of the funds used for the purchase. Changes in those objectives must also be reported within 20 trading days. The Articles of Incorporation have not made use of the option to release shareholders from this disclosure obligation. In calculating whether the 10% threshold has been reached or exceeded, the attribution rules mentioned above apply.

Furthermore, pursuant to the WpÜG, every person whose share of voting rights reaches or exceeds 30% of the voting shares is obligated to publish this fact on the internet and by means of an electronically operated system for disseminating financial information, unless an exemption from this obligation has been granted by BaFin. If no exemption has been granted, this publication has to be made within seven calendar days and include the total number of voting rights held by and attributed to such person and, subsequently, such person is further required to submit a mandatory public tender offer to all holders of shares. The WpÜG contains a series of provisions intended to ensure the attribution of shareholdings to the person who actually controls the voting rights attached to the shares, comparable to the attribution rules described above for shareholdings pursuant to Section 34 WpHG. If a bidder fails to give notice of reaching or exceeding the 30% threshold or fails to submit the mandatory tender offer, the bidder is barred from exercising the rights associated with these shares, including voting rights, for the duration of the delinquency. In case of willful failure to publish the notice of acquisition of control over another company or submission of a mandatory tender offer or willful failure to subsequently send those notices in a timely fashion, the bidder is also not entitled to dividends. A fine may also be imposed in case of non-compliance with the notification obligations described above.

Persons discharging managerial responsibilities at the Company within the meaning of the Market Abuse Regulation (EU) No. 596/2014, such as the members of the Board of Management and the Supervisory Board, have to notify the Company and BaFin promptly and no later than three business days following transactions exceeding a total of €5,000 per annum in shares, debt instruments, or in related financial instruments undertaken for their own account (so-called managers' transactions). This also applies to persons or entities that are closely associated with persons discharging managerial responsibilities. The Company shall ensure that such managers' transactions notifications are made public promptly and no later than three business days after the transaction.

19. SHAREHOLDER STRUCTURE

The Company's currently issued and outstanding share capital as of the date of this Prospectus amounts to €2,196,346,388.48 divided into 857,947,808 ordinary registered shares with no par value (*Stückaktien*), each representing a notional value of €2.56. An analysis of the Company's ownership structure carried out in the second quarter of 2018 covered approximately 91% of its issued and outstanding share capital at the time (i.e., 777,118,164), including those held by 1,486 institutional investors. The highest proportion of the Company's outstanding shares, almost 30.6%, was held by investors in the United States and Canada, followed by Germany with 20.7%. The remaining amount of the Company's outstanding shares was held by investors in various other countries.[32] From a regional perspective, Bayer has a stable ownership structure that has altered only slightly in recent years. At the end of 2017, approximately 343,000 stockholders were listed in the Company's share register. The Company has a 100% free float as defined by Deutsche Börse AG, the operator of the Frankfurt Stock Exchange.

The WpHG requires holders of voting rights in a listed stock corporation to notify the respective corporation and the BaFin without undue delay of the level of their holdings if they reach, exceed or fall below certain threshold, see "*18.7 Shareholder Notification Requirements; Mandatory Takeover Bids; Managers' Transactions*." To our knowledge, and based on the notifications received by the Company as of the date of this Prospectus in accordance with the WpHG and on information provided by shareholders, the following shareholders held an interest (direct or indirect) of at least 3% in the Company's ordinary shares as of the date of this Prospectus. The percentage values shown in the table below are the shares of voting rights last notified to the Company in relation to the Company's share capital as of the date of the respective notification. It should be noted that the number and share of voting rights last notified may have changed since the respective notification was submitted to the Company given that there is no obligation to notify unless notifiable thresholds were reached or crossed:

Shareholders	Stake/Share of Voting Rights[1]
BlackRock, Inc.[2]	7.17%
Government of Singapore[3]	3.97%

(1) The percentage of voting rights has been calculated on the basis of the Company's registered share capital on the date of the respective shareholding notification.

(2) Indirect shareholdings of BlackRock, Inc. as notified for March 26, 2018. BlackRock, Inc. is the ultimate controlling entity of the following other companies listed in its group notification: Trident Merger, LLC; BlackRock Investment Management, LLC; BlackRock Holdco 2, Inc.; BlackRock Financial Management, Inc.; BlackRock Holdco 4, LLC; BlackRock Holdco 6, LLC; BlackRock Delaware Holdings Inc.; BlackRock Institutional Trust Company, National Association; BlackRock Fund Advisors; BlackRock Capital Holdings, Inc.; BlackRock Advisors, LLC; BlackRock International Holdings, Inc.; BR Jersey International Holdings L.P.; BlackRock (Singapore) Holdco Pte. Ltd.; BlackRock (Singapore) Limited; BlackRock HK Holdco Limited; BlackRock Asset Management North Asia Limited; BlackRock Lux Finco S.à.r.l.; BlackRock Trident Holding Company Limited; BlackRock Japan Holdings GK; BlackRock Japan Co., Ltd.; BlackRock Australia Holdco Pty. Ltd.; BlackRock Investment Management (Australia) Limited; BlackRock Holdco 3, LLC; BlackRock Canada Holdings LP; BlackRock Canada Holdings ULC; BlackRock Asset Management Canada Limited; BlackRock Group Limited; BlackRock Advisors (UK) Limited; BlackRock Luxembourg Holdco S.à r.l.; BlackRock UK Holdco Limited; BlackRock Asset Management Schweiz AG; BlackRock (Luxembourg) S.A.; BlackRock Investment Management Ireland Holdings Limited; BlackRock Asset Management Ireland Limited; BlackRock International Limited; BlackRock Life Limited; BlackRock (Netherlands) B.V.; BlackRock Investment Management (UK) Limited; BlackRock Asset Management Deutschland AG; iShares (DE) I Investmentaktiengesellschaft mit Teilgesellschaftsvermögen; and BlackRock Fund Managers Limited. None of these companies directly held 3.0% or more of the voting rights in the Company at that date.

(3) Indirect shareholdings of the Government of Singapore, as notified for April 18, 2018. The Government of Singapore is the ultimate controlling shareholder of the following companies listed in its group notification: Temasek Holdings (Private) Limited; Tembusu Capital Pte. Ltd.; Bartley Investments Pte. Ltd.; Ellington Investments Pte. Ltd.; SeaTown Holdings Pte. Ltd.; SeaTown GP Pte. Ltd.; SeaTown Singapore Feeder Fund LP; SeaTown Master Fund; SeaTown Capital Pte. Ltd.; SeaTown Holdings International Pte. Ltd.; Pilatus Investments Pte. Ltd.; Temasek Capital (Private) Limited; Seletar Investments Pte. Ltd.; and Aranda Investments Pte. Ltd. Out of these companies, only Ellington Investments Pte. Ltd. directly held 3.0% or more of the voting rights in the Company, namely 3.96%, at that date.

Each share of the Company confers one vote at the stockholders' meeting. Voting rights are the same for all of the Company's shareholders. The Company is neither directly nor indirectly owned or controlled by any other company or person. There are no arrangements known to the Company, the operation of which may at a subsequent date result in a change of control of the Company.

[32] Cmi2i Survey

20. TAXATION IN GERMANY

The following section outlines certain key German tax principles that may be relevant with respect to the acquisition, holding or transfer of shares and/or subscription rights. It is important to note that the legal situation may change, possibly with retroactive effect.

This summary is not and does not purport to be a comprehensive or exhaustive description of all German tax considerations that may be relevant to shareholders. In particular, this summary does not cover tax considerations that may be relevant to a shareholder that is a tax resident of a jurisdiction other than Germany. This presentation is based upon domestic German tax laws in effect as of the date of this Prospectus and the typical provisions of double taxation treaties currently in force between Germany and other countries. Where reference is made to the tax residence of a shareholder, it is assumed that the tax residence for the purposes of the respective domestic tax law and for the purposes of any applicable income tax treaty is the same. However, exceptions may apply in certain cases.

This section does not replace the need for individual shareholders to seek personal tax advice. It is therefore recommended that shareholders consult their own tax advisors regarding the tax implications of acquiring, holding or transferring shares and/or subscription rights and what procedures are necessary to secure the repayment of German withholding tax (Kapitalertragsteuer), if possible. Only qualified tax advisors are in the position to adequately consider the particular tax situation of individual shareholders.

20.1 Taxation of the Company

The Company's taxable income, whether distributed or retained, is generally subject to German corporate income tax at a uniform rate of 15% plus the solidarity surcharge of 5.5% thereon, resulting in a total tax rate of 15.825%.

Dividends and other shares in profits which the Company receives from domestic and foreign corporations are generally not subject to corporate income tax; however, 5% of this type of income is deemed to be a non-deductible business expense. The same applies to profits earned by the Company from the sale of shares in another domestic or foreign corporation. Losses incurred from the sale of such shares are not deductible for tax purposes, regardless of the percentage of shares held. Different rules apply to portfolio dividends (i.e., dividends earned on direct shareholdings in a distributing corporation equal to less than 10% of its share capital held at the start of the respective calendar year). Such portfolio dividends are fully taxed at the corporate income tax rate. The acquisition of a shareholding of at least 10% is deemed to have occurred at the beginning of the calendar year.

In addition, the Company is subject to trade tax with respect to its taxable trade profits from its permanent establishments in Germany.

The trade tax rate depends on the local municipalities in which the Company maintains its permanent establishments. For the Company, it currently amounts to between approximately 9% and 17% of the taxable trade profit, depending on the local trade tax multiplier.

For trade tax purposes, dividends received from domestic and foreign corporations and capital gains from the sale of shares in other corporations are treated in principle in the same manner as for corporate income tax purposes. However, shares in profits received from domestic and foreign corporations are effectively 95% exempt from trade tax only if the Company held and, in case of foreign corporations not domiciled in the European Union, continues to hold at least 15% of the registered share capital of the distributing corporation at the beginning or – in the case of foreign corporations not domiciled in the European Union – continuously since the beginning of the relevant tax assessment period. In case of shares in profits received from certain foreign corporations domiciled in another member state of the European Union effectively 95% of such profits are exempt from trade tax only if the Company held at least 10% of the registered share capital of the distributing corporation at the beginning of the relevant tax assessment period. Additional limitations apply with respect to shares in profits received from foreign non-EU corporations.

The provisions of the interest barrier (*Zinsschranke*) restrict the extent to which interest expenses are tax deductible. Under these rules, net interest expense (the interest expense minus the interest income in a fiscal year) are generally only deductible up to 30% of the taxable EBITDA (taxable earnings adjusted for interest costs, interest income, and certain depreciation and amortization), although there are certain exceptions to this rule. Interest expenses that are not deductible in a given year may be carried forward to subsequent fiscal years of the Company (interest carryforward) and will increase the interest expense in those subsequent years. Under certain conditions, non-offsettable EBITDA can also be carried forward to subsequent years for up to five years (EBITDA carryforward). For the purpose of trade tax, however, an additional barrier to the deductibility of interest expenses exists to the extent

that the sum of certain trade taxable add back items exceeds €100,000.00, since 25% of the deductible interest expenses for tax purposes (after application of the interest barrier), to the extent they were deducted for corporate income tax purposes, are added back for purposes of the trade tax base; consequently, the deductibility is limited to 75% of the interest expenses. By decision dated October 14, 2015, the German Federal Fiscal Court (*Bundesfinanzhof*) submitted to the German Federal Constitutional Court (*Bundesverfassungsgericht*) the question as to whether or not the interest barrier provisions are unconstitutional. The final decision on whether the interest barrier violates the constitution now lies with the German Federal Constitutional Court (*Bundesverfassungsgericht*). It may take a few years until this court will decide. Until then, the interest barrier provisions remain applicable, and tax assessments may be kept open.

Any remaining losses of the Company can generally be carried forward in subsequent years and used to fully offset taxable income for corporate income tax and trade tax purposes only up to an amount of €1 million. If the taxable income for the year or taxable profit subject to trade taxation exceeds this threshold, only up to 60% of the amount exceeding the threshold may be offset by tax loss carryforwards. The remaining 40% are subject to tax (minimum taxation). The rules also provide for a tax carryback to the previous year with regard to corporate income tax limited to a maximum amount of €1.0 million. Unused tax carryforwards can generally continue to be carried forward without time limitation.

If more than 50% of the subscribed capital or voting rights of the Company is transferred to an acquirer (including parties related to the acquirer) within five years directly or indirectly or comparable circumstances occur, all tax loss carryforwards and interest carryforwards are generally forfeited. A group of acquirers with aligned interests is also considered to be an acquiring party for these purposes. In addition, any current year losses incurred prior to the acquisition will not be deductible. If more than 25% up to and including 50% of the subscribed capital or voting rights of the Company within five years are directly or indirectly transferred to an acquirer (including parties related to the acquirer) or comparable circumstances occur, a proportional amount of tax loss carryforwards, the unused current losses and interest carryforwards are generally forfeited. In its decision dated March 29, 2017, the Federal Constitutional Court (*Bundesverfassungsgericht*) held that the relevant provision of the Corporate Income Tax Act on the pro-rata forfeiture is unconstitutional; however, a retroactive implementation of a new provision substituting the unconstitutional piece of law was requested by the Federal Constitutional Court as the decision covers only the time period until December 31, 2015. A capital increase is deemed to be the equivalent to a transfer of the subscribed capital of the Company to the extent that it triggers a change of the participation ratios in the subscribed capital of the Company. Tax loss carryforwards, unused current losses and interest carryforwards taxable in Germany will not expire to the extent that they are covered by certain built-in gains taxable in Germany at the time of such acquisition. Upon application of the relevant corporation with the competent tax authority, the current tax losses, tax loss carryforwards and interest carryforwards of the respective corporation may be preserved, if and as long as certain requirements are met, which relate, in particular, to the preservation of the commercial identity of the respective corporation's business operations and are aimed at preventing the transfer of the economic benefit of the corporation's tax assets to an acquirer.

20.2 Taxation of Shareholders

Shareholders are taxed in particular in connection with the holding of shares (taxation of dividend income), upon the sale of shares and/or subscription rights (taxation of capital gains) and the gratuitous transfer of shares and/or subscription rights (inheritance and gift tax).

20.2.1 Taxation of Dividend Income

To the extent that the Company can pay dividends from the tax-recognized contribution account (*steuerliches Einlagenkonto*), the dividends are not subject to withholding tax, personal income tax (including the solidarity surcharge and church tax, if any) or corporate income tax, as the case may be. However, dividends paid out of a tax-recognized contribution account lower the acquisition costs of the shares, which may result in a higher amount of taxable capital gain upon the shareholder's sale of the shares. Special rules apply to the extent that dividends from the tax-recognized contribution account exceed the then lowered acquisition costs of the shares (the details are outlined below).

20.2.2 Withholding Tax

As a general rule, dividends distributed by the Company that are not paid out of the tax-recognized contribution account (*steuerliches Einlagenkonto*) are subject to a deduction at source (withholding tax) at a 25% rate plus a solidarity surcharge of 5.5% on the amount of withholding tax (amounting in total to a rate of 26.375%) and church tax (*Kirchensteuer*), if applicable. The basis for determining the dividend withholding tax is the dividend approved for distribution by the Company's annual stockholders' meeting.

In general, dividend withholding tax is withheld regardless of whether and, if so, to what extent the shareholder must report the dividend for tax purposes and regardless of whether the shareholder is a resident of Germany or of a foreign country.

As the Company's shares are admitted to be held in collective safe custody (*Girosammelverwahrung*) with a central securities depository (*Wertpapiersammelbank*) pursuant to Section 5 German Act on Securities Accounts (*Depotgesetz*) and are entrusted to such central securities depository for collective safe custody in Germany, the Company is not responsible for withholding the withholding tax; rather, it is, for the account of the shareholders, the responsibility of one of the following entities in Germany authorized to collect withholding tax to do so and to remit it to the relevant tax authority: (i) a domestic bank or financial service institute, a domestic securities trading company or a domestic securities trading bank (including the domestic branches of foreign banks or financial service institutes) that holds the shares in custody or that manages them and that pays out or credits the shareholders' investment income or that pays the investment income to a foreign entity, or (ii) the central securities depository holding the collective deposit shares in custody if it pays the investment income to a foreign entity and (iii) the Company itself if and to the extent shares held in collective safe custody (*girosammelverwahrt*) by the central securities depository (*Wertpapiersammelbank*) are treated as stock being held separately (so-called "*abgesetzte Bestände*").

The Company assumes responsibility for the withholding of taxes on distributions at source, in accordance with statutory provisions. This means that the Company is released from liability for the violation of its legal obligation to withhold and transfer the taxes at source if it provides evidence that it has not breached its duties intentionally or grossly negligently.

Where dividends are distributed to a company resident in another member state of the European Union within the meaning of Article 2 of the EC Directive 2011/96/EU of November 30, 2011, as amended (the "**Parent-Subsidiary Directive**"), the withholding of the dividend withholding tax may not be required, upon application, provided that additional requirements are met (withholding tax exemption). This also applies to dividends distributed to a permanent establishment located in another EU member state of such a parent company or of a parent company that is tax resident in Germany if the interest in the dividend-paying subsidiary is part of the respective permanent establishment's business assets. An important prerequisite for the exemption from withholding at source under the Parent-Subsidiary Directive is that the shareholder has directly held at least 10% of the Company's registered share capital continuously for one year, that various substance requirements are fulfilled and that the German Federal Central Office of Taxation (*Bundeszentralamt für Steuern*), with its registered office in Bonn-Beuel, An der Küppe 1, 53225 Bonn, Germany, has certified to the creditor, based upon an application filed by the shareholder on the officially prescribed form that the prerequisites for exemption have been met.

The dividend withholding tax rate for dividends paid to other shareholders without a tax domicile in Germany will be reduced in accordance with the applicable double taxation treaty, if any, between Germany and the shareholder's country of residence, provided that the shares are neither held as part of the business assets of a permanent establishment in Germany nor as part of the business assets for which a permanent representative in Germany has been appointed. The reduction in the dividend withholding tax is generally obtained by applying to the Federal Central Office of Taxation (*Bundeszentralamt für Steuern*), with its registered office in Bonn-Beuel, An der Küppe 1, 53225 Bonn, Germany, for a refund of the difference between the dividend withholding tax withheld, including the solidarity surcharge, and the amount of withholding tax actually owed under the applicable double taxation treaty, which is usually 5-15%. A reduced withholding tax rate (according to the applicable double taxation treaty) may be applicable, if the shareholder applied for a reduction at the Federal Central Office of Taxation (*Bundeszentralamt für Steuern*). A full exemption from German dividend withholding tax may also be possible under the applicable double taxation treaty, if the shareholder has directly held at least 10% of the Company's registered share capital and if further prerequisites are met. Forms for the refund and exemption procedure may be obtained from the Federal Central Office of Taxation (*Bundeszentralamt für Steuern*), www.bzst.bund.de, as well as German embassies and consulates. If, however the shareholder, *inter alia*, does not qualify as beneficial owner of the Company's shares for a minimum holding period of 45 consecutive days prior to and after the due date of the dividends, the refund of German dividend withholding tax may be restricted.

Corporations that are not tax residents in Germany will receive upon application a refund of two fifths of the dividend withholding tax that was withheld and remitted to the tax authorities subject to certain requirements. This applies regardless of any further reduction or exemption provided under the European Parent-Subsidiary Directive or a double taxation treaty.

Foreign corporations will generally have to meet certain stringent substance criteria defined by statute in order to receive an exemption from or (partial) refund of German dividend withholding tax.

20.2.3 Taxation of Dividends of Shareholders with a Tax Domicile in Germany

20.2.3.1 Individuals Who Hold the Shares as Private Assets

For individuals who are tax resident in Germany (generally, individuals whose domicile or usual residence is located in Germany) and who hold shares as private assets, the withholding tax will generally serve as a final tax. In other words, once deducted, the shareholder's income tax liability on the dividends will be settled, and he or she will no longer have to declare them on his or her annual tax return (the "**Flat Tax**"). Additional restrictions apply, if, among others, the shareholder is not the beneficial owner of the shares in the Company for a minimum holding period of 45 consecutive days occurring within a period of 45 days prior and 45 days after the due date of the dividends (for a more detailed description of these restrictions see "*20.2.3.2 Shares Held as Business Assets*").

The purpose of the Flat Tax is to provide for separate and final taxation of capital investment income earned; in other words, taxation that is irrespective of the individual's personal income tax rate. Shareholders may apply to have their capital investment income assessed in accordance with the general rules and with an individual's personal income tax rate if this would result in a lower tax burden. The base for taxation would be the gross dividend income less the savers' allowance of €801.00 (€1,602.00 for jointly assessed individuals). Any tax and solidarity surcharge already withheld would be credited against the income tax and solidarity surcharge so determined and any overpayment refunded. Income-related expenses cannot be deducted from capital gains in either case, however, subject to a new rule on the restriction of withholding tax credit (see "*20.2.3.2 Shares Held as Business Assets*").

If the individual owns (i) at least 1% of the shares in the Company and is able to have, as a result of his or her employment (*berufliche Tätigkeit*) for the Company, a significant entrepreneurial influence on the business activity of the Company or (ii) at least 25% of the shares, the tax authorities may approve upon application that the dividends are treated under the partial-income method (see "*20.2.3.2.2 Sole Proprietors (Individuals)*").

Church tax generally has to be withheld, if applicable, based on an automatic data access procedure, unless the shareholder has filed a blocking notice (*Sperrvermerk*) with the Federal Central Office of Taxation (*Bundeszentralamt für Steuern*). Where church tax applies and is not levied by way of withholding, it is determined by means of an income tax assessment.

As an exemption, dividend payments that are funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) and are paid to shareholders who are tax resident in Germany whose shares are held as non-business assets, do – contrary to the above – not form part of the shareholder's taxable income. If the dividend payment funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) exceeds the shareholder's acquisition costs, negative acquisition costs will arise which can result in a higher capital gain in case of the shares' disposal (cf. below). This will not apply if (i) the shareholder or, in the event of a gratuitous transfer, its legal predecessor, or, if the shares have been gratuitously transferred several times in succession, one of his legal predecessors at any point during the five years preceding the (deemed, as the case may be,) disposal directly or indirectly held at least 1% of the share capital of the Company (a "**Qualified Participation**") and (ii) the dividend payment funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) exceeds the acquisition costs of the shares. In such a case of a Qualified Participation, a dividend payment funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) is deemed a sale of the shares and is taxable as a capital gain if and to the extent the dividend payment funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) exceeds the acquisition costs of the shares. In this case the taxation corresponds with the description in the section *"20.2.5 Taxation of Capital Gains*" made with regard to shareholders maintaining a Qualified Participation.

20.2.3.2 Shares Held as Business Assets

The Flat Tax does not apply to dividends from shares held as business assets of shareholders who are tax resident in Germany. In this case, the taxation is based on whether the shareholder is a corporation, an individual or a partnership. The withholding tax withheld and paid to the tax authorities, including the solidarity surcharge, is credited against the income or corporate income tax and the solidarity surcharge of the shareholder and any overpayment will be refunded.

Dividend payments that are funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) and are paid to shareholders who are tax resident in Germany whose shares are held as business assets are generally fully tax-exempt in the hands of such shareholder. To the extent the dividend payments funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) exceed the acquisition costs of the shares, a taxable capital gain should occur. The taxation of such gain generally corresponds with the description in the section "*20.2.5 Taxation of Capital Gains*" made with regard to shareholders whose shares are held as business assets.

Notwithstanding the foregoing, the credit of withholding tax is subject to the following three cumulative prerequisites: (i) the shareholder must qualify as beneficial owner of the shares in the Company for a minimum holding period of 45 consecutive days occurring within a period of 45 days prior and 45 days after the due date of the dividends, (ii) the shareholder has to bear at least 70% of the change in value risk related to the shares in the Company during the minimum holding period without being directly or indirectly hedged, and (iii) the shareholder must not be required to fully or largely compensate directly or indirectly the dividends to third parties. Absent the fulfilment of all of the three prerequisites, three fifths of the withholding tax imposed on the dividends must not be credited against the shareholder's (personal or corporate) income tax liability, but may, upon application, be deducted from the shareholder's tax base for the relevant assessment period. A shareholder that has received gross dividends without any deduction of withholding tax (e.g., due to a tax exemption) without qualifying for a full tax credit has to notify the competent local tax office accordingly and has to make a payment in the amount of the refrained withholding tax deduction. The special rule on the restriction of withholding tax credit does not apply to a shareholder whose overall dividend earnings within an assessment period do not exceed €20,000.00 or that has been the beneficial owner of the shares in the Company for at least one uninterrupted year upon receipt of the dividends.

20.2.3.2.1 *Corporations*

Dividends received by corporations tax resident in Germany are generally exempt from corporate income tax and solidarity surcharge, irrespective of the stake represented by the shares and the length of time the shares are held; however 5% of the dividends are treated as a non-deductible business expenses and, as such, are subject to corporate income tax (plus the solidarity surcharge) with a total tax rate of 15.825%.

Different rules apply to portfolio dividends (i.e., dividends earned on direct shareholdings in the Company equal to less than 10% of its share capital at the beginning of the respective calendar year). Such portfolio dividends are fully taxed at the corporate income tax rate. The acquisition of a shareholding of at least 10% during a calendar year is deemed to have occurred at the beginning of the respective calendar year. Participations which a shareholder holds through a commercial partnership are attributable to the shareholder only on a pro rata basis at the ratio of the interest share of the shareholder in the assets of the relevant partnership.

Business expenses actually incurred and having a direct business relationship to the dividends may be fully deducted.

The amount of any dividends (after deducting business expenses related to the dividends) is fully subject to trade tax, unless the corporation held at least 15% of the Company's registered share capital at the beginning of the relevant tax assessment period, entitling it to an intercorporate privilege for trade tax purposes. In the latter case, the aforementioned exemption of 95% of the dividend income applies analogously for trade tax purposes, but the business expenses directly related to the dividends (for example, financing costs) are not deductible unless and to the extent they exceed the amount of dividend income exempted.

20.2.3.2.2 *Sole Proprietors (Individuals)*

If the shares are held as part of the business assets of a sole proprietor (individual) with his or her tax domicile in Germany, 40% of any dividend is tax exempt (the so-called partial income method). Only 60% of the expenses economically related to the dividends are tax deductible. The partial income method will also apply when individuals hold the shares indirectly through a partnership (with the exception of individual investors who hold their shares through partnerships that are neither commercial partnerships nor deemed to be commercial partnerships). However, the partial-income method does not apply with respect to church tax (if applicable). If the shares are held as business assets of a domestic commercial permanent establishment, the full amount of the dividend income (after deducting business expenses that are economically related to the dividends) is also subject to trade tax, unless the taxpayer held at least 15% of the Company's registered share capital at the beginning of the relevant tax assessment period. In the latter case, the net dividends (after deducting directly related expenses) are exempt from the trade tax. However, trade tax is generally credited—fully or in part—as a lump sum against the shareholder's personal income tax liability. Upon application and provided that additional prerequisites are met, a sole proprietor can obtain a certain reduction of his personal income tax rate for profits not withdrawn from the business.

20.2.3.2.3 *Partnerships*

If the shareholder is a commercial partnership or deemed to be a commercial partnership, the personal income tax or corporate income tax, as the case may be, and the solidarity surcharge are levied at the level of each partner rather than at the level of the partnership. The taxation of each partner depends upon whether the partner is a corporation or an individual. If the partner is a corporation, then the dividend is generally 95% tax exempt; however, dividends from an indirect shareholding representing less than 10% of the share capital for the relevant partner are fully subject to taxation (see "*20.2.3.2.1 Corporations*"). If the partner is an individual, only 60% of the dividend income

is subject to income tax; in this case the partial-income method does not apply as regards church tax (if applicable) (see "*20.2.3.2.2 Sole Proprietors (Individuals)*").

Additionally, if the shares are held as business assets of a domestic permanent establishment of a commercial or deemed to be commercial partnership, the full amount of the dividend income is also subject to trade tax at the level of the partnership. In the case of partners who are individuals, the trade tax that the partnership pays on his or her proportion of the partnership's income is generally credited as a lump sum—fully or in part—against the individual's personal income tax liability. If the partnership held at least 15% of the Company's registered share capital at the beginning of the relevant tax assessment period, the dividends (after the deduction of business expenses directly related thereto) should generally not be subject to trade tax. However, in this case, trade tax should be levied on 5% of the dividends to the extent they are attributable to the profit share of such corporate partners to whom at least 10% of the shares in the Company are attributable on a look-through basis, since such portion of the dividends should be deemed to be non-deductible business expenses. The remaining portion of the dividend income attributable to other than such specific corporate partners (which includes individual partners and should, according to a literal reading of the law, also include corporate partners to whom, on a look-through basis, only portfolio participations are attributable) should not be subject to trade tax. Partnerships and their partners are advised to consult their tax advisors with respect to the tax treatment of dividends received from the Company.

20.2.3.2.4 *Financial and Insurance Sector*

Special rules apply to companies operating in the financial and insurance sector (see "*20.3 Special Treatment of Companies in the Financial and Insurance Sectors and Pension Funds*").

20.2.4 Taxation of Dividends of Shareholders Without a Tax Domicile in Germany

The dividends paid to shareholders (individuals and corporations) without a tax domicile in Germany are taxed in Germany, provided that the shares are held as part of the business assets of a permanent establishment in Germany or as part of the business assets for which a permanent representative in Germany has been appointed. The withholding tax (including solidarity surcharge) withheld and remitted to the German tax authorities is credited against the respective shareholder's personal income tax or corporate income tax liability, and any overpayment will be refunded. The same applies to the solidarity surcharge. These shareholders are essentially subject to the same rules applicable to German resident shareholders, as discussed above.

In all other cases, the withholding of the dividend withholding tax (including solidarity surcharge) discharges any tax liability of the shareholder in Germany. A refund or exemption is granted only as discussed in the section on dividend withholding tax above, see "*20.2.2 Withholding Tax*."

Dividend payments that are funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) are generally not taxable in Germany.

20.2.5 Taxation of Capital Gains

20.2.5.1 Taxation of Capital Gains of Shareholders with a Tax Domicile in Germany

20.2.5.1.1 *Shares and Subscription Rights Held as Private Assets*

Gains on the sale of shares/subscription rights that are held as private assets by shareholders with a tax domicile in Germany, and which were acquired after December 31, 2008, are generally taxable regardless of the length of time held. The tax rate is (generally) a uniform 25% plus the 5.5% solidarity surcharge thereon (resulting in an aggregate tax rate of 26.375%) as well as any church tax, if applicable, unless the respective shareholder holds a Qualified Participation. The same applies to gains on the sale of subscription rights granted for such shares.

The taxable capital gains are the difference between (a) the proceeds from the disposal of shares/subscription rights after deducting the direct sales costs and (b) the acquisition cost of the shares/subscription rights. Under certain conditions, prior payments from the tax-recognized contribution account (*steuerliches Einlagekonto*) may lead to reduced acquisition costs of the shares rights held as private assets and, as a consequence, increase the taxable sales gain. Losses on the sale of shares may only be netted against gains on the sale of shares during the same year or in subsequent years. Losses from the sale of subscription rights can be offset against positive private capital investment income without restrictions (i.e., including such from the disposal of shares) earned in the same year or earned in subsequent years.

In the view of tax authorities, the exercise of subscription rights is not considered as a sale of such subscription rights. Shares acquired as a consequence of the exercise of subscription rights are deemed to be acquired at a subscription price of €0.00 at the time of exercise of the subscription right.

If the shares are held in custody or administered by a domestic bank or financial service institute, a domestic securities trading company or a domestic securities trading bank (including the domestic branches of foreign banks and financial service institutes), or if such office sells the shares/subscription rights and pays out or credits the capital gains (each a "**Domestic Paying Agent**"), said Domestic Paying Agent withholds a withholding tax of 25% plus 5.5% solidarity surcharge thereon and any church tax (if applicable) and remits this to the tax authority; in such a case, the tax on the capital gain will generally be discharged. If the shares/subscription rights were only held in custody or administered by the respective Domestic Paying Agent continuously after acquisition, the amount of tax withheld is generally based on the difference between the proceeds from the sale, after deducting expenses directly related to the sale, and the amount paid to acquire the shares/subscription rights. However, the withholding tax rate of 25% plus the 5.5% solidarity surcharge thereon and any church tax (if applicable), will be applied to 30% of the gross sales proceeds if the shares/subscription rights were not administered by a Domestic Paying Agent since acquisition and the original cost of the shares/subscription rights cannot be verified or such verification is not admissible. In this case, the shareholder is entitled to, and in case the actual gain is higher than 30% of the gross proceeds must, verify the original costs of the shares/subscription rights in his or her annual tax return. In any case, the acquisition costs for subscription rights granted by the Company are valued at €0 for purposes of this calculation.

Church tax generally has to be withheld, if applicable, based on an automatic data access procedure, unless the shareholder has filed a blocking notice (*Sperrvermerk*) with the Federal Central Office of Taxation (*Bundeszentralamt für Steuern*). Where church tax applies and is not levied by way of withholding, it is determined by means of an income tax assessment.

A shareholder/subscription rights holder may request that all his or her items of capital investment income, along with his or her other taxable income, be subject to the progressive income tax rate instead of the uniform tax rate for private capital investment income if this lowers his or her tax burden. The base for taxation would be the gross income less the savers' allowance of €801.00 (€1,602.00 for jointly assessed individuals). The prohibition on deducting income-related costs and the restrictions on offsetting losses also apply to tax assessments based on the progressive income tax rate. Any tax already withheld would be credited against the income tax so determined and any overpayment refunded.

One exception to this rule is that a shareholder's capital gains are subject to the partial-income method and not the Flat Tax, if a shareholders holds a Qualified Participation. Consequently, 60% of the proceeds from the sale of shares are subject to the individual income tax rate, if the shareholder, or his or her legal predecessor in case of acquisition without consideration, has directly or indirectly held shares equal to at least 1% of the Company's share capital at any time during the previous five years. 60% of the expenses economically related to the proceeds of the sale of shares are tax-deductible.

The partial-income method should apply *mutatis mutandis* to gains or losses on sales of subscription rights. In the case of a Qualified Participation, the "total value method" (*Gesamtwertmethode*) is used to determine the acquisition costs of the subscription rights. This is based on the concept that the acquisition of the subscription rights was included in the acquisition of the old shares. Accordingly, the granting of the subscription rights results in a splitting off of part of the original acquisition costs for the old shares (i.e., the acquisition costs of the old shares are reduced by the portion attributable to the subscription rights split off).

In the case of a Qualified Participation, withholding tax (including the solidarity surcharge) is also withheld by the Domestic Paying Agent. The tax withheld, however, is not treated as a final tax. Hence, the shareholder is obliged to declare the gains from the sale in his income tax return. The withholding tax (including solidarity surcharge) withheld and remitted to the German tax authorities is credited against the respective shareholder's personal income tax or corporate income tax liability in the tax assessment, and any overpayment will be refunded.

20.2.5.1.2 *Shares and Subscription Rights Held as Business Assets*

The Flat Tax does not apply to proceeds from the sale of shares or subscription rights held as business assets by shareholders domiciled in Germany. If the shares/subscription rights form part of a shareholder's business assets, taxation of the capital gains realized will then depend upon whether the shareholder is a corporation, sole proprietor or partnership. Dividend payments that are funded from the Company's tax-recognized contribution account (*steuerliches Einlagekonto*) reduce the original acquisition costs. In case of a sale of shares, a higher taxable capital gain can arise herefrom. If those dividend payments exceed the shares' book value for tax purposes, a taxable capital gain can arise.

- **Corporations:** In general, capital gains earned on the sale of shares by corporations domiciled in Germany are exempt from corporate income tax (including the solidarity surcharge) and trade tax, irrespective of the stake represented by the shares and the length of time the shares are held; however, 5% of the capital gains are treated as a non-deductible business expense and, as such, are subject to corporate income tax (plus the solidarity surcharge thereon) and to trade tax. Losses

from the sale of shares and any connected reductions in profit do not qualify as tax-deductible business expenses. Gains realized on the sale of subscription rights are subject in full to corporate income and trade tax. Losses from the sale of subscription rights and other reductions in profit reduce the taxable income. The exercise of subscription rights should not be treated as a sale of subscription rights.

- **Sole proprietors (individuals):** If the shares were acquired after December 31, 2008 and form part of the business assets of a sole proprietor (individual) who is tax resident in Germany, 60% of the capital gains on their sale are subject to the individual's personal tax rate plus the solidarity surcharge thereon (partial income method). Correspondingly, only 60% of losses from such sales and 60% of expenses economically related to such sales are deductible. For church tax, if applicable, the partial income method does not apply. If the shares are held as business assets of a commercial permanent establishment located in Germany, 60% of the capital gains are also subject to trade tax. There are good arguments that the partial income method should also apply to capital gains or losses from the sale of subscription rights held as business assets by a sole proprietor. Otherwise, the entire capital gain would be subject to income tax (plus solidarity surcharge and plus church tax, if applicable) and trade tax. In this case, losses and other expenses in relation to subscription rights would be deductible in full. The trade tax is fully or partially credited as a lump sum against the shareholder's personal income tax liability. The tax authorities take the view that the exercise of subscription rights is not considered a taxable event. Upon application and provided that additional prerequisites are met, a sole proprietor can obtain a certain reduction of his personal income tax rate for profits not withdrawn from the business.

- **Commercial Partnerships:** If the shareholder is a partnership, personal income tax or corporate income tax, as the case may be, is assessed at the level of each partner rather than at the level of the partnership. The taxation of each partner depends upon whether the respective partner is a corporation or an individual. If the partner is a corporation, the tax principles applying to capital gains which are outlined in subsection 1 above apply. If the partner is an individual, the tax principles applying to capital gains that are outlined in subsection 2 above apply. Upon application and provided that additional prerequisites are met, an individual who is a partner can obtain a reduction of his or her personal income tax rate for profits not withdrawn from the partnership. In addition, capital gains from the sale of shares/subscription rights attributable to a permanent establishment maintained in Germany by a commercial partnership, or deemed to be commercial partnership, are subject to trade tax at the level of the partnership. As a rule, only 60% of the gains from shares in this case are subject to trade tax to the extent the partners in the partnership are individuals (there are good arguments that this also applies in relation to subscription rights), while 5% are subject to trade tax to the extent the partners are corporations and shares are sold. Under the principles discussed above, losses on sales and other reductions in profit related to the shares sold are generally not deductible or are only partially deductible or in case of subscription rights fully deductible, if the partner is a corporation. If the partner is an individual, the trade tax the partnership pays on his or her share of the partnership's income is generally credited as a lump sum – fully or in part – against his or her personal income tax liability, depending on the tax rate imposed by the local municipality and certain individual tax-relevant circumstances of the taxpayer.

Special rules apply to capital gains realized by companies active in the financial and insurance sectors, as well as pension funds, see "*20.3 Special Treatment of Companies in the Financial and Insurance Sectors and Pension Funds.*"

If a Domestic Paying Agent is involved, the proceeds from the sale of shares/subscription rights held as business assets are generally subject to the same withholding tax rate as those of shareholders whose shares/ subscription rights are held as private assets, see "*20.2.5.1 Taxation of Capital Gains of Shareholders with a Tax Domicile in Germany*." However, the Domestic Paying Agent may refrain from withholding the withholding tax if (i) the shareholder is a corporation, association or estate with its tax domicile in Germany, or (ii) the shares/subscription rights form part of the shareholder's domestic business assets, and the shareholder informs the Domestic Paying Agent of this on the officially prescribed form and meets certain additional prerequisites. If the Domestic Paying Agent nevertheless withholds taxes, the withholding tax withheld and remitted (including the solidarity surcharge and church tax, if applicable) will be credited against the shareholder's income tax or corporate income tax liability (including the solidarity surcharge and church tax, if applicable) and any excess amount will be refunded.

20.2.5.2 Taxation of Capital Gains of Shareholders Without a Tax Domicile in Germany

Capital gains realized by a shareholder with no tax domicile in Germany are subject to German income tax only if the selling shareholder holds a Qualified Participation or if the shares form part of the business assets of a permanent establishment in Germany or of business assets for which a permanent representative is appointed.

Most double taxation treaties provide for an exemption from German taxes and assign the right of taxation to the shareholder's country of domicile in the former case, unless the respective shareholder holds the shares in a permanent establishment in Germany.

20.3 Special Treatment of Companies in the Financial and Insurance Sectors and Pension Funds

If financial institutions or financial service providers hold or sell shares that are allocable to their trading book pursuant to Section 340e para. 3 HGB, they will neither be able to use the partial-income method nor have 60% of their gains exempted from taxation nor be entitled to the 95% exemption from corporate income tax plus the solidarity surcharge and any applicable trade tax. Thus, dividend income and capital gains are fully taxable. The same applies to shares acquired by financial enterprises (*Finanzunternehmen*) within the meaning of the German Banking Act (*Gesetz über das Kreditwesen*), if the shares had to be accounted for as current assets at the time of acquisition and more than 50% of the shares in the relevant financial enterprise are directly or indirectly held by financial institutions or financial service providers. The partial-income method for gains on the sale of subscription rights also does not apply in these cases. The previously described tax exemption applicable to corporations for dividend income and capital gains from the sale of shares does not apply to shares that qualify as a capital investment in the case of life insurance and health insurance companies or to those which are held by pension funds.

However, an exemption to the foregoing, and thus a 95% effective tax exemption, generally applies to dividends obtained by the aforementioned companies to which the Parent-Subsidiary Directive applies.

20.4 Inheritance and Gift Tax

The transfer of shares/subscription rights to another person by inheritance or gift is generally subject to German inheritance and gift tax only if:

- the decedent, donor, heir, beneficiary or other transferee maintained his or her domicile or habitual abode in Germany, or had its place of management or registered office in Germany at the time of the transfer, or is a German citizen who has spent no more than five consecutive years prior to the transfer outside Germany without maintaining a residence in Germany (special rules apply to certain former German citizens who neither maintain their domicile nor have their habitual abode in Germany); or
- the shares/subscription rights were held by the decedent or donor as part of business assets for which a permanent establishment was maintained in Germany or for which a permanent representative in Germany had been appointed; or
- the decedent or donor with place of management or registered office in Germany, either individually or collectively with related parties, held, directly or indirectly, at least 10% of the Company's registered share capital at the time of the inheritance or gift.

The fair value represents the tax assessment base. In general that is the stock exchange price. Dependent on the degree of relationship between decedent or donor and recipient, different tax-free allowances and tax rates apply.

The few German double taxation treaties relating to inheritance tax and gift tax currently in force usually provide that the German inheritance tax or gift tax can only be levied in the cases of 1. above, and also with certain restrictions in case of 2. above. Special provisions apply to certain German nationals living outside of Germany and former German nationals.

20.5 Other Taxes

No German transfer tax, value-added tax, stamp duty or similar taxes are assessed on the purchase, sale or other transfer of shares/subscription rights. Provided that certain requirements are met, an entrepreneur may, however, opt for the payment of value-added tax on transactions that are otherwise tax-exempt. Net wealth tax is currently not imposed in Germany.

The European Commission and certain Member States (including Germany) are currently intending to introduce a financial transactions tax (presumably on secondary market transactions involving at least one financial intermediary). It is currently uncertain whether and when the proposed financial transactions tax will be enacted by the participating Member States and when the financial transactions tax will enter into force.

21. TAXATION IN LUXEMBOURG

The following information is of a general nature only and is based on the laws in force in Luxembourg as of the date of this Prospectus. It does not purport to be a comprehensive description of all the tax considerations that might be relevant to an investment decision. It is included herein solely for preliminary information purposes. It is not intended to be, nor should it be construed to be, legal or tax advice. It is a description of the essential material Luxembourg tax consequences with respect to the New Shares/subscription rights and may not include tax considerations that arise from rules of general application or that are generally assumed to be known to shareholders. This summary is based on the laws in force in Luxembourg on the date of this Prospectus and is subject to any change in law that may take effect after such date. Prospective shareholders should consult their professional advisors with respect to particular circumstances, the effects of state, local or foreign laws to which they may be subject, and as to their tax position.

Please be aware that the residence concept used under the respective headings applies for Luxembourg income tax assessment purposes only. Any reference in the present section to a tax, duty, levy impost or other charge or withholding of a similar nature refers to Luxembourg tax law and/or concepts only. Also, please note that a reference to Luxembourg income tax generally encompasses corporate income tax (*impôt sur le revenu des collectivités*), municipal business tax (*impôt commercial communal*), a solidarity surcharge (*contribution au fonds pour l'emploi*) as well as personal income tax (*impôt sur le revenu*). Corporate shareholders may further be subject to net wealth tax (*impôt sur la fortune*) as well as other duties, levies or taxes. Corporate income tax, municipal business tax as well as the solidarity surcharge invariably apply to most corporate taxpayers resident in Luxembourg for tax purposes. Individual taxpayers are generally subject to personal income tax and the solidarity surcharge. Under certain circumstances, where an individual taxpayer acts in the course of the management of a professional or business undertaking, municipal business tax may apply as well.

21.1 Luxembourg Taxation of New Shares/Subscription Rights of a Non-Resident Company

21.1.1 Withholding Tax

Dividend payments made to shareholders by a non-resident company, such as the Company, as well as liquidation proceeds and capital gains derived therefrom are not subject to a withholding tax in Luxembourg. Accordingly, the Company, which is not a resident in Luxembourg, does not assume responsibility for the withholding of Luxembourg withholding taxes at the source.

21.1.2 Income Taxes

21.1.2.1 Taxation of Income Derived from the New Shares and Capital Gains Realized on New Shares/Subscription Rights by Luxembourg Residents

21.1.2.1.1 *Luxembourg Resident Individuals*

Dividends and other payments derived from the New Shares by Luxembourg resident individual shareholders, who act in the course of the management of either their private wealth or their professional/business activity, are subject to income tax at the progressive ordinary rates with a current top effective marginal rate of 42% (45.78% including the maximum 9% solidarity surcharge) depending on the annual level of income of individuals. A tax credit may be granted for foreign withholding taxes, provided that it does not exceed the corresponding Luxembourg tax.

Under current Luxembourg tax law, 50% of the gross amount of dividends received by Luxembourg resident individuals from a company resident in an EU member state and covered by Article 2 of the Parent-Subsidiary Directive, such as the Company, is exempt from income tax.

Capital gains realized on the disposal of the New Shares/the subscription rights by Luxembourg resident individual shareholders/subscription right-holders, who act in the course of the management of their private wealth, are not subject to income tax, unless said capital gains qualify either as speculative gains or—in case of a disposal of shares—as gains on a substantial participation. Capital gains are deemed to be speculative and are subject to income tax at ordinary rates if the New Shares/subscription rights are disposed of within six months after their acquisition or if their disposal precedes their acquisition. A participation is deemed to be substantial where a resident individual shareholder holds, either alone or together with his spouse or partner and/or minor children, directly or indirectly at any time within the five years preceding the disposal, more than 10% of the share capital of the Company. A shareholder is also deemed to transfer a substantial participation if he acquired free of charge, within the five years preceding the transfer, a participation that was constituting a substantial participation in the hands of the transferor (or

the transferors in case of successive transfers free of charge within the same five-year period). Capital gains realized on a substantial participation more than six months after the acquisition thereof are subject to income tax according to the half global rate method (i.e., the average rate applicable to the total income is calculated according to progressive income tax rates and half of the average rate is applied to the capital gains realized on a substantial participation). A disposal may include a sale, an exchange, a contribution or any other kind of alienation of the shares/subscription rights.

Capital gains realized on the disposal of the New Shares/subscription rights by Luxembourg resident individual shareholders/subscription right-holders, who act in the course of their professional/business activity, are subject to income tax at ordinary rates and municipal business tax. Taxable gains are determined as being the difference between the price for which the New Shares/subscription rights have been disposed of and the lower of their cost or book value.

21.1.2.1.2 *Luxembourg Resident Fully-Taxable Companies and Luxembourg Permanent Establishments of Foreign Companies or of Non-Resident Individuals*

Unless benefiting from a special tax regime, dividends and other payments made by the Company to a Luxembourg resident fully-taxable company or to a Luxembourg permanent establishment of a foreign company or of non-resident individuals are subject to income tax at their respective ordinary rates. Under current Luxembourg tax laws, 50% of the gross amount of dividends received from a company resident in an EU member state and covered by Article 2 of the Parent-Subsidiary Directive, such as the Company, is exempt from income tax. A tax credit may further be granted for foreign withholding taxes, provided it does not exceed the corresponding Luxembourg corporate income tax on the dividends and other payments derived from the New Shares.

However, under the participation exemption regime, dividends derived from shares of an entity covered by Article 2 of the Parent-Subsidiary Directive, such as the Company, may be exempt from income tax and municipal business tax at the level of the shareholder if, at the time the dividend is made available to the shareholders, cumulatively, (i) the shareholder is (a) a fully-taxable Luxembourg resident company, or (b) a Luxembourg permanent establishment of a company covered by Article 2 of the Parent-Subsidiary Directive, or (c) a Luxembourg permanent establishment of a foreign company in a country having a tax treaty with Luxembourg, or (d) a Luxembourg permanent establishment of a company limited by share capital or a cooperative company resident in the European Economic Area other than a EU Member State, (ii) the shareholder has held or commits itself to hold the shares of the distributing entity (i.e., the Company) for an uninterrupted period of at least 12 months, (iii) during this uninterrupted period of 12 months, the shares represent a participation of at least 10% in the share capital of the Company or a participation of an acquisition price of at least €1.2 million, and (iv) the dividend is put at its disposal within such period. Shares held through a tax-transparent entity are considered as being a direct participation proportionally to the percentage held in the assets of the transparent entity.

Capital gains realized by (i) a Luxembourg fully-taxable resident company or (ii) the Luxembourg permanent establishment of a non-resident foreign company on the New Shares of the Company are subject to income tax at the current maximum global rate of 26.01% in 2018 in Luxembourg City, unless the conditions of the participation exemption regime, as described above, are satisfied except that the acquisition price must be of at least €6 million for capital gain exemption purposes. New Shares held through a tax-transparent entity are considered as a direct participation holding proportionally to the percentage held in the assets of the transparent entity.

Taxable gains are determined to be the difference between the price for which the New Shares have been disposed of and the lower of their cost or book value.

According to the case law of the Luxembourg Administrative Court of Appeals, the participation exemption regime, as described above, may also apply to capital gains realized upon the disposal of subscription rights.

Capital gains realized on the disposal of the New Shares/subscription rights by a non-resident individual holding the New Shares/subscription rights through a Luxembourg permanent establishment are subject to income tax at ordinary rates and municipal business tax. Taxable gains are determined as being the difference between the price for which the New Shares/subscription rights have been disposed of and the lower of their cost or book value.

21.1.2.1.3 *Luxembourg Resident Undertakings Benefiting from a Special Tax Regime*

A shareholder/subscription right-holder which is a Luxembourg resident undertaking benefiting from a special tax regime, such as (i) an undertaking for collective investment governed by the law of December 17, 2010, as amended, (ii) a specialized investment fund governed by the law of February 13, 2007, as amended, (iii) a family wealth management company governed by the law of May 11, 2007, as amended, or (iv) a reserved alternative investment fund governed by the law of July 23, 2016 and treated as a specialized investment fund for Luxembourg tax purposes, is exempt from income tax in Luxembourg. Dividends and capital gains derived from the New Shares/

capital gains derived from the subscription rights are thus not subject to Luxembourg income tax in the hands of such shareholder/subscription right-holder.

21.1.3 Net Wealth Tax

Unless benefiting from a special tax regime, a Luxembourg resident corporate shareholder/subscription right-holder, as well as non-resident corporate shareholder/subscription right-holder who has a permanent establishment or a permanent representative in Luxembourg to which the New Shares/subscription rights are attributable, is subject to Luxembourg net wealth tax ("**NWT**") on such New Shares.

Luxembourg NWT is levied at the rate of 0.5% applied on the shareholder's/subscription right-holder's net wealth as determined for NWT purposes. A reduced rate of 0.05% applies on the portion of the net asset exceeding €500 million. Net wealth is referred to as the unitary value (*valeur unitaire*), as determined on January 1 of each year. The unitary value is basically calculated as the difference between (a) assets estimated at their fair market value (*valeur estimée de réalisation or Gemeiner Wert*), and (b) liabilities vis-à -vis third parties, unless one of the exceptions mentioned below is satisfied.

Further, under the participation exemption regime, shares of an entity covered by Article 2 of the Parent-Subsidiary Directive, such as the Company, may be exempt from NWT at the level of the shareholder for a given year, if the shares represent at the end of the previous year a participation of at least 10% in the share capital of the entity or a participation of an acquisition price of at least €1.2 million. The NWT charge for a given year can be reduced if a specific reserve, equal to five times the NWT to save, is created before the end of the subsequent tax year and maintained during the five following tax years. The maximum NWT to be saved is limited to the corporate income tax amount due for the same tax year, including the solidarity surcharge, but before imputation of available tax credits.

According to the case law of the Luxembourg Administrative Court of Appeals, the participation exemption regime for NWT, as described above, may also apply to subscription rights.

In any case, a minimum NWT will be applicable to a Luxembourg resident corporate shareholder/ subscription right-holder, as well as non-resident corporate shareholder/subscription right-holder who has a permanent establishment or a permanent representative in Luxembourg, including (i) a securitization company governed by the law of March 22, 2004 on securitization, as amended, (ii) a company governed by the law of June 15, 2004 on venture capital vehicles, as amended, (iii) a professional pension institution governed by the law of July 13, 2005, as amended, or (iv) an opaque reserved alternative investment fund governed by the law of July 23, 2016 and treated as a venture capital vehicle for Luxembourg tax purposes.

21.2 Other Taxes

Under Luxembourg tax law, where an individual shareholder/subscription right-holder is a resident of Luxembourg for inheritance tax purposes at the time of his/her death, the New Shares/subscription rights are included in his/her taxable basis for inheritance tax purposes.

Gift tax may be due on a gift or donation of the shares/subscription rights if the gift is recorded in a Luxembourg notarial deed or otherwise registered in Luxembourg.

Under current Luxembourg tax laws, no registration tax or similar tax is in principle payable by the shareholders/subscription right-holders upon the acquisition, holding or disposal of the New Shares/subscription rights. However, a fixed registration duty of €12 may be due upon registration of the New Shares/subscription rights in Luxembourg in the case of a voluntary registration or if any documentation relating to the New Shares/subscription rights is appended to a document that requires mandatory registration in Luxembourg.

22. FINANCIAL INFORMATION

Unaudited Condensed Consolidated Interim Financial Statements of Bayer AG as of March 31, 2018 (IFRS on interim financial reporting (IAS 34))

Condensed Consolidated Interim Financial Statements as of March 31, 2018

Bayer Group Consolidated Income Statements

B 1

€ million	Q1 2017	Q1 2018
Net sales	**9,680**	**9,138**
Cost of goods sold	(2,987)	(2,909)
Gross profit	**6,693**	**6,229**
Selling expenses	(2,667)	(2,509)
Research and development expenses	(1,094)	(1,040)
General administration expenses	(460)	(427)
Other operating income	159	152
Other operating expenses	(204)	(95)
EBIT [1]	**2,427**	**2,310**
Equity-method income (loss)	(7)	71
Financial income	32	370
Financial expenses	(321)	(311)
Financial result	**(296)**	**130**
Income before income taxes	**2,131**	**2,440**
Income taxes	(424)	(494)
Income from continuing operations after income taxes	**1,707**	**1,946**
of which attributable to noncontrolling interest	(2)	–
of which attributable to Bayer AG stockholders (net income)	1,709	1,946
Income from discontinued operations after income taxes	**564**	**8**
of which attributable to noncontrolling interest	190	–
of which attributable to Bayer AG stockholders (net income)	374	8
Income after income taxes	**2,271**	**1,954**
of which attributable to noncontrolling interest	188	–
of which attributable to Bayer AG stockholders (net income)	**2,083**	**1,954**
€		
Earnings per share		
From continuing operations		
Basic	1.96	2.23
Diluted	1.96	2.23
From discontinued operations		
Basic	0.43	0.01
Diluted	0.43	0.01
From continuing and discontinued operations		
Basic	2.39	2.24
Diluted	2.39	2.24

2017 figures restated

[1] For definition see Annual Report 2017, A 2.4 “Alternative Performance Measures Used by the Bayer Group.”

Bayer Group Consolidated Statements of Comprehensive Income

B 2

€ million	Q1 2017	Q1 2018
Income after income taxes	**2,271**	**1,954**
of which attributable to noncontrolling interest	188	–
of which attributable to Bayer AG stockholders	2,083	1,954
Remeasurements of the net defined benefit liability for post-employment benefit plans	605	(176)
Income taxes	(195)	(1)
Other comprehensive income from remeasurements of the net defined benefit liability for post-employment benefit plans	**410**	**(177)**
Changes in fair values of equity instruments measured at fair value through other comprehensive income	–	95
Income taxes	–	–
Other comprehensive income from equity instruments measured at fair value through other comprehensive income	**–**	**95**
Other comprehensive income relating to associates accounted for using the equity method	**–**	**(13)**
Other comprehensive income that will not be reclassified subsequently to profit or loss	**410**	**(95)**
Changes in fair values of cash flow hedges	(88)	60
Reclassified to profit or loss	54	(31)
Income taxes	15	(8)
Other comprehensive income from cash flow hedges	**(19)**	**21**
Changes in fair values of available-for-sale financial assets	(7)	–
Reclassified to profit or loss	–	–
Income taxes	9	–
Other comprehensive income from available-for-sale financial assets	**2**	**–**
Changes in exchange differences recognized on translation of operations outside the eurozone	(171)	(382)
Reclassified to profit or loss	–	–
Other comprehensive income from exchange differences	**(171)**	**(382)**
Other comprehensive income relating to associates accounted for using the equity method	**7**	**(1)**
Other comprehensive income that may be reclassified subsequently to profit or loss	**(181)**	**(362)**
Total other comprehensive income [1]	**229**	**(457)**
of which attributable to noncontrolling interest	23	(4)
of which attributable to Bayer AG stockholders	206	(453)
Total comprehensive income	**2,500**	**1,497**
of which attributable to noncontrolling interest	211	(4)
of which attributable to Bayer AG stockholders	2,289	1,501

[1] Total changes recognized outside profit or loss

Bayer Group Consolidated Statements of Financial Position

B 3

€ million	March 31, 2017	**March 31, 2018**	Dec. 31, 2017
Noncurrent assets			
Goodwill	16,290	14,480	14,751
Other intangible assets	13,367	11,185	11,674
Property, plant and equipment	13,085	7,330	7,633
Investments accounted for using the equity method	580	2,574	4,007
Other financial assets	1,308	1,737	1,634
Other receivables	568	535	400
Deferred taxes	6,466	4,384	4,915
	51,664	**42,225**	**45,014**
Current assets			
Inventories	8,674	6,402	6,550
Trade accounts receivable	13,020	9,498	8,582
Other financial assets	6,662	7,315	3,529
Other receivables	2,205	1,029	1,276
Claims for income tax refunds	577	461	474
Cash and cash equivalents	2,224	5,332	7,581
Assets held for sale	28	3,132	2,081
	33,390	**33,169**	30,073
Total assets	**85,054**	**75,394**	**75,087**
Equity			
Capital stock	2,117	2,117	2,117
Capital reserves	9,658	9,658	9,658
Other reserves	21,842	26,553	25,026
Equity attributable to Bayer AG stockholders	**33,617**	**38,328**	**36,801**
Equity attributable to noncontrolling interest	2,240	56	60
	35,857	**38,384**	**36,861**
Noncurrent liabilities			
Provisions for pensions and other post-employment benefits	10,522	8,096	8,020
Other provisions	1,753	1,302	1,366
Refund liabilities	–	146	–
Contract liabilities	–	799	–
Financial liabilities	14,788	12,273	12,483
Income tax liabilities	204	482	495
Other liabilities	933	228	1,116
Deferred taxes	1,425	586	1,153
	29,625	**23,912**	**24,633**
Current liabilities			
Other provisions	6,130	2,194	4,344
Refund liabilities	–	2,519	–
Contract liabilities	–	197	–
Financial liabilities	4,199	1,761	1,935
Trade accounts payable	5,690	3,943	5,129
Income tax liabilities	1,307	646	422
Other liabilities	2,246	1,318	1,652
Liabilities directly related to assets held for sale	–	520	111
	19,572	**13,098**	**13,593**
Total equity and liabilities	**85,054**	**75,394**	**75,087**

Bayer Group Consolidated Statements of Cash Flows

B 4

€ million	Q1 2017	Q1 2018
Income from continuing operations after income taxes	1,707	1,946
Income taxes	424	494
Financial result	296	(130)
Income taxes paid	(493)	(388)
Depreciation, amortization and impairments	572	508
Change in pension provisions	(63)	(98)
(Gains) losses on retirements of noncurrent assets	(50)	(20)
Decrease (increase) in inventories	(100)	(84)
Decrease (increase) in trade accounts receivable	(1,645)	(1,349)
(Decrease) increase in trade accounts payable	(728)	(436)
Changes in other working capital, other noncash items	631	215
Net cash provided by (used in) operating activities from continuing operations	**551**	**658**
Net cash provided by (used in) operating activities from discontinued operations	290	–
Net cash provided by (used in) operating activities (total)	**841**	**658**
Cash outflows for additions to property, plant, equipment and intangible assets	(415)	(349)
Cash inflows from the sale of property, plant, equipment and other assets	54	59
Cash inflows from divestments	–	145
Cash inflows from (outflows for) noncurrent financial assets	(54)	1,777
Cash outflows for acquisitions less acquired cash	(158)	–
Interest and dividends received	20	22
Cash inflows from (outflows for) current financial assets	(583)	(3,712)
Net cash provided by (used in) investing activities (total)	**(1,136)**	**(2,058)**
Proceeds from shares of Covestro AG	1,460	–
Dividend payments	–	–
Issuances of debt	292	1,021
Retirements of debt	(1,036)	(1,528)
Interest paid including interest-rate swaps	(114)	(83)
Interest received from interest-rate swaps	9	9
Cash outflows for the purchase of additional interests in subsidiaries	–	–
Net cash provided by (used in) financing activities (total)	**611**	**(581)**
Change in cash and cash equivalents due to business activities (total)	**316**	**(1,981)**
Cash and cash equivalents at beginning of period	**1,899**	**7,436**
Change in cash and cash equivalents due to changes in scope of consolidation	**–**	**1**
Change in cash and cash equivalents due to exchange rate movements	9	(118)
Cash and cash equivalents at end of period	**2,224**	**5,338**

2017 figures restated

Bayer Group Consolidated Statements of Changes in Equity

B 5

€ million	Capital stock	Capital reserves	Other reserves	**Equity attributable to Bayer AG stockholders**	Equity attributable to non-controlling interest	**Equity**
Dec. 31, 2016	**2,117**	**9,658**	**18,558**	**30,333**	**1,564**	**31,897**
Equity transactions with owners						
Capital increase / decrease						
Dividend payments						
Other changes			995	995	465	1,460
Total comprehensive income			2,289	2,289	211	2,500
March 31, 2017	**2,117**	**9,658**	**21,842**	**33,617**	**2,240**	**35,857**
Dec. 31, 2017	**2,117**	**9,658**	**25,026**	**36,801**	**60**	**36,861**
Adjustment on adoption of IFRS 9 (net of tax)			(60)	(60)		(60)
Adjustment on adoption of IFRS 15 (net of tax)			86	86		86
Equity transactions with owners						
Capital increase / decrease						
Dividend payments						
Other changes						
Total comprehensive income			1,501	1,501	(4)	1,497
March 31, 2018	**2,117**	**9,658**	**26,553**	**38,328**	**56**	**38,384**

Notes to the Condensed Consolidated Interim Financial Statements of the Bayer Group

Key Data by Segment

B 6

Key Data by Segment

	Pharmaceuticals		Consumer Health		Crop Science		Animal Health	
€ million	Q1 2017	Q1 2018	Q1 2017	Q1 2018	Q1 2017	Q1 2018	Q1 2017	Q1 2018
Net sales (external)	4,263	4,075	1,601	1,409	3,120	2,861	440	414
Change [1]	+ 9.6%	– 4.4%	+ 5.3%	– 12.0%	+ 6.3%	– 8.3%	+ 7.8%	– 5.9%
Currency-adjusted change [1]	+ 7.4%	+ 2.7%	+ 2.6%	– 2.2%	+ 3.2%	– 1.0%	+ 4.7%	+ 3.0%
Intersegment sales	10	9	5	1	8	8	1	2
Net sales (total)	4,273	4,084	1,606	1,410	3,128	2,869	441	416
EBIT [1]	1,219	1,163	278	211	970	892	126	129
EBIT before special items [1]	1,255	1,164	287	216	1,007	953	126	129
EBITDA before special items [1]	1,502	1,415	392	313	1,115	1,042	135	139
Net cash provided by operating activities	973	1,232	265	173	(679)	(703)	(31)	13
Depreciation, amortization, impairment losses / loss reversals	280	251	106	97	121	89	9	10

[1] For definition see Annual Report 2017, A 2.4 “Alternative Performance Measures Used by the Bayer Group.”

B 6 continued

Key Data by Segment

			Reconciliation			
	All Other Segments		Corporate Functions and Consolidation		Group	
€ million	Q1 2017	Q1 2018	Q1 2017	Q1 2018	Q1 2017	Q1 2018
Net sales (external)	252	378	4	1	9,680	9,138
Change [1]	+ 0.8%	+ 50.0%	–	–	+ 7.5%	– 5.6%
Currency-adjusted change [1]	+ 2.0%	+ 48.0%	–	–	+ 5.0%	+ 1.9%
Intersegment sales	710	595	(734)	(615)	–	–
Net sales (total)	962	973	(730)	(614)	9,680	9,138
EBIT [1]	(26)	22	(140)	(107)	2,427	2,310
EBIT before special items [1]	(8)	30	(138)	(104)	2,529	2,388
EBITDA before special items [1]	45	87	(135)	(100)	3,054	2,896
Net cash provided by operating activities	(167)	(243)	190	186	551	658
Depreciation, amortization, impairment losses / loss reversals	53	57	3	4	572	508

2017 figures restated

[1] For definition see Annual Report 2017, A 2.4 “Alternative Performance Measures Used by the Bayer Group.”

Explanatory Notes

Accounting policies

The consolidated interim financial statements as of March 31, 2018, were prepared in condensed form in compliance with IAS 34 according to the International Financial Reporting Standards (IFRS) of the International Accounting Standards Board (IASB), London, which are endorsed by the European Union, and the Interpretations of the IFRS Interpretations Committee in effect at the closing date.

Reference should be made as appropriate to the Notes to the Consolidated Financial Statements for the 2017 fiscal year, particularly with regard to the main recognition and measurement principles, except where financial reporting standards have been applied for the first time in 2018 or an accounting policy has changed.

Financial reporting standards applied for the first time in 2018

IFRS 9 (Financial Instruments) and IFRS 15 (Revenue from Contracts with Customers) were applied for the first time as of January 1, 2018. The effects resulting from their first-time application are detailed in this section.

IFRS 9 is the new standard for accounting for financial instruments that Bayer applied retrospectively for the first time as of January 1, 2018, without restating the prior-year figures, accounting for the aggregate amount of any transition effects by way of an adjustment to equity and presenting the comparative period in line with previous rules.

The effects that the first-time application of IFRS 9 and IFRS 15 had on retained earnings and other comprehensive income in the statement of comprehensive income are detailed in the following tables:

B 7

Retained Earnings Reconciliation: IFRS 9 and IFRS 15

€ million	
Retained earnings incl. net income as at December 31, 2017	**26,851**
Effects of IFRS 9	**(43)**
of which reclassification from other comprehensive income (fair-value measurement of financial instruments)	37
of which loss allowances established for trade accounts receivable	(93)
of which loss allowances established for other receivables	(4)
of which loss allowances established for cash and cash equivalents	(1)
of which deferred taxes	**18**
Effects of IFRS 15	**86**
Retained earnings incl. net income as at January 1, 2018	**26,894**

B 8

Other Comprehensive Income Reconciliation (Fair-Value Measurement of Financial Instruments)

€ million	
Fair-value measurement of financial instruments as at December 31, 2017	**98**
Reclassifications to retained earnings	**(37)**
Remeasurement due to change in measurement category	11
Deferred taxes	9
Fair-value measurement of financial instruments as at January 1, 2018	**81**

IFRS 9 introduces new provisions for the classification and measurement of financial assets and replaces the current rules on the impairment of financial assets. The new standard requires a change in accounting methods for the effects resulting from a change in the company's own credit risk for financial liabilities classified at fair value and modifies the requirements for hedge accounting. The classification and measurement of financial liabilities is otherwise largely unchanged from the existing regulations.

Under IFRS 9, the classification and measurement of financial assets is determined by the company's business model and the characteristics of the cash flows of each financial asset. In the case of equity instruments held as of January 1, 2018, that are not held for trading, Bayer has uniformly opted to recognize future changes in their fair value through other comprehensive income in the statement of comprehensive income and to continue to classify these as equity upon the derecognition of the financial instrument. As for new instruments, Bayer can opt to make use of this option on an instrument-by-instrument basis upon recognition, but it must continue to do so thereafter.

As at the date of first-time application, reclassifications primarily resulted from the characteristics of the cash flows from fund shares, investments in limited partnerships, and the loan capital and jouissance right capital (Genussrechtkapital) provided to Bayer Pensionskasse VVaG. These financial instruments were previously reported in the category "available for sale," with changes in their fair value recognized in other comprehensive income in the statement of comprehensive income. They are now classified as debt instruments, and changes in their fair values are recognized through profit or loss.

Changes in the classification and measurement of financial assets led to the following effects as at the date of first-time application:

B 9

Financial Assets Reconciliation from IAS 39 to IFRS 9

€ million

Measurement category in accordance with IAS 39	Carrying amount (IAS 39) as of Dec. 31, 2017	Reclassifi -cation	Remeasurement due to change in measurement category	Remeasurement due to implemen-tation of the expected loss model	Carrying amount (IFRS 9) as of Jan. 1, 2018	Measurement category in accordance with IFRS 9
Trade accounts receivable						**Trade accounts receivable**
Loans and receivables	8,582			(93)	8,489	Measured at amortized cost
Other financial assets						**Other financial assets**
Loans and receivables	1,731				1,731	Measured at amortized cost
Available-for-sale financial assets – debt instruments	34				34	Measured at amortized cost
Held-to-maturity financial assets	57				57	Measured at amortized cost
Available-for-sale financial assets – equity instruments measured at amortized cost	35		11		46	Equity instruments measured at fair value through OCI (no recycling)
Available-for-sale financial assets – equity instruments measured at fair value	191				191	Equity instruments measured at fair value through OCI (no recycling)
Available-for-sale financial assets – equity instruments measured at fair value	39				39	Debt instruments measured at fair value through profit or loss
Available-for-sale financial assets – debt instruments	2,429	145			2,574	Debt instruments measured at fair value through profit or loss
Derivatives that qualify for hedge accounting	296				296	Derivatives that qualify for hedge accounting
Derivatives that do not qualify for hedge accounting	351				351	Derivatives that do not qualify for hedge accounting
Other receivables						**Other receivables**
Loans and receivables	380			(4)	376	Measured at amortized cost
Available-for-sale financial assets - debt instruments	46				46	Debt instruments measured at fair value through profit or loss
Cash and cash equivalents						**Cash and cash equivalents**
Loans and receivables	7,581	(145)		(1)	7,435	Measured at amortized cost
Total financial assets	**21,752**	**0**	**11**	**(98)**	**21,665**	

There were no effects on financial liabilities.

The following table shows the effects of the first-time application of IFRS 9 on retained earnings and other comprehensive income in the statement of other comprehensive income, broken down by measurement category:

B 10

Effects of First-Time Application of IFRS 9 on Retained Earnings and Other Comprehensive Income

€ million

Measurement category in accordance with IAS 39	Measurement category in accordance with IFRS 9	Retained earnings effect as of Jan. 1, 2018	OCI effect as of Jan 1, 2018
Trade accounts receivable	**Trade accounts receivable**		
Loans and receivables	Measured at amortized cost	(93)	
Other financial assets	**Other financial assets**		
Available-for-sale financial assets – equity instruments measured at amortized cost	Equity instruments measured at fair value through OCI (no recycling)		11
Available-for-sale financial assets – equity instruments measured at fair value	Debt instruments measured at fair value through profit or loss	10	(10)
Available-for-sale financial assets – debt instruments	Debt instruments measured at fair value through profit or loss	36	(36)
Other receivables	**Other receivables**		
Loans and receivables	Measured at amortized cost	(4)	
Available-for-sale financial assets – debt instruments	Debt instruments measured at fair value through profit or loss	(9)	9
Cash and cash equivalents	**Cash and cash equivalents**		
Loans and receivables	Measured at amortized cost	(1)	
Total financial assets		**(61)**	**(26)**

The following table shows the effects of the first-time application of IFRS 9 on financial assets and liabilities that are based on unobservable inputs and are measured at fair value (Level 3). The development of these assets and liabilities in the first quarter of 2018 is presented in Table B 22.

B 11

Reconciliation of Financial Assets and Liabilities Measured at Fair Value (Level 3) from IAS 39 to IFRS 9

€ million

Measurement category in accordance with IAS 39	Carrying amount (IAS 39) as of Dec. 31, 2017	Reclassifications due to change in fair value hierarchy	Remeasurements due to change in measurement category	Carrying amount (IFRS 9) as of Jan. 1, 2018	Measurement category in accordance with IFRS 9
Other financial assets					**Other financial assets**
Available-for-sale financial assets – equity instruments measured at amortized cost		35	11	46	Equity instruments measured at fair value through OCI (no recycling)
Available-for-sale financial assets – equity instruments measured at fair value	18	4		22	Equity instruments measured at fair value through OCI (no recycling)
Available-for-sale financial assets – equity instruments measured at fair value	18			18	Debt instruments measured at fair value through profit or loss
Available-for-sale financial assets – debt instruments	757			757	Debt instruments measured at fair value through profit or loss
Derivatives	10			10	Derivatives
Other receivables					**Other receivables**
Available-for-sale financial assets – debt instruments	46			46	Debt instruments measured at fair value through profit or loss
Total financial assets (Level 3)	**849**	**39**	**11**	**899**	**Total financial assets (Level 3)**
Other liabilities					**Other liabilities**
Measured at fair value through profit or loss (nonderivative)	(7)			(7)	Measured at fair value through profit or loss (nonderivative)
Total financial liabilities (Level 3)	**(7)**			**(7)**	**Total financial liabilities (Level 3)**

Loss allowances for expected credit losses are recognized for financial assets measured at amortized cost. Expected lifetime credit losses are recognized for trade accounts receivable are recognized using the simplified approach. This is based on loss rates calculated from historical and forward-looking data, taking into account the business model, the respective customer and the economic environment of the geographical region. Receivables that are overdue by a significant amount of time – in some cases exceeding 90 days due to the customer structure – and receivables from debtors against which insolvency or similar proceedings have been initiated are tested individually for impairment. Expected credit losses for other financial assets are determined upon their first-time recognition primarily on the basis of credit default swaps, with losses for defaults within the next 12 months calculated using the Monte Carlo simulation method. In the event of a significant increase in default risk, expected lifetime credit losses are taken into account.

The effects from the increase in loss allowances from the first-time application of the new impairment model are presented in the following table:

B 12

Reconciliation of Loss Allowances

€ million

Measurement category in accordance with IAS 39	Closing loss allowances under IAS 39 as at Dec. 31, 2017	Remeasurement due to implementation of the expected loss model under IFRS 9	Opening loss allowances under IFRS 9 as at Jan 1, 2018	Measurement category in accordance with IFRS 9
Trade accounts receivable				**Trade accounts receivable**
Loans and receivables	(425)	(93)	(518)	Measured at amortized cost
Other receivables				**Other receivables**
Loans and receivables	(3)	(4)	(7)	Measured at amortized cost
Cash and cash equivalents				**Cash and cash equivalents**
Loans and receivables		(1)	(1)	Measured at amortized cost
Total	**(428)**	**(98)**	**(526)**	

Changes in the fair values of financial liabilities measured at fair value through profit or loss resulting from Bayer's own credit risk are now recognized through other comprehensive income in the statement of comprehensive income rather than in the income statement. At Bayer, this change principally affects the debt instruments (exchangeable bond) issued in June 2017 which also can be exchanged into Covestro shares. As at the transition date, this accounting change did not have any material effects.

For hedge accounting, Bayer has opted to prospectively apply IFRS 9 from January 1, 2018. If only the intrinsic value of an option is designated as a hedging instrument in a hedging relationship, IFRS 9 requires that changes in the fair value of the time value of the options during the hedging period initially be recognized as other comprehensive income in the statement of comprehensive income. The release of the accumulated amounts, either in the form of a basis adjustment or directly through profit or loss, depends on the type of hedged transaction. In contrast to the other rules on hedge accounting, the revised accounting method is to be applied retrospectively. As at the transition date, these changes did not have any material impact on the presentation of the Group's financial position and results of operations.

The IASB issued IFRS 15 (Revenues from Contracts with Customers) in May 2014 and provided clarifications to the standard in April 2016. Both the standard and the clarifications have been endorsed by the European Union. IFRS 15 replaces the current IAS 18 (Revenue) and IAS 11 (Construction Contracts) revenue recognition standards and the related interpretations, and is applicable for annual reporting periods beginning on or after January 1, 2018. The new standard establishes a five-step model for revenue recognition from contracts with customers. Under IFRS 15, revenue is recognized at amounts that reflect the consideration that an entity expects to be entitled to in exchange for transferring goods or services to a customer. Revenue is recognized when (or as) the entity transfers control of goods or services to a customer either over time or at a point in time. In addition, IFRS 15 clarifies the allocation of individual topics to (new) line items in the statement of financial position and to functional cost items in the income statement, and whether gross or net amounts are to be presented.

As of January 1, 2018, Bayer transitioned to IFRS 15 on the basis of the modified retrospective method, accounting for the aggregate amount of the transition effects by way of an adjustment to retained earnings as of January 1, 2018, and presenting the comparative period in line with previous rules. Bayer has elected to retrospectively apply the standard only to contracts that are not completed contracts at the date of first-time application, and has opted to reflect the aggregate effect of all contract modifications that occurred prior to the date of first-time application in accordance with IFRS 15.C7A(b).

The adoption of IFRS 15 has led to the following effects:

Changes in the timing of recognition

- IFRS 15 requires catch-up adjustments to revenue when milestone payments for right-to-access licenses become unconstrained leading to earlier revenue recognition. This change resulted in an increase in retained earnings by €64 million after deferred taxes and a decrease in contract liabilities (under IAS 18, amounts were presented as deferred income in other liabilities) by €86 million. For the Pharmaceuticals segment, the introduction of IFRS 15 translates into a €2 million decrease in quarterly net sales and a €1 million decrease in quarterly deferred tax expense as compared to IAS 18. Comparable quarterly effects will persist through 2027.
- IFRS 15 in conjunction with IAS 38 (Intangible Assets) generally requires the recognition of the purchase price related to a brand divestment net of associated carrying amounts in other operating income or expenses upon transfer of control. Some cases were identified where the purchase price was deferred under former policy in line with IAS 18, but would have been recognized in income earlier under IFRS 15, leading to a €21 million increase in retained earnings after deferred taxes and a €27 million decrease in contract liabilities (under IAS 18, amounts were presented as deferred income in other liabilities) on the date of transition. For the Animal Health segment, the introduction of IFRS 15 translates into a €7 million decrease in quarterly net sales and a €2 million decrease in quarterly deferred tax expense as compared to IAS 18. Quarterly effects will persist until early 2019, but at a lower level. For the Pharmaceuticals segment, this change effective January 1, 2018, led to a one-time decrease of €6 million in quarterly net sales in the first quarter of 2018 and a €1 million decrease in quarterly tax expense as compared to IAS 18. An additional divestment attributable to the Pharmaceuticals segment that was completed in the first quarter of 2018 gave rise to a €2 million decrease in net sales and a €14 million increase in other operating income as compared to IAS 18. Net sales will decrease by this difference – €12 million – over the remaining quarters of 2018 as compared to IAS 18.
- Including the effects described individually, the change in the timing of revenue recognition led to a €2 million decrease in quarterly earnings as compared to revenue recognition under IAS 18.

Presentational changes

Bayer also changed the presentation of certain items in the statement of financial position and income statements to reflect the methodology of IFRS 15.

- IFRS 15 changes the presentation of expected product returns within the statement of financial position from net to gross in cases where returns are expected to be resalable and Bayer will refund the purchase price. The right-of-return asset is reflected in inventories at the former carrying amount less expected costs to recover and potential impairment. The refund liabilities include amounts expected to be refunded upon product return. Prior to the adoption of IFRS 15, Bayer presented the margin of expected returns on a net basis in “other provisions.” In the statement of cash flows, the increase in inventories to be recorded under IFRS 15 is set against a decline in “other working capital, other noncash items.”
- Amounts already received (or receivable), but expected to be refunded to the customer are presented as “refund liabilities” under IFRS 15. These amounts typically relate to expected volume rebates and expected product returns and were previously presented as “other provisions.”
- Advance payments received (or receivable) in connection with product deliveries were previously recognized in trade accounts payable. Advance payments received (or receivable) relating to right-to-access licenses and service contracts recognized over time were previously presented under “deferred income” in “other liabilities.” With the introduction of IFRS 15, both are presented as contract liabilities. Within the statement of cash flows, the decline in trade accounts payable resulting from the presentational change is set against a corresponding change in “other working capital, other noncash items.”

The effects of applying the modified retrospective method on the opening statement of financial position as at January 1, 2018, are shown in table B.13. In addition, table B 14 presents the impact on the Group statement of financial position as at March 31, 2018, that the continued application of IAS 18 would have had compared with IFRS 15.

B 13

IFRS 15 Accounting Changes: Consolidated Statements of Financial Position as of January 1, 2018

	Dec. 31, 2017			Jan. 1, 2018
€ million	Before accounting changes	Presentational changes	Changes in timing of recognition	After accounting changes
Noncurrent assets				
Deferred taxes	4,915		(5)	4,910
Other noncurrent assets	40,099			40,099
	45,014		**(5)**	**45,009**
Current assets				
Inventories	6,550	76		6,626
Other current assets	23,523			23,523
	30,073	**76**		**30,149**
Total assets	**75,087**	**76**	**(5)**	**75,158**
Equity				
Other reserves	25,026		86	25,112
Other equity	11,835			11,835
	36,861		**86**	**36,947**
Noncurrent liabilities				
Other provisions	1,366	(152)		1,214
Refund liabilities	–	152		152
Contract liabilities	–	905	(78)	827
Other liabilities	1,116	(905)		211
Deferred taxes	1,153		24	1,177
Other noncurrent liabilities	20,998			20,998
	24,633	**0**	**(54)**	**24,579**
Current liabilities				
Other provisions	4,344	(2,197)		2,147
Refund liabilities	–	2,275		2,275
Contract liabilities	–	740	(37)	703
Trade accounts payable	5,129	(561)		4,568
Other liabilities	1,652	(181)		1,471
Other current liabilities	2,468			2,468
	13,593	**76**	**(37)**	**13,632**
Total equity and liabilities	**75,087**	**76**	**(5)**	**75,158**

Reconciliation IFRS 15 to IAS 18: Consolidated Statements of Financial Position as of March 31, 2018

€ million	IFRS 15 March 31, 2018	Presentational changes	Changes in timing of recognition	IAS 18 March 31, 2018
Noncurrent assets				
Deferred taxes	4,384		2	4,386
Other noncurrent assets	37,841			37,841
	42,225		**2**	**42,227**
Current assets				
Inventories	6,402	(52)		6,350
Other current assets	26,767			26,767
	33,169	**(52)**		**33,117**
Total assets	**75,394**	**(52)**	**2**	**75,344**
Equity				
Other reserves	26,553		(84)	26,469
Other equity	11,831			11,831
	38,384		**(84)**	**38,300**
Noncurrent liabilities				
Other provisions	1,302	146		1,448
Refund liabilities	146	(146)		—
Contract liabilities	799	(799)		—
Other liabilities	228	799	73	1,100
Deferred taxes	586		(23)	563
Other noncurrent liabilities	21,796			20,851
	23,912	**0**	**50**	**23,962**
Current liabilities				
Other provisions	2,194	2,467		4,661
Refund liabilities	2,519	(2,519)		—
Contract liabilities	197	(197)		—
Trade accounts payable	3,943	71		4,014
Other liabilities	1,318	126	36	1,480
Other current liabilities	5,643			2,927
	13,098	**(52)**	**36**	**13,082**
Total equity and liabilities	**75,394**	**(52)**	**2**	**75,344**

Change in accounting methods

In connection with the planned acquisition of Monsanto and in preparation for the future combined business, the structure of the Crop Science segment was adjusted as of January 1, 2018, in line with the internal financial reporting system (management approach). In the new structure, all the strategic business entities are organizationally located directly below the Crop Science segment. Global impairment testing will also be carried out at the Crop Science segment level each year in the future.

Changes in underlying parameters

Changes in the underlying parameters relate primarily to currency exchange rates and the interest rates used to calculate pension obligations.

The exchange rates for major currencies against the euro varied as follows:

B 15

Exchange Rates for Major Currencies

		Closing rate			Average rate	
€1		Dec. 31, 2017	March 31, 2017	**March 31, 2018**	Q1 2017	**Q1 2018**
BRL	Brazil	3.98	3.37	4.09	3.35	3.99
CAD	Canada	1.51	1.43	1.59	1.41	1.55
CHF	Switzerland	1.17	1.07	1.18	1.07	1.17
CNY	China	7.81	7.35	7.73	7.31	7.81
GBP	United Kingdom	0.89	0.86	0.88	0.86	0.88
JPY	Japan	135.01	119.46	131.19	121.07	133.17
MXN	Mexico	23.66	20.01	22.52	21.61	23.05
RUB	Russia	69.41	60.28	70.85	62.59	69.90
USD	United States	1.20	1.07	1.23	1.06	1.23

The most important interest rates used to calculate the present value of pension obligations are given below:

B 16

Discount Rate for Pension Obligations

%	Dec. 31, 2017	**March 31, 2018**
Germany	1.90	1.90
United Kingdom	2.50	2.60
United States	3.40	3.80

Segment reporting

As of March 31, 2018, the Bayer Group comprises the four reportable segments Pharmaceuticals, Consumer Health, Crop Science and Animal Health.

The following table shows the reconciliation of EBITDA before special items of the above-mentioned segments and the reconciliation to income before income taxes of the Group from continuing operations:

B 17

Reconciliation of Segments' EBITDA Before Special Items to Group Income Before Income Taxes

€ million	Q1 2017	**Q1 2018**
EBITDA before special items of segments	3,189	2,996
EBITDA before special items of Corporate Functions and Consolidation	(135)	(100)
EBITDA before special items[1]	**3,054**	**2,896**
Depreciation, amortization and impairment losses before special items of segments	(522)	(504)
Depreciation, amortization and impairment losses before special items of Corporate Functions and Consolidation	(3)	(4)
Depreciation, amortization and impairment losses before special items	**(525)**	**(508)**
EBIT before special items of segments	2,667	2,492
EBIT before special items of Corporate Functions and Consolidation	(138)	(104)
EBIT before special items[1]	**2,529**	**2,388**
Special items of segments	(100)	(75)
Special items of Corporate Functions and Consolidation	(2)	(3)
Special items[1]	**(102)**	**(78)**
EBIT of segments	2,567	2,417
EBIT of Corporate Functions and Consolidation	(140)	(107)
EBIT[1]	**2,427**	**2,310**
Financial result	(296)	130
Income before income taxes	**2,131**	**2,440**

2017 figures restated

[1] For definition see Annual Report 2017, A 2.4 "Alternative Performance Measures Used by the Bayer Group."

Scope of consolidation

Changes in the scope of consolidation

The consolidated financial statements as of March 31, 2018, included 237 companies (December 31, 2017: 237 companies). Eight (December 31, 2017: eight) joint ventures and four (December 31, 2017: four) associates were accounted for in the consolidated financial statements using the equity method according to IAS 28 (Investments in Associates and Joint Ventures). The Covestro Group was deconsolidated as of September 30, 2017. As the parent company of the Covestro Group, Covestro AG is accounted for in the consolidated financial statements using the equity method.

Acquisitions, divestments and discontinued operations

Planned acquisitions

With regard to the planned acquisition of Monsanto, we refer to the Annual Report 2017. Following the approval by the authorities in Brazil, China and the European Union of the planned acquisition of Monsanto by Bayer, nearly two-thirds of the approvals have been granted. Closing of the transaction is currently expected in the second quarter of 2018.

Divestments and discontinued operations

Bayer ceded de facto control of Covestro and deconsolidated the company at the end of September 2017. As of the loss of control, Covestro fulfills the conditions for presentation as a discontinued operation. In connection with the sale of Covestro AG shares in 2017, Bayer AG entered into derivative contracts. These resulted in Bayer AG retaining economic exposure to the price of Covestro AG shares. In the first quarter of 2018, Bayer generated income after income taxes of €8 million from these contracts.

B 18

Income Statements for Discontinued Operations

	Covestro		Diabetes Care		Total	
€ million	Q1 2017	Q1 2018	Q1 2017	Q1 2018	Q1 2017	Q1 2018
Net sales	**3,564**	**–**	**128**	**–**	**3,692**	**–**
Cost of goods sold	(2,358)	–	(7)	–	(2,365)	–
Gross profit	**1,206**	**–**	**121**	**–**	**1,327**	**–**
Selling expenses	(346)	–	(1)	–	(347)	–
Research and development expenses	(64)	–	–	–	(64)	–
General administration expenses	(112)	–	(2)	–	(114)	–
Other operating income / expenses	5	10	5	–	10	10
EBIT [1]	**689**	**10**	**123**	**–**	**812**	**10**
Financial result	**(53)**	**–**	**–**	**–**	**(53)**	**–**
Income before income taxes	**636**	**10**	**123**	**–**	**759**	**10**
Income taxes	(171)	(2)	(24)	–	(195)	(2)
Income after income taxes	**465**	**8**	**99**	**–**	**564**	**8**
of which attributable to noncontrolling interest	190	–	–	–	190	–
of which attributable to Bayer AG stockholders (net income)	275	8	99	–	374	8

[1] For definition see Bayer Annual Report 2017, A 2.4 "Alternative Performance Measures Used by the Bayer Group."

In the first quarter of 2018, the discontinued operations affected the Bayer Group statement of cash flows as follows:

B 19

Cash Flows from Discontinued Operations

	Covestro		Diabetes Care		Total	
€ million	Q1 2017	Q1 2018	Q1 2017	Q1 2018	Q1 2017	Q1 2018
Net cash provided by (used in) operating activities	275	–	15	–	290	–
Net cash provided by (used in) investing activities	(112)	–	–	–	(112)	–
Net cash provided by (used in) financing activities	(1)	–	(15)	–	(16)	–
Change in cash and cash equivalents	**162**	**–**	**–**	**–**	**162**	**–**

As no cash was assigned to the discontinued operation Diabetes Care, the balance of the cash provided is deducted again in financing activities.

Assets held for sale

In connection with the planned acquisition of Monsanto, Bayer signed an agreement with BASF on October 13, 2017, concerning the sale of selected Crop Science businesses. The businesses to be sold comprise Bayer's global glufosinate ammonium business and the related LibertyLink™ technology for herbicide tolerance and a substantial part of the field crop seed business, including the related research and development capabilities. The seeds business being divested includes the global cotton seed business (excluding India and South Africa), the North American and European canola seed business, and the soybean seed business. The agreed base purchase price of €5.9 billion excludes the value of any net working capital and is subject to the customary adjustment mechanisms.

In connection with the planned acquisition of Monsanto and the associated merger control proceedings, Bayer has undertaken to divest, in addition to the divestments detailed above, its entire vegetable seeds business, its R&D platform for hybrid wheat, its remaining canola seed business, three research projects in the area of nonselective herbicides, its global digital farming business and business activities in the field of seed treatments. BASF is the intended purchaser of these assets.

The transactions are subject to regulatory approval as well as the successful closing of Bayer's acquisition of Monsanto. Bayer will continue to own, operate and maintain these businesses until the closing of these divestments.

On January 30, 2018, the Pharmaceuticals Division signed agreements to sell its MK Generics business in Central America and the Caribbean to Tecnoquímicas S.A. The business to be sold includes the Bonima production plant in El Salvador. The base purchase price is €44 million.

The assets and liabilities held for sale are presented below:

B 20

Assets and Liabilities Held for Sale

€ million	March 31, 2018
Goodwill	587
Other intangible assets	380
Property, plant and equipment	1,277
Other assets	334
Deferred taxes	135
Inventories	413
Cash and cash equivalents	6
Assets held for sale	**3,132**
Provisions for pensions and other post-employment benefits	37
Other provisions	44
Financial liabilities	15
Other liabilities	376
Deferred taxes	48
Liabilities directly related to assets held for sale	**520**

Financial instruments

The following table shows the carrying amounts and fair values of financial assets and liabilities by category of financial instrument under IFRS 9 and a reconciliation to the corresponding line items in the statements of financial position. Since the line items "Trade accounts receivable," "Other receivables" and "Other liabilities" contain both financial instruments and nonfinancial assets or liabilities (such as other tax receivables or advance payments for services to be received in the future), the reconciliation is shown in the column headed "Nonfinancial assets / liabilities."

The transition effects from the reclassification and remeasurement of financial assets upon the first-time application of IFRS 9 are detailed in the section "Financial reporting standards applied for the first time in 2018."

Carrying Amounts and Fair Values of Financial Instruments

March 31, 2018

	Measured at amortized cost	Measured at fair value (fair value for information [1])			Nonfinancial assets / liabilities	
€ million	Carrying amount	Based on quoted prices in active markets (Level 1) Carrying amount	Based on observable market data (Level 2) Carrying amount	Based on unobservable inputs (Level 3) Carrying amount	Carrying amount	Carrying amount in the statement of financial position
Trade accounts receivable	9,343				155	9,498
Measured at amortized cost	9,343					9,343
Nonfinancial assets					155	155
Other financial assets	322	2,930	4,958	842		9,052
Measured at amortized cost	322		(322)			322
Measured at fair value through profit or loss		2,655	4,371	775		7,801
Measured at fair value through OCI (no recycling)		275		53		328
Derivatives			587	14		601
Other receivables	313			50	1,201	1,564
Measured at amortized cost	313		(313)			313
Measured at fair value through profit or loss				50		50
Nonfinancial assets					1,201	1,201
Cash and cash equivalents	5,332					5,332
Measured at amortized cost	5,332		(5,332)			5,332
Total financial assets	**15,310**	**2,930**	**4,958**	**892**		**24,090**
of which measured at amortized cost	15,310					15,310
of which measured at fair value through profit or loss		2,655	4,371	825		7,851
Financial liabilities	12,656	1,179	199			14,034
Measured at amortized cost	12,656	(11,030)	(1,991)			12,656
Measured at fair value through profit or loss (nonderivative)		1,179				1,179
Derivatives			199			199
Trade accounts payable	3,943					3,943
Measured at amortized cost	3,943					3,943
Other liabilities	647		194	5	700	1,546
Measured at amortized cost	647		(647)			647
Measured at fair value through profit or loss (nonderivative)				5		5
Derivatives			194			194
Nonfinancial liabilities					700	700
Total financial liabilities	**17,246**	**1,179**	**393**	**5**		**18,823**
of which measured at amortized cost	17,246					17,246
of which measured at fair value through profit or loss (nonderivative)		1,179		5		1,184
of which derivatives			393			393

[1] Fair value of the financial instruments measured at amortized cost; the exemption provisions under IFRS 7.29(a) were applied for information on specific fair values.

The category “measured at amortized cost” within other financial assets and in financial liabilities also includes receivables and liabilities under finance leases in which Bayer is the lessor or lessee and which are therefore measured in accordance with IAS 17.

Due to the short maturities of most trade accounts receivable and payable, other receivables and liabilities, and cash and cash equivalents, their carrying amounts at the closing date do not significantly differ from the fair values.

The fair values of financial assets and liabilities measured at amortized cost that are given for information are the present values of the respective future cash flows. The present values are determined by discounting the cash flows at a closing-date interest rate, taking into account the term of the assets or liabilities and the creditworthiness of the counterparty. Where a market price is available, however, this is deemed to be the fair value.

The fair values of financial assets measured at fair value correspond to quoted prices in active markets (Level 1), or are determined using valuation techniques based on observable market data as of the end of the reporting period (Level 2) or are the present values of the respective future cash flows, determined on the basis of unobservable inputs (Level 3).

The fair values of derivatives for which no publicly quoted prices exist in active markets (Level 1) are determined using valuation techniques based on observable market data as of the end of the reporting period (Level 2). In applying valuation techniques, credit value adjustments are determined to allow for the contracting party’s credit risk.

Currency and commodity forward contracts are measured individually at their forward rates or forward prices on the closing date. These depend on spot rates or prices, including time spreads. The fair values of interest-rate hedging instruments and cross-currency interest-rate swaps were determined by discounting future cash flows over the remaining terms of the instruments at market rates of interest, taking into account any foreign currency translation as of the closing date.

Fair values measured using unobservable inputs are categorized within Level 3 of the fair value hierarchy. This applies to certain debt or equity instruments, in some cases to the fair values of embedded derivatives, and to obligations for contingent consideration in business combinations. Credit risk is frequently the principal unobservable input used to determine the fair values of debt instruments classified as measured at fair value by the discounted cash flow method. Here the credit spreads of comparable issuers are applied. A significant increase in credit risk could result in a lower fair value, whereas a significant decrease could result in a higher fair value. However, a relative change of 10% in the credit spread does not materially affect the fair value.

Embedded derivatives are separated from their respective host contracts, provided they are not financial instruments. Such host contracts are generally sale or purchase agreements relating to the operational business. The embedded derivatives cause the cash flows from the contracts to vary with exchange-rate or price fluctuations. The internal measurement of embedded derivatives is mainly performed using the discounted cash flow method, which is based on unobservable inputs. These include planned sales and purchase volumes, and prices derived from market data. Regular monitoring is carried out based on these fair values as part of quarterly reporting.

The financial liabilities arising from the debt instruments (exchangeable bond) issued in June 2017 that can be converted into Covestro shares are measured at fair value through profit or loss. This exchangeable bond is a hybrid financial instrument containing a debt instrument as a nonderivative host contract and multiple embedded derivatives.

The changes in the amount of financial assets and liabilities recognized at fair value based on unobservable inputs (Level 3) for each financial instrument category were as follows:

B 22

Development of Financial Assets and Liabilities (Level 3)

					2018
€ million	Financial assets at fair value through profit or loss	Financial assets at fair value through OCI (no recycling)	Derivatives (net)	Liabilities measured at fair value (non-derivative)	Total
Carrying amounts of net assets (net liabilities), January 1	**821**	**68**	**10**	**(7)**	**892**
Gains (losses) recognized in profit or loss	3	–	4	–	7
of which related to assets / liabilities recognized in the statements of financial position	3	–	4	–	7
Gains (losses) recognized outside profit or loss	–	(4)	–	–	(4)
Additions of assets (liabilities)	1	–	–	–	1
Settlements of (assets) liabilities	–	(1)	–	1	–
Transfers (IFRS 5)		(6)		1	(5)
Disposals from divestments / changes in scope of consolidation	–	(4)	–	–	(4)
Carrying amounts of net assets (net liabilities), March 31	**825**	**53**	**14**	**(5)**	**887**

The changes recognized in profit or loss were included in other operating income / expenses, as well as in the financial result in interest income and in other financial income and expenses.

The following table shows the carrying amounts and fair values of financial assets and liabilities by category of financial instrument as of December 31, 2017, under IAS 39.

B 23

Carrying Amounts and Fair Values of Financial Instruments

Dec. 31, 2017

	Measured at amortized cost	Measured at fair value (fair value for information [1])			Nonfinancial assets / liabilities	
€ million	Carrying amount	Based on quoted prices in active markets (Level 1) Carrying amount	Based on observable market data (Level 2) Carrying amount	Based on unobservable inputs (Level 3) Carrying amount	Carrying amount	**Carrying amount in the statement of financial position**
Trade accounts receivable	8,582					8,582
Loans and receivables	8,582					8,582
Other financial assets	1,823	452	2,085	803		5,163
Loans and receivables	1,731		(1,731)			1,731
Available-for-sale financial assets	35	448	1,452	793		2,728
Held-to-maturity financial assets	57		(58)			57
Derivatives		4	633	10		647
Other receivables	380			46	1,250	1,676
Loans and receivables	380		(380)			380
Available-for-sale financial assets				46		46
Nonfinancial assets					1,250	1,250
Cash and cash equivalents	7,581					7,581
Loans and receivables	7,581		(7,581)			7,581
Total financial assets	**18,366**	**452**	**2,085**	**849**		**21,752**
of which loans and receivables	18,274					18,274
of which available-for-sale financial assets	35	448	1,452	839		2,774
Financial liabilities	12,958	1,220	240			14,418
Measured at amortized cost	12,958	(11,327)	(2,183)			12,958
Measured at fair value (nonderivative)		1,220				1,220
Derivatives			240			240
Trade accounts payable	4,568				561	5,129
Measured at amortized cost	4,568					4,568
Nonfinancial liabilities					561	561
Other liabilities	681	2	319	7	1,759	2,768
Measured at amortized cost	681		(681)			681
Measured at fair value (nonderivative)				7		7
Derivatives		2	319			321
Nonfinancial liabilities					1,759	1,759
Total financial liabilities	**18,207**	**1,222**	**559**	**7**		**19,995**
of which measured at amortized cost	18,207					18,207
of which derivatives		2	559			561

[1] Fair value of the financial instruments measured at amortized cost; the exemption provisions under IFRS 7.29(a) were applied for information on specific fair values.

The following table shows the changes in the amounts of financial assets and liabilities recognized at fair value based on unobservable inputs (Level 3) for each financial instrument category for the comparative period under IAS 39:

B 24

Development of Financial Assets and Liabilities (Level 3)

	2017			
€ million	Available-for-sale financial assets	Derivatives (net)	Liabilities measured at fair value (non-derivative)	Total
Carrying amounts of net assets (net liabilities), January 1	**851**	**(8)**	**(8)**	**835**
Gains (losses) recognized in profit or loss	4	3	–	7
of which related to assets / liabilities recognized in the statements of financial position	4	3	–	7
Gains (losses) recognized outside profit or loss	(18)	–	–	(18)
Additions of assets (liabilities)	3	–	–	3
Settlements of (assets) liabilities	–	–	–	–
Carrying amounts of net assets (net liabilities), March 31	**840**	**(5)**	**(8)**	**827**

Contingent liabilities and other financial commitments

The Group's contingent liabilities amounted to €844 million as of March 31, 2018, and mainly comprised pending legal cases in several countries. Other financial liabilities totaling €52,260 million mainly resulted from the definitive merger agreement with Monsanto Company of September 14, 2016, that concerns a sum of €45,673 million and provides for Bayer's acquisition of all outstanding shares in Monsanto Company against a cash payment of US$128 per share.

Legal Risks

To find out more about the Bayer Group's legal risks, please see Note 32 to the consolidated financial statements in the Bayer Annual Report 2017, which can be downloaded free of charge at www.bayer.com. Since the Bayer Annual Report 2017, the following significant changes have occurred in respect of the legal risks:

Mirena™: As of April 13, 2018, lawsuits from approximately 3,100 users of Mirena™, an intrauterine system providing long-term contraception, had been served upon Bayer in the United States. Plaintiffs allege personal injuries resulting from the use of Mirena™, including perforation of the uterus, ectopic pregnancy or idiopathic intracranial hypertension, and seek compensatory and punitive damages. Additional lawsuits are anticipated. As of April 13, 2018, lawsuits from approximately 480 users of Mirena™ alleging idiopathic intracranial hypertension had been served upon Bayer in the United States.

In April 2018, the Master Settlement Agreement regarding the global settlement of the perforation cases for a total amount of US$12.2 million was executed. Bayer may withdraw from the agreement if fewer than 98% of those who are eligible choose to participate. As of April 13, 2018, a total of approximately 4,100 cases would be included in the settlement.

Xarelto™: As of April 13, 2018, U.S. lawsuits from approximately 23,200 recipients of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, had been served upon Bayer. Plaintiffs allege that users have suffered personal injuries from the use of Xarelto™, including cerebral, gastrointestinal or other bleeding and death, and seek compensatory and punitive damages. Additional lawsuits are anticipated. As of April 13, 2018, ten Canadian lawsuits relating to Xarelto™ seeking class action certification had been served upon Bayer.

Essure™: As of April 13, 2018, U.S. lawsuits from approximately 16,800 users of Essure™, a medical device offering permanent birth control with a nonsurgical procedure, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Essure™, including hysterectomy, perforation, pain, bleeding, weight gain, nickel sensitivity, depression and unwanted pregnancy, and seek compensatory and punitive damages. Additional lawsuits are anticipated. As of April 13, 2018, two Canadian lawsuits relating to Essure™ seeking class action certification had been served upon Bayer.

Class actions over neonicotinoids in Canada: In February 2018, a court in Quebec certified a class proposed by plaintiffs. Plaintiffs are honey producers in Quebec claiming damages and punitive damages and alleging Bayer and

another crop protection company were negligent in the design, development, marketing and sale of neonicotinoid pesticides.

Betaferon™ / Betaseron™: Since 2010, Bayer and Biogen Idec MA Inc. have been engaged in a dispute in the United States about the validity of a patent issued to Biogen and whether Bayer's production and distribution of Betaseron™ would infringe such patent. Betaseron™ is Bayer's drug product for the treatment of multiple sclerosis. In February 2018, a jury decided that Biogen's patent is invalid at the end of a trial regarding Biogen's claims against EMD Serono, Inc. and Pfizer Inc. for infringement of the same patent. Biogen has challenged the jury's verdict. Unless the jury's verdict is overturned, Biogen cannot assert its claims against Bayer.

Related parties

Related parties as defined in IAS 24 (Related Party Disclosures) are those legal entities and natural persons that are able to exert influence on Bayer AG and its subsidiaries or over which Bayer AG or its subsidiaries exercise control or joint control or have a significant influence. They include, in particular, nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, post-employment benefit plans and the corporate officers of Bayer AG.

Sales to related parties were not material from the viewpoint of the Bayer Group. Liabilities to joint ventures declined by €0.1 billion to €0.1 billion compared with December 31, 2017, and primarily pertained to the joint venture Casebia Therapeutics Limited Liability Partnership, Ascot, United Kingdom, which was established together with CRISPR Therapeutics AG, Basel, Switzerland.

Events After the End of the Reporting Period

Temasek subscribes to capital increase and acquires approximately 3.6% of Bayer

In April 2018, the investment company Temasek, Singapore, subscribed to 31 million new shares of Bayer, corresponding to around 3.6% of the increased capital stock, for total gross proceeds of €3 billion. The proceeds from this capital increase were used to reduce the syndicated credit facility arranged for financing the planned acquisition of Monsanto by US$ 3.7 billion to US$46 billion.

In light of the planned acquisition of Monsanto, Bayer signed an agreement to sell further Crop Science businesses to BASF on April 24, 2018. The businesses being divested include in particular the global vegetable seeds business, certain seed treatments, the research platform for wheat hybrids and certain glyphosate-based herbicides in Europe. In addition, three research projects in the field of total herbicides and Bayer's digital farming business will also be transferred. In return, Bayer will receive a back license for certain digital farming applications.

Leverkusen, April 26, 2018
Bayer Aktiengesellschaft

The Board of Management

The following review report (Bescheinigung nach prüferischer Durchsicht) has been issued in accordance with the German generally accepted standards for the review of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW) as well as in supplementary compliance with the International Standard on Review Engagements "Review of Interim Financial Information performed by the Independent Auditor of the Entity" (ISRE 2410) in German language on the German version on the condensed consolidated interim financial statements and the interim group management report (Konzernzwischenlagebericht) of Bayer Aktiengesellschaft as of and for the three months period ended March 31, 2018. The interim group management report is neither included nor incorporated by reference in this Prospectus.

Review Report

To Bayer Aktiengesellschaft, Leverkusen / Germany

We have reviewed the condensed interim consolidated financial statements – comprising the income statement and the statement of comprehensive income, the statement of financial position, the statement of cash flows, the condensed statement of changes in equity as well as selected explanatory notes to the financial statements – and the interim group management report for the period from 1 January until 31 March 2018 of Bayer Aktiengesellschaft, Leverkusen, that are part of the quarterly financial report under § 115 WpHG (Wertpapierhandelsgesetz: German Securities Trading Act). The preparation of the condensed interim consolidated financial statements in accordance with the International Financial Reporting Standards (IFRS) applicable to interim financial reporting as adopted by the EU and of the interim group management report in accordance with the requirements of the WpHG applicable to interim group management reports is the responsibility of the entity's Management Board. Our responsibility is to issue a report on the condensed interim consolidated financial statements and on the interim group management report based on our review.

We conducted our review of the interim consolidated financial statements and of the interim group management report in accordance with the German generally accepted standards for the review of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) as well as in supplementary compliance with the International Standard on Review Engagements *"Review of Interim Financial Information performed by the Independent Auditor of the Entity"* (ISRE 2410). Those standards require that we plan and perform the review such that we can preclude through critical evaluation, with a limited level of assurance, that the condensed interim consolidated financial statements have not been prepared, in all material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU, or that the interim group management report has not been prepared, in material respects, in accordance with the requirements of the WpHG applicable to interim group management reports. A review is limited primarily to inquiries of personnel of the entity and analytical assessments and therefore does not provide the assurance attainable in a financial statement audit. Since, in accordance with our engagement, we have not performed a financial statement audit, we cannot issue an auditor's report.

Based on our review, no matters have come to our attention that cause us to presume that the condensed interim consolidated financial statements of Bayer Aktiengesellschaft, Leverkusen, have not been prepared, in all material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU, or that the group management report has not been prepared, in material respects, in accordance with the requirements of the WpHG applicable to interim group management reports.

Munich, Germany, 27 April 2018

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

Heiner Kompenhans	Prof. Dr. Frank Beine
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

Audited Consolidated Financial Statements of Bayer AG as of and for Fiscal Year Ended December 31, 2017

Bayer Group Consolidated Income Statements

B 1

€ million	Note	2016	2017
Net sales	7	**34,943**	**35,015**
Cost of goods sold		(11,756)	(11,382)
Gross profit		**23,187**	**23,633**
Selling expenses	8	(11,148)	(11,116)
Research and development expenses	9	(4,405)	(4,504)
General administration expenses		(1,804)	(2,026)
Other operating income	10	787	864
Other operating expenses	11	(879)	(948)
EBIT [1]		**5,738**	**5,903**
Equity-method income (loss)	13.1	(6)	20
Financial income		149	289
Financial expenses		(1,108)	(1,635)
Financial result	13	**(965)**	**(1,326)**
Income before income taxes		**4,773**	**4,577**
Income taxes	14	(1,017)	(1,329)
Income from continuing operations after income taxes		**3,756**	**3,248**
of which attributable to noncontrolling interest		13	(1)
of which attributable to Bayer AG stockholders		3,743	3,249
Income from discontinued operations after income taxes	6.3	**1,070**	**4,846**
of which attributable to noncontrolling interest		282	759
of which attributable to Bayer AG stockholders		788	4,087
Income after income taxes		**4,826**	**8,094**
of which attributable to noncontrolling interest	15	295	758
of which attributable to Bayer AG stockholders (net income)		**4,531**	**7,336**
€			
Earnings per share	16		
From continuing operations	16		
Basic		4.50	3.73
Diluted		4.50	3.73
From discontinued operations	16		
Basic		0.94	4.68
Diluted		0.94	4.68
From continuing and discontinued operations	16		
Basic		5.44	8.41
Diluted		5.44	8.41

2016 figures restated

[1] For definition, see Combined Management Report, Chapter 2.4 “Alternative Performance Measures Used by the Bayer Group.”

Bayer Group Consolidated Statements of Comprehensive Income

B 2

€ million	Note	2016	2017
Income after income taxes		**4,826**	**8,094**
of which attributable to noncontrolling interest	15	295	758
of which attributable to Bayer AG stockholders		4,531	7,336
Remeasurements of the net defined benefit liability for post-employment benefit plans	25	(1,036)	1,236
Income taxes	14	228	(515)
Other comprehensive income from remeasurements of the net defined benefit liability for post-employment benefit plans		**(808)**	**721**
Other comprehensive income relating to associates accounted for using the equity method		**–**	**(44)**
Other comprehensive income that will not be reclassified subsequently to profit or loss		**(808)**	**677**
Changes in fair values of derivatives designated as cash flow hedges	30.3	58	(144)
Reclassified to profit or loss		3	3
Income taxes	14	(16)	53
Other comprehensive income from cash flow hedges		**45**	**(88)**
Changes in fair values of available-for-sale financial assets	20	65	(3)
Reclassified to profit or loss		–	(2)
Income taxes	14	(8)	3
Other comprehensive income from available-for-sale financial assets		**57**	**(2)**
Changes in exchange differences recognized on translation of operations outside the eurozone		703	(2,152)
Reclassified to profit or loss		(58)	–
Other comprehensive income from exchange differences		**645**	**(2,152)**
Other comprehensive income relating to associates accounted for using the equity method		**(14)**	**101**
Other comprehensive income that may be reclassified subsequently to profit or loss		**733**	**(2,141)**
Total other comprehensive income [1]		**(75)**	**(1,464)**
of which attributable to noncontrolling interest		(10)	(106)
of which attributable to Bayer AG stockholders		(65)	(1,358)
Total comprehensive income		**4,751**	**6,630**
of which attributable to noncontrolling interest		285	652
of which attributable to Bayer AG stockholders		4,466	5,978

[1] Total changes recognized outside profit or loss

Bayer Group Consolidated Statements of Financial Position

B 3

€ million	Note	Dec. 31, 2016	Dec. 31, 2017
Noncurrent assets			
Goodwill	17	16,312	14,751
Other intangible assets	17	13,567	11,674
Property, plant and equipment	18	13,114	7,633
Investments accounted for using the equity method	19	584	4,007
Other financial assets	20	1,281	1,634
Other receivables	23	583	400
Deferred taxes	14	6,350	4,915
		51,791	**45,014**
Current assets			
Inventories	21	8,408	6,550
Trade accounts receivable	22	10,969	8,582
Other financial assets	20	6,275	3,529
Other receivables	23	2,210	1,276
Claims for income tax refunds		676	474
Cash and cash equivalents		1,899	7,581
Assets held for sale	6.3	10	2,081
		30,447	**30,073**
Total assets		**82,238**	**75,087**
Equity	24		
Capital stock		2,117	2,117
Capital reserves		9,658	9,658
Other reserves		18,558	25,026
Equity attributable to Bayer AG stockholders		**30,333**	**36,801**
Equity attributable to noncontrolling interest		1,564	60
		31,897	**36,861**
Noncurrent liabilities			
Provisions for pensions and other post-employment benefits	25	11,134	8,020
Other provisions	26	1,780	1,366
Financial liabilities	27	16,180	12,483
Income tax liabilities		423	495
Other liabilities	29	957	1,116
Deferred taxes	14	1,330	1,153
		31,804	**24,633**
Current liabilities			
Other provisions	26	5,421	4,344
Financial liabilities	27	3,401	1,935
Trade accounts payable	28	6,410	5,129
Income tax liabilities		884	422
Other liabilities	29	2,421	1,652
Liabilities directly related to assets held for sale	6.3	–	111
		18,537	**13,593**
Total equity and liabilities		**82,238**	**75,087**

Bayer Group Consolidated Statements of Changes in Equity

B 4

€ million	Capital stock	Capital reserves	Retained earnings incl. net income	Exchange differences	Fair-value measurement of securities
Dec. 31, 2015	**2,117**	**6,167**	**16,581**	**(622)**	**24**
Equity transactions with owners					
Capital increase		3,491			
Dividend payments			(2,067)		
Other changes			129	53	
Other comprehensive income			(781)	614	57
Income after income taxes			4,531		
Dec. 31, 2016	**2,117**	**9,658**	**18,393**	**45**	**81**
Equity transactions with owners					
Capital increase					
Dividend payments			(2,233)		
Other changes			2,727		
Other comprehensive income			628	(1,915)	17
Income after income taxes			7,336		
Dec. 31, 2017	**2,117**	**9,658**	**26,851**	**(1,870)**	**98**

B 4 (continued)

€ million	Cash flow hedges	Revaluation surplus	**Equity attributable to Bayer AG stockholders**	Equity attributable to non-controlling interest	**Equity**
Dec. 31, 2015	**(23)**	**21**	**24,265**	**1,180**	**25,445**
Equity transactions with owners					
Capital increase			3,491		3,491
Dividend payments			(2,067)	(58)	(2,125)
Other changes		(4)	178	157	335
Other comprehensive income	45		(65)	(10)	(75)
Income after income taxes			4,531	295	4,826
Dec. 31, 2016	**22**	**17**	**30,333**	**1,564**	**31,897**
Equity transactions with owners					
Capital increase					
Dividend payments			(2,233)	(131)	(2,364)
Other changes		(4)	2,723	(2,025)	698
Other comprehensive income	(88)		(1,358)	(106)	(1,464)
Income after income taxes			7,336	758	8,094
Dec. 31, 2017	**(66)**	**13**	**36,801**	**60**	**36,861**

Bayer Group Consolidated Statements of Cash Flows

B 5

€ million	Note	2016	2017
Income from continuing operations after income taxes		3,756	3,248
Income taxes		1,017	1,329
Financial result		965	1,326
Income taxes paid		(1,701)	(1,821)
Depreciation, amortization and impairments		3,063	2,660
Change in pension provisions		(297)	(227)
(Gains) losses on retirements of noncurrent assets		(45)	(133)
Decrease (increase) in inventories		(78)	(293)
Decrease (increase) in trade accounts receivable		(385)	(18)
(Decrease) increase in trade accounts payable		310	265
Changes in other working capital, other noncash items		(170)	275
Net cash provided by (used in) operating activities from continuing operations		**6,435**	**6,611**
Net cash provided by (used in) operating activities from discontinued operations		2,654	1,523
Net cash provided by (used in) operating activities	33	**9,089**	**8,134**
Cash outflows for additions to property, plant, equipment and intangible assets		(2,578)	(2,366)
Cash inflows from sales of property, plant, equipment and other assets		111	241
Cash inflows from (outflows for) divestments		(18)	453
Cash outflows for noncurrent financial assets		(690)	(313)
Cash inflows from (outflows for) acquisitions less acquired cash		2	(158)
Interest and dividends received		89	168
Cash inflows from (outflows for) current financial assets		(5,645)	1,543
Net cash provided by (used in) investing activities	34	**(8,729)**	**(432)**
Capital contributions		3,300	–
Proceeds from shares of Covestro AG		–	3,717
Dividend payments		(2,126)	(2,364)
Issuances of debt		15,190	10,369
Retirements of debt		(15,920)	(12,848)
Interest paid including interest-rate swaps		(853)	(801)
Interest received from interest-rate swaps		59	69
Cash outflows for the purchase of additional interests in subsidiaries		–	(23)
Net cash provided by (used in) financing activities	35	**(350)**	**(1,881)**
Change in cash and cash equivalents due to business activities		**10**	**5,821**
Cash and cash equivalents at beginning of year		**1,859**	**1,899**
Change in cash and cash equivalents due to changes in scope of consolidation		3	–
Change in cash and cash equivalents due to exchange rate movements		27	(139)
Cash and cash equivalents at end of year		**1,899**	**7,581**

2016 figures restated

Notes to the Consolidated Financial Statements of the Bayer Group

1. Key data by segment

B 1/1

Key Data by Segment

	Pharmaceuticals		Consumer Health		Crop Science		Animal Health	
€ million	2016	2017	2016	2017	2016	2017	2016	2017
Net sales (external)	16,420	16,847	6,037	5,862	9,915	9,577	1,523	1,571
Change [1]	+ 7.3%	+ 2.6%	– 0.6%	– 2.9%	– 2.1%	– 3.4%	+ 2.2%	+ 3.2%
Currency-adjusted change [1]	+ 8.7%	+ 4.3%	+ 3.5%	– 1.7%	+ 0.2%	– 2.2%	+ 4.8%	+ 4.1%
Intersegment sales	29	38	5	14	36	38	10	8
Net sales (total)	16,449	16,885	6,042	5,876	9,951	9,610	1,533	1,579
EBIT [1]	3,389	4,325	695	518	1,755	1,235	313	307
EBIT before special items [1]	3,947	4,665	987	818	1,898	1,643	320	338
EBITDA before special items [1]	5,251	5,711	1,411	1,231	2,421	2,043	349	381
ROCE [1]	16.2%	21.0%	3.5%	2.7%	12.9%	9.6%	63.5%	47.1%
Net cash provided by operating activities	3,368	3,867	874	1,059	2,071	1,884	193	209
Equity-method income (loss)	–	1	2	1	(1)	(1)	–	–
Equity-method carrying amounts [2]	3	3	11	11	15	35	–	–
Assets [2]	22,173	21,753	16,558	14,896	14,868	13,106	838	935
Capital expenditures [2]	851	1,126	220	181	773	670	39	41
Depreciation, amortization and impairments	1,695	1,251	601	627	525	481	30	45
of which impairment losses	464	217	175	213	52	72	1	9
of which impairment loss reversals	–	–	–	–	–	(1)	(1)	–
Research and development expenses	2,787	2,888	259	240	1,164	1,166	140	155

[1] For definition, see Combined Management Report, Chapter 2.4 “Alternative Performance Measures Used by the Bayer Group.”
[2] 2016 Group total including Covestro

Key Data by Segment

	All Other Segments		Reconciliation: Corporate Functions and Consolidation		Group	
€ million	2016	2017	2016	2017	2016	2017
Net sales (external)	1,042	1,142	6	16	34,943	35,015
Change [1]	– 5.0%	+ 9.6%	+50.0%	+166.7%	+ 2.5%	+ 0.2%
Currency-adjusted change [1]	– 4.2%	+ 10.5%	–	–	+ 4.7%	+ 1.6%
Intersegment sales	1,356	2,324	(1,436)	(2,417)	–	–
Net sales (total)	2,398	3,466	(1,430)	(2,401)	34,943	35,015
EBIT [1]	(50)	4	(364)	(486)	5,738	5,903
EBIT before special items [1]	18	115	(344)	(449)	6,826	7,130
EBITDA before special items [1]	224	358	(338)	(436)	9,318	9,288
ROCE [1]	–	–	–	–	10.3%	10.8%
Net cash provided by operating activities	503	256	(574)	(664)	6,435	6,611
Equity-method income (loss)	–	–	(7)	19	(6)	20
Equity-method carrying amounts [2]	–	–	325	3,958	584	4,007
Assets [2]	2,632	2,206	15,986	22,191	82,238	75,087
Capital expenditures [2]	307	359	18	41	2,627	2,418
Depreciation, amortization and impairments	206	243	6	13	3,063	2,660
of which impairment losses	7	2	–	–	699	513
of which impairment loss reversals	–	–	–	–	(1)	(1)
Research and development expenses	39	3	16	52	4,405	4,504

2016 figures restated

[1] For definition, see Combined Management Report, Chapter 2.4 “Alternative Performance Measures Used by the Bayer Group.”

[2] 2016 Group total including Covestro

2. General information

The consolidated financial statements of the Bayer Group as of December 31, 2017, were prepared by Bayer Aktiengesellschaft (Bayer AG) according to the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), London, United Kingdom, in effect at the end of the reporting period, and the interpretations of the IFRS Interpretations Committee (IFRS IC) as endorsed by the European Union. The applicable further requirements of Section 315e of the German Commercial Code were also taken into account.

Bayer AG (which is entered in the commercial register of the Local Court of Cologne, Germany, HRB 48248) is a global enterprise based in Germany. Its registered office is at Kaiser-Wilhelm-Allee 1, 51368 Leverkusen. Its material business activities in the fields of health care and agriculture took place in the reporting period in the Pharmaceuticals, Consumer Health, Crop Science and Animal Health segments. The activities of each segment are outlined in Note 5.

The declarations required under Section 161 of the German Stock Corporation Act concerning the German Corporate Governance Code have been issued and made available to stockholders.

The Board of Management of Bayer AG prepared the consolidated financial statements of the Bayer Group on February 20, 2018. They were discussed by the Audit Committee of the Supervisory Board of Bayer AG at its meeting on February 26, 2018, and approved by the Supervisory Board at its plenary meeting on February 27, 2018.

In the income statement and statement of comprehensive income, statement of financial position, statement of cash flows and statement of changes in equity, certain items are combined for the sake of clarity. These are explained in the Notes. The income statement is prepared using the cost-of-sales method. Assets and liabilities are classified by maturity. They are regarded as current if they mature within one year or within the normal business cycle of the company or the Group, or are held for sale. The normal business cycle is defined for this purpose as beginning with the procurement of the resources necessary for the production process and ending with the receipt of cash or cash equivalents as consideration for the sale of the goods or services produced in that process. Inventories and trade accounts receivable and payable are always presented as current items. Deferred tax assets and liabilities and pension provisions are always presented as noncurrent items.

The consolidated financial statements of the Bayer Group are drawn up in euros. Amounts are stated in millions of euros (€ million) except where otherwise indicated.

The financial statements of the individual consolidated companies are prepared as of the closing date of the Group financial statements.

3. Effects of new financial reporting standards

Financial reporting standards applied for the first time in 2017

The first-time application of the following amended financial reporting standards had no impact, or no material impact, on the presentation of Bayer's financial position or results of operations, or on earnings per share.

In January 2016, the IASB published amendments to IAS 7 (Statement of Cash Flows) under the title "Amendments to IAS 7: Disclosure Initiative." The following changes in liabilities arising from financing activities must be disclosed: (a) changes from financing cash flows; (b) changes arising from obtaining or losing control of subsidiaries or other businesses; (c) the effect of changes in foreign exchange rates; (d) changes in fair values; (e) other changes.

In January 2016, the IASB also published amendments to IAS 12 (Income Taxes) under the title "Recognition of Deferred Assets for Unrealised Losses." These amendments basically clarify that in the case of assets recognized at fair value (e.g. fixed-rate debt instruments) where the taxable value is the cost of acquisition, unrealized losses result in deductible temporary differences, irrespective of the future use of the asset. Further, when estimating future taxable profits for the purpose of recognizing deferred tax assets, the tax deductions resulting from the reversal of other deductible temporary differences must be eliminated.

In December 2016, the IASB published "Annual Improvements to IFRS Standards 2014 - 2016 Cycle" as part of its annual improvements project. The changes relating to IFRS 12 (Disclosure of Interest in Other Entities) primarily pertain to clarifications.

Published financial reporting standards that have not yet been applied

The IASB and the IFRS Interpretations Committee have issued the following standards, amendments to standards, and interpretations whose application was not yet mandatory for the 2017 fiscal year, or for which the European Union had not yet completed the endorsement process. The application of these standards and amendments is conditional upon their endorsement by the European Union.

IFRS 9 (Financial Instruments) is the new standard for accounting for financial instruments that is to be applied for annual reporting periods beginning on or after January 1, 2018. It was endorsed by the European Union in November 2016.

Bayer will apply IFRS 9 retrospectively, accounting for the aggregate amount of any transition effects by way of an adjustment to equity as of January 1, 2018, and presenting the comparative period in line with previous rules. IFRS 9 introduces new provisions for the classification and measurement of financial assets and replaces the current rules on the impairment of financial assets. The new standard requires a change in accounting methods for the effects resulting from a change in the company's own credit risk for financial liabilities classified at fair value and modifies the requirements for hedge accounting. The classification and measurement of financial liabilities is otherwise largely unchanged from the existing regulations.

Under IFRS 9, the classification and measurement of financial assets is determined by the company's business model and the characteristics of the cash flows of each financial asset. As at the transition date, these changes in the classification of financial assets will not have any material impact on the presentation of the Group's financial position and results of operations. In the case of equity instruments held as of January 1, 2018, that are not held for trading, Bayer will uniformly opt to recognize future changes in their fair value through other comprehensive income in the statement of comprehensive income and to continue to classify these as equity upon the derecognition of the financial instrument.

Furthermore, IFRS 9 will lead to an increase in the loss allowance for expected credit losses on financial assets, including trade accounts receivable. Loss allowances for expected credit losses on trade accounts receivable will increase by an amount in the region of approximately €95 million. As at the transition date, the measurement effects for other financial assets will be immaterial.

In the future, changes in the fair values of financial liabilities measured at fair value through profit or loss resulting from Bayer's own credit risk will be recognized through other comprehensive income in the statement of comprehensive

income rather than in the income statement. At Bayer, this change principally affects the debt instruments (exchangeable bond) issued in June 2017, which also can be exchanged into Covestro shares. As at the transition date, this change will not have any material effects on these items.

For hedge accounting, Bayer is opting to prospectively apply IFRS 9 from January 1, 2018. If only the intrinsic value of an option is designated as a hedging instrument in a hedging relationship, IFRS 9 requires that changes in the fair value of the time value of the options during the hedging period initially be recognized as other comprehensive income in the statement of comprehensive income. Subsequent measurement depends on the type of hedged transaction. In contrast to the other rules on hedge accounting, the revised accounting method is to be applied retrospectively. As at the transition date, these changes will not have any material impact on the presentation of the Group's financial position and results of operations.

The IASB issued IFRS 15 (Revenues from Contracts with Customers) in May 2014 and provided clarifications to the standard in April 2016. Both the standard and the clarifications have been endorsed by the European Union. IFRS 15 replaces the current IAS 18 (Revenue) and IAS 11 (Construction Contracts) revenue recognition standards and the related interpretations, and is applicable for annual reporting periods beginning on or after January 1, 2018. The new standard establishes a five-step model related to revenue recognition from contracts with customers. Under IFRS 15, revenue is recognized at amounts that reflect the consideration that an entity expects to be entitled to in exchange for transferring goods or services to a customer. Revenue is recognized when (or as) the entity transfers control of goods or services to a customer either over time or at a point in time. In addition, IFRS 15 clarifies the allocation of individual topics to (new) line items in the statement of financial position and to functional cost items in the income statement, and whether gross or net amounts are to be presented.

Bayer will implement IFRS 15 on the basis of the modified retrospective method, accounting for the aggregate amount of any transition effects by way of an adjustment to retained earnings as of January 1, 2018, and presenting the comparative period in line with previous rules. All of the established business models for the Bayer Group were examined in the course of the implementation project. The previous assessment that the new standard is not expected to materially affect the timing of revenue recognition for the transactions concerned or their components was confirmed. With regard to total Group sales, there are indications of immaterial transition effects specifically due to the different accounting for milestone payments in connection with right-to-access licenses and the recognition of revenues from trademark rights divested in the past. This is likely to result in an immaterial increase in retained earnings on the transition date as explained in greater detail below:

- IFRS 15 requires catch-up adjustments to revenue when milestone payments for right-to-access licenses become unconstrained leading to earlier revenue recognition. This change is expected to result in an increase in retained earnings and a decrease in contract liabilities (currently presented as deferred income in other liabilities) by roughly €100 million on January 1, 2018. This would translate into a decrease of less than 0.1% in annual net sales and less than 0.3% in annual EBIT through 2027 in the Pharmaceuticals segment as measured in relation to the segment's current figures. These effects are presented before deferred taxes.
- IFRS 15 in conjunction with IAS 38 (Intangible Assets) generally requires the recognition of the purchase price related to a brand divestment net of associated carrying amounts in other operating income or expenses upon control transfer. Some cases have been identified where the purchase price was deferred under former policy in line with IAS 18, but would have been recognized in income earlier under IFRS 15, leading to an expected increase in retained earnings and an expected decrease in contract liabilities (currently presented as deferred income in other liabilities) by roughly €30 million on the date of transition. This would translate into a decrease of less than 1.2% and 0.2% in annual net sales and less than 6.2% and 1% in annual EBIT in 2018 and 2019, respectively, for the Animal Health segment as measured in relation to the segment's current figures. For the Pharmaceuticals segment, this would lead to a decrease of less than 0.04% in annual net sales and less than 0.2% in annual EBIT in 2018 as measured in relation to the segment's current figures. These effects are presented before deferred taxes.

At the time these consolidated financial statements were finalized, Bayer had not fully concluded its analysis of the impact IFRS 15 will have on the sale of goods for which it also organizes transportation services. However, preliminary analyses have not revealed any material effects. Line items added to the statement of financial position through IFRS 15, and the corresponding allocation rules, will give rise to presentational changes within the statement of financial position. Overall, based on current knowledge, we do not anticipate any material effects on the results of operations or on earnings per share.

In January 2016, the IASB issued IFRS 16 (Leases), the new standard for lease accounting, which will replace IAS 17. IFRS 16 introduces a uniform lease accounting model for lessees, requiring recognition of a right-of-use asset and a

liability for all leases with a term of more than 12 months unless such leases are immaterial. It will eliminate the current requirement for lessees to classify lease contracts as either operating leases – without recognizing the respective assets or liabilities – or as finance leases. As in the previous standard, IAS 17, lessors still have to differentiate between finance and operating leases. Companies in the Bayer Group mainly act as lessees. The application of IFRS 16 is expected to impact Bayer's financial position and results of operations as follows: Instead of the minimum lease payments arising from operating leases currently recognized under other financial commitments, application of IFRS 16 will increase noncurrent assets by requiring the recognition of rights of use. Similarly, financial liabilities will be increased by recognition of the corresponding lease liabilities. In the statement of comprehensive income, the amortization of rights of use and the interest expense for the liabilities will be recognized in place of the expenses for operating leases. In the statement of cash flows, IFRS 16 will probably result in an improvement in the operating cash flow by reducing cash flows for operating activities, while the repayment component of lease payments and the interest expense will be recognized in the financing cash flow. The new standard is to be applied for annual periods beginning on or after January 1, 2019. It was endorsed by the European Union in October 2017. A Group-wide project is steering the implementation of this new standard. Bayer is currently evaluating the quantitative impacts the amendments will have on the presentation of its financial position and results of operations. In this connection, we refer to the other financial commitments from operating leases reported in Note 31.

In June 2016, the IASB published an amendment to IFRS 2 (Share-based Payment) under the title "Classification and Measurement of Share-based Payment Transactions." This amendment provides guidance on certain accounting issues relating to cash-settled share-based payments. For example, the fair value of the equity instruments is not to be adjusted for service conditions or non-market-based performance conditions. Instead, these are to be taken into account by adjusting the number of equity instruments expected to vest. The amendment is to be applied for annual periods beginning on or after January 1, 2018. It has not yet been endorsed by the European Union. The changes are not expected to have a material impact on the presentation of Bayer's financial position or results of operations.

In September 2016 the IASB published an amendment to IFRS 4 (Insurance Contracts) under the title "Applying IFRS 9 'Financial Instruments' with IFRS 4 'Insurance Contracts'." These amendments aim to mitigate the impact of the different dates of first-time application of IFRS 9 and IFRS 17, the successor to IFRS 4, especially at companies with extensive insurance business. It introduces two optional approaches which insurers can use provided that certain conditions are fulfilled: the overlay approach and temporary exemption. The amendment is to be applied for annual periods beginning on or after January 1, 2018. It was endorsed by the European Union in November 2017. The changes are not expected to have a material impact on the presentation of Bayer's financial position or results of operations.

In December 2016, the IASB published an amendment to IAS 40 (Investment Property) under the title "Transfers of Investment Property." This specifies that a property may only be transferred to or from the investment property classification when there has been an actual change in use and not when there is a mere change of intent concerning the property. The amendment is to be applied for annual periods beginning on or after January 1, 2018. It has not yet been endorsed by the European Union. The changes are not expected to have a material impact on the presentation of Bayer's financial position or results of operations.

In December 2016, the IASB published "Annual Improvements to IFRS Standards 2014-2016 Cycle" as part of its annual improvements project. The amendments relate to IFRS 1 (First Time Adoption of IFRS), IFRS 12 (Disclosure of Interest in Other Entities) and IAS 28 (Investments in Associates and Joint Ventures). They mainly contain clarifications on the scope of application and other matters. The amendments to IFRS 1 and IAS 28 are to be applied for annual periods beginning on or after January 1, 2018. The amendments were endorsed by the European Union in February 2018. The changes are not expected to have a material impact on the presentation of Bayer's financial position or results of operations.

In December 2016, the IASB published the IFRIC Interpretation 22 (Foreign Currency Transactions and Advance Consideration) relating to IAS 21 (The Effects of Changes in Foreign Exchange Rates). The Interpretation clarifies that the assets, income and expenses accounted for following a foreign currency transaction are to be translated at the same exchange rate as any related receipts or payments of advance consideration. IFRIC 22 is to be applied for annual periods beginning on or after January 1, 2018. It has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In May 2017, the IASB published IFRS 17 (Insurance Contracts), which will replace IFRS 4. Its scope comprises insurance contracts, reinsurance contracts and investment contracts with discretionary participation features. IFRS 17 is to be applied for annual periods beginning on or after January 1, 2021. The amendments have not yet been

endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In June 2017, the IASB published IFRIC Interpretation 23 (Uncertainty over Income Tax Treatments) to clarify uncertainty relating to the accounting treatment of income taxes. IFRIC 23 is to be applied for annual periods beginning on or after January 1, 2019. It has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In October 2017, the IASB published an amendment to IFRS 9 (Financial Instruments) under the title "Prepayment Features with Negative Compensation." This addresses the treatment of symmetrical rights to terminate a contract to allow measurement of financial assets at amortized cost or at fair value through comprehensive income. In addition, it contains clarification on the modification of financial liabilities that does not result in derecognition. The amendment to IFRS 9 is to be applied for annual periods beginning on or after January 1, 2019. It has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In October 2017, the IASB published an amendment to IAS 28 (Investments in Associates and Joint Ventures) under the title "Long-term Interests in Associates and Joint Ventures." This clarifies that a company is required to apply IFRS 9 (Financial Instruments), including its impairment rules, to long-term interests in associates and joint ventures that, in substance, form part of the net investment in the associate or joint venture and to which the equity method is not applied. The application of IFRS 9 thus takes precedence over IAS 28. The amendment to IAS 28 is to be applied for annual periods beginning on or after January 1, 2019. It has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In December 2017, the IASB published "Annual Improvements to IFRS Standards 2015-2017 Cycle" as part of its annual improvements project. The amendments relate to IFRS 3 (Business Combinations), IFRS 11 (Joint Arrangements), IAS 12 (Income Taxes) and IAS 23 (Borrowing Costs). They principally comprise clarifications. The amendments are to be applied for annual periods beginning on or after January 1, 2019. Earlier application is permitted. The amendments have not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In February 2018, the IASB published amendments to IAS 19 (Employee Benefits). These amendments relate to how a company accounts for a defined benefit plan when a change – an amendment, curtailment or settlement – takes place, and require a company to remeasure its net defined benefit liability or asset when said change occurs. They also require a company to use the updated acturial assumptions from this remeasurement to determine current service cost and net interest for the remainder of the reporting period after the change to the plan. The amendments also include clarifications regarding the related effects on determining the asset ceiling. The amendments are to be applied for annual reporting periods beginning on or after January 1, 2019. Early application is permissable. They have not yet been endorsed by the European Union. Bayer will evaluate the impact the amendments will have on the presentation of its financial position and results of operations.

4. Basic principles, methods and critical accounting estimates

The financial statements of the consolidated companies are prepared according to uniform accounting policies and measurement principles.

The consolidated financial statements of the Group are based on the principle of the historical cost of acquisition, construction or production, with the exception of the items reflected at fair value, such as for example, financial assets held for trading or available for sale, derivatives, and liabilities for which Bayer has made use of the fair value option.

In preparing the consolidated financial statements, the management has to make certain assumptions and estimates that may substantially impact the presentation of the Group's financial position and / or results of operations.

Such estimates, assumptions or the exercise of discretion mainly relate to the useful life of noncurrent assets, the discounted cash flows used for impairment testing and purchase price allocations, and the recognition of provisions, including those for litigation-related expenses, pensions and other benefits, taxes, environmental compliance and remediation costs, sales allowances, product liability and guarantees. Essential estimates and assumptions that may affect reporting in the various item categories of the financial statements are described in the following sections of this Note. Estimates are based on historical experience and other assumptions that are considered reasonable under given circumstances. They are continually reviewed but may vary from the actual values.

Changes in accounting policies or measurement principles in light of new or revised standards are generally applied in line with the options permitted within the respective standard. Depending on the option that Bayer makes use of, the income statement for the previous year and the opening statement of financial position for that year are adjusted where necessary. For detailed information on standards to be applied for the first time from January 1, 2018, please see Note 3.

Consolidation

The consolidated financial statements include subsidiaries, joint operations, joint ventures and associates.

Subsidiaries are companies over which Bayer AG is currently able to exercise power by virtue of existing rights. Power means the ability to direct the relevant activities that significantly affect a company's profitability. Control is therefore only deemed to exist if Bayer AG is exposed, or has rights, to variable returns from its involvement with a company and has the ability to use its power over that company to affect the amount of that company's returns. The ability to control another company generally derives from Bayer AG's direct or indirect ownership of a majority of the voting rights. In the case of structured entities, however, control is based on contractual agreements. Inclusion of an entity's accounts in the consolidated financial statements begins when the Bayer Group is able to exercise control over the entity and ceases when it is no longer able to do so.

Joint operations and joint ventures are based on joint arrangements. A joint arrangement is deemed to exist if the Bayer Group through a contractual agreement jointly controls activities managed with a third party. Joint control is only deemed to exist if decisions regarding the relevant activities require the unanimous consent of the parties sharing control. A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. The Bayer Group recognizes the share of assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with its rights and obligations.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint ventures are accounted for using the equity method.

Associates are companies over which Bayer AG exerts significant influence, generally through an ownership interest between 20% and 50%. They also are accounted for using the equity method. In addition, Bayer AG can generally exert significant influence on companies in which it holds an interest of below 20% when it has representation in that company's supervisory body.

The carrying amount of a company accounted for using the equity method is adjusted annually by the percentage of any change in its equity corresponding to Bayer's percentage interest in the company. Differences arising upon first-time inclusion using the equity method are accounted for according to full-consolidation principles. Bayer's share of changes – recognized in profit or loss – in these companies' equities, impairment losses recognized on goodwill, and gains and losses from the sale of investments accounted for using the equity method, are reflected in equity-method income / loss.

Interests in subsidiaries, joint ventures and associates that do not have a material impact on the Group's financial position or results of operations, either individually or in aggregate, are accounted for at cost of acquisition less any impairment losses.

Foreign currency translation

The financial statements of the individual companies for inclusion in the consolidated financial statements are prepared in their respective functional currencies. A company's functional currency is that of the economic environment in which it primarily generates and expends cash. The majority of consolidated companies carry out their activities autonomously from a financial, economic and organizational point of view, and their functional currencies are therefore the respective local currencies.

In the consolidated financial statements, the assets and liabilities of companies that do not use the euro as their functional currency at the start and end of the year are translated into euros at closing rates. All changes occurring during the year and all income and expense items and cash flows are translated into euros at average monthly rates. Equity components are translated at the historical exchange rates prevailing at the respective dates of their first-time recognition in Group equity.

The exchange differences arising between the resulting amounts and those obtained by translating at closing rates are recognized outside profit or loss as "Exchange differences on translation of operations outside the eurozone" (in other comprehensive income) or presented as "Exchange differences" in the tables in the Notes. When a company is deconsolidated or the net investment in a foreign operation is reduced, such exchange differences are reclassified from equity to profit or loss.

The exchange rates for major currencies against the euro varied as follows:

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Exchange Rates for Major Currencies

		Closing rate		Average rate	
€1/		2016	2017	2016	2017
BRL	Brazil	3.43	3.98	3.84	3.59
CAD	Canada	1.42	1.51	1.47	1.46
CHF	Switzerland	1.07	1.17	1.09	1.11
CNY	China	7.35	7.81	7.36	7.61
GBP	United Kingdom	0.86	0.89	0.82	0.88
JPY	Japan	123.36	135.01	120.06	126.39
MXN	Mexico	21.78	23.66	20.62	21.28
RUB	Russia	64.30	69.41	73.79	65.71
USD	United States	1.05	1.20	1.11	1.13

In 2017, as in prior years, the rules of IAS 29 (Financial Reporting in Hyperinflationary Economies) were relevant for Bayer S.A., Venezuela. Gains and losses incurred upon adjusting the carrying amounts of nonmonetary assets and liabilities and of items in the income statement for inflation are recognized in other operating income and expenses.

Starting in January 2016, foreign currency translation and valuation were switched to the "hyperinflation-adjusted" SIMADI exchange rate. This is determined internally because reliable exchange rates are not available externally. It was initially based on the official SIMADI rate and has subsequently been adjusted in line with published inflation rates. The exchange rate thus calculated was VEF 74,258 to the U.S. dollar at the end of December 2017 (2016: VEF 2,737 to the U.S. dollar). The resulting U.S. dollar amounts were then translated at the dollar / euro closing-date rate.

Receivables from the Venezuelan exchange control authority relating to the allocation of U.S. dollars at a preferential exchange rate are impaired to zero as soon as they are posted.

Foreign currency measurement

In the separate financial statements of the individual consolidated companies, monetary items, such as receivables and liabilities, that are denominated in currencies other than the respective functional currency are measured at closing rates. Related exchange differences are recognized in profit or loss as exchange gains or losses under other financial income or expenses.

Net sales and other operating income

All revenues derived from the selling of products or rendering of services or from licensing agreements are recognized as sales. Other operational revenues are recognized as other operating income. Sales are recognized in profit or loss when the significant risks and rewards of ownership of the goods have been transferred to the customer, the company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold, the amount of revenue and costs incurred or to be incurred can be measured reliably, and it is sufficiently probable that the economic benefits associated with the transaction will flow to the company.

Sales are stated net of sales taxes, other taxes and sales deductions at the fair value of the consideration received or to be received. Sales deductions are estimated amounts for rebates, cash discounts and product returns. They are deducted at the time the sales are recognized, and appropriate provisions are recorded. Sales deductions are estimated primarily on the basis of historical experience, specific contractual terms and future expectations of sales development. It is unlikely that factors other than these could materially affect sales deductions in the Bayer Group.

Provisions for rebates in 2017 amounted to 6.1% of total net sales (2016: 5.5%). In addition to rebates, Group companies offer cash discounts for prompt payment in some countries. Provisions for cash discounts as of December 31, 2017, and December 31, 2016, were less than 0.1% of total net sales for the respective year.

Sales are reduced by the amount of the provisions for expected returns of defective goods or of saleable products that may be returned under contractual arrangements. The net sales are reduced on the date of sale or on the date when the amount of future product returns can be reasonably estimated. Provisions for product returns in 2017 amounted to 0.6% of total net sales (2016: 0.6%). If future product returns cannot be reasonably estimated and are significant to a sales transaction, the revenues and the related cost of sales are deferred until a reasonable estimate can be made or the right to return the goods has expired.

Some of the Bayer Group's revenues are generated on the basis of licensing agreements under which third parties have been granted rights to products and technologies. Payments received, or expected to be received, that relate to the sale or out-licensing of technologies or technological expertise are recognized in profit or loss as of the effective date of the respective agreement if all rights relating to the technologies and all obligations resulting from them have been relinquished under the contract terms. However, if rights to the technologies continue to exist or obligations resulting from them have yet to be fulfilled, the payments received are deferred accordingly. Upfront payments and similar nonrefundable payments received under these agreements are recorded as other liabilities and recognized in profit or loss according to the degree of performance over the estimated performance period stipulated in the agreement.

License agreements and research and development collaboration agreements may be multiple-deliverable arrangements with varying consideration terms, such as upfront, milestone or similar payments. Such agreements therefore have to be assessed to determine whether the revenues allocated to individual deliverables must be recognized at different points in time and therefore form separate units of account.

To qualify as a separate unit of account for revenue recognition purposes, a deliverable must have value to the licensee on a standalone basis. If this is not the case, the agreement as a whole or a combination of individual deliverables that has value on a standalone basis forms a unit of account.

If necessary goods have yet to be delivered or necessary services provided for a unit of account and such delivery or provision is probable, nonrefundable (royalty) payments already received are recognized through profit or loss over the periods in which these goods are delivered or these services are provided.

Income may also arise from the exchange of intangible assets. The amount recognized is generally based on the fair value of the asset received plus (less) any cash received (dispersed).

Research and development expenses

For accounting purposes, research expenses are defined as costs incurred for current or planned investigations undertaken with the prospect of gaining new scientific or technical knowledge and understanding. Development expenses are defined as costs incurred for the application of research findings or specialist knowledge to plans or designs for the production, provision or development of new or substantially improved products, services or processes, respectively, prior to the commencement of commercial production or use.

Research and development expenses are incurred in the Bayer Group for in-house research and development activities as well as numerous research and development collaborations and alliances with third parties.

Research and development expenses mainly comprise the costs for active ingredient discovery, clinical studies, research and development activities in the areas of application technology and engineering, field trials, regulatory approvals and approval extensions.

Research costs cannot be capitalized. The conditions for capitalization of development costs are closely defined: a key precondition for recognition of an intangible asset is that it is sufficiently certain that the development activity will generate future cash flows that will cover the associated development costs. Since our own development projects are often subject to regulatory approval procedures and other uncertainties, the conditions for the capitalization of costs incurred before receipt of approvals are not normally satisfied.

In the case of research and development collaborations, a distinction is generally made between payments on contract signature, upfront payments, milestone payments and cost reimbursements for work performed. If an

intangible asset (such as the right to the use of an active ingredient) is acquired in connection with any of these payment obligations, the respective payment is capitalized even if it is uncertain whether further development work will ultimately lead to the production of a saleable product. Reimbursements of the cost of research or development work are recognized in profit or loss, except where they are required to be capitalized.

Income taxes

Income taxes comprise the taxes levied on taxable income in the individual countries along with changes in deferred tax assets and liabilities that are recognized in profit or loss. The income taxes recognized are reflected at the amounts likely to be payable under the statutory regulations in force, or already enacted in relation to future periods, at the end of the reporting period.

Complex tax regulations may give rise to uncertainties with respect to their interpretation and the amounts and timing of future taxable income. Given the wide range of international business relationships and the long-term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate adjustments to tax income and expense in future periods. The Group establishes provisions for taxes, based on reasonable estimates, for liabilities to the tax authorities of the respective countries that are uncertain as to their amount and the probability of their occurrence. The amount of such provisions is based on various factors, such as experience with previous tax audits and differing legal interpretations by the taxable entity and the responsible tax authority.

In compliance with IAS 12 (Income Taxes), deferred taxes are recognized for temporary differences between the carrying amounts of assets and liabilities in the statement of financial position prepared according to IFRS and their tax bases. Deferred taxes are also recognized for consolidation measures and for loss carryforwards, interest carryforwards and tax credits that are likely to be usable.

Deferred tax assets relating to deductible temporary differences, tax credits, loss carryforwards and interest carryforwards are recognized where it is sufficiently probable that taxable income will be available in the future to enable them to be used. Deferred tax liabilities are recognized on temporary differences taxable in the future. Deferred taxes are calculated at the rates which – on the basis of the statutory regulations in force, or already enacted in relation to future periods, as of the closing date – are expected to apply in the individual countries at the time of realization. Deferred tax assets and deferred tax liabilities are offset if they relate to income taxes levied by the same taxation authority and Bayer has a legal right to settle on a net basis. Material effects of changes in tax rates or tax law on deferred tax assets and liabilities are generally accounted for in the period in which the changes are enacted. Such effects are recognized in profit or loss except where they relate to deferred taxes that were recognized outside profit or loss, in which case they are recognized in other comprehensive income or directly in equity.

Deferred and current taxes are recognized in profit or loss unless they relate to items recognized outside profit or loss, in which case they, too, are recognized in other comprehensive income or directly in equity.

The probability that deferred tax assets resulting from temporary differences, loss carryforwards or interest carryforwards can be used in the future is the subject of forecasts by the individual consolidated companies regarding their future earnings situation and other parameters.

Deferred tax liabilities are recognized on planned dividend payments by subsidiaries. Where no dividend payment is planned for the foreseeable future, no deferred tax liability is recognized on the difference between the proportionate net assets according to IFRS and the tax base of the investment in the subsidiary.

Goodwill

In a business combination, goodwill is capitalized at the acquisition date. It is measured at its cost of acquisition, which is the excess of the acquisition price for shares in a company over the acquired net assets. The net assets are the balance of the fair values of the acquired identifiable assets and the assumed liabilities and contingent liabilities.

Goodwill is not amortized, but tested annually for impairment. Details of the annual impairment tests are given under “Procedure used in global impairment testing and its impact.” Once an impairment loss has been recognized on goodwill, it is not reversed in subsequent periods.

Other intangible assets

An “other intangible asset” is an identifiable nonmonetary asset without physical substance, other than goodwill (such as a patent, a trademark or a marketing right). It is capitalized if the future economic benefits attributable to the asset will probably flow to the company and the cost of acquisition or generation of the asset can be reliably measured.

Other intangible assets are recognized at the cost of acquisition or generation. Those with a determinable useful life are amortized accordingly on a straight-line basis over a period of up to 30 years, except where their actual depletion demands a different amortization pattern. Determination of the expected useful lives of such assets and the amortization patterns is based on estimates of the period for which they will generate cash flows. An impairment test is performed if there is an indication of possible impairment.

Other intangible assets with an indefinite life (such as the Bayer Cross trademark) and intangible assets not yet available for use (such as research and development projects) are not amortized, but tested annually for impairment.

Property, plant and equipment

Property, plant and equipment is depreciated by the straight-line method over an asset's useful life, except where depreciation based on actual depletion is more appropriate.

The following depreciation periods are applied throughout the Group:

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Useful Life of Property, Plant and Equipment	
Buildings	20 to 50 years
Outdoor infrastructure	10 to 20 years
Storage tanks and pipelines	10 to 20 years
Plant installations	6 to 20 years
Machinery and equipment	6 to 12 years
Furniture and fixtures	4 to 10 years
Vehicles	5 to 8 years
Computer equipment	3 to 5 years
Laboratory and research facilities	3 to 5 years

When assets are sold, closed down or scrapped, the difference between the net proceeds and the net carrying amount of the assets is recognized as a gain or loss in other operating income or expenses, respectively.

Investment property comprises land and buildings not being used for operational or administrative purposes. It is measured using the cost model. The fair value of the investment property reported in the Notes is determined using the discounted cash flow method, comparisons with the current market values of similar properties, or reports from external experts.

Financial assets

Financial assets comprise loans and receivables, acquired equity and debt instruments, cash and cash equivalents, and derivatives with positive fair values.

Regular-way purchases and sales of financial assets are generally posted on the settlement date. Financial assets are initially recognized at fair value plus transaction costs. The transaction costs incurred for the purchase of financial assets held at fair value through profit or loss are expensed immediately.

If there are substantial and objective indications of a decline in the value of loans and receivables, held-to-maturity financial assets or available-for-sale financial assets, an impairment test is performed. Indications of possible impairment include a high probability of insolvency, a significant deterioration in credit standing, a material breach of contract, operating losses reported by a company over several years, a reduction in market value, the financial restructuring of the debtor, or the disappearance of an active market for the asset.

Impairment losses are generally recorded on receivables in the event of insolvency or similar proceedings being launched, financial restructuring at business partners, or the initiation of enforcement measures. Payment history and past-due receivables are also analyzed, with customer-specific facts assessed in each case.

Financial assets are derecognized when contractual rights to receive cash flows from the financial assets expire or the financial assets are transferred together with all material risks and benefits.

Inventories

In accordance with IAS 2 (Inventories), inventories encompass assets consumed in production or in the rendering of services (raw materials and supplies), assets in the production process for sale (work in process), goods held for sale

in the ordinary course of business (finished goods and goods purchased for resale), and advance payments on inventories. Inventories are recognized at their cost of acquisition or production (production-related full costs) – calculated by the weighted-average method – or at their net realizable value, whichever is lower. The net realizable value is the estimated selling price in the ordinary course of business less estimated cost to complete and selling expenses.

Cash and cash equivalents

Cash and cash equivalents comprise cash, checks received and balances with banks and companies. Cash equivalents are highly liquid short-term financial investments that are subject to an insignificant risk of changes in value, are easily convertible into a known amount of cash and have a maturity of three months or less from the date of acquisition or investment.

Provisions for pensions and other post-employment benefits

Within the Bayer Group, post-employment benefits are provided under defined contribution and / or defined benefit plans. In the case of defined contribution plans, the company pays contributions to publicly or privately administered pension plans on a mandatory, contractual or voluntary basis. Once the contributions have been paid, the company has no further payment obligations. The regular contributions constitute expenses for the year in which they are due and as such are included in the functional cost items, and thus in EBIT. All other post-employment benefit systems are defined benefit plans, which may be either unfunded, i.e. financed by provisions, or funded, i.e. financed through pension funds.

The present value of provisions for defined benefit plans and the resulting expense are calculated in accordance with IAS 19 (Employee Benefits) by the projected unit credit method. The future benefit obligations are valued by actuarial methods and spread over the entire employment period on the basis of specific assumptions regarding beneficiary structure and the economic environment. These relate mainly to the discount rate, future salary and pension increases, variations in health care costs, and mortality rates.

The discount rates used are calculated from the yields of high-quality corporate bond portfolios in specific currencies with cash flows approximately equivalent to the expected disbursements from the pension plans. The uniform discount rate derived from this interest-rate structure is thus based on the yields, at the closing date, of a portfolio of AA-rated corporate bonds whose weighted residual maturities approximately correspond to the duration necessary to cover the entire benefit obligation.

The fair value of plan assets is deducted from the present value of the defined benefit obligation for pensions and other post-employment benefits to determine the net defined benefit liability. The obligations and plan assets are valued at regular intervals of not more than three years. Comprehensive actuarial valuations for all major plans are performed annually as of December 31. Plan assets in excess of the benefit obligation are reflected in other receivables, subject to the asset ceiling specified in IAS 19 (Employee Benefits).

The balance of all income and expenses relating to defined benefit plans, except the net interest on the net liability, is recognized in EBIT. The net interest is reflected in the financial result under other financial income and expenses.

The effects of remeasurements of the net defined benefit liability are reflected in the statement of comprehensive income as other comprehensive income. They consist of actuarial gains and losses, the return on plan assets and changes in the effects of the asset ceiling, less the respective amounts included in net interest. Deferred taxes relating to the effects of remeasurements are also recognized in other comprehensive income.

Other provisions

Other provisions are recognized for present legal and constructive obligations arising from past events that will probably give rise to a future outflow of resources, provided that a reliable estimate can be made of the amount of the obligations.

If the projected obligation declines as a result of a change in the estimate, the provision is reversed by the corresponding amount and the resulting income recognized in the operating expense item(s) in which the original charge was recognized.

To enhance the information content of the estimates, certain provisions that could have a material effect on the financial position or results of operations of the Group are tested for their sensitivity to changes in the underlying parameters. To reflect uncertainty about the likelihood of the assumed events actually occurring, the impact of a five-percentage-point change in the probability of occurrence is examined in each case. This analysis has not shown other provisions to be materially sensitive.

Provisions for environmental protection are recorded if future cash outflows are likely to be necessary to ensure compliance with environmental regulations or to carry out remediation work, such costs can be reliably estimated and no future benefits are expected from such measures. Provisions for environmental protection mainly relate to the rehabilitation of contaminated land, recultivation of landfills, and redevelopment and water protection measures.

Estimating the future costs of environmental protection and remediation involves many uncertainties, particularly with regard to the status of laws, regulations and the information available about conditions in the various countries and at the individual sites. Significant factors in estimating the costs include previous experiences in similar cases, conclusions drawn from expert opinions obtained regarding the Group's environmental programs, current costs and new developments affecting costs, management's interpretation of current environmental laws and regulations, the number and financial position of third parties that may become obligated to participate in any remediation costs on the basis of joint liability, and the remediation methods likely to be deployed. Changes in these assumptions could impact future reported results of the Group.

Taking into consideration experience gained to date regarding environmental matters of a similar nature, provisions are believed to be adequate based upon currently available information. Given the difficulties inherent in estimating environmental liabilities in the businesses in which the Group operates, especially those for which the risk of environmental damage is greater in relative terms (Crop Science), it remains possible that material additional costs will be incurred beyond the amounts accrued. It may transpire during remediation work that additional expenditures are necessary over an extended period and that these exceed existing provisions and cannot be reasonably estimated.

Provisions for restructuring only cover expenses that arise directly from restructuring measures, are necessary for restructuring and are not related to future business operations. Such expenses include severance payments to employees and compensation payments in respect of rented property that can no longer be used.

Restructuring measures may include the sale or termination of business units, site closures, relocations of business activities or fundamental reorganizations of business units.

Trade-related provisions are recorded mainly for the granting of rebates or discounts, product returns, obligations in respect of services already received but not yet invoiced, and impending losses or onerous contracts.

As a global enterprise with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks for which **provisions for litigations** must be established under certain conditions – particularly in the areas of product liability, competition and antitrust law, patent disputes, tax law and environmental protection.

Litigations and other judicial proceedings often raise complex issues and are subject to many uncertainties and complexities including, but not limited to, the facts and circumstances of each particular case, the jurisdiction in which each suit is brought and differences in applicable law. The outcomes of currently pending and future proceedings generally cannot be predicted. It is particularly difficult to assess the likely outcomes of class actions for damages or mass compensation claims in the United States, which may give rise to significant financial risks for the Bayer Group. As a result of a judgment in court proceedings, regulatory decisions or the conclusion of a settlement, the Bayer Group may incur charges for which no accounting measures have yet been taken for lack of reasonable estimability or which exceed presently established provisions and the insurance coverage.

The Bayer Group considers the need for accounting measures in respect of pending or future litigations, and the extent of any such measures, on the basis of the information available to its legal department and in close consultation with legal counsel acting for the Bayer Group.

Where it is more likely than not that such a litigation will result in an outflow of resources that is already reasonably estimable, a provision for litigation is recorded in the amount of the present value of the expected cash outflows. Such provisions cover the estimated payments to the plaintiffs, court and procedural costs, attorney costs and the cost of potential settlements.

It is frequently impossible to reliably determine the existence of a present obligation or reasonably estimate the probability that a potential outflow of resources will result from a pending or future litigation. The status of the material

"legal risks" is described in Note 32. Due to the special nature of these litigations, provisions generally are not established until initial settlements allow an estimate of potential amounts or judgments have been issued. Provisions for legal defense costs are established if it is probable that material costs will have to be incurred for external legal counsel to defend the company's legal position.

Internal and external legal counsel evaluate the current status of the Bayer Group's material legal risks at the end of each reporting period. The need to establish or adjust a provision and the amount of the provision or adjustment are determined on this basis. Adjusting events are reflected up to the date of preparation of the consolidated financial statements. The measurement of provisions in the case of class actions or mass compensation claims is mainly based on any settlements reached during the past year and on pending or anticipated future claims.

Provisions for personnel commitments mainly include those for variable one-time payments under short-term incentive programs and for stock-based compensation. Also reflected here are commitments for service awards, early retirements and pre-retirement part-time working arrangements. Provisions for severance payments resulting from restructuring are reflected in provisions for restructuring.

Miscellaneous provisions include those for other liabilities, contingent liabilities from business combinations, and asset retirement obligations (other than those included in provisions for environmental protection).

Financial liabilities

Financial liabilities comprise financial liabilities, trade accounts payable and other liabilities that are settled in cash and cash equivalents or other financial instruments, as well as negative fair values of derivatives.

Financial liabilities are measured at amortized cost unless they are carried at fair value. Examples include derivatives with negative fair values or liabilities for which the fair value option has been used.

Liabilities for contingent consideration arising from business combinations are measured at fair value. Changes in fair value are recognized through profit or loss as of the respective closing date.

Financial liabilities are derecognized when the contractual obligation is discharged or canceled, or has expired.

Mandatory convertible notes are assessed to determine whether they should be accounted for entirely as debt or split into an equity component and a debt component. This involves examining whether Bayer's early conversion rights have economic substance. These rights may have economic substance with respect to maintaining the current credit rating if early conversion can prevent a rating downgrade. In this event, future savings of credit interest would more than offset the cost of early conversion by Bayer. If the right to early conversion is deemed to have economic substance, components of the mandatory convertible notes are classified as equity.

The mandatory convertible notes issued are accounted for as a hybrid financial instrument. The directly attributable costs along with the debt component, which corresponds to the present value of the future interest payments, are deducted from the proceeds of the issue. The debt component is included in financial liabilities. The remaining amount is the equity component, which is reflected in capital reserves.

The fair value option under IAS 39.11A may be used if a bond represents a hybrid financial instrument, i.e. if the nonderivative host contract constitutes a debt instrument, multiple derivatives are embedded in the bond and at least one of the derivatives has to be separated from the host contract and significantly modifies the contractual cash flows. Such a bond is designated in its entirety as a financial liability at fair value through profit or loss. Changes in its fair value are recognized in other financial income and expenses. Use was made of this fair value option for the first time for the debt instruments issued in June 2017 (exchangeable bond 2017/2020), which are exchangeable into Covestro shares.

Other receivables and liabilities

Accrued items and other nonfinancial assets and liabilities are carried at amortized cost. They are amortized to income by the straight-line method or according to performance of the underlying transaction.

Grants and subsidies from third parties that serve to promote investment are reflected in the statement of financial position under other liabilities and amortized to income over the useful lives of the respective investments or in line with the terms of the grant or subsidy.

Derivatives

The Bayer Group uses derivatives to mitigate the risk of changes in exchange rates, interest rates or prices and to hedge stock-based compensation programs. The instruments used include forward exchange contracts, interest-rate swaps and stock options. Derivatives are recognized at the trade date.

Contracts concluded in order to receive or deliver nonfinancial items for the company's own purposes are not accounted for as derivatives but treated as pending transactions. Where embedded derivatives are identified that are required to be separated from the pending transactions, they are accounted for separately. To take advantage of market opportunities or cover possible peak demand, a nonmaterial volume of transactions may be entered into for which the possibility of immediate resale cannot be excluded. Such transactions are allocated to separate portfolios upon acquisition and accounted for as derivatives according to IAS 39.

Derivatives are carried at fair value. Positive fair values at the end of the reporting period are reflected in financial assets, negative fair values in financial liabilities. Changes in the fair values of these derivatives are recognized directly in profit or loss except where hedge accounting is used.

Changes in the fair values of the effective portion of derivatives designated as cash flow hedges are initially recognized outside profit or loss in accumulated other comprehensive income. They are reclassified to profit or loss when the underlying transaction is realized. If such a derivative is sold or ceases to qualify for hedge accounting, the change in its value continues to be recognized in accumulated other comprehensive income until the forecasted transaction is realized. If the forecasted transaction is no longer expected to occur, the amount previously recognized in accumulated other comprehensive income is reclassified to profit or loss. The ineffective portion of gains or losses on derivatives designated as cash flow hedges is recognized either in other operating income or expenses or in the financial result, depending on the type of underlying transaction.

Changes in the fair values of derivatives designated as fair-value hedges and the adjustments in the carrying amounts of the underlying transactions are recognized in profit or loss.

Changes in the fair values of forward exchange contracts and currency options serving as hedges of items in the statement of financial position are reflected in other financial income and expenses as exchange gains or losses, while changes in the values of interest-rate swaps and interest-rate options are recognized in interest income or expense. Changes in the fair values of commodity futures and options, and of forward exchange contracts used to hedge forecasted sales transactions in foreign currencies, are recognized in other operating income or expenses. Changes in the fair values of stock options or forward stock transactions used to hedge stock-based employee compensation are initially recognized outside profit or loss and subsequently reclassified to profit or loss in the functional costs over the periods of the Aspire programs.

The income and expense reflected in the financial result pertaining to the derivatives and the underlying transactions are shown separately. Income and expense are not offset.

Acquisition accounting

Acquired businesses are accounted for using the acquisition method, which requires that the assets acquired and liabilities assumed be recorded at their respective fair values on the date Bayer obtains control. Ancillary acquisition costs are recognized as expenses in the periods in which they occur.

The application of the acquisition method requires certain estimates and assumptions to be made, especially concerning the fair values of the acquired intangible assets, property, plant and equipment and the liabilities assumed at the acquisition date, and the useful lives of the acquired intangible assets, property, plant and equipment.

Measurement is based to a large extent on anticipated cash flows. If actual cash flows vary from those used in calculating fair values, this may materially affect the Group's future results of operations. In particular, the estimation of discounted cash flows from intangible assets under development, patented and nonpatented technologies and brands is based on assumptions concerning, for example:

- The outcomes of research and development activities regarding the efficacy of a crop protection or seed product, compound, results of clinical trials
- The probability of obtaining regulatory approvals in individual countries
- Long-term sales projections

- Possible selling price erosion due to offerings of unpatented products following patent expirations
- The behavior of competitors (launch of competing products, marketing initiatives, etc.)

For significant acquisitions, the purchase price allocation is carried out with assistance from independent third-party valuation specialists. The valuations are based on the information available at the acquisition date.

In step acquisitions, the fair values of the acquired entity's assets and liabilities are measured in accordance with IFRS 3 (Business Combinations) at the date on which control is obtained. Any resulting adjustments to the fair value of the existing interest are recognized in profit or loss. The carrying amount of the assets and liabilities already recognized in the statement of financial position is then adjusted accordingly.

Divestment accounting

Divestments of shares in subsidiaries that result in a loss of control are generally accounted for in profit or loss. When shares in a subsidiary are gradually divested in several tranches, a reduction in the majority shareholding without the loss of control is reflected outside profit or loss and results in an increase in the equity attributable to noncontrolling stockholders.

After the loss of control, the interest remaining at the time of the loss of control is carried at fair value. If Bayer AG still retains significant influence after divesting shares, the remaining interest is recognized as an interest in an associate and is accounted for using the equity method. If Bayer can no longer exert significant influence on the company, the remaining interest is immediately classified as an available-for-sale financial asset and recognized at fair value outside profit or loss.

Procedure used in global impairment testing and its impact

Impairment tests are performed not only on individual items of intangible assets, property, plant and equipment, but also at the level of cash-generating units or groups of cash-generating units. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Bayer Group regards its strategic business entities or groups of strategic business entities, as well as certain product families, as cash-generating units and subjects them to global impairment testing. The strategic business entities constitute the second financial reporting level below the segments.

Cash-generating units and unit groups are globally tested if there is an indication of possible impairment. Those to which goodwill is allocated are tested at least annually.

Impairment testing involves comparing the carrying amount of each cash-generating unit, unit group or item of intangible assets, property, plant or equipment to the recoverable amount, which is the higher of its fair value less costs of disposal or value in use. If the carrying amount exceeds the recoverable amount, an impairment loss must be recognized for the difference. In this case an impairment loss is first recognized on any goodwill allocated to the cash-generating unit or unit group. Any remaining part of the impairment loss is then allocated among the other noncurrent nonfinancial assets of the cash-generating unit or unit group in proportion to their carrying amounts. The resulting expense is reflected in the functional item of the income statement in which the depreciation or amortization of the respective assets is recognized. The same applies to income from impairment loss reversals.

The recoverable amount is generally determined on the basis of the fair value less costs of disposal, taking into account the present value of the future net cash flows as market prices for the individual units are not normally available. These are forecasted on the basis of the Bayer Group's current planning, the planning horizon normally being three to five years. Forecasting involves making assumptions, especially regarding future selling prices, sales volumes, costs, market growth rates, economic cycles and exchange rates. These assumptions are based on internal estimates along with external market studies. Where the recoverable amount is the fair value less costs of disposal, the cash-generating unit or unit group is measured from the viewpoint of an independent market participant. Where the recoverable amount is the value in use, the cash-generating unit, unit group or individual asset is measured as currently used. In either case, net cash flows beyond the planning period are determined on the basis of long-term business expectations using the respective individual growth rates derived from market information. The fair value less costs of disposal is determined on the basis of unobservable inputs (Level 3).

The net cash inflows are discounted at a rate equivalent to the weighted average cost of equity and debt capital. To allow for the different risk and return profiles of the Bayer Group's principal businesses, the after-tax cost of capital is calculated separately for each reporting segment, and a segment-specific capital structure is defined by

benchmarking against comparable companies in the same industry sector. The cost of equity corresponds to the return expected by stockholders, while the cost of debt is based on the conditions on which comparable companies can obtain long-term financing. Both components are derived from capital market information.

The growth rates applied for impairment testing in 2017 and 2016 and the capital cost factors used to discount the expected cash flows are shown in the following table:

B 4/3

Impairment Testing Parameters

	Growth rate		After-tax cost of capital	
%	2016	2017	2016	2017
Pharmaceuticals	0.0	0.0	5.5	5.6
Consumer Health	0.0	1.0	5.2	4.8
Crop Protection	2.1	2.0	5.3	5.4
Seeds	1.7	2.0	5.3	5.4
Environmental Science	2.4	2.0	5.3	5.4
Animal Health	0.0	1.0	5.3	5.0

No impairment losses were recognized on goodwill on the basis of the global annual impairment testing of the cash-generating units and unit groups in 2017 or 2016. Impairment losses on intangible assets, property, plant and equipment – net of €13 million (2016: €1 million) in impairment loss reversals – totaled €506 million (2016: €711 million). Details are provided in Notes 17 and 18.

Although the estimates of the useful lives of certain assets, assumptions concerning the macroeconomic environment and developments in the industries in which the Bayer Group operates, and estimates of the discounted future cash flows are believed to be appropriate, changes in assumptions or circumstances could require changes in the analysis. This could lead to the recognition of additional impairment losses in the future or – except in the case of goodwill – to reversals of previously recognized impairment losses if developments are contrary to expectations.

The sensitivity analysis for cash-generating units and unit groups to which goodwill is allocated was based on a 10% reduction in future cash flows, a 10% increase in the weighted average cost of capital or a one-percentage-point reduction in the long-term growth rate. Bayer concluded that no impairment loss would need to be recognized on goodwill in any cash-generating unit or unit group under these conditions.

5. Segment reporting

At Bayer, the Board of Management – as the chief operating decision-maker – allocates resources to the operating segments and assesses their performance. The reportable segments and regions are identified, and the disclosures selected, in line with the internal financial reporting system (management approach) and based on the Group accounting policies outlined in Note 4.

The Bayer Group lost control of the Covestro Group at the end of the third quarter of 2017 and deconsolidated Covestro. As of December 31, 2017, there are four reportable segments: Pharmaceuticals, Consumer Health, Crop Science and Animal Health. Therefore, total figures for the four Life Science segments are no longer presented separately.

The segments' activities are as follows:

B 5/1

Activities of the Segments

Segment	Activities
Pharmaceuticals	Development, production and marketing of prescription products, especially for cardiology and women's healthcare; specialty therapeutics in the areas of oncology, hematology and ophthalmology; diagnostic imaging equipment and the necessary contrast agents
Consumer Health	Development, production and marketing of mainly nonprescription (OTC = over-the-counter) products in the dermatology, dietary supplement, analgesic, gastrointestinal, cold, allergy, sinus and flu, foot care and sun protection categories
Crop Science	Development, production and marketing of a broad portfolio of products in seeds and plant traits, crop protection and nonagricultural pest control
Animal Health	Development, production and marketing of prescription and nonprescription veterinary products

In the Crop Science segment, the Crop Protection / Seeds and Environmental Science operating segments were combined, mainly in light of the comparable nature of their products for the agricultural industry, such as in the area of crop protection and the related comparable production processes and comparable distribution methods, including via wholesalers in particular.

Business activities that cannot be allocated to any other segment are reported under "All Other Segments." These primarily include the services provided by the service areas: Business Services and Currenta.

The items in "Corporate Functions and Consolidation" mainly comprise the Bayer holding companies and and Leaps by Bayer (formerly the Bayer Lifescience Center), which focuses on the development of crucial, cross-species innovations. They also include the increase or decrease in expenses for Group-wide long-term stock-based compensation arising from fluctuations in the performance of Bayer stock, and the consolidation of intersegment sales (2017: €2.4 billion; 2016: €1.4 billion).

The segment data are calculated as follows:

- Table B 1/1 "Key Data by Segment" and the present chapter contain supplementary performance indicators that are not subject to requirements of the financial reporting standards governing the preparation of the Combined Management Report and the consolidated financial statements. The most important of these indicators are EBIT, EBITDA, EBIT before special items, EBITDA before special items, and the return on capital employed (ROCE). These supplementary indicators are defined, and their calculation explained, in Chapter 2.4 "Alternative Performance Measures Used by the Bayer Group" of the Combined Management Report in the Bayer Annual Report 2017.
- The intersegment sales reflect intra-Group transactions effected at transfer prices fixed on an arm's-length basis.
- The net cash provided by operating activities is the cash flow from operating activities as defined in IAS 7 (Statement of Cash Flows).
- The segment assets comprise all assets serving the respective segment, stated as of December 31, including material participating interests of direct relevance to business operations.
- The equity items reflect the earnings and carrying amounts of investments accounted for using the equity method.

Reconciliations

The reconciliations of EBITDA before special items, EBIT before special items and EBIT to Group income before income taxes and of the segments' assets to Group assets are given in the following tables:

B 5/2

Reconciliation of Segments' EBITDA Before Special Items to Group Income Before Income Taxes

€ million	2016	2017
EBITDA before special items of segments	9,656	9,724
EBITDA before special items of Corporate Functions and Consolidation	(338)	(436)
EBITDA before special items [1]	**9,318**	**9,288**
Depreciation, amortization and impairment losses / loss reversals before special items of segments	(2,486)	(2,145)
Depreciation, amortization and impairment losses / loss reversals before special items of Corporate Functions and Consolidation	(6)	(13)
Depreciation, amortization and impairment losses / loss reversals before special items	**(2,492)**	**(2,158)**
EBIT before special items of segments	7,170	7,579
EBIT before special items of Corporate Functions and Consolidation	(344)	(449)
EBIT before special items [1]	**6,826**	**7,130**
Special items of segments	(1,068)	(1,190)
Special items of Corporate Functions and Consolidation	(20)	(37)
Special items [1]	**(1,088)**	**(1,227)**
EBIT of segments	6,102	6,389
EBIT of Corporate Functions and Consolidation	(364)	(486)
EBIT [1]	**5,738**	**5,903**
Financial result	(965)	(1,326)
Income before income taxes	**4,773**	**4,577**

2016 figures restated

[1] For definition, see Combined Management Report, Chapter 2.4 "Alternative Performance Measures Used by the Bayer Group."

B 5/3

Reconciliation of Segments' Assets to Group Assets

€ million	2016	2017
Assets of the operating segments	**66,252**	**52,896**
Corporate Functions and Consolidation assets	507	4,207
Nonallocated assets	15,479	17,984
Group assets	**82,238**	**75,087**

Prior-year figures include Covestro

The reconciliation of the segments' sales to Group sales is apparent from the table of key data by segment in Note 1.

Information on geographical areas

The following table provides a regional breakdown of external sales by market and of intangible assets, property, plant and equipment:

B 5/4

Information on Geographical Areas

	Net sales (external) – by market		Intangible assets and property, plant and equipment	
€ million	2016	2017	2016	2017
Europe / Middle East / Africa	13,062	13,388	23,438	21,356
of which Germany	3,329	3,392	12,468	10,856
of which Switzerland	510	485	5,047	5,190
North America	10,066	10,143	14,693	10,354
of which United States	8,706	8,561	14,297	10,056
Asia / Pacific	7,413	7,637	4,116	1,771
of which China	2,441	2,594	2,938	853
Latin America	4,402	3,847	746	577
of which Brazil	2,173	1,647	340	209
Total	**34,943**	**35,015**	**42,993**	**34,058**

2016 figures restated

Information on major customers

Revenues from transactions with a single customer in no case exceeded 10% of Bayer Group sales in 2017 or 2016.

6. Scope of consolidation; subsidiaries and affiliates

6.1 Changes in the scope of consolidation

Changes in the scope of consolidation in 2017 were as follows:

B 6.1/1

Change in Number of Consolidated Companies

Bayer AG and consolidated companies	Germany	Other countries	Total
December 31, 2016	64	237	301
Changes in scope of consolidation	(9)	(39)	(48)
Retirements	(5)	(11)	(16)
December 31, 2017	50	187	237

The decrease in the total number of consolidated companies in 2017 was primarily due to the deconsolidation of Covestro. Covestro AG has since been accounted for as an associate in the consolidated financial statements.

In conjunction with the acquisition of the consumer care business of Merck & Co., Inc., United States, Bayer entered into a strategic collaboration with that company in 2014. This collaboration is included in the consolidated financial statements as a joint operation. Bayer and Merck & Co., Inc., have mutually agreed to collaborate on the development, production, life-cycle management and marketing of active ingredients and products in the field of soluble guanylate cyclase (sGC) modulation.

Four (2016: five) associates and eight (2016: six) joint ventures were accounted for in the consolidated financial statements using the equity method. Details of these companies are given in Note 19.

Flagship Ventures V Agricultural Fund, L.P., United States, was included in the consolidated financial statements for the first time in 2015 and classified as an associate. Bayer has no control over this associate despite owning 99.9% of the capital, but is able to significantly influence its financial and operating policy decisions.

Bayer Trendlines Ag Innovation Fund, Limited Partnership, Israel, was included in the consolidated financial statements for the first time in 2016 and classified as an associate. Bayer is a limited partner and has no control over this entity due to contractual restrictions, despite owning 100% of the capital.

Nanjing Baijingyu Pharmaceutical Co., Ltd., China, was classified as an associate in view of Bayer's representation on its executive committee and supervisory board. This enables Bayer to significantly influence its financial and operating policy decisions despite owning only 15% of its voting rights and capital.

A total of 76 (2016: 72) subsidiaries, including one (2016: one) structured entities and 12 (2016: 12) associates or joint ventures that in aggregate are immaterial to the Bayer Group's financial position and results of operations are neither consolidated nor accounted for using the equity method, but are recognized at cost. The immaterial subsidiaries accounted for less than 0.1% of Group sales, less than 0.2% of equity and less than 0.1% of total assets.

Details of the companies included in the consolidated financial statements, the subsidiary and affiliated companies of the Bayer Group pursuant to Section 313, Paragraph 2 of the German Commercial Code, and a list of domestic subsidiaries that availed themselves in 2017 of certain exemptions granted under Section 264, Paragraph 3, and Section 264b of the German Commercial Code, are included in the audited consolidated financial statements that have been submitted for publication in the electronic version of the Federal Gazette. This information can also be accessed at www.bayer.com/owner17.

6.2 Business combinations and other acquisitions

Business combinations and other acquisitions in 2017

The purchase price of the acquisition made in 2017 was €158 million (2016: minus €5 million). The purchase price of the acquired businesses was settled mainly in cash. Goodwill amounted to €51 million (2016: €9 million). It resulted from the following transaction:

On January 3, 2017, Bayer Animal Health acquired the Cydectin™ portfolio in the United States from Boehringer Ingelheim Vetmedica, Inc., St. Joseph, Missouri, United States. The acquisition comprises the CYDECTIN Pour-On, CYDECTIN Injectable and CYDECTIN Oral Drench endectocides for cattle and sheep. The acquisition is intended to strengthen the antiparasitics portfolio in the United States through the addition of endectocides. A purchase price of €158 million was agreed. The purchase price pertained mainly to trademarks and goodwill, which, as expected, is fully tax-deductible.

The effects of this transaction – as of the acquisition date – on the Group's assets and liabilities in 2017 are shown in the following table. The transaction resulted in the following cash outflow:

B 6.2/1

Acquired Assets and Assumed Liabilities (Fair Values at the Respective Acquisition Dates)

€ million	2016	2017
Goodwill	9	51
Patents and technologies	1	–
Trademarks	–	85
Production rights	–	4
R&D projects	(24)	–
Inventories	–	18
Provisions for pensions and other post-employment benefits	1	–
Deferred tax liabilities	8	–
Net assets	**(5)**	**158**
Purchase price	**(5)**	**158**
Net cash (inflow) outflow for acquisitions	**(5)**	**158**

In fiscal 2017, the Cydectin™ business contributed €31 million to the sales of the Bayer Group. After-tax income of €5 million was recorded for the Cydectin™ business from the date of first-time consolidation. This includes the financing costs incurred since the acquisition date.

On September 13, 2017, Bayer and Gingko Bioworks, Inc., Boston, Massachusetts, United States, founded the joint venture Cooksonia Opco LLC, Boston, Massachusetts, United States. The joint venture will focus on technologies to improve plant-associated microbes with a major focus on nitrogen fixation, which is important in agriculture. Capital contribution liabilities of US$70 million to Cooksonia Opco LLC were recognized in the statement of financial position as of December 31, 2017. These liabilities mature on December 31, 2024, at the latest. US$10 million was contributed in 2017.

Planned acquisitions

On September 14, 2016, Bayer signed a definitive merger agreement with Monsanto Company, St. Louis, Missouri, United States, which provides for Bayer's acquisition of all outstanding shares in Monsanto Company against a cash payment of US$128 per share. At the time this corresponded to an expected transaction volume of approximately US$66 billion, comprising an equity value (purchase price) of approximately US$56 billion and net debt to be assumed in an amount of US$10 billion, which includes pension obligations as of May 31, 2016, as well as liabilities for payments under stock-based compensation programs. Based on Monsanto's interim report as at November 30, 2017, the transaction value currently amounts to US$62 billion. Bayer thus has a contingent financial commitment in the amount of approximately US$56 billion to acquire Monsanto's entire outstanding capital stock. The planned transaction has been partially hedged against the euro / U.S. dollar currency risk using derivatives contracts.

The transaction brings together two different, but highly complementary businesses. Monsanto is a leading global provider of agricultural products, including seeds and seed technologies, herbicides, and digital platforms to give farmers agronomic recommendations. The combined business will offer a comprehensive portfolio of seed and crop protection products for a broad range of crops and indications, along with supporting digital farming applications. The combination also brings together both companies' leading innovation capabilities and R&D technology platforms.

Syndicated bank financing of US$56.9 billion was committed by Bank of America Merrill Lynch, Credit Suisse, Goldman Sachs, HSBC and JP Morgan upon the signing of the merger agreement. The credit facility was subsequently syndicated to more than 20 other partner banks of Bayer. Further refinancing of the purchase price is to be achieved through a capital increase, the issuance of bonds and existing liquidity. In November 2016, Bayer successfully placed mandatory convertible notes with a nominal value of €4 billion. The credit facility was reduced by the net proceeds from the mandatory convertible notes in 2016 and by the net proceeds from an exchangeable bond in June 2017. As of December 31, 2017, the credit facility amounts to US$51.5 billion.

The stockholders of Monsanto Company approved the merger with the requisite majority on December 13, 2016. The transaction remains subject to customary closing conditions, including relevant antitrust and other regulatory approvals. With the support of Monsanto, Bayer has initiated the process of obtaining the required regulatory approvals. In 2017, Bayer obtained regulatory approvals in 16 countries.

In connection with this transaction, Bayer reached an agreement with BASF in October 2017 regarding the sale of selected Crop Science businesses. Further information can be found in Note 6.3.

The merger agreement also provides for payment by Bayer of a US$2 billion reverse break fee in particular, in the event that the transaction has not been closed at the latest by June 14, 2018, because a necessary antitrust approval has not been granted and Bayer or Monsanto therefore terminates the merger agreement.

Acquisitions in 2016

The following acquisitions and adjustments to purchase price allocations were reported in 2016:

In the course of the global purchase price allocation for SeedWorks India Pvt. Ltd, Hyderabad, India, which was acquired in July 2015, improved information obtained about the acquired assets in the first quarter of 2016 led to decreases of €23 million in intangible assets and €8 million in deferred tax liabilities and a corresponding increase of €13 million in goodwill in the opening statement of financial position. In addition, the purchase price declined by €2 million to €78 million following completion of the final purchase price negotiations.

On February 12, 2016, Bayer and CRISPR Therapeutics AG, Basel, Switzerland, established the joint venture Casebia Therapeutics LLP, Ascot, United Kingdom. Its purpose is the development and commercialization of new methods to treat blood disorders, blindness and heart diseases.

On December 9, 2016, Bayer and Versant Ventures, San Francisco, United States, established the joint venture BlueRock Therapeutics LP, San Francisco, United States. The joint venture will be active in the field of next-generation regenerative medicine. Its goal is to develop induced pluripotent stem cell (iPSC) therapies to cure a range of diseases.

6.3 Divestments, material sale transactions and discontinued operations

Divestments in 2017
The effects of divestments in 2017 on the consolidated financial statements were as follows:

In October 2015, Bayer successfully floated the former MaterialScience subgroup on the stock market under the name "Covestro". In view of the remaining majority interest, Covestro was fully consolidated in the Bayer Group until the end of September 2017.

Following various share sales, the interest held directly by Bayer was reduced to 24.6% by the end of September 2017. The buyers of the approximately 14 million shares sold on September 29, 2017, agreed to be bound by a lock-up arrangement pursuant to which they would not sell the shares they purchased until at least December 11, 2017. Under the contractual agreement, Bayer retained economic exposure to the price of the shares. Bayer Pension Trust holds a further 8.9% of the equity of Covestro AG.

In addition, Bayer and Covestro signed a control termination agreement at the end of September, as part of which Bayer undertakes not to exercise certain voting rights at the Covestro Annual General Meeting. Bayer therefore ceded de facto control of Covestro at the end of September 2017. Accordingly, the Covestro Group was deconsolidated at the end of the third quarter and, in view of Bayer's remaining significant influence, was recognized for the first time as an associate. Further details of the accounting for the Covestro Group as an associate using the equity method are given in Note 19. Details of share sales are provided in Note 24.

At the end of September, the fair value of the remaining interest, €3.6 billion, was determined on the basis of the share price. The deconsolidation and remeasurement of the remaining interest in Covestro resulted in overall income before taxes of €3.1 billion, which is included in income from discontinued operations. This figure reflects a gain of €2.4 billion from the remeasurement of the remaining interest, a gain of €0.5 billion from the deconsolidation, and a gain of €0.2 billion from the performance of the shares sold on September 29, 2017, in the fourth quarter of 2017. The overall gain after taxes amounted to €3.0 billion. A deferred tax expense of €32 million was accounted for as part of the remeasurement of the remaining interest. In addition, an amount of minus €0.6 billion recognized in other comprehensive income was reclassified to retained earnings attributable to Bayer AG stockholders.

The aforementioned divestment and additional smaller divestments had the following effect in 2017:

B 6.3/1

Divested Assets and Liabilities

€ million	2016	2017
Goodwill	36	254
Patents and technologies	4	18
Marketing and distribution rights	16	28
Other rights	–	33
Property, plant and equipment	–	4,206
Other noncurrent assets	–	233
Deferred taxes	–	506
Inventories	184	1,840
Other current assets	–	3,005
Assets held for sale	–	3
Cash and cash equivalents	–	637
Provisions for pensions and other post-employment benefits	(28)	(1,201)
Other provisions	(97)	(779)
Financial liabilities	–	(1,809)
Other liabilities	–	(1,715)
Divested net assets	**115**	**5,259**

Discontinued operations

Following the loss of control, Covestro fulfilled the conditions for presentation as a discontinued operation for all of the periods prior to deconsolidation, including the prior year.

The sale of the Diabetes Care business to Panasonic Healthcare Holdings Co., Ltd., Tokyo, Japan, for approximately €1 billion was completed on January 4, 2016. The sale included the leading Contour™ portfolio of blood glucose meters and strips, other blood glucose monitoring sysems such as Breeze™2 and Elite™, and Microlet™ lancing devices.

The sale of the Diabetes Care business also comprised further significant obligations by Bayer that were fulfilled over a period of up to two years subsequent to the date of divestment. The sale proceeds were recognized accordingly until the end of 2017 and reported as income from discontinued operations. Deferred income was recognized in the statement of financial position and was dissolved as the obligations were fulfilled. Of this, an amount of €462 million was recognized in sales in 2017.

The obligations fulfilled over a period of up to two years after the divestment of the Diabetes Care business are also reported as discontinued operations in the income statement and the statement of cash flows. They resulted in sales of €39 million in 2017.

The items in the statement of financial position pertaining to the Diabetes Care business are shown in the segment reporting under "All Other Segments." The statement of financial position includes other receivables (net: €3 million), income tax liabilities (€57 million) and miscellaneous provisions (€2 million).

The sale of the Consumer business (CS Consumer) of Bayer's Environmental Science unit to SBM Développement SAS, Lyon, France, was completed on October 4, 2016. These activities were reported as discontinued operations from the second half of 2016.

The income statements for the discontinued operations are given below:

B 6.3/2

Income Statements for Discontinued Operations

	Covestro		Diabetes Care		CS Consumer		Total	
€ million	2016	2017	2016	2017	2016	2017	2016	2017
Net sales	**11,826**	**10,556**	**573**	**501**	**195**	**–**	**12,594**	**11,057**
Cost of goods sold	(8,539)	(6,973)	(146)	(28)	(121)	–	(8,806)	(7,001)
Gross profit	**3,287**	**3,583**	**427**	**473**	**74**	**–**	**3,788**	**4,056**
Selling expenses	(1,326)	(1,016)	(9)	(4)	(83)	–	(1,418)	(1,020)
Research and development expenses	(261)	(200)	(1)	–	(11)	–	(273)	(200)
General administration expenses	(452)	(345)	(12)	(8)	(9)	–	(473)	(353)
Other operating income / expenses	56	3,150	(4)	(3)	(55)	–	(3)	3,147
EBIT [1]	**1,304**	**5,172**	**401**	**458**	**(84)**	**–**	**1,621**	**5,630**
Financial result	**(190)**	**(124)**	**–**	**–**	**–**	**–**	**(190)**	**(124)**
Income before income taxes	**1,114**	**5,048**	**401**	**458**	**(84)**	**–**	**1,431**	**5,506**
Income taxes	(312)	(580)	(76)	(80)	27	–	(361)	(660)
Income after income taxes	**802**	**4,468**	**325**	**378**	**(57)**	**–**	**1,070**	**4,846**
of which attributable to noncontrolling interest	282	759	–	–	–	–	282	759
of which attributable to Bayer AG stockholders (net income)	520	3,709	325	378	(57)	–	788	4,087

[1] For definition, see Combined Management Report, Chapter 2.4 "Alternative Performance Measures Used by the Bayer Group."

The cash flows for the discontinued operations are as follows:

B 6.3/3

Cash Flows from Discontinued Operations

	Covestro		Diabetes Care		CS Consumer		Total	
€ million	2016	2017	2016	2017	2016	2017	2016	2017
Net cash provided by (used in) operating activities	1,824	1,473	788	50	42	–	2,654	1,523
Net cash provided by (used in) investing activities	(1,020)	(742)	–	–	–	–	(1,020)	(742)
Net cash provided by (used in) financing activities	1,014	(224)	(788)	(50)	(42)	–	184	(274)
Change in cash and cash equivalents	**1,818**	**507**	**–**	**–**	**–**	**–**	**1,818**	**507**

As no cash was assigned to the discontinued operations Diabetes Care and CS Consumer, the balance of the cash provided is deducted again in financing activities.

Assets held for sale

In connection with the planned acquisition of Monsanto, Bayer signed an agreement with BASF on October 13, 2017, concerning the sale of selected Crop Science businesses. The businesses to be sold comprise Bayer's global glufosinate ammonium business and the related LibertyLink™ technology for herbicide tolerance, a substantial part of the field crop seed business, including the related research and development capabilities. The seeds business being divested includes the global cotton seed business (excluding India and South Africa), the North American and European canola seed business, and the soybean seed business. The agreed base purchase price of €5.9 billion excludes the value of any net working capital and is subject to the customary adjustment mechanisms.

The transaction is subject to regulatory approvals as well as the successful closing of Bayer's acquisition of Monsanto. Bayer will continue to own, operate and maintain these businesses until the divestment is concluded.

The assets and liabilities held for sale are presented below:

B 6.3/4

Assets and Liabilities Held for Sale

€ million	Dec. 31, 2017
Goodwill	479
Other intangible assets	287
Property, plant and equipment	1,062
Other receivables	41
Deferred taxes	63
Inventories	149
Assets held for sale	**2,081**
Provisions for pensions and other post-employment benefits	11
Other provisions	79
Financial liabilities	14
Other liabilities	4
Deferred taxes	3
Liabilities directly related to assets held for sale	**111**

Notes to the Income Statements

7. Net sales

Net sales are derived primarily from product deliveries. Total reported net sales for 2017 amounted to €35,015 million, rising by €72 million, or 0.2%, compared with 2016. The increase resulted from the following factors:

B 7/1

Factors in Sales Development

	2017	
	€ million	%
Volume	810	+ 2.3
Price	(269)	– 0.8
Currency	(490)	– 1.4
Portfolio	21	+ 0.1
Total	**72**	**+ 0.2**

Breakdowns of net sales by segment and geographical area are given in the table in Note 1 and in Note 5, respectively.

8. Selling expenses

Selling expenses comprise all expenses incurred in the reporting period for the sale, storage and transportation of saleable products, advertising, the provision of advice to customers, and market research.

9. Research and development expenses

Research and development expenses and their accounting treatment are defined in Note 4. Breakdowns of research and development expenses by segment and region are given in Note 1.

10. Other operating income

Other operating income was comprised as follows:

B 10/1

Other Operating Income

€ million	2016	2017
Gains on retirements of noncurrent assets	64	173
Reversal of impairment losses on receivables	18	23
Reversals of unutilized provisions	122	26
Gains from derivatives	255	291
Miscellaneous operating income	328	351
Total	**787**	**864**
of which special items	115	14

2016 figures restated

Gains on retirements of noncurrent assets included an €81 million gain from the sale of trademark rights for the Vagitrol™, Benadon™, Claradol™, Transipeg™ and Colopeg™ brands and some smaller brands (Consumer Health segment). In addition, a €49 million gain was realized on the sale of capitalized transfer rights by Bayer 04 Leverkusen Fußball GmbH (All Other Segments), Germany. In the Crop Science segment, a license agreement for herbicide active ingredients with FMC Corporation, United States resulted in income of €18 million.

Miscellaneous operating income includes a receivable relating to the nonfulifillment of a purchase obligation by one of our distribution partners in the amount of €34 million (Pharmaceuticals segment). The Crop Science segment received €25 million from insurers. A further €13 million was generated by the sale of research data following patent expirations (Crop Science segment). The transfer of a database to the joint venture Cooksonia Opco LLC, United States, with Ginkgo Bioworks, Inc., United States, brought additional income of €9 million for the Crop Science segment. In addition, a claim for damages of €8 million resulting from an infringement of a patent for Yasmin™ was recorded in the Pharmaceuticals segment.

Income from reversals of unutilized provisions included €9 million from the reversal of provisions for the Yasmin™ / YAZ™ litigation (2016: €104 million).

Furthermore, in 2016 miscellaneous operating income included a gain of €32 million at Bayer 04 Leverkusen Fußball GmbH from the sale of non-capitalized transfer rights (All Other Segments). In the Crop Science segment, milestone payments led to income of €21 million. In the Pharmaceuticals segment, a €14 million compensation payment was received in connection with the closure of the production site in Putuo, China. A €10 million gain (All Other Segments) was incurred on the sale of the BAYQUIK™ technology to Chemetics, Inc., Canada (Corporate Functions segment).

11. Other operating expenses

Other operating expenses were comprised as follows:

B 11/1

Other Operating Expenses

€ million	2016	2017
Losses on retirements of noncurrent assets	(19)	(39)
Impairment losses on receivables	(163)	(139)
Expenses related to significant legal risks	(262)	(258)
Losses from derivatives	(171)	(258)
Miscellaneous operating expenses	(264)	(254)
Total	**(879)**	**(948)**
of which special items	(205)	(202)

2016 figures restated

Of the impairment losses on receivables, €74 million (2016: €115 million) pertained to past-due receivables in Brazil.

The expenses related to significant legal risks amounted to €258 million in 2017 (2016: €262 million), which, as in the previous year, primarily included expenses in connection with litigation relating to the produts Xarelto™, Essure™ and Cipro™ / Avelox™.

Miscellaneous operating expenses included donations to charitable causes (all segments) and subsidies for patient assistance programs with government agencies and partners of health care systems (Pharmaceuticals segment) in the amount €52 million (2016: €43 million). A settlement relating to a seed license agreement led to an expense of €14 million (Crop Science segment). Further expenses of €11 million were incurred in connection with intellectual property and patent disputes about a herbicide active ingredient (Crop Science segment). In addition, expenses of €11 million were recorded for restructuring at Currenta GmbH & Co. OHG, Germany (All Other Segments).

The remaining amount of miscellaneous operating expenses comprised a large number of individually immaterial items at the subsidiaries.

In 2016, miscellaneous operating expenses included €34 million for provisions established by the Crop Science segment for environmental protection measures in the United States.

12. Personnel expenses and employee numbers

Personnel expenses for continuing operations rose in 2017 by €69 million to €9,528 million (2016: €9,459 million). The change was mainly due to higher expenses in connection with compensation adjustments, which were partially offset by lower employee bonuses.

B 12/1

Personnel Expenses

€ million	2016	2017
Salaries	7,602	7,567
Social expenses and expenses for pensions and other benefits	1,857	1,961
of which for defined contribution pension plans	491	488
of which for defined benefit and other pension plans	389	445
Total	9,459	**9,528**

2016 figures restated

The personnel expenses shown here do not contain the interest portion of the allocation to personnel-related provisions – mainly for pensions and other post-employment benefits – which is included in the financial result under other financial expenses (Note 13.3).

The average numbers of employees, classified by corporate function, were as shown in the table below:

B 12/2

Employees

	2016	2017
Production	40,397	39,298
Marketing and distribution	37,270	37,147
Research and development	13,999	13,958
General administration	8,322	9,359
Total	**99,988**	**99,762**
Apprentices	1,998	1,918

2016 figures restated

The number of employees on either permanent or temporary contracts is stated in full-time equivalents (FTE), with part-time employees included on a pro-rated basis in line with their contractual working hours. The figures do not include apprentices.

13. Financial result

The financial result for 2017 was minus €1,326 million (2016: minus €965 million), comprising equity-method income of €20 million (2016: loss of €6 million), financial expenses of €1,635 million (2016: €1,108 million) and financial income of €289 million (2016: €149 million). Details of the components of the financial result are provided in the following sections.

13.1 Income (loss) from investments in affiliated companies

The net income (loss) from investments in affiliated companies was comprised as follows:

B 13.1/1

Income (Loss) from Investments in Affiliated Companies

€ million	2016	2017
Net income (loss) from investments accounted for using the equity method (equity-method income / loss)	(6)	20
Expenses		
Impairment losses on investments in affiliated companies	(2)	(1)
Losses from the sale of investments in affiliated companies	–	**(1)**
Income		
Impairment loss reversals on investments in affiliated companies	–	5
Income / losses from investments in affiliated companies and from profit and loss transfer agreements (net)	–	2
Gains from the sale of investments in affiliated companies	6	**5**
Total	(2)	30

2016 figures restated

The main components of the income from investments in affiliated companies were the equity-method income of €51 million from the remaining interest in Covestro and the equity-method losses of €16 million (2016: €4 million) and €15 million (2016: €3 million), respectively, from the Casebia Group and the BlueRock joint ventures.

Further details of the companies accounted for using the equity method are given in Note 19.

13.2 Net interest expense

The net interest expense was comprised as follows:

B 13.2/1

Net Interest Expense

€ million	2016	2017
Expenses		
Interest and similar expenses	(638)	(682)
Interest expenses for derivatives (held for trading)	(3)	(3)
Income		
Interest and similar income	135	272
Interest income from derivatives (held for trading)	2	–
Total	(504)	**(413)**

2016 figures restated

Interest and similar expenses included interest expense of €54 million (2016: €41 million) relating to nonfinancial liabilities. Interest and similar income included interest income of €96 million (2016: €10 million) from nonfinancial assets.

The change in the liability for redeemable noncontrolling interest is reflected in interest income or expense. In 2017, a €49 million (2016: €0 million) increase in this liability was recognized as interest expense.

13.3 Other financial income and expenses

Other financial income and expenses were comprised as follows:

B 13.3/1

Other Financial Income and Expenses

€ million	2016	2017
Expenses		
Interest portion of interest-bearing provisions	(251)	(189)
Exchange loss	(121)	(326)
Miscellaneous financial expenses	(93)	(433)
Income		
Miscellaneous financial income	6	5
Total	(459)	**(943)**

2016 figures restated

The interest portion of noncurrent provisions comprised €191 million (2016: €236 million) in interest expense for pension and other post-employment benefit provisions and a positive amount of €2 million (2016: minus €15 million) in effects of interest expense and interest-rate fluctuations for other provisions and corresponding overfunding. The interest expense for pension and other post-employment benefit provisions included €539 million (2016: €640 million) for the unwinding of discount on the present value of the defined benefit obligation and €348 million (2016: €404 million) in interest income from plan assets.

The miscellaneous financial expenses included €210 million in commitment fees and other fees related to the syndicated bank financing for the planned acquisition of Monsanto. The €172 million in negative fair value changes of the debt instruments (exchangeable bond) issued in June 2017 was also recognized in miscellaneous financial expenses.

14. Taxes

The breakdown of tax expenses by origin was as follows:

B 14/1

Tax Expense by Origin

€ million	2016	Of which income taxes	2017	Of which income taxes
Taxes paid or accrued				
Current income taxes				
Germany	(864)		(794)	
Other countries	(725)		(737)	
Other taxes				
Germany	(80)		(87)	
Other countries	(137)		(118)	
	(1,806)	(1,589)	**(1,736)**	**(1,531)**
Deferred taxes				
from temporary differences	524		70	
from tax loss and interest carryforwards and tax credits	48		132	
	572	572	**202**	**202**
Total	(1,234)	(1,017)	**(1,534)**	**(1,329)**

2016 figures restated

The other taxes mainly include land, vehicle and other indirect taxes. They are reflected in the respective functional cost items.

The deferred tax assets and liabilities were allocable to the following items in the statements of financial position:

B 14/2

Deferred Tax Assets and Liabilities

€ million	Dec. 31, 2016 Deferred tax assets	Dec. 31, 2016 Deferred tax liabilities	Dec. 31, 2017 Deferred tax assets	Dec. 31, 2017 Deferred tax liabilities
Intangible assets	1,478	1,766	799	1,469
Property, plant and equipment	264	692	79	323
Financial assets	240	224	204	81
Inventories	1,267	32	1,117	15
Receivables	71	547	60	464
Other assets	39	13	39	2
Provisions for pensions and other post-employment benefits	3,637	983	2,520	367
Other provisions	1,083	112	610	64
Liabilities	793	133	534	101
Tax loss and interest carryforwards	473		486	–
Tax credits	177		200	–
	9,522	**4,502**	**6,648**	**2,886**
of which noncurrent	7,868	3,662	5,194	2,214
Set-off	(3,172)	(3,172)	(1,733)	(1,733)
Total	6,350	1,330	**4,915**	**1,153**

Deferred taxes on remeasurements, recognized outside profit or loss, of the net liability for defined benefit pension and other post-employment benefits diminished equity by €515 million (2016: increased equity by €228 million). Deferred taxes on changes, recognized outside profit or loss, in fair values of available-for-sale financial assets and derivatives designated as hedges increased equity by €56 million (2016: diminished equity by €24 million). These effects on equity are reported in the statement of comprehensive income.

The use of tax loss carryforwards reduced current income taxes in 2017 by €47 million (2016: €82 million). The use of tax credits reduced current income taxes by €16 million (2016: €16 million).

Of the total tax loss and interest carryforwards of €6,443 million, including interest carryforwards of €148 million (2016: €5,447 million, including interest carryforwards of €118 million), an amount of €2,890 million, including interest carryforwards of €1 million (2016: €2,269 million, including interest carryforwards of €0 million) is expected to be usable within a reasonable period. The increase in tax loss and interest carryforwards was mainly due to the current development of business in the United States and Brazil. Deferred tax assets of €486 million (2016: €473 million) were recognized for the amount of tax loss and interest carryforwards expected to be usable.

The use of €3,553 million of tax loss and interest carryforwards, including interest carryforwards of €147 million (2016: €3,178 million, including interest carryforwards of €118 million) was subject to legal or economic restrictions. Consequently, no deferred tax assets were recognized for this amount. If these tax loss and interest carryforwards had been fully usable, deferred tax assets of €351 million (2016: €294 million) would have been recognized.

Tax credits of €200 million were recognized in 2017 (2016: €177 million) as deferred tax assets. The use of €28 million (2016: €37 million) of tax credits was subject to legal or economic restrictions. Consequently, no deferred tax assets were recognized for this amount.

Unusable tax credits, tax loss carryforwards and interest carryforwards will expire as follows:

B 14/3

Expiration of Unusable Tax Credits, Tax Loss and Interest Carryforwards

	Tax credits		Tax loss and interest carryforwards	
€ million	Dec. 31, 2016	**Dec. 31, 2017**	Dec. 31, 2016	**Dec. 31, 2017**
Within one year	4	4	4	17
Within two years	–	–	1	15
Within three years	4	–	31	114
Within four years	–	1	132	28
Within five years	29	19	31	70
Thereafter	–	4	2,979	3,309
Total	37	**28**	3,178	**3,553**

In 2017, subsidiaries that reported losses for 2017 or 2016 recognized net deferred tax assets totaling €2,303 million (2016: €2,575 million) from temporary differences and tax loss carryforwards. These assets were considered to be unimpaired because the companies concerned were expected to generate taxable income in the future.

Deferred tax liabilities of €22 million were recognized in 2017 (2016: €41 million) for planned dividend payments by subsidiaries. Deferred tax liabilities were not recognized for differences on €18,272 million (2016: €20,069 million) of retained earnings of subsidiaries because these earnings are to be reinvested for an indefinite period.

The reported tax expense of €1,329 million for 2017 (2016: €1,017 million) differed by minus €246 million (2016: €135 million) from the expected tax expense of €1,083 million (2016: €1,152 million) that would have resulted from applying an expected weighted average tax rate to the pre-tax income of the Group. This average rate, derived from the expected tax rates of the individual Group companies, was 23.7% in 2017 (2016: 24.1%). The effective tax rate was 29.0% (2016: 21.3%).

The reconciliation of expected to reported income tax expense and of the expected to the effective tax rate for the Group was as follows:

B 14/4

Reconciliation of Expected to Actual Income Tax Expense

	2016		2017	
	€ million	%	€ million	%
Expected income tax expense and expected tax rate	1,152	24.1	**1,083**	**23.7**
Reduction in taxes due to tax-free income				
Income related to the operating business	(127)	(2.6)	(135)	(3.0)
Income from affiliated companies and divestment proceeds	(1)	–	(16)	(0.3)
First-time recognition of previously unrecognized deferred tax assets on tax loss and interest carryforwards	(17)	(0.4)	(31)	(0.7)
Use of tax loss and interest carryforwards on which deferred tax assets were not previously recognized	(2)	–	(4)	(0.1)
Increase in taxes due to non-tax-deductible expenses				
Expenses related to the operating business	142	3.0	168	3.7
Impairment losses on investments in affiliated companies	2	–	–	–
New tax loss and interest carryforwards unlikely to be usable	43	0.9	69	1.5
Existing tax loss and interest carryforwards on which deferred tax assets were previously recognized but which are unlikely to be usable	6	0.1	1	–
Tax income (–) and expenses (+) relating to other periods	(76)	(1.6)	(128)	(2.8)
Tax effects of changes in tax rates	(5)	(0.1)	384	8.4
Other tax effects	(100)	(2.1)	(62)	(1.4)
Actual income tax expense and effective tax rate	1,017	21.3	**1,329**	**29.0**

2016 figures restated

The reported tax expense contains a one-time effect in the amount of €455 million that results solely from the U.S. tax reform passed on December 22, 2017, which provides for a reduction in the corporate tax rate from 35% to 21% from January 1, 2018, leading to a remeasurement of all deferred tax assets and liabilities associated with U.S. companies. This resulted in deferred tax expense of €409 million for 2017 due to changes in tax rates. The additional tax on nonrepatriated profits, which previously had not been taxed in the United States, led to prior-period tax expenses of €46 million.

15. Income / losses attributable to noncontrolling interest

Income attributable to noncontrolling interest amounted to €791 million (2016: €468 million). Losses attributable to noncontrolling interest amounted to €33 million (2016: €173 million). As in the previous years, the income and losses primarily related to Covestro.

16. Earnings per share

Earnings per share from continuing operations are determined according to IAS 33 (Earnings per Share) by dividing net income (income after income taxes attributable to Bayer AG stockholders) minus income from discontinued operations after income taxes (attributable to Bayer AG stockholders) by the weighted average number of shares. Earnings per share for continuing and discontinued operations are calculated by dividing net income by the weighted average number of shares.

In November 2016, Bayer placed €4.0 billion in mandatory convertible notes without granting subscription rights to existing stockholders of the company. According to IAS 33.23, the weighted average number of shares increases as soon as the notes contract is signed, and this increase must be taken into account in calculating undiluted and diluted earnings per share. The new weighted average number of shares is based on a minimum conversion price that is

adjusted annually due to the dividend payment and determines the maximum conversion ratio. The minimum conversion price stood at €87.82 as of December 31, 2017 (December 31, 2016: €90.00). Undiluted and diluted earnings per share are not adjusted for financing expenses incurred in connection with the mandatory convertible notes because the interest component was recognized outside profit or loss when the notes were placed. Further details of the mandatory convertible notes are provided in Note 24.

Since the undiluted and diluted earnings per share were determined for each interim reporting period, earnings per share for the full year or year to date may differ from the sum of the earnings per share for the respective interim reporting periods.

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Earnings per Share

€ million	2016	2017
Income from continuing operations after income taxes	3,756	3,248
of which attributable to noncontrolling interest	13	(1)
of which attributable to Bayer AG stockholders	3,743	3,249
Income from discontinued operations after income taxes	1,070	4,846
of which attributable to noncontrolling interest	282	759
of which attributable to Bayer AG stockholders	788	4,087
Income after income taxes	4,826	8,094
of which attributable to noncontrolling interest	295	758
of which attributable to Bayer AG stockholders (net income)	4,531	7,336
	Shares	Shares
Weighted average number of shares	832,502,808	**872,107,808**
Earnings per share (€)		
From continuing operations		
Basic	4.50	3.73
Diluted	4.50	3.73
From discontinued operations		
Basic	0.94	4.68
Diluted	0.94	4.68
From continuing and discontinued operations		
Basic	5.44	8.41
Diluted	5.44	8.41

2016 figures restated

Notes to the Statements of Financial Position

17. Goodwill and other intangible assets

Changes in intangible assets in 2017 were as follows:

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Changes in Intangible Assets

€ million	Acquired goodwill	Patents and technol-ogies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
Cost of acquisition or generation, December 31, 2016	**16,312**	**13,162**	**11,045**	**2,044**	**2,138**	**887**	**2,666**	**48,254**
Acquisitions	51	–	85	–	4	–	–	140
Capital expenditures	–	78	–	54	–	458	167	757
Retirements	–	(61)	(31)	(4)	–	(220)	(365)	(681)
Transfers	–	–	1	45	–	17	(63)	–
Transfers (IFRS 5)	(481)	(123)	(40)	(14)	(118)	(43)	(403)	(1,222)
Divestments / changes in the scope of consolidation	(254)	(31)	(5)	(105)	(96)	–	(322)	(813)
Inflation adjustment (IAS 29)	5	–	–	–	–	–	–	5
Exchange differences	(882)	(164)	(602)	(109)	(5)	(55)	(116)	(1,933)
December 31, 2017	**14,751**	**12,861**	**10,453**	**1,911**	**1,923**	**1,044**	**1,564**	**44,507**
Accumulated amortization and impairment losses, December 31, 2016	**–**	**9,312**	**3,673**	**1,268**	**2,027**	**235**	**1,860**	**18,375**
Retirements	–	(36)	(20)	(4)	–	(201)	(356)	(617)
Amortization and impairment losses in 2017	–	596	580	170	21	98	228	1,693
Amortization	–	596	369	133	21	–	118	1,237
Impairment losses	–	–	211	37	–	98	110	456
Impairment loss reversals	–	–	–	–	–	–	–	–
Transfers	–	–	–	1	–	–	(1)	–
Transfers (IFRS 5)	–	(86)	(39)	(9)	(118)	(2)	(199)	(453)
Divestments / changes in the scope of consolidation	–	(13)	(5)	(77)	(90)	–	(295)	(480)
Exchange differences	–	(135)	(148)	(66)	(4)	(13)	(70)	(436)
December 31, 2017	**–**	**9,638**	**4,041**	**1,283**	**1,836**	**117**	**1,167**	**18,082**
Carrying amounts, December 31, 2017	**14,751**	**3,223**	**6,412**	**628**	**87**	**927**	**397**	**26,425**
Carrying amounts, December 31, 2016	**16,312**	**3,850**	**7,372**	**776**	**111**	**652**	**806**	**29,879**

Capital expenditures for research and development projects include an advance payment to Loxo Oncology, Inc., in the amount of US$400 million as part of an exclusive global collaboration relating to the development and marketing of larotrectinib.

Impairment losses of €456 million were recognized on intangible assets. In the Pharmaceuticals segment, impairment losses of €69 million were recognized on intangible assets in the oncology area (OncoMed). In addition, impairment losses of €59 million were recognized on a drug candidate for the treatment of lung infections (Amikacin Inhale) due to new research findings. Furthermore, impairment losses of €65 million were recognized on intangible assets in the women's health and ophthalmology areas. In the Consumer Health segment, a weaker market environment led to impairment losses of €155 million for a sunscreen product brand (Coppertone™) and €47 million on a trademark in the allergies area (Aerius™). In the Crop Science segment, an impairment loss of €41 million was recognized in connection with the termination of a research project.

The remaining impairment losses pertained to intangible assets in the Pharmaceuticals (€2 million), Consumer Health (€3 million), Crop Science (€5 million) and Animal Health (€9 million) segments along with All Other Segments (€1 million).

Details of acquisitions and divestments are provided in Notes 6.2 and 6.3. The impairment testing procedure for goodwill and other intangible assets is explained in Note 4.

Changes in intangible assets in 2016 were as follows:

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Changes in Intangible Assets (Previous Year)

€ million	Acquired goodwill	Patents and technol-ogies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
Cost of acquisition or generation, December 31, 2015	**16,096**	**13,069**	**10,952**	**1,944**	**2,172**	**946**	**2,600**	**47,779**
Acquisitions	9	1	–	–	–	(23)	–	(13)
Capital expenditures	–	55	3	47	5	96	157	363
Retirements	–	(6)	(39)	(14)	(25)	(108)	(80)	(272)
Transfers	–	5	–	50	3	(43)	(15)	–
Transfers (IFRS 5)	–	(5)	(8)	(15)	(16)	–	(11)	(55)
Divestments / changes in the scope of consolidation	–	–	(8)	–	–	–	–	(8)
Inflation adjustment (IAS 29)	3	–	–	–	–	–	–	3
Exchange differences	204	43	145	32	(1)	19	15	457
December 31, 2016	**16,312**	**13,162**	**11,045**	**2,044**	**2,138**	**887**	**2,666**	**48,254**
Accumulated amortization and impairment losses, December 31, 2015	**–**	**8,277**	**3,083**	**1,134**	**2,021**	**225**	**1,765**	**16,505**
Retirements	–	(2)	(38)	(14)	(25)	(106)	(66)	(251)
Amortization and impairment losses in 2016	–	1,007	604	144	48	109	160	2,072
Amortization	–	708	393	137	28	–	129	1,395
Impairment losses	–	299	211	7	20	109	31	677
Impairment loss reversals	–	–	(1)	–	–	–	–	(1)
Transfers	–	–	–	–	–	–	–	–
Transfers (IFRS 5)	–	(5)	(8)	(15)	(16)	–	(11)	(55)
Divestments / changes in the scope of consolidation	–	–	–	–	–	–	(1)	(1)
Exchange differences	–	35	33	19	(1)	7	13	106
December 31, 2016	**–**	**9,312**	**3,673**	**1,268**	**2,027**	**235**	**1,860**	**18,375**
Carrying amounts, December 31, 2016	**16,312**	**3,850**	**7,372**	**776**	**111**	**652**	**806**	**29,879**
Carrying amounts, December 31, 2015	**16,096**	**4,792**	**7,869**	**810**	**151**	**721**	**835**	**31,274**

Goodwill and other intangible assets with an indefinite useful life that are of material significance for the Bayer Group are allocated to the following cash-generating units or unit groups as of the end of the reporting period:

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Intangible Assets with an Indefinite Useful Life

Reporting segment	Cash-generating unit / unit group	Goodwill (€ million)	Material intangible assets with indefinite useful life (€ million)
Pharmaceuticals	Pharmaceuticals	7,105	857
Consumer Health	Consumer Care	5,854	24
Crop Science	Crop Protection	1,120	41
Crop Science	Seeds	122	98

In the case of research and development projects, the point in time from which a capitalized asset can be expected to generate an economic benefit for the company cannot be determined. Such assets are therefore classified as having an indefinite useful life. Development projects were capitalized at a total amount of €927 million as of the end of 2017 (2016: €652 million).

Another intangible asset classified as having an indefinite useful life is the Bayer Cross, which was reacquired for the North America region in 1994, having been awarded to the United States and Canada under the reparations agreements at the end of the First World War. The period for which the Bayer Group will derive an economic benefit

from this name cannot be determined as Bayer intends to make continuous use of it. The Bayer Cross is capitalized at €108 million.

18. Property, plant and equipment

Changes in property, plant and equipment in 2017 were as follows:

B 18/1

Changes in Property, Plant and Equipment

€ million	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
Cost of acquisition or construction, December 31, 2016	**10,346**	**20,335**	**2,297**	**2,551**	**35,529**
Acquisitions	–	–	–	–	–
Capital expenditures	286	460	193	1,022	1,961
Retirements	(82)	(304)	(143)	–	(529)
Transfers	282	699	52	(1,033)	–
Transfers (IFRS 5)	(498)	(601)	(66)	(240)	(1,405)
Divestments / changes in the scope of consolidation	(3,167)	(11,059)	(500)	(455)	(15,181)
Inflation adjustment (IAS 29)	5	–	–	–	5
Exchange differences	(466)	(884)	(112)	(82)	(1,544)
December 31, 2017	**6,706**	**8,646**	**1,721**	**1,763**	**18,836**
Accumulated depreciation and impairment losses, December 31, 2016	**5,592**	**15,111**	**1,685**	**27**	**22,415**
Retirements	(60)	(280)	(125)	–	(465)
Depreciation and impairment losses in 2017	334	893	223	5	1,455
Depreciation	310	860	222	–	1,392
Impairment losses	24	33	1	5	63
Impairment loss reversals	(7)	(6)	–	–	(13)
Transfers	6	4	(1)	(9)	–
Transfers (IFRS 5)	(82)	(214)	(31)	–	(327)
Divestments / changes in the scope of consolidation	(1,923)	(8,631)	(420)	(1)	(10,975)
Exchange differences	(199)	(610)	(75)	(3)	(887)
December 31, 2017	**3,661**	**6,267**	**1,256**	**19**	**11,203**
Carrying amounts, December 31, 2017	**3,045**	**2,379**	**465**	**1,744**	**7,633**
Carrying amounts, December 31, 2016	**4,754**	**5,224**	**612**	**2,524**	**13,114**

Including impairment loss reversals of €13 million, net impairment losses totaling €50 million were recognized on property, plant and equipment in the Pharmaceuticals (€23 million), Consumer Health (€8 million), and Crop Science (€25 million) segments, as well as All Other Segments (€1 million), while impairment loss reversals were recognized for Covestro (€7 million).

In 2017, borrowing costs of €31 million (2016: €31 million) were capitalized as components of the cost of acquisition or construction of qualifying assets, applying an average interest rate of 2.5% (2016: 2.5%).

Capitalized property, plant and equipment included assets with a total net value of €231 million (2016: €471 million) held under finance leases. The cost of acquisition or construction of these assets as of the closing date totaled €368 million (2016: €867 million). They comprised buildings with a carrying amount of €98 million (2016: €146 million), plant installations and machinery with a carrying amount of €75 million (2016: €191 million), and other property, plant and equipment with a carrying amount of €58 million (2016: €134 million). For information on the liabilities arising from finance leases, see Note 27.

In 2017, rental payments of €385 million (2016: €346 million), excluding Covestro, were made for assets held under operating leases as defined in IAS 17 (Leases).

Lease payments of €1 million are expected to be received in 2018 from operating leases – as defined in IAS 17 (Leases) – pertaining to property, plant and equipment, excluding the investment property stated below. Lease payments totaling €1 million are expected to be received between 2019 and 2022 and lease payments totaling €0 million after 2022.

Investment property

The fair values of investment property are mainly determined using the income approach based on internal valuations for buildings and developed sites, and using the market comparison approach for undeveloped sites.

The total carrying amount of investment property as of December 31, 2017, was €97 million (December 31, 2016: €136 million). The fair value of this property was €336 million (2016: €507 million). The rental income from investment property was €14 million (2016: €11 million), and the operating expenses directly allocable to this property amounted to €4 million (2016: €5 million). A further amount of €1 million (2016: €1 million) in operating expenses was directly allocable to investment property from which no rental income was derived.

Changes in property, plant and equipment in 2016 were as follows:

B 18/2

Changes in Property, Plant and Equipment (Previous Year)

€ million	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
Cost of acquisition or construction, December 31, 2015	**9,685**	**19,418**	**2,142**	**2,295**	**33,540**
Acquisitions	–	–	–	–	–
Capital expenditures	248	369	206	1,441	2,264
Retirements	(69)	(262)	(158)	(9)	(498)
Transfers	407	698	82	(1,187)	–
Transfers (IFRS 5)	(14)	(4)	(1)	(1)	(20)
Divestments / changes in the scope of consolidation	–	–	–	–	–
Inflation adjustment (IAS 29)	3	1	–	–	4
Exchange differences	86	115	26	12	239
December 31, 2016	**10,346**	**20,335**	**2,297**	**2,551**	**35,529**
Accumulated depreciation and impairment losses, December 31, 2015	**5,255**	**14,303**	**1,578**	**29**	**21,165**
Retirements	(49)	(245)	(139)	(6)	(439)
Depreciation and impairment losses in 2016	334	936	235	5	1,510
Depreciation	314	927	234	–	1,475
Impairment losses	20	9	1	5	35
Impairment loss reversals	–	–	–	–	–
Transfers	5	(4)	–	(1)	–
Transfers (IFRS 5)	(2)	(1)	(1)	–	(4)
Divestments / changes in the scope of consolidation	–	–	–	–	–
Divestments / changes in the scope of consolidation	–	–	–	–	–
Exchange differences	49	122	12	–	183
December 31, 2016	**5,592**	**15,111**	**1,685**	**27**	**22,415**
Carrying amounts, December 31, 2016	**4,754**	**5,224**	**612**	**2,524**	**13,114**
Carrying amounts, December 31, 2015	**4,430**	**5,115**	**564**	**2,266**	**12,375**

19. Investments accounted for using the equity method

Four (2016: five) associates and eight (2016: six) joint ventures were accounted for in the consolidated financial statements using the equity method.

B 19/1

Associates and Joint Ventures Accounted for Using the Equity Method

Company name	Place of business	Bayer's interest (%)
Associates		
Bayer Trendlines Ag Innovation Fund, L.P [1]	Misgav, Israel	100
Covestro AG	Leverkusen, Germany	24.6
Flagship Ventures V Agricultural Fund, L.P [1]	Cambridge, Massachusetts, U.S.A.	99.9
Nanjing Baijingyu Pharmaceutical Co., Ltd.[1]	Nanjing, China	15
Joint ventures		
Bayer Zydus Pharma Private Limited	Mumbai, India	50
BlueRock Therapeutics Canada ULC	Vancouver, Canada	42.9
BlueRock Therapeutics GP LLC	San Francisco, California, U.S.A.	50
BlueRock Therapeutics LP	San Francisco, California, U.S.A.	42.9
Casebia Therapeutics LLC	Cambridge, Massachusetts, U.S.A.	50
Casebia Therapeutics LLP	Ascot, U.K.	50
Cooksonia Opco LLC	Boston, Massachusetts, U.S.A.	50
DCSO Deutsche Cyber-Sicherheitsorganisation GmbH	Berlin, Germany	25

[1] For information concerning significant influence, see Note 6.1.

In October 2015, Bayer successfully floated the former MaterialScience subgroup on the stock market under the name "Covestro". Covestro is a leading global producer of high-tech polymer materials and develops innovative product solutions for a wide variety of everyday uses. The Covestro Group was deconsolidated at the end of the third quarter of 2017, and, in view of Bayer's remaining significant influence, was recognized for the first time as an associate and accounted for using the equity method. See Note 6.3 for details on the deconsolidation of the Covestro Group.

The remaining interest in Covestro at the time of deconsolidation was remeasured at €3.6 billion based on its share price, which led to the identification of hidden reserves and liabilities. According to the purchase price allocation, the hidden reserves and liabilities primarily related to noncurrent assets (€1.9 billion), current assets (€0.1 billion), noncurrent liabilities (€0.6 billion) and goodwill (€1.0 billion).

The following two tables contain summarized data from the income statements and statements of financial position of the Covestro Group, and show the respective amounts recognized in the consolidated financial statements of the Bayer Group.

B 19/2

Earnings Data of the Covestro Group

€ million	2016	Q4 2017
Net sales	–	3,522
Income after income taxes	–	569
of which attributable to Covestro AG shareholders	–	566
Other comprehensive income after income taxes	–	**(193)**
of which attributable to Covestro AG shareholders	–	(191)
Total comprehensive income after income taxes	–	**376**
of which attributable to Covestro AG shareholders	–	375
Share of total comprehensive income after income taxes	–	92
Share of income after income taxes	**–**	**139**
Group adjustments	–	(88)
Equity-method income	**–**	**51**

B 19/3

Data from the Statements of Financial Position of the Covestro Group

€ million	Dec. 31, 2016	Dec. 31, 2017
Noncurrent assets	–	5,606
Current assets	–	5,735
Noncurrent liabilities	–	2,885
Current liabilities	–	3,091
Equity	–	5,365
Share of equity	**–**	**1,320**
Group adjustments	–	2,307
Carrying amount	**–**	**3,627**

The adjustments to the Group data contain hidden reserves and liabilities identified in the course of the purchase price allocation and their measurement using the equity method.

In December 2015, Bayer and CRISPR Therapeutics AG, Switzerland, agreed to establish a company to develop and commercialize new, breakthrough therapeutics for blood disorders, blindness and congenital heart diseases. The joint venture Casebia Therapeutics, established at the beginning of 2016, has access to gene-editing technology from CRISPR Therapeutics in specific disease areas, as well as access to protein engineering expertise and relevant disease know-how through Bayer.

The following two tables contain summarized data from the income statements and statements of financial position of the Casebia Group, which is accounted for using the equity method, and show the respective amounts recognized in the consolidated financial statements of the Bayer Group.

B 19/4

Earnings Data of the Casebia Group

€ million	2016	2017
Net sales	–	–
Loss after income taxes	(8)	(32)
Share of loss after income taxes	(4)	(16)
Equity-method loss	**(4)**	**(16)**

B 19/5

Data from the Statements of Financial Position of the Casebia Group

€ million	Dec. 31, 2016	Dec. 31, 2017
Noncurrent assets	68	70
Current assets	4	24
Noncurrent liabilities	–	8
Current liabilities	3	4
Equity	69	82
Share of equity	**38**	**69**
Other	242	162
Carrying amount	**280**	**231**

The item “Other” comprises Bayer’s outstanding capital contribution obligation.

The following table contains a summary of the aggregated income statement data and aggregated carrying amounts of the individually nonmaterial associates accounted for using the equity method.

B 19/6

Earnings Data and Carrying Amounts of Associates Accounted for Using the Equity Method

€ million	2016	2017
Income after income taxes	4	7
Other comprehensive income after income taxes	3	28
Total comprehensive income after income taxes	7	**35**
Share of income after income taxes	**2**	**1**
Share of total comprehensive income after income taxes	5	29
Carrying amount	**247**	**37**

2016 figures restated

The following table contains a summary of the aggregated income statement data and aggregated carrying amounts of the individually nonmaterial joint ventures that are accounted for using the equity method.

B 19/7

Earnings Data and Carrying Amounts of Joint Ventures Accounted for Using the Equity Method

€ million	2016	2017
Income after income taxes	(6)	(16)
Total comprehensive income after income taxes	(6)	(16)
Share of income after income taxes	**(4)**	**(16)**
Share of total comprehensive income after income taxes	(4)	(16)
Carrying amount	**57**	**112**

2016 figures restated

20. Other financial assets

The other financial assets were comprised as follows:

B 20/1

Other Financial Assets

	Dec. 31, 2016		Dec. 31, 2017	
€ million	Total	Of which current	Total	Of which current
Loans and receivables	2,140	2,087	1,718	1,501
Available-for-sale financial assets	4,629	3,517	2,728	1,502
of which debt instruments	4,371	3,514	2,463	1,499
of which equity instruments	258	3	265	3
Held-to-maturity financial investments	65	8	57	15
Receivables from derivatives	714	663	647	509
Receivables under lease agreements	8	–	13	2
Total	7,556	6,275	**5,163**	**3,529**

Loans and receivables included €1,390 million (2016: €1,770 million) in bank deposits and €108 million (2016: €305 million) in commercial paper.

The debt instruments classified as available-for-sale financial assets included capital of €605 million (2016: €612 million) provided to Bayer-Pensionskasse VVaG (Bayer-Pensionskasse) for its effective initial fund, and jouissance right capital (Genussrechtskapital) of €152 million (2016: €154 million), also provided to Bayer-Pensionskasse. Also reported in this category were investments of €1,497 million (2016: €3,513 million) in money market funds.

The equity instruments reported as available-for-sale financial assets included the €101 million (2016: €98 million) investment in CRISPR Therapeutics AG, Switzerland, along with €35 million (2016: €32 million) in instruments whose fair value could not be determined from a stock exchange or other market price or by discounting reliably determinable future cash flows. These equity instruments were recognized at cost.

Further information on the accounting for receivables from derivatives is given in Note 30.

Receivables under lease agreements relate to finance leases where Bayer is the lessor and the economic owner of the leased assets is the lessee. These receivables comprised expected lease payments of €15 million (2016: €39 million), including €2 million (2016: €31 million) in interest. Of the expected lease payments, €3 million (2016: €1 million) is due within one year, €10 million (2016: €2 million) within the following four years and €2 million (2016: €36 million) in subsequent years.

21. Inventories

Inventories were comprised as follows:

B 21/1

Inventories

€ million	Dec. 31, 2016	Dec. 31, 2017
Raw materials and supplies	2,396	1,761
Work in process, finished goods and goods purchased for resale	5,991	4,776
Advance payments	21	13
Total	8,408	**6,550**

The deconsolidation of Covestro reduced inventories by €1,831 million.

Impairment losses recognized on inventories were reflected in the cost of goods sold. They were comprised as follows:

B 21/2

Impairments of Inventories

€ million	2016	2017
Accumulated impairment losses, January 1	(427)	**(416)**
Divestments / changes in the scope of consolidation	–	13
Impairment losses in the reporting period	(321)	(235)
Impairment loss reversals or utilization	346	261
Exchange differences	(18)	45
Transfers (IFRS 5)	4	1
Accumulated impairment losses, December 31	(416)	**(331)**

22. Trade accounts receivable

Trade accounts receivable less impairment losses amounted to €8,582 million (2016: €10,969 million) on the closing date and were comprised as follows:

B 22/1

Trade Accounts Receivable

€ million	2016	2017
Trade accounts receivable (before impairments)	11,377	9,007
Accumulated impairment losses	(408)	(425)
Carrying amount, December 31	10,969	**8,582**
of which noncurrent	144	97

The deconsolidation of Covestro reduced trade accounts receivable by €1,943 million.

Changes in impairment losses on trade accounts receivable were as follows:

B 22/2

Impairments of Trade Accounts Receivable

€ million	2016	2017
Accumulated impairment losses, January 1	(248)	**(408)**
Divestments / changes in the scope of consolidation	–	41
Impairment losses in the reporting period	(165)	(133)
Impairment loss reversals or utilization	35	29
Exchange differences	(30)	46
Accumulated impairment losses, December 31	(408)	**(425)**

Trade accounts receivable amounting to €8,189 million (2016: €10,954 million) were not individually impaired. Of this amount, €1,440 million (2016: €1,161 million) was past due or due immediately on the closing date.

The amounts of impaired and past-due trade accounts receivable are summarized in the following table:

B 22/3

Impaired and Past-Due Trade Accounts Receivable

Carrying amount	€ million	Of which neither impaired nor past due at the closing date	Of which unimpaired but past due at the closing date				Of which impaired at the closing date
			up to 3 months	3 – 6 months	6 – 12 months	more than 12 months	
December 31, 2017	8,582	6,749	934	142	104	260	393
December 31, 2016	10,969	9,793	780	162	125	94	15

The gross carrying amount of individually impaired trade accounts receivable was €798 million (2016: €192 million). The impairment losses recognized on these assets totaled €405 million (2016: €177 million), resulting in a net carrying amount of €393 million (2016: €15 million).

The unimpaired receivables were deemed to be collectible on the basis of established credit management processes and individual assessments of customer risks. Recognized impairment losses included an appropriate allowance for the default risk as of the end of the reporting period.

Receivables from government health service institutions, especially in Greece, Italy, Portugal and Spain, are under special observation in view of the government debt crisis. Although there were no material defaults on such receivables in 2017 or 2016, it is possible that future developments in these countries could result in payment delays and / or defaults. This could necessitate the recognition of impairment losses due to new occurrences. Trade accounts receivable from government health service institutions in the above countries at the end of 2017 totaled €102 million (2016: €134 million).

An excess-of-loss policy exists for the Pharmaceuticals, Consumer Health and Animal Health segments as part of a global credit insurance program. More than 80% of the receivables of these segments are insured up to a maximum total annual compensation payment of €150 million (2016: €150 million). A global excess-of-loss policy has also existed for the Crop Science segment since January 2016. In this global credit insurance program, more than 80% of this segment's receivables are insured up to a maximum total annual compensation payment of €300 million (2016: €300 million).

A further €696 million (2016: €743 million) of receivables was secured by advance payments, letters of credit or guarantees or by liens on land, buildings or harvest yields.

23. Other receivables

Other receivables were comprised as follows:

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Other Receivables

€ million	Dec. 31, 2016		Dec. 31, 2017	
	Total	Of which current	Total	Of which current
Other tax receivables	764	746	554	541
Deferred charges	549	358	298	192
Reimbursement claims	120	104	85	71
Net defined benefit asset	26	–	36	–
Receivables from employees	50	49	47	46
Miscellaneous receivables	1,284	953	656	426
Total	**2,793**	**2,210**	**1,676**	**1,276**

The reimbursement claims of €85 million (2016: €120 million) predominantly consisted of receivables from insurance companies in connection with product liability claims.

In 2016, miscellaneous receivables included a €441 million receivable from Dow AgroSciences LLC, United States, for damages and royalty payments resulting from the infringement of Bayer's rights to the LibertyLink™ weed control system. This receivable was settled in May 2017.

Other receivables included €426 million (2016: €690 million) in financial receivables. Of this amount, receivables of €383 million (2016: €612 million) were neither impaired nor past due. Receivables of €26 million (2016: €50 million) were due immediately or up to three months past due. Receivables of €17 million (2016: €27 million) were more than three months past due.

Other receivables are stated net of impairment losses of €70 million (2016: €56 million), of which €67 million (2016: €52 million) related to a receivable from the Venezuelan exchange control authority reflecting the right to receive U.S. dollars at a preferential rate.

24. Equity

The foremost objectives of our financial management are to help bring about a sustained increase in Bayer's value for the benefit of all stakeholders, and to ensure the Group's creditworthiness and liquidity. The pursuit of these goals means reducing our cost of capital, optimizing our capital structure, improving our financing cash flow and effectively managing risk.

The rating agencies commissioned by Bayer assess Bayer's creditworthiness as follows:

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Rating

	Long-term rating	Short-term rating
S&P Global Ratings	A–	A–2
Moody's	A3	P–2

These credit ratings reflect the company's high solvency and ensure access to a broad investor base for financing purposes. As a result of the agreed acquisition of Monsanto, both S & P Global Ratings and Moody's are reviewing the possibility of downgrade. Bayer will continue to target an investment-grade rating after the successful closing of the Monsanto acquisition. We remain committed to the single "A" credit rating category over the long term.

Apart from utilizing cash inflows from our operating business to reduce net financial debt, we are implementing our financial strategy by way of vehicles such as the subordinated hybrid bonds issued in July 2014 and April 2015, the mandatory convertible notes issued in November 2016, the authorized and conditional capital, and a potential share buyback program.

The changes in the various components of equity during 2016 and 2017 are shown in the consolidated statements of changes in equity.

Capital stock

The capital stock of Bayer AG on December 31, 2017, amounted to €2,117 million (2016: €2,117 million), divided into 826,947,808 (2016: 826,947,808) registered no-par shares, and was fully paid in. Each no-par share confers one voting right.

Authorized and conditional capital

The authorized and conditional capital was comprised as follows:

B 24/2

Authorized and Conditional Capital

Capital	Resolution	Amount / shares	Expires	Purpose
Authorized capital I	April 29, 2014	€530 million	April 28, 2019	Increase the capital stock by issuing new no-par shares against cash contributions and / or contributions in kind, the latter not to exceed €423 million
Authorized capital II	April 29, 2014	€212 million	April 28, 2019	Increase the capital stock by issuing new no-par shares against cash contributions
Conditional capital	April 29, 2014	€212 million / up to 82,694,750 no-par shares	April 28, 2019	Increase the capital stock by granting no-par shares to the holders of bonds with warrants or convertible notes, profit participation certificates or income bonds; the authorizations to issue such instruments are limited to a total nominal amount of €6 billion.

Capital increases are effected by issuing new registered no-par shares. Stockholders must normally be granted subscription rights. However, subscription rights may be excluded under certain conditions stated in the authorization resolutions. Absent a further resolution of the Annual Stockholders' Meeting on the exclusion of stockholders' subscription rights, the Board of Management may only use the existing authorizations to increase the capital stock out of the authorized capital I and II or the conditional capital – while excluding stockholders' subscription rights – up to a total amount of 20% of the capital stock that existed when the respective resolutions were adopted by the Annual Stockholders' Meeting on April 29, 2014. All issuances or sales of no-par shares or of bonds with warrants or conversion rights or obligations that are effected while excluding stockholders' subscription rights also count toward this 20% limit. Details of the authorized and conditional capital are provided in the Notice of the Annual Stockholders' Meeting of April 29, 2014, and on the Bayer website. The authorized capital I and the authorized capital II have not been utilized so far.

On November 22, 2016, Bayer placed mandatory convertible notes in the amount of €4,000 million without granting subscription rights to existing stockholders of the company. The notes, denominated in units of €100,000, were issued by Bayer Capital Corporation B.V. under the subordinated guarantee of Bayer AG. At maturity, the outstanding amount of the notes will be mandatorily converted into registered no-par shares of Bayer AG. After deduction of €48 million in transaction costs and recognition of €191 million in deferred taxes, €3,491 million were allocated to capital reserves and €652 million to financial liabilities. The deferred taxes result from temporary differences in accounting for the liability component and were recognized outside profit or loss in equity. As at December 31, 2017, the financial liability had decreased by €125 million, resulting in a €41 million deferred tax reversal through profit or loss. The issuance of the mandatory convertible notes constitutes a utilization of the conditional capital.

Accumulated comprehensive income

Accumulated comprehensive income comprises retained earnings and accumulated other comprehensive income. The retained earnings comprise prior years' undistributed income of consolidated companies and all remeasurements of the net defined benefit liability for pension or other post-employment benefits that are recognized outside profit or loss. The accumulated other comprehensive income comprises exchange differences, the changes in fair values of cash flow hedges and available-for-sale financial assets, and the revaluation surplus. In 2017, an amount of €4 million (2016: €4 million) corresponding to the annual amortization / depreciation of the respective assets was transferred from the revaluation surplus to retained earnings.

Dividend

Under the German Stock Corporation Act (AktG), the dividend payment is determined by the distributable profit reported in the annual financial statements of Bayer AG, which are prepared according to the German Commercial Code. Retained earnings were diminished by payment of the dividend of €2.70 per share for 2016. The proposed dividend for the 2017 fiscal year is €2.80 per share, which – based on the current number of shares – would result in a total dividend payment of €2,315 million. Payment of the proposed dividend is contingent upon approval by the

stockholders at the Annual Stockholders' Meeting and therefore is not recognized as a liability in the consolidated financial statements.

Noncontrolling interest

The changes in noncontrolling interest in equity during 2016 and 2017 are shown in the following table:

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Changes in Noncontrolling Interest in Equity

€ million	2016	2017
January 1	**1,180**	**1,564**
Changes in equity not recognized in profit or loss		
Remeasurements of the net liability under defined benefit pension plans	(27)	49
Changes in fair value of cash flow hedges	–	–
Changes in fair value of securities	–	–
Exchange differences on translation of operations outside the eurozone	17	(155)
Other changes in equity	157	(2,025)
Dividend payments	(58)	(131)
Income after income taxes	**295**	**758**
December 31	**1,564**	**60**

Of the dividend payments, €129 million pertained to the noncontrolling interest in the equity of Covestro AG.

The principal subsidiary with third-party noncontrolling interest holders is Bayer CropScience Limited, India. The interest and share of voting rights attributable to noncontrolling interest amounted to 31.3% as at December 31, 2017 (December 31, 2016: 31.4%), and the equity attributable to this noncontrolling interest stood at €52 million (2016: €85 million).

During fiscal 2017, Bayer AG reduced its interest in Covestro AG from 64.2% to 24.6%. In the first quarter, Bayer sold 22 million shares of Covestro AG to institutional investors at a price of €66.50 per share. A further 17.25 million shares of Covestro AG were sold to institutional investors in the second quarter at a price of €62.25 per share. Further, 8 million shares of Covestro AG were deposited in Bayer Pension Trust e. V. at a price of €63.04 per share. In the third quarter of 2017, Bayer AG sold shares 19 million shares in Covestro AG at a price of €63.25 per share on September 12, 2017, and approximately 14 million Covestro AG shares at a price of €71.72 on September 29, 2017. The buyers of the around 14 million shares sold on September 29, 2017 agreed to be bound by a lock-up arrangement pursuant to which they would not sell the shares they purchased until at least December 11, 2017. Under the contractual agreement, Bayer retained the economic exposure to the price of these shares at least until that date.

The reductions in Bayer's interest through September 12, 2017, detailed above had a €4.2 billion positive effect on Bayer Group equity, which was recognized in other changes in equity. Of this amount, €2.7 billion was attributable to stockholders of Bayer AG and €1.5 billion to noncontrolling interest. As part of the deconsolidation at the end of September 2017, the noncontrolling interest in Covestro AG equity was derecognized in its entirety. See Note 6.3 for details on the deconsolidation of Covestro.

As of December 31, 2017, Bayer held 24.6% of the shares of Covestro AG. Bayer Pension Trust e.V. held a further 8.9%.

25. Provisions for pensions and other post-employment benefits

Provisions were established for defined benefit obligations pertaining to pensions and other post-employment benefits. The net liability was accounted for as follows:

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Net Defined Benefit Liability Reflected in the Statement of Financial Position

	Pensions		Other post-employment benefits		Total	
€ million	Dec. 31, 2016	**Dec. 31, 2017**	Dec. 31, 2016	**Dec. 31, 2017**	Dec. 31, 2016	**Dec. 31, 2017**
Provisions for pensions and other post-employment benefits (net liability)	**10,736**	**7,798**	**398**	**222**	**11,134**	**8,020**
of which Germany	9,176	6,778	–	–	9,176	6,778
of which other countries	1,560	1,020	398	222	1,958	1,242
Net defined benefit asset	**25**	**36**	**1**	**–**	**26**	**36**
of which Germany	23	22	–	–	23	22
of which other countries	2	14	1	–	3	14
Net defined benefit liability	**10,711**	**7,762**	**397**	**222**	**11,108**	**7,984**
of which Germany	9,153	6,756	–	–	9,153	6,756
of which other countries	1,558	1,006	397	222	1,955	1,228

The deconsolidation of Covestro reduced provisions for pensions and other post-employment benefits by €1,201 million.

The expenses for defined benefit plans for pensions and other post-employment benefits comprised the following components:

B 25/2

Expenses for Defined Benefit Plans

	Pension plans						Other post-employment benefit plans	
	Germany		Other countries		Total		Other countries	
€ million	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**
Current service cost	281	312	86	93	367	405	14	13
Past service cost	17	20	(4)	(3)	13	17	(1)	(2)
of which plan curtailments	–	–	1	(2)	1	(2)	–	(2)
Plan settlements	–	–	(8)	8	(8)	8	–	–
Plan administration cost paid out of plan assets	3	3	1	1	4	4	–	–
Net interest	175	135	46	43	221	178	14	13
Total	**476**	**470**	**121**	**142**	**597**	**612**	**27**	**24**

2016 figures restated

In addition, a total of €1,236 million in effects of remeasurements of the net defined benefit liability was recognized in 2017 outside profit or loss (2016: minus €1,036 million). Of this amount, €1,223 million (2016: minus €1,063 million) related to pension obligations, €1 million (2016: €34 million) to other post-employment benefit obligations, and €12 million (2016: minus €7 million) to the effects of the asset ceiling.

The net defined benefit liability developed as follows:

B 25/3

Changes in Net Defined Benefit Liability

€ million	Defined benefit obligation	Fair value of plan assets	Effects of the asset ceiling	Net defined benefit liability
Germany				
January 1, 2017	**(20,962)**	**11,809**	**–**	**(9,153)**
Acquisitions	–	–	–	–
Divestments / changes in the scope of consolidation	3,021	(2,075)	–	946
Current service cost	(368)			(368)
Past service cost	(32)			(32)
Net interest	(358)	208	–	(150)
Net actuarial gain / (loss)	206			206
of which due to changes in financial assumptions	180			180
of which due to changes in demographic assumptions	(1)			(1)
of which due to experience adjustments	27			27
Return on plan assets excluding amounts recognized as interest income		755		755
Employer contributions		593		593
Employee contributions	(39)	39		–
Payments due to plan settlements	–	–		–
Benefits paid out of plan assets	216	(216)		–
Benefits paid by the company	441			441
Plan administration cost paid from plan assets		(3)		(3)
Reclassification to current assets / liabilities held for sale	38	(29)		9
December 31, 2017	**(17,837)**	**11,081**	**–**	**(6,756)**
Other countries				
January 1, 2017	**(8,033)**	**6,127**	**(49)**	**(1,955)**
Acquisitions	–	–	–	–
Divestments / changes in the scope of consolidation	840	(589)	3	254
Current service cost	(109)			(109)
Past service cost	8			8
Gains / (losses) from plan settlements	(8)			(8)
Net interest	(244)	183	(3)	(64)
Net actuarial gain / (loss)	(166)			(166)
of which due to changes in financial assumptions	(191)			(191)
of which due to changes in demographic assumptions	21			21
of which due to experience adjustments	4			4
Return on plan assets excluding amounts recognized as interest income		429		429
Remeasurement of asset ceiling			12	12
Employer contributions		125		125
Employee contributions	(14)	14		–
Payments due to plan settlements	32	(41)		(9)
Benefits paid out of plan assets	300	(300)		–
Benefits paid by the company	94			94
Plan administration costs paid out of plan assets		(1)		(1)
Reclassification to current assets / liabilities held for sale	10	(8)	–	2
Exchange differences	635	(481)	6	160
December 31, 2017	**(6,655)**	**5,458**	**(31)**	**(1,228)**
of which other post-employment benefits	(671)	449	–	(222)
Total, December 31, 2017	**(24,492)**	**16,539**	**(31)**	**(7,984)**

Covestro is included in the net defined benefit liability.

Changes in Net Defined Benefit Liability (Previous Year)

€ million	Defined benefit obligation	Fair value of plan assets	Effects of the asset ceiling	Net defined benefit liability
Germany				
January 1, 2016	**(19,148)**	**10,199**	**–**	**(8,949)**
Acquisitions	–	–	–	–
Divestments / changes in the scope of consolidation	4	(2)	–	2
Current service cost	(350)			(350)
Past service cost	(26)			(26)
Net interest	(452)	248	–	(204)
Net actuarial gain / (loss)	(1,610)			(1,610)
of which due to changes in financial assumptions	(1,563)			(1,563)
of which due to changes in demographic assumptions	(1)			(1)
of which due to experience adjustments	(46)			(46)
Return on plan assets excluding amounts recognized as interest income		669		669
Employer contributions		878		878
Employee contributions	(39)	39		–
Payments due to plan settlements	–	–		–
Benefits paid out of plan assets	219	(219)		–
Benefits paid by the company	440			440
Plan administration cost paid from plan assets		(3)		(3)
Reclassification to current assets / liabilities held for sale	–	–		–
December 31, 2016	**(20,962)**	**11,809**	**–**	**(9,153)**
Other countries				
January 1, 2016	**(7,660)**	**5,799**	**(32)**	**(1,893)**
Acquisitions	–	1	–	1
Divestments / changes in the scope of consolidation	4	(3)	–	1
Current service cost	(118)			(118)
Past service cost	6			6
Gains / (losses) from plan settlements	9			9
Net interest	(284)	215	(3)	(72)
Net actuarial gain / (loss)	(515)			(515)
of which due to changes in financial assumptions	(650)			(650)
of which due to changes in demographic assumptions	89			89
of which due to experience adjustments	46			46
Return on plan assets excluding amounts recognized as interest income		427		427
Remeasurement of asset ceiling			(7)	(7)
Employer contributions		152		152
Employee contributions	(12)	12		–
Payments due to plan settlements	83	(84)		(1)
Benefits paid out of plan assets	295	(295)		–
Benefits paid by the company	87			87
Plan administration costs paid out of plan assets		(1)		(1)
Reclassification to current assets / liabilities held for sale	–	–	–	–
Exchange differences	72	(96)	(7)	(31)
December 31, 2016	**(8,033)**	**6,127**	**(49)**	**(1,955)**
of which other post-employment benefits	(867)	471	–	(396)
Total, December 31, 2016	**(28,995)**	**17,936**	**(49)**	**(11,108)**

Covestro is included in the net defined benefit liability.

The benefit obligations pertained mainly to Germany (73%; 2016: 72%), the United States (12%; 2016: 14%) and the United Kingdom (8%; 2016: 7%). In Germany, current employees accounted for about 43% (2016: 46%), retirees or their surviving dependents for about 50% (2016: 47%) and former employees with vested pension rights for about 7% (2016: 7%) of entitlements under defined benefit plans. In the United States, current employees accounted for about 21% (2016: 25%), retirees or their surviving dependents for about 65% (2016: 53%) and former employees with vested pension rights for about 14% (2016: 22%) of entitlements under defined benefit plans.

The actual return on the assets of defined benefit plans for pensions or other post-employment benefits amounted to €1,517 million (2016: €1,519 million) and €58 million (2016: €40 million), respectively.

The following table shows the defined benefit obligations for pensions and other post-employment benefits along with the funded status of the funded obligations.

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Defined Benefit Obligation and Funded Status

	Pension obligation		Other post-employment benefit obligation		Total	
€ million	2016	2017	2016	2017	2016	2017
Defined benefit obligation	**28,128**	**23,821**	**867**	**671**	**28,995**	**24,492**
of which unfunded	1,231	1,117	125	64	1,356	1,181
of which funded	26,897	22,704	742	607	27,639	23,311
Funded status of funded obligations						
Overfunding	74	67	1	–	75	67
Underfunding	9,506	6,681	272	158	9,778	6,839

Pension and other post-employment benefit obligations

Group companies provide retirement benefits for most of their employees, either directly or by contributing to privately or publicly administered funds. The benefits vary depending on the legal, fiscal and economic conditions of each country. The obligations relate both to existing retirees' pensions and to pension entitlements of future retirees.

Bayer has set up funded pension plans for its employees in various countries. The most appropriate investment strategy is determined for each defined benefit pension plan based on the risk structure of the obligations (especially demographics, the current funded status, the structure of the expected future cash flows, interest sensitivity, biometric risks etc.), the regulatory environment and the existing level of risk tolerance or risk capacity. A strategic target investment portfolio is then developed in line with the plan's risk structure, taking capital market factors into consideration. Further determinants are risk diversification, portfolio efficiency and the need for both a country-specific and a global risk / return profile centered on ensuring the payment of all future benefits. As the capital investment strategy for each pension plan is developed individually in light of the plan-specific conditions listed above, the investment strategies for different pension plans may vary considerably. The investment strategies are generally aligned less toward maximizing absolute returns and more toward the maximum probability of being able to finance pension commitments over the long term. For pension plans, stress scenarios are simulated and other risk analyses (such as value at risk) undertaken with the aid of risk management systems.

Bayer-Pensionskasse VVaG (Bayer-Pensionskasse), Leverkusen, Germany, is by far the most significant of the pension plans. It has been closed to new members since 2005. This legally independent fund is regarded as a life insurance company and therefore is subject to the German Insurance Supervision Act. The benefit obligations covered by Bayer-Pensionskasse comprise retirement, surviving dependents' and disability pensions. It constitutes a multi-employer plan, to which the active members and their employers contribute. The company contribution is a certain percentage of the employee contribution. This percentage is the same for all participating employers, including those outside the Bayer Group, and is set by agreement between the plan's executive committee and its supervisory board, acting on a proposal from the responsible actuary. It takes into account the differences between the actuarial estimates and the actual values for the factors used to determine liabilities and contributions. Bayer may also adjust the company contribution in agreement with the plan's executive committee and its supervisory board, acting on a proposal from the responsible actuary. The plan's liability is governed by Section 1, Paragraph 1, Sentence 3 of the German Law on the Improvement of Occupational Pensions. This means that if the pension plan exercises its right under the articles of association to reduce benefits, each participating employer has to make up the resulting difference. Bayer is not liable for the obligations of participating employers outside the Bayer Group, even if they cease to participate in the plan.

Pension entitlements for people who joined Bayer in Germany in 2005 or later are granted via Rheinische Pensionskasse VVaG, Leverkusen. Future pension payments from this plan are based on contributions and the return on plan assets; a guaranteed interest rate applies.

Another important pension provision vehicle is Bayer Pension Trust e. V. (BPT). This covers further retirement provision arrangements of the Bayer Group, such as deferred compensation, pension obligations previously administered by Schering Altersversorgung Treuhand e. V., and components of other direct commitments.

The defined benefit pension plans in the United States have been frozen for some years, and no significant new entitlements can be earned under these plans. The assets of all the U.S. pension plans are held by a master trust for reasons of efficiency. The applicable regulatory framework is based on the Employee Retirement Income Security Act (ERISA), which includes a statutory 80% minimum funding requirement to avoid benefit restrictions. The actuarial risks, such as investment risk, interest-rate risk and longevity risk, remain with the company.

The defined benefit pension plans in the United Kingdom have been closed to new members for some years. Plan assets in the U.K. are administered by independent trustees, who are legally obligated to act solely in the interests of the beneficiaries. A technical assessment is performed every three years in line with U.K. regulations. This serves as the basis for developing a plan to cover any potential financing requirements. Here, too, the actuarial risks remain with the company.

The other post-employment benefit obligations outside Germany mainly comprised health care benefit payments for retirees in the United States.

The fair value of the plan assets to cover pension and other post-employment benefit obligations was as follows:

B 25/6

Fair Value of Plan Assets as of December 31

	Pension obligations				Other post-employment obligations	
	Germany		Other countries		Other countries	
€ million	2016	**2017**	2016	**2017**	2016	**2017**
Plan assets based on quoted prices in active markets						
Real estate and special real estate funds	–	–	215	181	22	16
Equities and equity funds	2,919	3,617	1,861	1,739	149	158
Callable debt instruments	–	–	263	27	–	–
Noncallable debt instruments	556	–	736	602	128	127
Bond funds	3,754	3,737	1,823	1,631	104	94
Derivatives	11	11	(3)	–	–	–
Cash and cash equivalents	243	164	114	74	17	13
Other	–	–	6	–	–	–
	7,483	**7,529**	**5,015**	**4,254**	**420**	**408**
Plan assets for which quoted prices in active markets are not available						
Real estate and special real estate funds	563	496	124	179	–	–
Equities and equity funds	115	121	72	71	–	–
Callable debt instruments	1,525	1,399	–	–	–	–
Noncallable debt instruments	1,870	1,394	–	–	–	–
Bond funds	–	–	72	74	–	–
Derivatives	1	–	–	–	–	–
Other	252	142	373	431	51	41
	4,326	**3,552**	**641**	**755**	**51**	**41**
Total plan assets	**11,809**	**11,081**	**5,656**	**5,009**	**471**	**449**

The fair value of plan assets in Germany included real estate leased by Group companies, recognized at a fair value of €82 million (2016: €82 million), and Bayer AG shares and bonds held through investment funds, recognized at their fair values of €37 million (2016: €41 million) and €3 million (2016: €3 million), respectively.

In 2017, Bayer AG deposited 8 million (2016: 10 million) shares it held in Covestro AG with BPT. The market value of BPT's total shareholding in Covestro AG amounted to €1,549 million as of December 31, 2017 (2016: €652 million). In 2016, Covestro deposited short-term securities totaling €450 million with Metzler Trust e. V.

The other plan assets comprised mortgage loans granted, other receivables and qualified insurance policies.

Risks

The risks from defined benefit plans arise partly from the defined benefit obligations and partly from the investment in plan assets. These risks include the possibility that additional contributions will have to be made to plan assets in order to meet current and future pension obligations, and negative effects on provisions and equity.

Demographic / biometric risks

Since a large proportion of the defined benefit obligations comprises lifelong pensions or surviving dependents' pensions, longer claim periods or earlier claims may result in higher benefit obligations, higher benefit expense and / or higher pension payments than previously anticipated.

Investment risks

If the actual return on plan assets were below the return anticipated on the basis of the discount rate, the net defined benefit liability would increase, assuming there were no changes in other parameters. This could happen as a result of a drop in share prices, increases in market rates of interest, default of individual debtors or the purchase of low-risk but low-interest bonds, for example.

Interest-rate risk

A decline in capital market interest rates, especially for high-quality corporate bonds, would increase the defined benefit obligation. This effect would be at least partially offset by the ensuing increase in the market values of the debt instruments held.

Measurement parameters and their sensitivities

The following weighted parameters were used to measure the obligations for pensions and other post-employment benefits as of December 31 of the respective year:

B 25/7

Parameters for Benefit Obligations

	Germany		Other countries		Total	
%	2016	2017	2016	2017	2016	2017
Pension obligations						
Discount rate	1.80	1.90	3.25	2.95	2.15	2.15
of which U.S.A			3.70	3.40	3.70	3.40
of which U.K.			2.65	2.50	2.65	2.50
Projected future salary increases	2.75	2.75	3.50	3.60	2.95	2.95
Projected future benefit increases	1.50	1.70	3.35	3.25	1.95	2.10
Other post-employment benefit obligations						
Discount rate	–	–	4.35	4.25	4.35	4.25

The data selection criteria used to determine the discount rate in the eurozone were modified starting in the third quarter of 2017 in connection with the deconsolidation of Covestro. As before, the underlying bond portfolio consists entirely of high-quality corporate bonds with a minimum AA or AAA rating. It no longer contains corporate bonds issued by government-owned entities. The bond portfolio includes corporate bonds of special-purpose entities and exchange-traded corporate bonds. Without these modifications, the interest rate as of December 31, 2017, would have been 20 basis points lower. Provisions for pensions would therefore have been €0.6 billion higher.

In Germany the Heubeck 2005 G mortality tables were used, in the United States the RP-2014 Mortality Tables, and in the United Kingdom 95% of S1NXA.

The following weighted parameters were used to measure the expense for pension and other post-employment benefits in the respective year:

B 25/8

Parameters for Benefit Expense

	Germany		Other countries		Total	
%	2016	2017	2016	2017	2016	2017
Pension obligations						
Discount rate	2.40	1.80	3.85	3.25	2.75	2.15
Projected future salary increases	3.00	2.75	3.35	3.50	3.10	2.95
Projected future benefit increases	1.75	1.50	3.20	3.35	2.15	1.95
Other post-employment benefit obligations						
Discount rate	–	–	4.45	4.35	4.45	4.35

The parameter sensitivities were computed by expert actuaries based on a detailed evaluation similar to that performed to obtain the data presented in Table B 25/3. Altering individual parameters by 0.5 percentage points (mortality by 10% per beneficiary) while leaving the other parameters unchanged would have impacted pension and other post-employment benefit obligations as of year-end 2017 as follows:

B 25/9

Sensitivity of Benefit Obligations

	Germany		Other countries		Total	
€ million	Increase	Decrease	Increase	Decrease	**Increase**	**Decrease**
Pension obligations						
0.5%-pt. change in discount rate	(1,417)	1,620	(414)	468	(1,831)	2,088
0.5%-pt. change in projected future salary increases	87	(82)	50	(47)	137	(129)
0.5%-pt. change in projected future benefit increases	921	(841)	146	(110)	1,067	(951)
10% change in mortality	(587)	660	(172)	176	(759)	836
Other post-employment benefit obligations						
0.5%-pt. change in discount rate	–	–	(36)	39	(36)	39
10% change in mortality	–	–	(20)	22	(20)	22

B 25/10

Sensitivity of Benefit Obligations (prior year)

	Germany		Other countries		Total	
€ million	Increase	Decrease	Increase	Decrease	**Increase**	**Decrease**
Pension obligations						
0.5%-pt. change in discount rate	(1,752)	2,014	(478)	539	(2,230)	2,553
0.5%-pt. change in projected future salary increases	135	(125)	50	(47)	185	(172)
0.5%-pt. change in projected future benefit increases	1,107	(1,009)	139	(94)	1,246	(1,103)
10% change in mortality	(670)	752	(195)	209	(865)	961
Other post-employment benefit obligations						
0.5%-pt. change in discount rate	–	–	(48)	53	(48)	53
10% change in mortality	–	–	(24)	27	(24)	27

Provisions are also set up for the obligations, mainly of U.S. subsidiaries, to provide post-employment benefits in the form of health care cost payments for retirees. The valuation of health care costs was based on the assumption that they will increase at a rate of 6.5% (2016: 6.8%), which should gradually decline to 5.0% by 2023 (assumption in 2016: gradually decline to 5.0% by 2023). The following table shows the impact on other post-employment benefit obligations and total benefit expense of a one-percentage-point change in the assumed cost increase rates:

B 25/11

Sensitivity to Health Care Cost Increases

	Increase of one percentage point		Decrease of one percentage point	
€ million	2016	**2017**	2016	**2017**
Impact on other post-employment benefit obligations	77	55	(66)	(47)
Impact on benefit expense	4	3	(3)	(3)

Payments made and expected future payments

The following payments or asset contributions correspond to the employer contributions made or expected to be made to funded benefit plans:

B 25/12

Employer Contributions Paid or Expected

	Germany			Other countries		
€ million	2016	**2017**	2018 expected	2016	**2017**	2018 expected
Pension obligations	878	593	42	151	146	104
Other post-employment benefit obligations	–	–	–	1	(21)	1
Total	**878**	**593**	**42**	**152**	**125**	**105**

Bayer has currently committed to make deficit contributions for its U.K. pension plans of approximately GBP 16 million annually through 2019. For its U.S. pension plans, Bayer made payments of US$50 million in 2017 and expects to make payments of US$50 million in 2018, the latter amount being subject to change depending on future circumstances.

Pensions and other post-employment benefits payable in the future from funded and unfunded plans are estimated as follows:

B 25/13

Future Benefit Payments

	Payments out of plan assets				Payments by the company			
		Pensions	Other post-employment benefits			Pensions	Other post-employment benefits	
€ million	Germany	Other countries	Other countries	**Total**	Germany	Other countries	Other countries	**Total**
2018	203	247	22	472	434	69	14	517
2019	205	247	23	475	439	66	16	521
2020	208	251	23	482	443	70	17	530
2021	211	259	24	494	449	77	18	544
2022	216	261	25	502	454	78	18	550
2023-2027	1,135	1,363	128	2,626	2,311	415	110	2,836

The weighted average term of the pension obligations is 17.0 years (2016: 18.0 years) in Germany and 13.8 years (2016: 13.3 years) in other countries. The weighted average term of the obligations for other post-employment benefits in other countries is 11.5 years (2016: 11.5 years).

26. Other provisions

Changes in the various provision categories in 2017 were as follows:

B 26/1

Changes in Other Provisions

€ million	Other Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
December 31, 2016	**41**	**321**	**276**	**2,375**	**512**	**3,290**	**386**	**7,201**
Divestments / changes in the scope of consolidation	(6)	(44)	(56)	(88)	(7)	(552)	(25)	(778)
Additions	19	34	103	5,440	172	2,706	332	8,806
Utilization	(18)	(32)	(101)	(4,423)	(199)	(2,720)	(255)	(7,748)
Reversal	(5)	(14)	(37)	(567)	(47)	(589)	(61)	(1,320)
Reclassification to current liabilities	–	–	–	(11)	–	(2)	–	(13)
Interest cost	–	(2)	–	–	–	7	–	5
Exchange differences	(2)	(20)	(14)	(245)	(38)	(102)	(22)	(443)
December 31, 2017	**29**	**243**	**171**	**2,481**	**393**	**2,038**	**355**	**5,710**

The provisions recognized in the statement of financial position as of December 31, 2017, were expected to be utilized as follows:

B 26/2

Expected Utilization of Other Provisions

€ million	Other Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
2018	12	69	109	2,313	258	1,334	249	4,344
2019	–	13	29	147	65	59	3	316
2020	–	8	11	9	2	187	2	219
2021	–	7	6	2	3	159	1	178
2022	–	2	4	2	6	40	5	59
2023 or later	17	144	12	8	59	259	95	594
Total	**29**	**243**	**171**	**2,481**	**393**	**2,038**	**355**	**5,710**

The provisions were partly offset by claims for refunds in the amount of €74 million (2016: €110 million), which were recognized as receivables. These claims predominantly related to product liability.

Restructuring

Provisions for restructuring included €116 million (2016: €179 million) for severance payments and €55 million (2016: €97 million) for other restructuring expenses, which mainly comprised other costs related to the closure of production facilities.

In the Pharmaceuticals segment, restructuring took place mainly in the areas of marketing and supply network optimization as part of the Continuous Efficiency Program. In 2017, further use was made of the restructuring provisions established for this program in previous years, primarily in Japan, France and the United States. Provisions for the above and other restructuring measures in Pharmaceuticals as of December 31, 2017, totaled €45 million. Of this amount, severance payments accounted for €44 million and other restructuring expenses for €1 million.

In the Consumer Health segment, restructuring took place mainly in France, Germany and Italy. The restructuring measures in France and in Italy related to distribution, and in Germany to the discontinuation of contract manufacturing of medical products for third parties. Provisions for restructuring in this segment totaled €33 million as of December 31, 2017, with severance payments accounting for the entire amount.

In the Crop Science segment, provisions were established for the planned restructuring of the site in Institute, West Virginia, United States, to prepare for the termination of thiodicarb production. The restructuring measures initiated in connection with the "Advancing our Leadership Strategy" program to improve customer centricity, innovation and efficiency continued to be implemented. Restructuring provisions for the above and other measures at Crop Science as of December 31, 2017, totaled €73 million. Of this amount, severance payments accounted for €21 million and other restructuring expenses for €52 million.

Provisions for restructuring in the Animal Health segment as of December 31, 2017, totaled €6 million. Of this amount, severance payments accounted for €5 million and other restructuring expenses for €1 million.

In "All Other Segments," provisions were established for the relocation of a shared service center in China from Shanghai to Dalian. In addition, the provisions established in past years were utilized to implement planned restructuring measures to enhance efficiency. The restructuring provisions totaled €14 million as of December 31, 2017. Of this amount, severance payments accounted for €13 million and other restructuring expenses for €1 million.

Litigations

The legal risks currently considered to be material, and their development, are described in Note 32.

Personnel commitments

Stock-based compensation programs

Bayer offers stock-based compensation programs collectively to different groups of employees. As required by IFRS 2 (Share-based Payment) for compensation systems involving cash settlement, awards to be made under the stock-

based programs are covered by provisions in the amount of the fair value of the obligations existing as of the date of the financial statements vis-à-vis the respective employee group. All resulting valuation adjustments are recognized in profit or loss.

The following table shows the changes in provisions for the various programs:

B 26/3

Changes in Provisions for Stock-Based Compensation Programs

€ million	Aspire I	Aspire II	Aspire 2.0	Aspire I Covestro	Aspire II Covestro	Covestro Prisma	Total
December 31, 2016	**61**	**203**	**85**	**17**	**48**	**15**	**429**
Acquisitions / divestments	–	–	–	(7)	(22)	(27)	(56)
Additions	54	163	292	2	5	15	531
Utilization	(51)	(157)	–	(8)	(27)	–	(243)
Reversal	(56)	(167)	(98)	(3)	(3)	(1)	(328)
Exchange differences	(2)	(7)	(16)	(1)	(1)	(2)	(29)
December 31, 2017	**6**	**35**	**263**	**–**	**–**	**–**	**304**

The value of the Aspire tranches that were fully earned at the end of 2017, resulting in payments at the beginning of 2018, was €34 million (2016: €241 million).

The net expense for all stock-based compensation programs (excluding Covestro) was €194 million (2016: €87 million), including €5 million (2016: €5 million) for the BayShare stock participation program and expense of €1 million (2016: €1 million income) for grants of virtual Bayer shares.

The fair value of the obligations under the Aspire I, Aspire II and Aspire 2.0 programs (excluding Aspire programs for Covestro) was calculated using the Monte Carlo simulation method based on the following key parameters:

B 26/4

Parameters for Monte Carlo Simulation

	2016	2017
Dividend yield	2.90%	2.46%
Risk-free interest rate	(0.67)%	(0.35)%
Volatility of Bayer stock	22.78%	15.49%
Volatility of EURO STOXX 50	11.66%	9.27%
Correlation between Bayer stock price and the EURO STOXX 50	0.67	0.71

Long-term incentive program for members of the Board of Management and other senior executives (Aspire I)

From 2005 through 2015, members of the Board of Management and other senior executives were entitled to participate in Aspire I on the condition that they purchased a certain number of Bayer shares – determined for each individual according to specific guidelines – and retained them for the full term of the program. A percentage of the executive's annual base salary – according to his or her position – was defined as a target for variable payments (Aspire target opportunity). Depending on the performance of Bayer stock, both in absolute terms and relative to the EURO STOXX 50 index over a four-year performance period, participants receive a payment of up to 300% of their individual Aspire target opportunity at the end of the period. The prices used to determine the amount of the payment are the averages of the official closing prices of Bayer shares over the last 30 stock-exchange trading days of the respective year. At the start of 2017, a payment of 270% was made for the tranche issued in 2013. A payment of 20% was made at the start of 2018 for the tranche issued in 2014.

Long-term incentive program for middle management (Aspire II)

From 2005 through 2015, other senior managers were offered Aspire II, which was similar to Aspire I but did not require a personal investment in Bayer shares. The amount of the payment is based entirely on the absolute performance of Bayer stock over a four-year period. The maximum payment is 250% of each manager's Aspire target opportunity. The prices used to determine the amount of the payment are the averages of the official closing prices of Bayer shares over the last 30 stock-exchange trading days of the respective year. At the start of 2017, a payment of 220% was made for the tranche issued in 2013. A payment of 40% was made at the start of 2018 for the tranche issued in 2014.

Long-term incentive program Aspire 2.0

Since 2016, Aspire has been offered to all eligible employees in a new, standardized format named Aspire 2.0. For the Board of Management, there is an additional hurdle in the form of a comparison between the performance of Bayer stock and that of the EURO STOXX 50. Each tranche runs for four years. Aspire 2.0 is also based on a percentage of each employee's annual base salary, the percentage varying according to his or her position. This target value is multiplied by the employee's STI payment factor for the previous year to give the Aspire grant value. The STI payment factor reflects the employee's individual performance and the business performance under the global short-term incentive program (STI). The Aspire grant value is converted into virtual Bayer shares by dividing it by the share price at the start of the program. The program's performance is based on these virtual shares. The fair value of the obligations is determined from the price of Bayer stock at year end and the dividends paid up to that time. The payment made at the end of each tranche is determined by multiplying the number of virtual shares by the Bayer share price at that time and adding an amount equivalent to the dividends paid during the period of the tranche. The maximum payment for Aspire 2.0 is 250% of the Aspire grant value.

BayShare 2017

All management levels and nonmanagerial employees are offered an annual stock participation program known as BayShare, under which Bayer subsidizes their personal investments in the company's stock. The discount under this program in 2017 was 20% (2016: 20%) of the subscription amount. Employees stated a fixed amount that they wished to invest in shares. The maximum subscription amount in Germany was set at €2,500 (2016: €2,500) or €5,000 (2016: €5,000), depending on the employee's position. These shares must be retained until December 31, 2018.

In 2017, employees purchased a total of about 229,000 shares (2016: 259,000 shares) under the BayShare program.

27. Financial liabilities

Financial liabilities were comprised as follows:

B 27/1

Financial Liabilities

	Dec. 31, 2016		Dec. 31, 2017	
€ million	Total	Of which current	Total	Of which current
Bonds and notes / promissory notes	15,991	2,010	12,436	505
Liabilities to banks	1,837	820	534	513
Liabilities under finance leases	436	59	238	32
Liabilities from derivatives	587	309	240	221
Other financial liabilities	730	203	970	664
Total	**19,581**	**3,401**	**14,418**	**1,935**

The development of financial liabilities in 2017 is outlined in Note 35.

A breakdown of financial liabilities by contractual maturity is given below:

B 27/2

Maturities of Financial Liabilities

€ million	Dec. 31, 2016	€ million	Dec. 31, 2017
2017	3,401	2018	1,935
2018	3,241	2019	2,155
2019	2,456	2020	1,248
2020	44	2021	2,096
2021	2,714	2022	89
2022 or later	7,725	2023 or later	6,895
Total	**19,581**	**Total**	**14,418**

In addition to promissory notes in the amount of €45 million (2016: €45 million), the Bayer Group has issued the following bonds and notes:

B 27/3

Bonds and Notes

Effective interest rate	Stated rate		Nominal volume	Dec. 31, 2016 € million	Dec. 31, 2017 € million
		Bayer AG, Germany			
1.253%	1.125%	DIP bond 2014 / 2018 [3]	EUR 750 million	749	–
5.774%	5.625%	DIP bond 2006 / 2018	GBP 250 million	292	281
5.541%	5.625%	DIP bond 2006 / 2018 (increase)	GBP 100 million	117	113
0.050%	0.050%	Exchangeable bond [4] 2017 / 2020	EUR 1,000 million	–	1,220
2.086%	1.875%	DIP bond 2014 / 2021	EUR 750 million	755	753
3.811%	3.750%	Hybrid bond 2014 / 2024 [5] / 2074	EUR 1,500 million	1,494	1,495
2.517%	2.375%	Hybrid bond 2015 / 2022 [5] / 2075	EUR 1,300 million	1,290	1,292
3.093%	3.000%	Hybrid bond 2014 / 2020 [5] / 2075	EUR 1,750 million	1,745	1,746
		Bayer Capital Corporation B.V., Netherlands			
1.333%	1.250%	DIP bond 2014 / 2023	EUR 500 million	497	498
6.061%	5.625%	Mandatory convertible notes [6] 2016 / 2019	EUR 4,000 million	–	–
		Bayer Corporation, U.S.A.			
6.670%	6.650%	Notes 1998 / 2028	US$ 350 million	351	307
		Bayer Holding Ltd., Japan			
0.858%	0.816%	DIP bond 2012 / 2017	JPY 30 billion	243	–
1.493%	1.459%	DIP bond 2010 / 2017	JPY 10 billion	81	–
3.654%	3.575%	DIP bond 2008 / 2018	JPY 15 billion	122	111
0.629%	0.594%	DIP bond 2013 / 2019	JPY 10 billion	81	74
0.270%	0.230%	DIP bond 2017 / 2021	JPY 10 billion	–	74
0.301%	0.260%	DIP bond 2017 / 2022	JPY 10 billion	–	74
		Bayer Nordic SE, Finland			
Floating [1]	Floating [1]	DIP bond 2014 / 2017	EUR 500 million	500	–
		Bayer U.S. Finance LLC, U.S.A.			
Floating [2]	Floating [2]	Notes 2014 / 2017	US$ 400 million	379	–
1.615%	1.500%	Notes 2014 / 2017	US$ 850 million	806	–
2.564%	2.375%	Notes 2014 / 2019	US$ 2,000 million	1,889	1,662
3.096%	3.000%	Notes 2014 / 2021	US$ 1,500 million	1,419	1,247
3.579%	3.375%	Notes 2014 / 2024	US$ 1,750 million	1,642	1,444
		Covestro AG, Germany			
Floating	Floating	DIP bond 2016 / 2018	EUR 500 million	500	–
1.076%	1.000%	DIP bond 2016 / 2021	EUR 500 million	497	–
1.782%	1.750%	DIP bond 2016 / 2024	EUR 500 million	497	–
		Total		**15,946**	**12,391**

[1] Floating-rate coupon comprising three-month EURIBOR plus 22 basis points
[2] Floating-rate coupon comprising three-month USD-LIBOR plus 28 basis points
[3] Bond was early redeemed in October 2017
[4] Bond can be redeemed in cash, Covestro shares or a combinaton thereof
[5] Date of first option to early redeem the bond at par
[6] The mandatory convertible notes were allocated to capital reserves and to other financial liabilities.

Debt Issuance Programme

An important means of external financing are the bonds issued under the Debt Issuance Programme (DIP).

Bayer Holding Ltd., Japan, issued two JPY 10 billion bonds under the DIP in May 2017.

Hybrid bonds

The hybrid bonds issued by Bayer AG are subordinated, and 50% of their amount is treated by Moody's and S & P Global Ratings as equity. They therefore have a more limited effect on the Group's rating-relevant debt indicators than senior borrowings.

Mandatory convertible notes

On November 22, 2016, Bayer Capital Corporation B.V. placed subordinated mandatory convertible notes in the amount of €4,000 million, which will be converted into no-par shares of Bayer AG at maturity. The notes represented the first part of the equity component of the financing for the planned acquisition of Monsanto. The mandatory convertible notes were recognized in capital reserves and other financial liabilities.

Exchangeable bond

On June 14, 2017, Bayer AG issued bonds with a nominal value of €1,000 million which mature in 2020. The issue price was 105.25 percent of the principal amount and the initial exchange price was fixed at €80.93. These bonds can be settled in cash, by delivery of Covestro shares or by a combination thereof at or prior to maturity. Applying the fair value option under IAS 39.11A, these debt instruments were designated as financial liabilities at fair value through profit or loss upon first-time recognition.

Bayer AG guarantees all the bonds issued by subsidiaries.

Lease liabilities

Lease payments totaling €365 million (2016: €609 million), including €127 million (2016: €173 million) in interest, are to be made under finance leases to the respective lessors in future years.

The liabilities under finance leases mature as follows:

B 27/4

Lease Liabilities

€ million	Dec. 31, 2016		
Maturity	Lease payments	Interest component	Liabilities under finance leases
2017	88	29	59
2018	76	24	52
2019	68	21	47
2020	59	17	42
2021	57	15	42
2022 or later	261	67	194
Total	**609**	**173**	**436**

€ million	Dec. 31, 2017		
Maturity	Lease payments	Interest component	Liabilities under finance leases
2018	49	17	32
2019	44	13	31
2020	39	12	27
2021	31	11	20
2022	25	10	15
2023 or later	177	64	113
Total	**365**	**127**	**238**

Other financial liabilities

Other financial liabilities as of December 31, 2017, comprised €525 million (2016: €652 million) relating to the mandatory convertible notes issued in November 2016, and €292 million (2016: €0 million) in commercial paper.

Other information

As of December 31, 2017, the Group had undrawn credit facilities at its disposal totaling €47 billion (2016: €55 billion), including €43 billion, or US$52 billion (2016: €50 billion, or US$53 billion), in bridge financing for the planned acquisition of Monsanto.

Further information on the accounting for liabilities from derivatives is given in Note 30.

28. Trade accounts payable

Trade accounts payable comprised €5,116 million (2016: €6,403 million) due within one year and €13 million (2016: €7 million) due after one year. As a result of the deconsolidation of Covestro, trade accounts payable decreased by €1,286 million.

29. Other liabilities

Other liabilities comprised:

B 29/1

Other Liabilities

€ million	Dec. 31, 2016 Total	Dec. 31, 2016 Of which current	Dec. 31, 2017 Total	Dec. 31, 2017 Of which current
Other tax liabilities	544	527	420	418
Deferred income	1,463	651	1,156	195
Liabilities to employees	229	219	181	164
Liabilities for social expenses	168	157	138	130
Accrued interest on liabilities	186	181	149	139
Miscellaneous liabilities	788	686	724	606
Total	**3,378**	**2,421**	**2,768**	**1,652**

Deferred income included an upfront payment, originally amounting to US$1 billion, in connection with the strategic pharmaceutical collaboration agreed between Bayer and Merck & Co., Inc., United States, in the field of soluble guanylate cyclase (sGC) modulation. This deferred income is being amortized over a period of 13.5 years as the obligations are satisfied. At the end of 2017, the remaining amount of deferred income was €601 million (2016: €660 million). In addition, a milestone achieved in 2017 in the course of the collaboration led to the recognition of €291 million in deferred income at year end.

Deferred income also included the proceeds from the sale of the Diabetes Care business at the beginning of 2016. As at December 31, 2016, the amount deferred was €469 million. The original proceeds of around €1 billion were accrued over a period of 24 months in line with the rendering of the services and were fully realized by the end of 2017.

The deferred income included €48 million (2016: €62 million) in grants and subsidies received from governments, of which €17 million (2016: €15 million) was reversed through profit or loss.

The miscellaneous liabilities included financing commitments of US$195 million (2016: US$255 million) for the joint venture Casebia Therapeutics LLP, United Kingdom, established in December 2015 with CRISPR Therapeutics AG, Switzerland, and a further financing commitment of US$70 million for the joint venture Cooksonia Opco LLC, United States, established in September 2017 with Ginkgo Bioworks, Inc., United States, which will operate in the area of the plant microbiome.

The miscellaneous liabilities included €321 million (2016: €271 million) from derivatives.

30. Financial instruments

The system used by the Bayer Group to manage credit risks, liquidity risks and the different types of market price risk (interest-rate and currency risks), together with its objectives, methods and procedures, is outlined in the Opportunity and Risk Report, which forms part of the Combined Management Report.

30.1 Financial instruments by category

The following table shows the carrying amounts and fair values of financial assets and liabilities for each financial instrument category and a reconciliation to the corresponding line item in the statements of financial position. Since the line items “Other receivables,” “Trade accounts payable” and “Other liabilities” contain both financial instruments and nonfinancial assets or liabilities (such as other tax receivables or advance payments for services to be received in the future), the reconciliation is shown in the column headed “Nonfinancial assets / liabilities.”

Carrying Amounts and Fair Values of Financial Instruments

Dec.31, 2017

€ million	Carried at amortized cost	Carried at fair value *fair value for information* [1]			Nonfinancial assets / liabilities	**Carrying amount in the statement of financial position**
		Based on quoted prices in active markets (Level 1)	Based on observable market data (Level 2)	Based on unobserv-able inputs (Level 3)		
	Carrying amount	Carrying amount	Carrying amount	Carrying amount	Carrying amount	
Trade accounts receivable	8,582					8,582
Loans and receivables	8,582					8,582
Other financial assets	1,823	452	2,085	803		5,163
Loans and receivables	1,731		*1,731*			1,731
Available-for-sale financial assets	35	448	1,452	793		2,728
Held-to-maturity financial assets	57		*58*			57
Derivatives that qualify for hedge accounting			296			296
Derivatives that do not qualify for hedge accounting		4	337	10		351
Other receivables	380			46	1,250	1,676
Loans and receivables	380		*380*			380
Available-for-sale financial assets				46		46
Nonfinancial assets					1,250	1,250
Cash and cash equivalents	7,581					7,581
Loans and receivables	7,581		*7,581*			7,581
Total financial assets	**18,366**	**452**	**2,085**	**849**		**21,752**
of which loans and receivables	18,274					18,274
of which available-for-sale financial assets	35	448	1,452	839		2,774
Financial liabilities	12,958	1,220	240			14,418
Carried at amortized cost	12,958	*11,327*	*2,183*			12,958
Carried at fair value (non-derivative)		1,220				1,220
Derivatives that qualify for hedge accounting			187			187
Derivatives that do not qualify for hedge accounting			53			53
Trade accounts payable	4,568				561	5,129
Carried at amortized cost	4,568					4,568
Nonfinancial liabilities					561	561
Other liabilities	681	2	319	7	1,759	2,768
Carried at amortized cost	681		*681*			681
Carried at fair value (non-derivative)				7		7
Derivatives that qualify for hedge accounting			288			288
Derivatives that do not qualify for hedge accounting		2	31			33
Nonfinancial liabilities					1,759	1,759
Total financial liabilities	**18,207**	**1,222**	**559**	**7**		**19,995**
of which carried at amortized cost	18,207					18,207
of which derivatives that qualify for hedge accounting			475			475
of which derivatives that do not qualify for hedge accounting		2	84			86

[1] Fair value of the financial instruments carried at amortized cost; the exemption provisions under IFRS 7.29(a) were applied for information on specific fair values.

Carrying Amounts and Fair Values of Financial Instruments

						Dec. 31, 2016
	Carried at amortized cost	Carried at fair value *fair value for information* [1]			Nonfinancial assets / liabilities	
€ million	Carrying amount	Based on quoted prices in active markets (Level 1) Carrying amount	Based on observable market data (Level 2) Carrying amount	Based on unobservable inputs (Level 3) Carrying amount	Carrying amount	**Carrying amount in the statement of financial position**
Trade accounts receivable	10,969					10,969
Loans and receivables	10,969					10,969
Other financial assets	2,245	523	3,985	803		7,556
Loans and receivables	2,148		*2,145*	16		2,148
Available-for-sale financial assets	32	520	3,283	794		4,629
Held-to-maturity financial assets	65		*68*			65
Derivatives that qualify for hedge accounting			269			269
Derivatives that do not qualify for hedge accounting		3	433	9		445
Other receivables	633			57	2,103	2,793
Loans and receivables	633		*633*			633
Available-for-sale financial assets				57		57
Nonfinancial assets					2,103	2,103
Cash and cash equivalents	1,899					1,899
Loans and receivables	1,899		*1,899*			1,899
Total financial assets	**15,746**	**523**	**3,985**	**860**		**21,114**
of which loans and receivables	15,649					15,649
of which available-for-sale financial assets	32	520	3,283	851		4,686
Financial liabilities	18,994		587			19,581
Carried at amortized cost	18,994	*16,040*	*3,362*			18,994
Carried at fair value (non-derivative)						–
Derivatives that qualify for hedge accounting			312			312
Derivatives that do not qualify for hedge accounting			275			275
Trade accounts payable	6,035				375	6,410
Carried at amortized cost	6,035					6,035
Nonfinancial liabilities					375	375
Other liabilities	840	2	252	25	2,259	3,378
Carried at amortized cost	840		*840*			840
Carried at fair value (nonderivative)				8		8
Derivatives that qualify for hedge accounting			165			165
Derivatives that do not qualify for hedge accounting		2	87	17		106
Nonfinancial liabilities					2,259	2,259
Total financial liabilities	**25,869**	**2**	**839**	**25**		**26,735**
of which carried at amortized cost	25,869					25,869
of which derivatives that qualify for hedge accounting			477			477
of which derivatives that do not qualify for hedge accounting		2	362	17		381

[1] Fair value of the financial instruments carried at amortized cost; the exemption provisions under IFRS 7.29(a) were applied for information on specific fair values.

The loans and receivables reflected in other financial assets and the liabilities measured at amortized cost also include receivables and liabilities under finance leases in which Bayer is the lessor or lessee and which are therefore measured in accordance with IAS 17.

Due to the short maturities of most trade accounts receivable and payable, other receivables and liabilities, and cash and cash equivalents, their carrying amounts at the closing date do not significantly differ from the fair values.

The fair values of loans and receivables, held-to-maturity financial investments and of financial liabilities carried at amortized cost that are given for information are the present values of the respective future cash flows. The present values are determined by discounting the cash flows at a closing-date interest rate, taking into account the term of the assets or liabilities and the creditworthiness of the counterparty. Where a market price is available, however, this is deemed to be the fair value.

The fair values of available-for-sale financial assets correspond to quoted prices in active markets (Level 1), are determined using valuation techniques based on observable market data as of the end of the reporting period (Level 2) or are the present values of the respective future cash flows, determined on the basis of unobservable inputs (Level 3).

The fair values of derivatives for which no publicly quoted prices exist in active markets (Level 1) are determined using valuation techniques based on observable market data as of the end of the reporting period (Level 2). In applying valuation techniques, credit value adjustments are determined to allow for the contracting party's credit risk.

Currency and commodity forward contracts are measured individually at their forward rates or forward prices on the closing date. These depend on spot rates or prices, including time spreads. The fair values of interest rate hedging instruments and cross-currency interest-rate swaps were determined by discounting future cash flows over the remaining terms of the instruments at market rates of interest, taking into account any foreign currency translation as of the closing date.

Fair values measured using unobservable inputs are categorized within Level 3 of the fair value hierarchy. This applies to certain available-for-sale debt or equity instruments, in some cases to the fair values of embedded derivatives, and to obligations for contingent consideration in business combinations. Credit risk is frequently the principal unobservable input used to determine the fair values of debt instruments classified as available-for-sale financial assets by the discounted cash flow method. Here the credit spreads of comparable issuers are applied. A significant increase in credit risk could result in a lower fair value, whereas a significant decrease could result in a higher fair value. However, a relative change of 10% in the credit spread does not materially affect the fair value.

Embedded derivatives are separated from their respective host contracts. Such host contracts are generally sale or purchase agreements relating to the operational business. The embedded derivatives cause the cash flows from the contracts to vary with exchange-rate or price fluctuations. The internal measurement of embedded derivatives is mainly performed using the discounted cash flow method, which is based on unobservable inputs. These include planned sales and purchase volumes, and prices derived from market data. Regular monitoring is carried out based on these fair values as part of quarterly reporting.

Within financial liabilities, the fair value option permitted by IAS 39.11A was used for the first time for the debt instruments issued in June 2017 (exchangeable bond 2017/2020). On first-time recognition, the bond was designated as a financial liability at fair value through profit or loss.

The changes in the amount of financial assets and liabilities recognized at fair value based on unobservable inputs (Level 3) for each financial instrument category were as follows:

B 30.1/3

Development of Financial Assets and Liabilities (Level 3)

	2016				2017			
€ million	Available-for-sale financial assets	Derivatives (net)	Liabilities measured at fair value (non-derivative)	Total	Available-for-sale financial assets	Derivatives (net)	Liabilities carried at fair value (non-derivative)	Total
Carrying amounts of net assets / (net liabilities), Jan. 1	**833**	**9**	**(37)**	**805**	**851**	**(8)**	**(8)**	**835**
Gains (losses) recognized in profit or loss	18	(17)	23	24	15	21	–	36
of which related to assets / liabilities recognized in the statements of financial position	18	(17)	–	1	15	21	–	36
Gains (losses) recognized outside profit or loss	9	–	–	9	(16)	–	–	(16)
Additions of assets / (liabilities)	46	–	–	46	6	–	–	6
Settlements of (assets) / liabilities	(23)	–	6	(17)	(17)	–	1	(16)
Disposals from divestments / changes in scope of consolidation	–	–	–	–	–	(3)	–	(3)
Transfers to a different fair-value hierarchy	(32)	–	–	(32)	–	–	–	–
Carrying amounts of net assets / (net liabilities), Dec. 31	**851**	**(8)**	**(8)**	**835**	**839**	**10**	**(7)**	**842**

The changes recognized in profit or loss were included in other operating income / expenses, in interest income in the financial result, and in exchange gains / losses.

Income, expense, gains and losses on financial instruments can be assigned to the following categories:

B 30.1/4

Income, Expense, Gains and Losses on Financial Instruments

	2017						
€ million	Loans and receivables	Held-to-maturity financial investments	Available for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Liabilities carried at fair value (non-derivative)	Total
Interest income	61	–	37	–	78	–	176
Interest expense	–	–	–	(3)	(628)	–	(631)
Income / expenses from affiliated companies	–	–	2	–	–	–	2
Changes in fair value	–	–	–	17	–	(172)	(155)
Impairment losses	(139)	–	(1)	–	–	–	(140)
Impairment loss reversals	23	–	5	–	–	–	28
Exchange gains / losses	(733)	–	–	(232)	620	–	(345)
Gains / losses from retirements	–	–	5	–	–	–	5
Other financial income / expenses	(14)	–	(7)	–	–	–	(21)
Net result	**(802)**	**–**	**41**	**(218)**	**70**	**(172)**	**(1,081)**

Income, Expense, Gains and Losses on Financial Instruments (Previous Year)

							2016
€ million	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Liabilities carried at fair value (non-derivative)	**Total**
Interest income	42	–	21	2	62	–	127
Interest expense	–	–	–	(3)	(597)	–	(600)
Income / expenses from affiliated companies	–	–	–	–	–	–	–
Changes in fair value	–	–	–	(71)	–	–	(71)
Impairment losses	(163)	–	(2)	–	–	–	(165)
Impairment loss reversals	23	–	–	–	–	–	23
Exchange gains / losses	348	–	–	(55)	(329)	–	(36)
Gains / losses from retirements	–	–	6	–	–	–	6
Other financial income / expenses	–	–	–	–	(34)	–	(34)
Net result	**250**	**–**	**25**	**(127)**	**(898)**	**–**	**(750)**

2016 figures restated

The interest expense of €628 million (2016: €597 million) from non-derivative financial liabilities also included the income and expense from interest-rate swaps that qualified for hedge accounting. Interest income from financial assets not measured at fair value through profit or loss amounted to €98 million (2016: €63 million). Interest income from interest-rate derivatives that qualified for hedge accounting was €78 million (2016: €62 million). The changes in fair values of financial assets held for trading related mainly to forward commodity contracts and embedded derivatives. The changes of minus €172 million in the fair value of (nonderivative) liabilities measured at fair value contain fair value adjustments pertaining to debt instruments (exchangeable bond 2017/2020) issued in June 2017. The changes in fair value relating to credit risks were not material.

Derivatives that form part of a master netting arrangement, constitute a financial asset or liability and can only be netted in the event of breach of contract by, or insolvency of, one of the contracting parties do not satisfy, or only partially satisfy, the criteria for offsetting in the statement of financial position according to IAS 32. The volume of such derivatives with positive fair values was €654 million (2016: €630 million), and the volume with negative fair values was €520 million (2016: €762 million). Included here is an amount of €312 million (2016: €362 million) in positive and negative fair values of derivatives concluded with the same contracting party.

30.2 Maturity analysis

The liquidity risks to which the Bayer Group was exposed from its financial instruments at the end of the reporting period comprised obligations for future interest and repayment installments on financial liabilities and the liquidity risk arising from derivatives.

There were also loan commitments under an as yet unpaid €1,005 million (2016: €1,005 million) portion of the effective initial fund of Bayer-Pensionskasse VVaG, which may result in further payments by Bayer AG in subsequent years.

B 30.2/1

Maturity Analysis of Financial Instruments

€ million	Dec. 31, 2017 Carrying amount	2018	2019	2020	2021	2022	after 2022
		Interest and repayment					
Financial liabilities							
Bonds and notes / promissory notes	12,436	719	2,096	1,487	2,288	236	7,125
Liabilities to banks	534	527	20	–	–	–	–
Remaining liabilities	1,208	716	359	40	32	26	177
Trade accounts payable	4,568	4,555	11	2	–	–	–
Other liabilities							
Accrued interest on liabilities	149	140	1	1	1	1	5
Remaining liabilities	539	455	66	3	2	2	11
Liabilities from derivatives							
Derivatives that qualify for hedge accounting	475	443	34	–	6	–	–
Derivatives that do not qualify for hedge accounting	86	88	1	2	–	–	–
Receivables from derivatives							
Derivatives that qualify for hedge accounting	296	144	62	17	2	–	–
Derivatives that do not qualify for hedge accounting	351	331	4	1	1	–	–
Loan commitments	–	1,005	–	–	–	–	–
Financial guarantees	–	12	–	–	–	–	–

B 30.2/2

Maturity Analysis of Financial Instruments

€ million	Dec. 31, 2016 Carrying amount	2017	2018	2019	2020	2021	after 2021
		Interest and repayment					
Financial liabilities							
Bonds and notes / promissory notes	15,991	2,261	2,160	2,367	295	2,916	8,093
Liabilities to banks	1,837	884	998	39	–	–	9
Remaining liabilities	1,166	293	303	382	61	58	268
Trade accounts payable	6,035	6,028	4	2	1	–	–
Other liabilities							
Accrued interest on liabilities	186	181	1	1	1	–	2
Remaining liabilities	662	626	3	5	2	1	25
Liabilities from derivatives							
Derivatives that qualify for hedge accounting	477	178	231	157	2	–	–
Derivatives that do not qualify for hedge accounting	381	374	3	4	2	1	1
Receivables from derivatives							
Derivatives that qualify for hedge accounting	269	210	23	4	3	2	–
Derivatives that do not qualify for hedge accounting	445	467	2	2	1	1	1
Loan commitments	–	1,213	–	–	–	–	–
Financial guarantees	–	14	–	–	–	–	3

30.3 Information on derivatives

Asset and liability fair values and future cash flows are exposed to currency, interest-rate and commodity price risks. Derivatives are used to reduce this risk. In some cases they are designated as hedging instruments in a hedge accounting relationship.

Currency risks

Foreign currency receivables and liabilities are hedged using foreign exchange derivatives without the existence of a hedge accounting relationship. A bond of Bayer AG denominated in British pounds was swapped on the issuance date into a fixed-rate euro bond by means of a cross-currency interest-rate swap, which was designated as a cash flow hedge. Cross-currency interest-rate swaps used to hedge intra-Group loans were also designated as cash flow hedges.

Fluctuations in future cash flows resulting from forecasted foreign currency transactions and procurement activities are avoided partly through derivatives contracts, most of which are designated as cash flow hedges.

Foreign currency risks related to the planned acquisition of Monsanto Company were partially hedged with currency derivatives, which were designated as cash flow hedges.

Interest-rate risk

The interest-rate risks from fixed-interest borrowings are managed in part using interest-rate swaps. Two interest-rate swaps in the total amount of €200 million were designated as fair value hedges for the €750 million DIP bond issued in 2014 and maturing in 2021.

Losses of €3 million were recorded on fair-value hedging instruments in 2017 (2016: €1 million). Gains of €4 million were recorded on the underlying hedged items (2016: €1 million).

Interest-rate risks relating to the planned acquisition of Monsanto were partly hedged using interest-rate derivatives. These were designated as cash flow hedges.

Commodity price risks

Hedging contracts are also used to partly reduce exposure to fluctuations in future cash outflows and inflows resulting from price changes on procurement and selling markets.

Hedging of obligations under stock-based employee compensation programs

A portion of the obligations to make variable payments to employees under stock-based compensation programs (Aspire) is hedged against share price fluctuations using derivatives contracts that are settled in cash at maturity. These derivatives are designated as cash flow hedges.

Further information on cash flow hedges

Other comprehensive income from cash flow hedges declined in 2017 by €89 million (2016: increased by €44 million) due to changes in the fair values of derivatives net of tax. Total changes of €3 million in the fair values of derivatives were expensed in 2017 (2016: €3 million). The respective pro-rated deferred tax income of €2 million (2016: €2 million) was likewise recognized through profit or loss.

No material ineffective portions of hedges required recognition through profit or loss in 2017 or 2016.

The income and expense from cash flow hedges recognized in other comprehensive income as at December 31, 2017, mainly comprised gains of €177 million (2016: €204 million) and losses of €289 million (2016: €143 million) from the hedging of forecasted transactions in foreign currencies and the planned acquisition of Monsanto Company. Of these gains and losses, a net amount of €102 million (2016: minus €91 million) will be reclassifiable to profit or loss within one year, and a net amount of minus €17 million (2016: €2 million) in subsequent years.

The fair values of existing contracts in the major categories at the end of the reporting period are indicated in the following table together with the included volumes of hedges.

B 30.3/1

Fair Values of Derivatives

	Dec. 31, 2016			Dec. 31, 2017		
€ million	Notional amount [1]	Positive fair value	Negative fair value	Notional amount [1]	Positive fair value	Negative fair value
Currency hedging of recorded transactions	**22,645**	**299**	**(587)**	**12,321**	**233**	**(240)**
Forward exchange contracts	20,454	296	(273)	10,399	144	(53)
Cross-currency interest-rate swaps	2,191	3	(314)	1,922	89	(187)
of which cash flow hedges	2,146	3	(312)	1,880	87	(187)
Currency hedging of forecasted transactions	**17,799**	**317**	**(206)**	**9,475**	**116**	**(194)**
Forward exchange contracts	3,805	48	(145)	9,292	105	(194)
of which cash flow hedges	3,672	43	(138)	9,205	103	(192)
Currency options	13,994	269	(61)	183	11	–
of which cash flow hedges	13,698	161	(5)	183	11	–
Interest-rate hedging of recorded transactions	**200**	**14**	**–**	**200**	**11**	**–**
Interest-rate swaps	200	14	–	200	11	–
of which fair value hedges	200	14	–	200	11	–
Interest-rate hedging of forecasted transactions	**–**	**–**	**–**	**9,086**	**64**	**(81)**
Interest-rate swaps	–	–	–	9,086	64	(81)
of which cash flow hedges	–	–	–	9,086	64	(81)
	–	–	–	–	–	–
Commodity price hedging	**168**	**5**	**(4)**	**420**	**6**	**(3)**
Forward commodity contracts	167	4	(4)	414	6	(3)
Commodity option contracts	1	1	–	6	–	–
Hedging of stock-based employee compensation programs	**532**	**48**	**(22)**	**544**	**20**	**(15)**
Share price options	152	48	–	75	5	–
of which cash flow hedges	152	48	–	75	5	–
Forward share transactions	380	–	(22)	469	15	(15)
of which cash flow hedges	380	–	(22)	469	15	(15)
Total	**41,344**	**683**	**(819)**	**32,046**	**450**	**(533)**
of which current derivatives	38,349	635	(514)	30,259	317	(499)
for currency hedging	38,111	597	(510)	20,678	242	(415)
for interest-rate hedging [2]	–	3	–	9,086	64	(81)
for raw material price hedging	168	5	(4)	420	6	(3)
for hedging of stock-based employee compensation programs	70	30	–	75	5	–

[1] The notional amount is reported as gross volume, which also contains economically closed hedges.
[2] The portion of the fair value of long-term interest-rate swaps that relates to current interest payments was classified as current.

Other information

In connection with the sale of Covestro AG shares in 2017, Bayer AG entered into derivative contracts. These resulted in Bayer AG retaining economic exposure to the price of Covestro AG shares. As at the end of the year, Bayer AG continued to hold derivatives on the Covestro AG shares with a notional amount of €752 million, and had generated a gain of €50 million from these derivatives. The derivatives had a fair value of €150 million as of December 31, 2017, that was also recognized in profit and loss.

31. Contingent liabilities and other financial commitments

Contingent liabilities

The following warranty contracts, guarantees and other contingent liabilities existed at the end of the reporting period:

B 31/1

Contingent Liabilities

€ million	Dec. 31, 2016	Dec. 31, 2017
Warranties	100	88
Guarantees	264	148
Other contingent liabilities	444	614
Total	**808**	**850**

The guarantees mainly comprise a declaration issued by Bayer AG to the trustees of the U.K. pension plans guaranteeing the pension obligations of Bayer Public Limited Company and Bayer CropScience Limited. Under the declaration, Bayer AG – in addition to the two companies – undertakes to make further payments into the plans upon receipt of a payment request from the trustees. The net liability with respect to these defined benefit plans as of December 31, 2017, declined to €148 million (2016: €264 million).

Other financial commitments

The other financial commitments were as follows:

B 31/2

Other Financial Commitments

€ million	Dec. 31, 2016	Dec. 31, 2017
Operating leases	1,101	801
Commitments under purchase agreements for property, plant and equipment	479	493
Contractual obligation to acquire intangible assets	243	83
Capital contribution commitments	182	149
Binding acquisition agreement with Monsanto Company, St. Louis, Missouri, U.S.A. [1]	53,000	47,000
Unpaid portion of the effective initial fund	1,213	1,005
Potential payment obligations under R&D collaboration agreements	2,444	2,349
Revenue-based milestone payment commitments	1,839	1,923
Total	**60,501**	**53,803**

[1] The contingent financial commitment of approximately US$56 billion was translated at the closing rate and rounded.

On September 14, 2016, Bayer signed a definitive merger agreement with Monsanto Company, St. Louis, Missouri, United States, which provides for Bayer's acquisition of all outstanding shares in Monsanto Company against a cash payment of US$128 per share. Bayer thus has a contingent financial commitment in the amount of approximately US$56 billion to acquire Monsanto's entire outstanding capital stock. Further details of this planned acquisition are given in Note 6.2.

Financial commitments resulting from orders already placed under purchase agreements related to planned or ongoing capital expenditure projects totaled €493 million (2016: €479 million), while contractual obligations to acquire intangible assets totaled €83 million (2016: €243 million).

The nondiscounted future minimum lease payments relating to operating leases totaled €801 million (2016: €1,101 million). The decline is largely due to the deconsolidation of Covestro. The maturities of the respective payment obligations were as follows:

B 31/3

Operating Leases

Maturing in	Dec. 31, 2016	Maturing in	Dec. 31, 2017
	€ million		€ million
2017	237	2018	166
2018	192	2019	143
2019	161	2020	124
2020	138	2021	93
2021	102	2022	73
2022 or later	271	2023 or later	202
Total	**1,101**	**Total**	**801**

The Bayer Group has entered into cooperation agreements with third parties under which it has agreed to fund various research and development projects or has assumed other payment obligations based on the achievement of certain milestones or other specific conditions. If all of these payments have to be made, their maturity distribution as of December 31, 2017, was expected to be as set forth in the following table. The amounts shown represent the maximum payments to be made, and it is unlikely that they will all fall due. Since the achievement of the conditions for payment is highly uncertain, both the amounts and the dates of the actual payments may vary considerably from those stated in the table.

B 31/4

Potential Payment Obligations Under R&D Collaboration Agreements

Maturing in	Dec. 31, 2016	Maturing in	Dec. 31, 2017
	€ million		€ million
2017	233	2018	157
2018	151	2019	510
2019	333	2020	143
2020	66	2021	143
2021	28	2022	54
2022 or later	1,633	2023 or later	1,342
Total	**2,444**	**Total**	**2,349**

In addition to the above commitments, there were also revenue-based milestone payment commitments totaling €1,923 million (2016: €1,839 million), of which €1,764 million (2016: €1,834 million) was not expected to fall due until 2023 (2016: 2022) or later. These commitments are also highly uncertain.

32. Legal risks

As a global company with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks, particularly in the areas of product liability, competition and antitrust law, anticorruption, patent disputes, tax assessments and environmental matters. The outcome of any current or future proceedings cannot normally be predicted. It is therefore possible that legal or regulatory judgments or future settlements could give rise to expenses that are not covered, or not fully covered, by insurers' compensation payments and could significantly affect our revenues and earnings.

Legal proceedings currently considered to involve material risks are outlined below. The legal proceedings referred to do not represent an exhaustive list.

Product-related litigation

Mirena™: As of January 30, 2018, lawsuits from approximately 2,900 users of Mirena™, a levonorgestrel-releasing intrauterine system providing long-term contraception, had been served upon Bayer in the United States (excluding

lawsuits no longer pending). Plaintiffs allege personal injuries resulting from the use of Mirena™, including perforation of the uterus, ectopic pregnancy or idiopathic intracranial hypertension, and seek compensatory and punitive damages. Plaintiffs claim, inter alia, that Mirena™ is defective and that Bayer knew or should have known of the risks associated with it and failed to adequately warn its users. Additional lawsuits are anticipated. In April 2017, most of the cases pending in U.S. federal courts in which plaintiffs allege idiopathic intracranial hypertension were consolidated in a multidistrict litigation ("MDL") proceeding for common pre-trial management. As of January 30, 2018, lawsuits from approximately 400 users of Mirena™ alleging idiopathic intracranial hypertension had been served upon Bayer in the United States. Another MDL proceeding concerning perforation cases has, in the meantime, been dismissed. The Second Circuit Court of Appeals affirmed the perforation MDL district court's summary judgment order of 2016 dismissing approximately 1,230 cases pending before that court. In August 2017, Bayer reached an agreement in principle with plaintiffs' counsel leadership for global settlement of the perforation litigation, for a total amount of US$12.2 million. As of January 30, 2018, a total of approximately 4,000 cases would be included in the settlement. The idiopathic intracranial hypertension MDL proceeding is not included in the settlement.

As of January 30, 2018, five Canadian lawsuits relating to Mirena™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Xarelto™: As of January 30, 2018, U.S. lawsuits from approximately 22,000 recipients of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Xarelto™, including cerebral, gastrointestinal or other bleeding and death, and seek compensatory and punitive damages. They claim, amongst other things, that Xarelto™ is defective and that Bayer knew or should have known of these risks associated with the use of Xarelto™ and failed to adequately warn its users. Additional lawsuits are anticipated. Cases pending in U.S. federal courts have been consolidated in an MDL for common pre-trial management. In May, June and August 2017, the first three MDL trials resulted in complete defense verdicts; plaintiffs have appealed all three verdicts. In January 2018, after the first trial to proceed in Pennsylvania state court had initially resulted in a judgment in favor of the plaintiff, the trial judge vacated the jury's verdict and granted judgment in favor of Bayer. Further Pennsylvania state court trials are currently scheduled for the first and second quarters of 2018. Bayer anticipates that additional trials will be scheduled.

As of January 30, 2018, ten Canadian lawsuits relating to Xarelto™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Essure™: As of January 30, 2018, U.S. lawsuits from approximately 16,100 users of Essure™, a medical device offering permanent birth control with a nonsurgical procedure, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Essure™, including hysterectomy, perforation, pain, bleeding, weight gain, nickel sensitivity, depression and unwanted pregnancy, and seek compensatory and punitive damages. Additional lawsuits are anticipated.

As of January 30, 2018, two Canadian lawsuits relating to Essure™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Class actions over neonicotinoids in Canada: Proposed class actions against Bayer were filed in Quebec and Ontario (Canada) concerning crop protection products containing the active substances imidacloprid and clothianidin (neonicotinoids). Plaintiffs are honey producers, who have filed a proposed nationwide class action in Ontario and a Quebec-only class action in Quebec. Plaintiffs claim for damages and punitive damages and allege Bayer and another crop protection company were negligent in the design, development, marketing and sale of neonicotinoid pesticides. The proposed Ontario class action is in a very early procedural phase. In Quebec, the plaintiff sought authorization (certification) of a class for which a motion was heard in November 2017. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

In connection with the above-mentioned proceedings, Bayer is insured against statutory product liability claims against Bayer to the extent customary in the respective industries and has, based on the information currently available, taken appropriate accounting measures for anticipated defense costs. However, the accounting measures relating to Essure™ claims exceed the available insurance coverage.

Patent disputes

Adempas™: In January 2018, Bayer filed patent infringement lawsuits in a U.S. federal court against Alembic Pharmaceuticals Limited, Alembic Global Holding SA, Alembic Pharmaceuticals, Inc. and INC Research, LLC (together "Alembic"), against MSN Laboratories Private Limited and MSN Pharmaceuticals Inc. (together "MSN") and

against Teva Pharmaceuticals USA, Inc. and Teva Pharmaceutical Industries Ltd. (together "Teva"). In December 2017, Bayer had received notices of an Abbreviated New Drug Application with a paragraph IV certification ("ANDA IV") pursuant to which Alembic, MSN and Teva each seek approval of a generic version of Bayer's pulmonary hypertension drug Adempas™ in the United States.

Betaferon™ / Betaseron™: In 2010, Bayer filed a complaint against Biogen Idec MA Inc. in a U.S. federal court seeking a declaration by the court that a patent issued to Biogen in 2009 is invalid and not infringed by Bayer's production and distribution of Betaseron™, Bayer's drug product for the treatment of multiple sclerosis. Biogen is alleging patent infringement by Bayer through Bayer's production and distribution of Betaseron™ and Extavia™ and has sued Bayer accordingly. Bayer manufactures Betaseron™ and distributes the product in the United States. Extavia™ is also a drug product for the treatment of multiple sclerosis; it is manufactured by Bayer, but distributed in the United States by Novartis Pharmaceuticals Corporation, another defendant in the lawsuit. In 2016, the U.S. federal court decided a disputed issue regarding the scope of the patent in Biogen's favor. Bayer disagrees with the decision, which may be appealed at the conclusion of the proceedings in the U.S. federal court.

Damoctocog alfa pegol (BAY 94-9027, long-acting recombinant factor VIII): In August 2017, Bayer filed a lawsuit in a U.S. federal court against Nektar Therapeutics ("Nektar"), Baxalta Incorporated and Baxalta U.S., Inc. (together "Baxalta") seeking a declaration by the court that a patent by Nektar is invalid and not infringed by Bayer's drug candidate BAY 94-9027 for the treatment of hemophilia A. In September 2017, Baxalta and Nektar filed a complaint in a different U.S. federal court against Bayer alleging that BAY 94-9027 infringes seven other patents by Nektar. Regarding the complaint by Bayer, Nektar and Baxalta gave Bayer a covenant not to make any claims against Bayer for infringement of that patent. Bayer amended the complaint to now seek a declaration by the court that the seven other patents by Nektar are not infringed by BAY 94-9027. The patents are part of a patent family registered in the name of Nektar and further comprising European patent applications with the title "Polymer-factor VIII moiety conjugates" which are at issue in a lawsuit Bayer filed against Nektar in 2013 in the district court of Munich, Germany. In this proceeding, Bayer claims rights to the European patent applications based on a past collaboration between Bayer and Nektar in the field of hemophilia. However, Bayer believes that the patent family does not include any valid patent claim relevant for Bayer's drug candidate BAY 94-9027 for the treatment of hemophilia A.

Nexavar™: In 2015, Bayer filed patent infringement lawsuits in a U.S. federal court against Mylan Pharmaceuticals Inc. and Mylan Inc. (together "Mylan"). In 2014 and 2015, Bayer had received notices of an ANDA IV application pursuant to which Mylan seeks approval of a generic version of Bayer's cancer drug Nexavar™ in the United States. In October 2017, Bayer reached agreement with Mylan to settle this patent dispute. Under the settlement terms, Mylan will obtain a license to sell its generic version of NexavarTM in the United States at a date after the expiration of the patent for the active ingredient expiring in January 2020. In 2016, Bayer had received another notice of such an ANDA IV application by Teva Pharmaceuticals USA, Inc. Bayer filed a patent infringement lawsuit against Teva in the same U.S. federal court. In January 2018, Bayer reached agreement with Teva to settle this patent dispute. Under the settlement terms, Teva will obtain a license to sell its generic version of NexavarTM in the United States at a date after the expiration of the patent for the active ingredient expiring in January 2020.

Stivarga™: In 2016, Bayer filed patent infringement lawsuits in a U.S. federal court against Apotex, Inc. and Apotex Corp. (together "Apotex") and against Teva. Bayer had received notices of an ANDA IV application pursuant to which Apotex and Teva each seek approval of a generic version of Bayer's cancer drug Stivarga™ in the United States.

Xarelto™: In 2015, Bayer and Janssen Pharmaceuticals filed a patent infringement lawsuit in a U.S. federal court against Aurobindo Pharma Limited, Aurobindo Pharma USA, Inc. (together "Aurobindo"), Breckenridge Pharmaceutical Inc. ("Breckenridge"), Micro Labs Ltd., Micro Labs USA Inc. (together "Micro Labs"), Mylan, Prinston Pharmaceutical Inc. ("Prinston"), Sigmapharm Laboratories, LLC ("Sigmapharm"), Torrent Pharmaceuticals, Limited and Torrent Pharma Inc. (together "Torrent"). Bayer had received notices of an ANDA IV application by Aurobindo, Breckenridge, Micro Labs, Mylan, Prinston, Sigmapharm and Torrent, each seeking approval to market a generic version of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, in the United States. In 2016, Bayer received another notice of such an ANDA IV application by InvaGen Pharmaceuticals, Inc. ("InvaGen"). Bayer and Janssen Pharmaceuticals filed a patent infringement lawsuit against InvaGen in the same U.S. federal court.

Bayer believes it has meritorious defenses in the above ongoing patent disputes and intends to defend itself vigorously.

Further Legal Proceedings

Trasylol™ / Avelox™: A qui tam complaint relating to marketing practices for Trasylol™ (aprotinin) and Avelox™ (moxifloxacin) filed by a former Bayer employee is pending in the United States District Court in New Jersey. The U.S. government has declined to intervene at the present time.

Newark Bay Environmental Matters: In the United States, Bayer is one of numerous parties involved in a series of claims brought by federal and state environmental protection agencies. The claims arise from operations by entities which historically were conducted near Newark Bay or surrounding bodies of water, or which allegedly discharged hazardous waste into these waterways or onto nearby land. Bayer and the other potentially responsible parties are being asked to remediate and contribute to the payment of past and future remediation or restoration costs and damages. In 2016, Bayer learned that two major potentially responsible parties had filed for protection under Chapter 11 of the U.S. Bankruptcy Code. While Bayer remains unable to determine the extent of its liability for these matters, this development is likely to adversely affect the share of costs potentially allocated to Bayer.

In the Lower Passaic River matter, a group of more than sixty companies including Bayer is investigating contaminated sediments in the riverbed under the supervision of the United States Environmental Protection Agency (EPA) and other governmental authorities. Future remediation will involve some form of dredging, the nature and scope of which are not yet defined, and potentially other tasks. The cost of the investigation and the remediation work may be substantial if the final remedy involves extensive dredging and disposal of impacted sediments. In the Newark Bay matter, an unaffiliated party is currently conducting an investigation of sediments in Newark Bay under EPA supervision. The investigation is in a preliminary stage. Bayer has contributed to certain investigation costs in the past and may incur costs for future investigation and remediation activities in Newark Bay.

Bayer has also been notified by governmental authorities acting as natural resource trustees that it may have liability for natural resource damages arising from the contamination of the Lower Passaic River, Newark Bay and surrounding water bodies. Bayer is currently unable to determine the extent of its liability.

Asbestos: A further risk may arise from asbestos litigation in the United States. In many cases, the plaintiffs allege that Bayer and co-defendants employed third parties on their sites in past decades without providing them with sufficient warnings or protection against the known dangers of asbestos. Additionally, a Bayer affiliate in the United States is the legal successor to companies that sold asbestos products until 1976. Union Carbide has agreed to indemnify Bayer for this liability. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Tax Proceedings

Stamp taxes in Greece: In 2014, 2016 and 2017, a Greek administrative court of first instance dismissed Bayer's lawsuits against the assessment of stamp taxes and contingent penalties in a total amount of approximately €130 million on certain intra-Group loans to a Greek subsidiary. Bayer is convinced that the decisions are wrong and either has appealed the relevant decisions or plans to do so in due course. Bayer believes it has meritorious arguments to support its legal position and intends to defend itself vigorously.

Notes to the Statements of Cash Flows

The statement of cash flows shows how cash inflows and outflows during the fiscal year affected the cash and cash equivalents of the Bayer Group. Cash flows are classified by operating, investing and financing activities in accordance with IAS 7 (Statement of Cash Flows). Effects of changes in the scope of consolidation are stated separately.

Of the cash and cash equivalents, an amount of €14 million (2016: €17 million) had limited availability due to foreign exchange restrictions. Past experience has shown such restrictions to be of short duration. The above amount included €0 million (2016: €3 million) of exchange-restricted cash in Venezuela. The conversion of cash from Venezuelan bolivars (VEF) into U.S. dollars is subject to a government approval process.

The cash flows reported by consolidated companies outside the eurozone are translated at average monthly exchange rates, with the exception of cash and cash equivalents, which are translated at closing rates. The "Change in cash and cash equivalents due to exchange rate movements" is reported in a separate line item.

33. Net cash provided by (used in) operating activities

The operating cash flow (total) declined by 10.5% in 2017, to €8,134 million. The prior-year figure included inflows from the divestment of Diabetes Care. The operating cash flow from continuing operations was €6,611 million, up 2.7% from the previous year. It included the operating portion of the payments received from DOW Chemical in connection with a patents dispute.

The transfer of Covestro shares with a value of €504 million (2016: €337 million) to Bayer Pension Trust e. V. was a noncash transaction and therefore did not result in an operating cash outflow.

34. Net cash provided by (used in) investing activities

The net cash outflow for investing activities in 2017 amounted to €432 million (2016: €8,729 million).

Additions to property, plant and equipment and intangible assets in 2017 resulted in a cash outflow of €2,366 million (2016: €2,578 million). Cash inflows from sales of property, plant and equipment and intangible assets amounted to €241 million (2016: €111 million).

The proceeds of €999 million from the sale of Covestro shares as of September 29, 2017, which, together with the control termination agreement concluded, led to the de facto loss of control, less the cash of €637 million derecognized with Covestro, resulted in a cash inflow of €362 million from divestments. The sale of some of these shares by the banks in December 2017 resulted in a further cash inflow of €37 million.

The net cash inflow from noncurrent and current financial assets amounted to €1,230 million (2016: net cash outflow of €6,335 million).

35. Net cash provided by (used in) financing activities

In 2017 there was a net cash outflow of €1,881 million (2016: €350 million) for financing activities. Net loan repayments amounted to €2,479 million (2016: €730 million).

Cash outflows for dividend payments amounted to €2,364 million (2016: €2,126 million). Net interest payments – including payments for and receipts from interest-rate swaps – declined to €732 million (2016: €794 million). The sale of Covestro shares prior to the de facto loss of control resulted in a total net inflow of €3,717 million. In 2016, the net inflow of €3,952 million from the mandatory convertible notes was reflected as a capital contribution of €3,300 million and a borrowing of €652 million.

The transfer of Covestro shares with a value of €504 million (2016: €337 million) to Bayer Pension Trust e. V. was a noncash transaction and therefore did not result in a financing cash inflow.

Financial Liabilities

		Cash flows	Non-cash changes				
€ million	Dec. 31, 2016		Acquisition Divestment	Currency effects	New contracts	Fair value changes [1]	Dec. 31, 2017
Bonds and notes / promissory notes	15,991	(1,121)	(1,492)	(788)	–	(154)	12,436
Liabilities to banks	1,837	(1,006)	(92)	(203)	–	(2)	534
Liabilities under finance leases	436	(153)	(229)	(28)	212	–	238
Liabilities from derivatives	587	(434)	(6)	–	–	93	240
Other financial liabilities	730	235	–	(4)	–	9	970
Total	**19,581**	**(2,479)**	**(1,819)**	**(1,023)**	**212**	**(54)**	**14,418**

[1] Including discount effects

Other Information

36. Audit fees

The following fees for the services of the worldwide network of Deloitte or Deloitte GmbH Wirtschaftsprüfungsgesellschaft (Deloitte GmbH WPG) were recognized as expenses:

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Audit Fees

€ million	PwC 2016	Deloitte 2017	Of which PwC GmbH WPG 2016	Of which Deloitte GmbH WPG 2017
Financial statements auditing	16	9	7	3
Audit-related services and other audit work	2	2	1	2
Tax consultancy	3	1	–	–
Other services	7	5	5	4
Total	**28**	**17**	**13**	**9**

The fees for the auditing of financial statements mainly comprised those for the audits of the consolidated financial statements of the Bayer Group and the financial statements of Bayer AG and its subsidiaries. In 2016, €2 million in fees related to the auditing of the Covestro Group's financial statements.

The non-audit-related services primarily related to the analysis of financial information concerning business entities considered for divestment (Other services), the assessment of financial and nonfinancial information outside of financial statement auditing (Audit-related services and other audit work), and compliance-related tax consultancy services that had neither a material or direct impact on the annual financial statements or consolidated financial statements.

Deloitte has been Bayer's auditor since 2017 and is thus the successor to PricewaterhouseCoopers (PwC). The Independent Auditor's Report on the consolidated financial statements for fiscal 2017 was signed by Mr. Heiner Kompenhans and Prof. Frank Beine. Both signed the Independent Auditor's Report for the first time for the year ended December 31, 2017, and are the responsible audit partners.

37. Related parties

Related parties as defined in IAS 24 (Related Party Disclosures) are those legal entities and natural persons that are able to exert influence on Bayer AG and its subsidiaries or over which Bayer AG or its subsidiaries exercise control or joint control or have a significant influence. They include, in particular, nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, and post-employment benefit plans, as well as the corporate officers of Bayer AG whose compensation is reported in Note 38 and in the Compensation Report, which forms part of the Combined Management Report.

Transactions with nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, and post-employment benefit plans are carried out on an arm's-length basis.

The following table shows the volume of transactions with related parties included in the consolidated financial statements of the Bayer Group at amortized cost or using the equity method, and with post-employment benefit plans:

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Related Parties

	2016				2017			
€ million	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities
Nonconsolidated subsidiaries	4	5	9	19	5	6	6	16
Joint ventures	24	–	4	243	25	–	3	164
Associates	34	557	3	6	84	84	119	87
Post-employment benefit plans	–	–	907	63	–	–	974	70

Intercompany profits and losses for companies accounted for in the consolidated financial statements using the equity method were immaterial in 2017 and 2016.

In the second quarter of 2017, Bayer AG increased the coverage of Bayer Pension Trust e. V. through a deposit of 8 million of the shares it held in Covestro AG. The shares deposited amounted to 4.0% of the outstanding shares of Covestro AG and had a value of €504 million.

Due to the loss of control at the end of the third quarter of 2017, Covestro is now an associate. Consequently, receivables from and payables to associates both increased from €0.0 billion as of December 31, 2016, to €0.1 billion as of December 31, 2017. In this connection, goods and services received from associates declined from €0.6 billion to €0.1 billion. From the end of the third quarter of 2017, transactions in goods and services between Covestro and its associates are no longer reflected in the consolidated financial statements of the Bayer Group.

Bayer AG has undertaken to provide jouissance right capital (Genussrechtskapital) in the form of an interest-bearing loan with a nominal volume of €150 million (2016: €150 million) for Bayer-Pensionskasse VVaG. The entire amount remained undrawn as of December 31, 2017. The carrying amount as of December 31, 2017, was €152 million (2016: €154 million). Loan capital was first provided to Bayer-Pensionskasse VVaG in 2008 for its effective initial fund. This capital had a nominal volume of €595 million as of December 31, 2017 (2016: €595 million). The carrying amount as of December 31, 2017, was €605 million (2016: €612 million). The outstanding receivables, comprised of different tranches, are each subject to a five-year interest-rate adjustment mechanism. Interest income of €15 million was recognized for 2017 (2016: €18 million).

Impairment losses of €2 million were recognized on receivables from associates in 2017 (2016: €0 million).

38. Total compensation of the Board of Management and the Supervisory Board, advances and loans

The compensation of the Board of Management comprises short-term payments, stock-based payments and post-employment benefits.

The following table shows the individual components of the Board of Management's compensation according to IFRS. Further details are provided in the Compensation Report, which forms part of the Combined Management Report:

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Board of Management Compensation according to IFRS

€ thousand	2016	2017
Fixed annual compensation	6,385	6,148
Fringe benefits	664	266
Total short-term non-performance-related compensation	**7,049**	**6,414**
Short-term performance-related cash compensation	9,063	4,890
Total short-term compensation	**16,112**	**11,304**
Change in value of existing entitlements to stock-based compensation (virtual Bayer shares)	(1,275)	538
Stock-based compensation (Aspire) earned in the respective year	5,217	9,082
Change in value of existing entitlements to stock-based compensation (Aspire)	(923)	(641)
Total stock-based compensation (long-term incentive)	**3,019**	**8,979**
Service cost for pension entitlements earned in the respective year	3,902	3,907
Total long-term compensation	**6,921**	**12,886**
Severance indemnity in connection with the termination of a service contract	4,542	1,978
Aggregate compensation (IFRS)	**27,575**	**26,168**

In addition to the above compensation, actuarial gains of €245 thousand (2016: losses of €3,196 thousand) incurred in connection with pension obligations to the currently serving members of the Board of Management were recognized outside profit or loss. The losses in the previous year mainly resulted from the decline in the level of interest rates.

Pension payments to former members of the Board of Management and their surviving dependents in 2017 amounted to €12,758 thousand (2016: €12,800 thousand). The defined benefit obligation for former members of the Board of Management and their surviving dependents amounted to €184,479 thousand (2016: €188,850 thousand).

The compensation of the Supervisory Board amounted to €3,703 thousand (2016: €3,479 thousand).

In addition to their compensation as members of the Supervisory Board, those employee representatives who are employees of Bayer Group companies receive compensation unrelated to their service on the Supervisory Board. The total amount of such compensation in 2017 was €767 thousand (2016: €939 thousand).

Pension obligations for employee representatives on the Supervisory Board amounted to €3,941 thousand (2016: €4,399 thousand).

There were no advances or loans to members of the Board of Management or the Supervisory Board outstanding as of December 31, 2017, nor at any time during 2017 or 2016.

39. Events after the end of the reporting period

Sale of 10.4% of the shares in Covestro

On January 10, 2018, Bayer AG reduced its direct interest in Covestro from 24.6% to 14.2%. This was achieved by selling 21 million shares to institutional investors at a price of €86.25 per share. In addition to Bayer AG's direct stake in Covestro, Bayer Pension Trust holds a further 8.9%. As already announced, Bayer intends to achieve full separation from Covestro in the medium term.

The proceeds from the divestment of Covestro shares were largely used to reduce the syndicated credit facility arranged to finance the planned acquisition of Monsanto by US$1.8 billion to US$49.7 billion.

Divestments in conjunction with the planned acquisition of Monsanto

In connection with the proposed acquisition of Monsanto and related anti-trust clearance proceedings, Bayer has committed to divest its entire vegetable seed business, in addition to the sale of certain Crop Science businesses to BASF. Certain additional business activities of Bayer and Monsanto may also be sold or out-licensed. Through the move, Bayer is actively addressing observations expressed by anti-trust authorities. Any sales and licenses would be subject to a successful closing of the proposed acquisition of Monsanto, which remains subject to customary closing conditions, including receipt of required regulatory approvals.

Leverkusen, February 20, 2018

Bayer Aktiengesellschaft

The Board of Management

The following auditor's report (Bestätigungsvermerk) has been issued in accordance with Section 322 German Commercial Code (Handelsgesetzbuch) in German language on the German version on the consolidated financial statements and the combined management report (zusammengefasster Lagebericht) of Bayer Aktiengesellschaft as of and for the fiscal year ended December 31, 2017. The combined management report is neither included nor incorporated by reference in this Prospectus.

Independent Auditor's Report

To: Bayer Aktiengesellschaft, Leverkusen

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND THE COMBINED MANAGEMENT REPORT

Audit opinions

We audited the consolidated financial statements of Bayer Aktiengesellschaft, Leverkusen, and its subsidiaries (the Group), which comprise the consolidated statements of financial position as at December 31, 2017, the consolidated income statement and consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statements of cash flows for the fiscal year from January 1, 2017 through December 31, 2017 as well as the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we audited the group management report of Bayer Aktiengesellschaft, Leverkusen, which is combined with the Company´s management report, for the fiscal year from January 1, 2017 through December 31, 2017. In conformity with German legal regulations, we have not audited the parts of the combined management report specified in the Chapter "Other information" of our independent auditor's report with regard to their content.

In our opinion, based on our knowledge obtained during the audit,

- the accompanying consolidated financial statements comply with International Financial Reporting Standards (IFRS) as adopted by the EU and the supplementary German legal regulations to be applied in accordance with Section 315e (1) German Commercial Code (HGB) in all material respects and give a true and fair view of the Group's net assets and financial position as of December 31, 2017 as well as its results of operations for the fiscal year from January 1, 2017 through December 31, 2017 in accordance with these requirements and
- the accompanying combined management report as a whole provides a suitable view of the Group's position. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with German legal requirements and suitably presents the opportunities and risks of future development. Our audit opinion on the combined management report does not extend to the content of the parts of the combined management report detailed in the Chapter "Other information" section.

Pursuant to Section 322 (3) Sentence 1 German Commercial Code (HGB), we state that our audit has not led to any reservations with respect to the propriety of the consolidated financial statements and the combined management report.

Basis for the audit opinions

We conducted our audit of the consolidated financial statements and the combined management report in accordance with Section 317 German Commercial Code (HGB) and the EU Audit Regulation (No. 537/2014; hereinafter referred to as "EU Audit Regulation"), and generally accepted German standards for the audit of financial statements promulgated by the Institute of Public Auditors in Germany Institut der Wirtschaftsprüfer (IDW). We conducted our audit of the consolidated financial statements also in accordance with International Standards on Auditing (ISA). Our responsibilities under these requirements, principles, and standards are further described in the Section "Auditor's responsibility for the audit of the consolidated financial statements and the combined management report" of our report. We are independent of the group companies in accordance with European and German commercial law and rules of professional conduct and we have fulfilled our other ethical responsibilities applicable in Germany in accordance with these requirements. In addition, pursuant to Article 10 (2) lit. f EU Audit Regulation, we declare that we have not provided any prohibited non-audit services pursuant to Article 5 (1) EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and combined management report.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the fiscal year from January 1, 2017 through December 31, 2017. These matters

were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our opinion thereon but we do not provide a separate opinion on these issues.

In the following we present the key audit matters in our view:

1. Sales of shares in Covestro AG and deconsolidation of the Covestro Group
2. Impairment of goodwill and brand rights
3. Financial instruments – hedge accounting
4. Depiction of risks from product-related legal disputes
5. Adjustments to EBITDA for special items

Our presentation of these key audit matters is structured as follows:

a) Description (including reference to corresponding information in the consolidated financial statements)
b) Auditor's response

1. Sales of shares in Covestro AG and deconsolidation of the Covestro Group

a) Following the creation of the financial and legal autonomy of the MaterialScience segment in autumn 2015 and the subsequent IPO under the name of Covestro, at the end of 2016 the Bayer Group still held directly and indirectly via Bayer Pension Trust e. V. a total of 69.1 % of the shares in Covestro AG (of which 64.2 % were held directly). Due to three separate share sales transactions totaling 58.25 million or 28.7 % of the shares in Covestro AG for EUR 3.7bn and the contribution of 8 million shares or 4 % of the shares in Covestro AG worth EUR 0.5bn to Bayer Pension Trust e. V., the direct interest held by Bayer in Covestro AG fell to 31.5 % and the directly and indirectly held interest to 40.4 % by the beginning of September 2017. Since Bayer would still have held a majority at the Covestro AG Annual General Meeting at that time and was therefore able to exercise *de facto* control over the Covestro Group, these transfers of shares were accounted for as transactions between shareholders under IFRS 10 and the Covestro Group continued to be (fully) consolidated by Bayer. In all, the Bayer Group's equity increased by EUR 4.2bn as a result of these transactions, of which EUR 1.5bn were attributable to non-controlling interests.

   Finally, at the end of September 2017 Bayer sold a further 13.94 million or 6.9 % of the shares in Covestro AG for EUR 1.0bn and entered into a relinquishment of control agreement with Covestro AG with effect from September 30, 2017. The consequence of this was the relinquishment of *de facto* control over the Covestro Group. Pursuant to IFRS 10, these two transactions were recognized economically as a single transaction. The Covestro Group was deconsolidated as of September 30, 2017 and has since been shown in the consolidated financial statements as a discontinued operation, in accordance with IFRS 5. Since Bayer currently directly holds 24.6 % and indirectly holds 33.5 % of the shares in Covestro AG and can continue to exercise significant influence over the Covestro Group, Covestro AG was included as of September 30, 2017 in the Bayer consolidated financial statements as an associated company with a carrying amount (fair value) of EUR 3.6bn according to the equity method. Bayer received income of EUR 3.1bn at Group level from the deconsolidation in 2017, in particular due to the recognition of the carrying amount at fair value. As of December 31, 2017, the equity value is virtually unchanged.

   In our opinion, this issue was of particular significance due to the complexity of the underlying contractual agreements and the numerous material effects on the consolidated financial statements.

   The Company's disclosures on the discontinued operation, the deconsolidation, and the first-time inclusion of the Covestro Group as an associate are set out in Sections 6.3 and 19 of the Notes to the consolidated financial statements.

b) We assessed whether Bayer had in fact continued to control the Covestro Group, despite the share sales up until the beginning of September, and thus ought to have continued to consolidate the Covestro Group. Moreover, by inspecting the relevant Board of Management resolutions and Board of Management and Supervisory Board minutes, we investigated whether the Board of Management had not already at the time of the individual share sales drawn up a plan that would have led to a loss of control over the Covestro Group, so that it would have been necessary, under IFRS 5, to report the Covestro Group as a discontinued operation even before September 30, 2017. We analyzed the sale of shares at the end of September 2017 and the conclusion of the relinquishment of control agreement to determine whether these can be treated as a single transaction under IFRS 10 and isolated from the earlier sales of shares up to mid-September.

We also assessed the relinquishment of control agreement as to whether the agreement fulfilled the company and stock corporation law requirements for the loss of control and thus for the deconsolidation of the Covestro Group and whether Covestro should have been deconsolidated as of September 30, 2017. We also examined whether the first-time classification as a discontinued operation as of September 30, 2017 was appropriate and that the presentation in the income statement and statements of cash flows as a discontinued operation is in accordance with IFRS 5.

Furthermore, we verified whether the deconsolidation was technically correct and whether the result of the deconsolidation was correctly determined and recognized in the accounts. We also performed audit procedures to ascertain whether the carrying amount of the investment in Covestro AG as an associated company and the provisional purchase price allocation made in this connection for the initial fair value measurement had been appropriately calculated.

2. Impairment of goodwill and brand rights

a) In the consolidated financial statements, an amount of EUR 14,751m (20 % of total Group assets) is reported under the balance sheet item “Goodwill”. In addition, brand rights of EUR 6,412m (9 % of the Group’s total assets) are reported under “Other intangible assets”. The Company allocates goodwill to the strategic business units or groups of strategic business units within the Bayer Group. Regular impairment tests of goodwill and case-related impairment tests of brand rights compare the respective carrying amounts with their recoverable amounts. Fundamentally, the recoverable amount is determined on the basis of the fair value less costs to sell. The present value of future cash flows is used as a basis, since as a rule no market values are available for the individual strategic business units. The present value is determined using discounted cash flow models based on the Bayer Group’s three-year operating plan drawn up by the legal representatives and acknowledged by the Supervisory Board and perpetuated with assumptions about long-term growth rates. Discounting is based on the weighted average cost of capital of the reporting segments concerned. The result of this valuation depends to a large extent on the estimates by the legal representatives of the future cash flows of the strategic business unit concerned and the discount rate used and is therefore fraught with considerable uncertainty. In the light of this, and owing to the underlying complexity of the valuation models, this issue was of particular importance within the framework of our audit.

   The Company’s disclosures on goodwill and brand rights are contained in Section 4 and 17 of the Notes to the consolidated financial statements.

b) In our audit, among other things we reconstructed the methodology used to perform the impairment tests and assessed the calculation of the weighted cost of capital. We convinced ourselves of the appropriateness of the future cash inflows used in the valuation among other things by recording and critically assessing the underlying planning process. We also compared this information with the current budget from the three-year plan drawn up by the legal representatives and noted by the Supervisory Board, and reconciled it with general and industry-specific market expectations. For this, we also convinced ourselves that the costs of the Group functions included in the Corporate Functions and Consolidation segment of segment reporting were appropriately taken into account in the impairment test of the strategic business unit concerned. We studied intensively the parameters used to determine the discount rate applied and assessed the completeness and correctness of the calculation scheme. Owing to the material significance of goodwill, we further performed additional sensitivity analyses of our own for the strategic business units (carrying amount in comparison to the recoverable amount).

3. Financial instruments - hedge accounting

a) Bayer Group companies conclude a large number of different derivative financial instruments to hedge against currency, commodity price, and interest rate risks from ordinary business operations. The basis for this is the hedging policy prescribed by the legal representatives, which is documented in appropriate internal guidelines. The currency risk essentially results from sales revenues, sales and procurement transactions (in particular relating to raw materials), and financing transactions in foreign currencies. The aim of interest rate hedging is, on the one hand to achieve a reasonable relationship between variable and fixed interest rates and on the other to secure a low rate of interest for planned financing transactions. Derivative financial instruments are recognized at their fair value as of balance sheet date. The positive fair values of all derivative financial instruments used as hedges amounted to EUR 450m as of the closing date (i.e., 1 % of total Group assets), the negative fair values amounted to EUR 533m (representing 1 % of total Group assets). To the extent that the financial instruments used by the Bayer Group are effective hedges of future cash flows under hedge accounting in accordance with IAS 39, changes in fair value are recognized in equity until the due date of the hedged cash flow (effective portion)

over the term of the hedge relationship. As of the balance sheet date, a cumulative amount of EUR -112m had been recognized outside profit or loss as expenses and income before taxes on income. In our view, these issues were of particular importance due to the high complexity and the great number of transactions, and the extensive accounting and reporting requirements of IAS 39 and IFRS 7.

The disclosures on hedge accounting are contained in Sections 4 and 30 of the Notes to the consolidated financial statements. Risk reporting with regard to the use of financial instruments is provided in the combined management report in Section 3.2.2.

b) Within the framework of our audit, and with the support of our internal specialists from the Financial Risk Solutions unit, we assessed the contractual and financial fundamentals of the financial instruments, among other things, and reconstructed the accounting including the effects on equity and earnings of the various hedging transactions. Jointly with our specialists, we also assessed the Company's internal control system in the area of derivative financial instruments, including the internal monitoring of compliance with the hedging policy, and reviewed the controls with regard to design, implementation, and effectiveness. Furthermore, while auditing the fair value measurement of the financial instruments, we also checked, on the basis of market data and within the framework of our risk assessment, the calculation methods of representatively selected samples and reconstructed the correct implementation of the methods in the system. In order to audit the effectiveness of the hedging transactions, we analyzed the various methods (prospective critical term match method; retrospective regression method) and, in the framework of our risk assessment, reconstructed their correct implementation in the system. With regard to the expected cash flows, we essentially assessed the past hedging ratios in retrospect.

4. Depiction of risks arising from product-related legal disputes

a) Bayer Group companies are involved in legal and out-of-court proceedings with public authorities, competitors, and other parties. These give rise to legal risks, in particular in the areas of product liability, competition and anti-trust law, patent law, tax law, and environmental protection.

Against the background of pending and expected product liability lawsuits relating to the product Mirena™, the Bayer Group had been served in the United States with lawsuits from approximately 2,900 (previous year: 2,600) (women) users of Mirena™ by January 30, 2018. In addition, by January 30, 2018, the Bayer Group had been served in the United States with about 22,000 claims (prior year: 16,400) for damages and punitive damages from users of the product Xarelto™. Moreover, by January 30, 2018, the Bayer Group had been served in Canada with ten lawsuits relating to Xarelto™, in each of which the admission of a class action has been applied for. By January 30, 2018, the Bayer Group had been served with lawsuits in the United States by about 16,100 (prior year 3,700) (women) users of Essure™ and two lawsuits in Canada, in each of which the admission of a class action has been applied for.

Whether a pending legal dispute makes the recognition of a provision to cover the risk necessary and, if so, to what extent, is determined to a large extent by estimates and assumptions by the legal representatives. Against this background, and in view of the amount of the claims asserted, the above-mentioned product-related disputes of the Bayer Group were of particular significance from our point of view.

The disclosures about and explanations of the legal disputes mentioned are contained in Section 32 of the notes to the consolidated financial statements.

b) Within the framework of our audit, we assessed, among other things, the process established by the Company to ensure the recognition, the estimate of the outcome of the proceedings, and the accounting presentation of a legal dispute. Furthermore, we held regular discussions with the Company's internal legal department in order to be informed about current developments and the reasons that led to the corresponding estimates. The development of material legal disputes, including the estimates by the legal representatives with regard to the possible outcome of proceedings, was made available to us in writing by Bayer AG's internal legal department. As of the closing date, we furthermore obtained external attorney's certificates, which we compared with the risk assessment made by the legal representatives about the product-related disputes named in the "Description of the facts" section.

5. Adjustments to EBITDA for special items

a) For management and analysis purposes, the Bayer Group adduces EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization, and also impairment losses and reversals), adjusted for special items (by their

nature or amount special effects). Adjustments to EBITDA amounting to EUR 725m are presented in Bayer AG's consolidated financial statements in continuing operations. Adjusted EBITDA from continuing operations are used by Bayer as a key financial performance indicator in its capital market communications. They are furthermore adduced as a degree of target achievement for the annual performance-based compensation of the employees of the Bayer Group. The adjustments to EBITDA were of particular significance within the framework of our audit, as they are made on the basis of the Bayer Group's internal accounting guideline and there is a risk that the legal representatives may exercise their discretionary powers one-sidedly.

The company's disclosures on the adjustments to EBITDA and the calculation thereof are presented in Section 5 of the notes to the consolidated financial statements and in Section 2.2 of the combined management report.

b) We reconstructed the calculation of adjusted EBITDA and critically examined the identification of the Group companies' special items taken into account by the legal representatives. For this we analyzed the composition of the adjustments in terms of the extent to which the individual components correspond to the corresponding guidelines for special items and were correctly excluded from adjusted EBITDA. At the same time, we examined, on the basis of the findings of our audit and the information provided by the legal representatives, whether the adjustments made were carried out in accordance with the definition and procedure presented in the explanations in the combined management report and in the segment reporting.

Other information

The legal representatives are responsible for the other information. The other information comprises:

- the Group´s statement on business management pursuant to Section 289f and Section 315d HGB specified in Chapter 4.1 of the combined management report,
- the "Compliance" section of the Corporate Governance Report contained in Chapter 4.2 of the combined management report pursuant to No. 3.10 of the German Corporate Governance Code,
- all online addenda referred to in the combined management report and contained in the expanded online version of the Annual Report,
- assurance pursuant to Section 297 (2) Sentence 4 German Commercial Code (HGB) to the consolidated financial statements and assurance pursuant to Section 315 (1) Sentence 5 German Commercial Code (HGB) to the combined management report, and
- the remaining components of the annual report, with the exception of the audited consolidated financial statements and the combined management report and our Auditor's Report.

Our audit opinions on the consolidated financial statements and the combined management report do not extend to cover the other information, and accordingly we do not issue an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in doing so, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, the combined management report or our knowledge obtained in the audit, or
- otherwise appears to be substantially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this information, we are required to report on that fact. We have nothing to report in this regard.

Responsibilities of the legal representatives and the Supervisory Board for the consolidated financial statements and the combined management report

The legal representatives are responsible for the preparation of the consolidated financial statements which comply with IFRS as adopted by the EU and the supplementary requirements of the German legal regulations pursuant to Section 315e (1) German Commercial Code (HGB) in all material respects, so that the consolidated financial statements give a true and fair view of the net assets, financial position, and results of operations of the Group in accordance with these requirements. In addition, the legal representatives are responsible for the internal controls they have identified as necessary in order to enable the preparation of consolidated financial statements that are free from material misstatements, whether intentional or unintentional.

In preparing the consolidated financial statements, the legal representatives are responsible for assessing the Group's ability to continue as a going concern. Furthermore, they have the responsibility to disclose matters relating to the

Group's ability to continue as a going concern, if relevant. In addition, they are responsible for using the going concern basis of accounting, unless the intention is to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

In addition, the legal representatives are responsible for the preparation of the combined management report, which as a whole provides a suitable view of the Group's position, is consistent with the consolidated financial statements in all material respects, complies with German legal regulations and suitably presents the opportunities and risks of future development. Furthermore, the legal representatives are responsible for such arrangements and measures (systems) which they have deemed necessary in order to enable the preparation of a combined management report in accordance with the applicable German legal regulations and to furnish sufficient and appropriate evidence for the statements in the combined management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and the combined management report.

Auditor's responsibilities for the audit of the consolidated financial statements and the combined management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatements, whether due to fraud or error, and whether the combined management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the findings of the audit, is in accordance with the German legal regulations, and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and the combined management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 German Commercial Code (HGB) and the EU Audit Regulation and generally accepted German standards for the audit of financial statements promulgated by the Institute of Public Auditors in Germany (IDW), and subject to supplementary compliance with ISA, will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this combined management report.

As part of an audit, we exercise professional judgement and maintain professional skepticism. We also

- identify and assess the risks of material misstatements in the consolidated financial statements and in the combined management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the overriding of internal controls.
- obtain an understanding of internal controls relevant to the audit of the consolidated financial statements and the arrangements and measures relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- evaluate the appropriateness of the accounting policies used by the legal representatives and the reasonableness of accounting estimates and related disclosures made by the legal representatives.
- form a conclusion on the appropriateness of the legal representatives' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists relating to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that there is a material uncertainty, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements and combined management report, or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- evaluate the overall presentation, structure, and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner such that the consolidated financial statements give a true and fair view of the net assets and financial position as well as the results of operations of the Group in accordance with IFRS as adopted by the EU and the supplementary requirements of German law pursuant to Section 315e (1) German Commercial Code (HGB).

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and the combined management report. We are responsible for the direction, supervision, and performance of the group audit. We remain solely responsible for our audit opinions.
- evaluate the consistency of the combined management report with the consolidated financial statements, its legal consistency, and the view provided of the Group's position.
- perform audit procedures on the forward-looking information presented by the legal representatives in the combined management report. On the basis of sufficient appropriate audit evidence, we particularly evaluate the significant assumptions underlying the forward-looking information by the legal representatives and evaluate the correct derivation of forward-looking information from these assumptions. We do not issue an independent opinion on the forward-looking information or on the underlying assumptions. There is a significant unavoidable risk that future events will differ materially from the forward-looking information.

We communicate with those charged with governance among other matters, on the planned scope and timing of the audit and significant audit findings, including any deficiencies in internal control, which we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance we determine those matters that were of most significance in the audit of the consolidated financial statements of the current reporting period and are therefore the key audit matters. We describe these matters in our auditor's report on the consolidated financial statements unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Other information pursuant to Article 10 EU Audit Regulation

We were appointed by the Annual General Meeting on April 28, 2017 to audit the consolidated financial statements. We were engaged by the Supervisory Board on June 1/28, 2017. We have been engaged continuously as the auditors of the consolidated financial statements of Bayer Aktiengesellschaft, Leverkusen, since the fiscal year 2017.

We confirm that the audit opinions contained in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 EU Audit Regulation ("Prüfungsbericht").

RESPONSIBLE AUDITOR

The auditor responsible for the audit is Prof. Dr. Frank Beine.

Munich, February 21, 2018

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

Heiner Kompenhans	Prof. Dr. Frank Beine
German Public Auditor	German Public Auditor

Audited Consolidated Financial Statements of Bayer AG as of and for Fiscal Year Ended December 31, 2016

Bayer Group Consolidated Income Statements

B 1

€ million	Note	2015	2016
Net sales	(7)	**46,085**	**46,769**
Cost of goods sold		(21,040)	(20,295)
Gross profit		**25,045**	**26,474**
Selling expenses	(8)	(12,272)	(12,474)
Research and development expenses	(9)	(4,274)	(4,666)
General administration expenses		(2,092)	(2,256)
Other operating income	(10)	1,109	898
Other operating expenses	(11)	(1,275)	(934)
EBIT [1]		**6,241**	**7,042**
Equity-method loss	(13.1)	(9)	(26)
Financial income		371	151
Financial expenses		(1,367)	(1,280)
Financial result	(13)	**(1,005)**	**(1,155)**
Income before income taxes		**5,236**	**5,887**
Income taxes	(14)	(1,223)	(1,329)
Income from continuing operations after income taxes		**4,013**	**4,558**
Income from discontinued operations after income taxes	(6.3)	**85**	**268**
Income after income taxes		**4,098**	**4,826**
of which attributable to noncontrolling interest	(15)	(12)	295
of which attributable to Bayer AG stockholders (net income)		**4,110**	**4,531**
€			
Earnings per share	(16)		
From continuing operations	(16)		
Basic		4.87	5.12
Diluted		4.87	5.12
From discontinued operations	(16)		
Basic		0.10	0.32
Diluted		0.10	0.32
From continuing and discontinued operations	(16)		
Basic		4.97	5.44
Diluted		4.97	5.44

2015 figures restated

[1] For definition see Combined Management Report, Chapter 2.4 “Alternative Performance Measures Used by the Bayer Group.”

Bayer Group Consolidated Statements of Comprehensive Income

B 2

€ million	Note	2015	2016
Income after income taxes		**4,098**	**4,826**
of which attributable to noncontrolling interest	(15)	(12)	295
of which attributable to Bayer AG stockholders		4,110	4,531
Remeasurements of the net defined benefit liability for post-employment benefit plans	(25)	1,216	(1,036)
Income taxes	(14)	(430)	228
Other comprehensive income from remeasurements of the net defined benefit liability for post-employment benefit plans		**786**	**(808)**
Other comprehensive income that will not be reclassified subsequently to profit or loss		**786**	**(808)**
Changes in fair values of derivatives designated as cash flow hedges	(30.3)	(266)	58
Reclassified to profit or loss		304	3
Income taxes	(14)	(25)	(16)
Other comprehensive income from cash flow hedges		**13**	**45**
Changes in fair values of available-for-sale financial assets	(20)	(5)	65
Reclassified to profit or loss		1	–
Income taxes	(14)	(2)	(8)
Other comprehensive income from available-for-sale financial assets		**(6)**	**57**
Changes in exchange differences recognized on translation of operations outside the eurozone		748	703
Reclassified to profit or loss		–	(58)
Other comprehensive income from exchange differences		**748**	**645**
Other comprehensive income relating to associates accounted for using the equity method		**(20)**	**(14)**
Other comprehensive income that may be reclassified subsequently to profit or loss		**735**	**733**
Effects of changes in scope of consolidation		**–**	**–**
Total other comprehensive income [1]		**1,521**	**(75)**
of which attributable to noncontrolling interest		33	(10)
of which attributable to Bayer AG stockholders		1,488	(65)
Total comprehensive income		**5,619**	**4,751**
of which attributable to noncontrolling interest		21	285
of which attributable to Bayer AG stockholders		5,598	4,466

2015 figures restated

[1] Total changes recognized outside profit or loss

Bayer Group Consolidated Statements of Financial Position

B 3

€ million	Note	Dec. 31, 2015	Dec. 31, 2016
Noncurrent assets			
Goodwill	(17)	16,096	16,312
Other intangible assets	(17)	15,178	13,567
Property, plant and equipment	(18)	12,375	13,114
Investments accounted for using the equity method	(19)	246	584
Other financial assets	(20)	1,092	1,281
Other receivables	(23)	430	583
Deferred taxes	(14)	4,679	6,350
		50,096	**51,791**
Current assets			
Inventories	(21)	8,550	8,408
Trade accounts receivable	(22)	9,933	10,969
Other financial assets	(20)	756	6,275
Other receivables	(23)	2,017	2,210
Claims for income tax refunds		509	676
Cash and cash equivalents		1,859	1,899
Assets held for sale and discontinued operations	(6.3)	197	10
		23,821	**30,447**
Total assets		**73,917**	**82,238**
Equity	(24)		
Capital stock		2,117	2,117
Capital reserves		6,167	9,658
Other reserves		15,981	18,558
Equity attributable to Bayer AG stockholders		**24,265**	**30,333**
Equity attributable to noncontrolling interest		1,180	1,564
		25,445	**31,897**
Noncurrent liabilities			
Provisions for pensions and other post-employment benefits	(25)	10,873	11,134
Other provisions	(26)	1,740	1,780
Financial liabilities	(27)	16,513	16,180
Income tax liabilities		475	423
Other liabilities	(29)	1,065	957
Deferred taxes	(14)	826	1,330
		31,492	**31,804**
Current liabilities			
Other provisions	(26)	5,045	5,421
Financial liabilities	(27)	3,421	3,401
Trade accounts payable	(28)	5,945	6,410
Income tax liabilities		923	884
Other liabilities	(29)	1,534	2,421
Liabilities directly related to assets held for sale and discontinued operations	(6.3)	112	–
		16,980	**18,537**
Total equity and liabilities		**73,917**	**82,238**

Bayer Group Consolidated Statements of Changes in Equity

B 4

€ million	Capital stock	Capital reserves	Retained earnings incl. net income	Exchange differences	Fair-value measurement of securities
Dec. 31, 2014	**2,117**	**6,167**	**12,974**	**(1,172)**	**30**
Equity transactions with owners					
Capital increase					
Dividend payments			(1,861)		
Other changes			582	(155)	
Other comprehensive income			776	705	(6)
Income after income taxes			4,110		
Dec. 31, 2015	**2,117**	**6,167**	**16,581**	**(622)**	**24**
Equity transactions with owners					
Capital increase [1]		3,491			
Dividend payments			(2,067)		
Other changes			129	53	
Other comprehensive income			(781)	614	57
Income after income taxes			4,531		
Dec. 31, 2016	**2,117**	**9,658**	**18,393**	**45**	**81**

[1] The capital increase resulted from the issuance of mandatory convertible notes in the amount of €4,000 million on November 22, 2016. After deduction of €48 million in transaction costs and recognition of €191 million in deferred taxes, €3,491 million was allocated to capital reserves and €652 million to financial liabilities.

B 4 continued

€ million	Cash flow hedges	Revaluation surplus	**Equity attributable to Bayer AG stockholders**	Equity attributable to non-controlling interest	**Equity**
Dec. 31, 2014	**(36)**	**26**	**20,106**	**112**	**20,218**
Equity transactions with owners					
Capital increase					
Dividend payments			(1,861)	(8)	(1,869)
Other changes		(5)	422	1,055	1,477
Other comprehensive income	13		1,488	33	1,521
Income after income taxes			4,110	(12)	4,098
Dec. 31, 2015	**(23)**	**21**	**24,265**	**1,180**	**25,445**
Equity transactions with owners					
Capital increase			3,491		3,491
Dividend payments			(2,067)	(58)	(2,125)
Other changes		(4)	178	157	335
Other comprehensive income	45		(65)	(10)	(75)
Income after income taxes			4,531	295	4,826
Dec. 31, 2016	**22**	**17**	**30,333**	**1,564**	**31,897**

Bayer Group Consolidated Statements of Cash Flows

B 5

€ million	Note	2015	2016
Income after income taxes		4,013	4,558
Income taxes		1,223	1,329
Financial result		1,005	1,155
Income taxes paid		(1,699)	(2,092)
Depreciation, amortization and impairments		3,332	3,743
Change in pension provisions		(221)	(285)
(Gains) losses on retirements of noncurrent assets		(105)	(44)
Decrease (increase) in inventories		(191)	(3)
Decrease (increase) in trade accounts receivable		(1,059)	(552)
(Decrease) increase in trade accounts payable		400	452
Changes in other working capital, other noncash items		138	(2)
Net cash provided by (used in) operating activities from continuing operations		**6,836**	**8,259**
Net cash provided by (used in) operating activities from discontinued operations		54	830
Net cash provided by (used in) operating activities	(33)	**6,890**	**9,089**
Cash outflows for additions to property, plant, equipment and intangible assets		(2,517)	(2,578)
Cash inflows from sales of property, plant, equipment and other assets		193	111
Cash inflows from divestments		2	(18)
Cash inflows from (outflows for) noncurrent financial assets		(26)	(690)
Cash outflows for acquisitions less acquired cash		(176)	2
Interest and dividends received		106	89
Cash inflows from (outflows for) current financial assets		(344)	(5,645)
Net cash provided by (used in) investing activities	(34)	**(2,762)**	**(8,729)**
Capital contributions		–	3,300
Proceeds from shares of Covestro AG		1,490	–
Dividend payments		(1,869)	(2,126)
Issuances of debt		16,620	15,190
Retirements of debt		(19,549)	(15,920)
Interest paid including interest-rate swaps		(812)	(853)
Interest received from interest-rate swaps		160	59
Cash outflows for the purchase of additional interests in subsidiaries		(14)	–
Net cash provided by (used in) financing activities	(35)	**(3,974)**	**(350)**
Change in cash and cash equivalents due to business activities		**154**	**10**
Cash and cash equivalents at beginning of year		**1,853**	**1,859**
Change in cash and cash equivalents due to changes in scope of consolidation		5	3
Change in cash and cash equivalents due to exchange rate movements		(153)	27
Cash and cash equivalents at end of year		**1,859**	**1,899**

2015 figures restated

Notes to the Consolidated Financial Statements of the Bayer Group

1. Key data by segment and region

B 1/1

Key Data by Segment

	Pharmaceuticals		Consumer Health		Crop Science		Animal Health	
€ million	2015	2016	2015	2016	2015	2016	2015	2016
Net sales (external)	15,308	16,420	6,076	6,037	10,128	9,915	1,490	1,523
Change [1]	+ 13.3%	+ 7.3%	+ 43.1%	– 0.6%	+ 9.2%	– 2.1%	+ 13.1%	+ 2.2%
Currency-adjusted change [1]	+ 8.7%	+ 8.7%	+ 40.4%	+ 3.5%	+ 2.4%	+ 0.2%	+ 4.5%	+ 4.8%
Intersegment sales	38	29	2	5	34	36	20	10
Net sales (total)	15,346	16,449	6,078	6,042	10,162	9,951	1,510	1,533
Other operating income	154	207	108	101	643	301	4	10
EBIT [1]	3,028	3,389	768	695	2,094	1,755	254	313
EBIT before special items [1]	3,327	3,947	1,005	987	1,872	1,898	318	320
EBITDA before special items [1]	4,616	5,251	1,456	1,411	2,406	2,421	347	349
ROCE [1]	14.4%	16.2%	4.0%	3.5%	16.3%	12.9%	47.8%	63.5%
Net cash provided by operating activities	3,157	3,368	816	874	749	2,071	348	193
Equity-method income (loss)	1	–	–	2	(1)	(1)	–	–
Equity-method investments	3	3	11	11	4	15	–	–
Assets	22,389	22,173	16,560	16,558	14,230	14,868	791	838
Capital expenditures	764	851	182	220	735	773	43	39
Additions to noncurrent assets from acquisitions	(145)	(3)	149	(1)	98	(10)	–	–
Depreciation, amortization and impairments	1,347	1,695	454	601	534	525	63	30
of which impairment losses	62	464	25	175	35	52	34	1
of which impairment loss reversals	(1)	–	–	–	–	–	–	(1)
Liabilities	8,385	8,941	1,596	1,614	5,344	5,897	678	699
Research and development expenses	2,450	2,787	250	259	1,082	1,164	134	140
Number of employees (as of Dec. 31) [2]	40,504	40,093	13,513	12,821	23,268	22,399	3,804	3,957

2015 figures restated

[1] For definition see Combined Management Report, Chapter 2.4 “Alternative Performance Measures Used by the Bayer Group.”

[2] Full-time equivalents

Key Data by Segment

	All Other Segments		Reconciliation: Corporate Functions and Consolidation		Life Sciences		Covestro		Group	
€ million	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Net sales (external)	1,097	1,042	4	6	34,103	34,943	11,982	11,826	46,085	46,769
Change [1]	– 1.3%	– 5.0%	– 42.9%	+ 50.0%	+ 15.7%	+ 2.5%	+ 2.8%	– 1.3%	+ 12.1%	+ 1.5%
Currency-adjusted change [1]	– 0.8%	– 4.2%	– 42.9%	–	+ 10.7%	+ 4.7%	– 5.1%	0.0%	+ 6.2%	+ 3.5%
Intersegment sales	2,249	2,124	(2,407)	(2,279)	–	–	64	75	–	–
Net sales (total)	3,346	3,166	(2,403)	(2,273)	–	–	12,046	11,901	46,085	46,769
Other operating income	69	91	64	77	1,042	787	67	111	1,109	898
EBIT [1]	(39)	(50)	(499)	(364)	5,606	5,738	635	1,304	6,241	7,042
EBIT before special items [1]	43	18	(472)	(344)	6,093	6,826	967	1,304	7,060	8,130
EBITDA before special items [1]	238	224	(466)	(338)	8,597	9,318	1,659	1,984	10,256	11,302
ROCE [1]	–	–	–	–	10.4%	10.3%	7.1%	15.3%	9.9%	11.0%
Net cash provided by operating activities	27	503	287	(574)	5,384	6,435	1,452	1,824	6,836	8,259
Equity-method income (loss)	–	–	–	(7)	–	(6)	(9)	(20)	(9)	(26)
Equity-method investments	–	–	1	325	19	354	227	230	246	584
Assets	2,324	2,632	8,263	15,986	64,557	73,055	9,360	9,183	73,917	82,238
Capital expenditures	311	307	5	18	2,040	2,208	514	419	2,554	2,627
Additions to noncurrent assets from acquisitions	–	–	–	–	102	(14)	27	–	129	(14)
Depreciation, amortization and impairments	195	206	6	6	2,599	3,063	733	680	3,332	3,743
of which impairment losses	4	7	–	–	160	699	69	13	229	712
of which impairment loss reversals	–	–	–	–	(1)	(1)	–	–	(1)	(1)
Liabilities	4,814	5,616	23,915	23,724	44,732	46,491	3,740	3,850	48,472	50,341
Research and development expenses	32	39	64	16	4,012	4,405	262	261	4,274	4,666
Number of employees (as of Dec. 31) [2]	19,015	19,494	709	828	100,813	99,592	15,770	15,578	116,583	115,170

2015 figures restated

[1] For definition see Combined Management Report, Chapter 2.4 “Alternative Performance Measures Used by the Bayer Group.”

[2] Full-time equivalents

Key Data by Region

	Europe / Middle East / Africa		North America		Asia / Pacific	
€ million	2015	2016	2015	2016	2015	2016
Net sales (external) – by market	17,707	17,823	12,621	12,806	10,263	11,032
Change [1]	+ 5.0%	+ 0.7%	+ 28.0%	+ 1.5%	+ 13.2%	+ 7.5%
Currency-adjusted change [1]	+ 5.6%	+ 2.8%	+ 10.8%	+ 2.0%	+ 1.4%	+ 7.9%
Net sales (external) – by point of origin	18,528	18,808	12,332	12,375	10,022	10,786
Change [1]	+ 5.4%	+ 1.5%	+ 27.3%	+ 0.3%	+ 13.6%	+ 7.6%
Currency-adjusted change [1]	+ 6.1%	+ 3.5%	+ 9.5%	+ 0.8%	+ 1.5%	+ 8.1%
Interregional sales	10,340	10,745	3,994	4,280	828	912
Other operating income	580	331	109	223	107	126
EBIT [1]	4,119	4,673	1,483	1,128	547	1,165
Assets	34,145	39,146	20,522	21,088	9,492	9,831
Capital expenditures	1,442	1,549	587	628	402	299
Depreciation, amortization and impairments	1,874	1,997	834	1,181	496	479
Liabilities	29,116	30,506	13,461	13,478	3,583	3,428
Research and development expenses	2,944	3,285	1,051	1,081	214	229
Number of employees (as of Dec. 31) [2]	58,839	59,483	15,961	15,788	28,818	27,407

2015 figures restated

[1] For definition see Combined Management Report, Chapter 2.4 “Alternative Performance Measures Used by the Bayer Group.”

[2] Full-time equivalents

Key Data by Region

	Latin America		Reconciliation		Total	
€ million	2015	2016	2015	2016	2015	2016
Net sales (external) – by market	5,494	5,108	–	–	46,085	46,769
Change [1]	+ 3.2%	– 7.0%	–	–	+ 12.1%	+ 1.5%
Currency-adjusted change [1]	+ 7.7%	+ 0.8%	–	–	+ 6.2%	+ 3.5%
Net sales (external) – by point of origin	5,203	4,800	–	–	46,085	46,769
Change [1]	+ 3.4%	– 7.7%	–	–	12.1%	1.5%
Currency-adjusted change [1]	+ 8.7%	+ 0.6%	–	–	6.2%	3.5%
Interregional sales	582	530	(15,744)	(16,467)	–	–
Other operating income	313	218	–	–	1,109	898
EBIT [1]	591	440	(499)	(364)	6,241	7,042
Assets	5,079	5,823	4,679	6,350	73,917	82,238
Capital expenditures	123	151	–	–	2,554	2,627
Depreciation, amortization and impairments	122	80	6	6	3,332	3,743
Liabilities	1,486	1,599	826	1,330	48,472	50,341
Research and development expenses	65	71	–	–	4,274	4,666
Number of employees (as of Dec. 31) [2]	12,965	12,492	–	–	116,583	115,170

2015 figures restated

[1] For definition see Combined Management Report, Chapter 2.4 “Alternative Performance Measures Used by the Bayer Group.”

[2] Full-time equivalents

2. General information

The consolidated financial statements of the Bayer Group as of December 31, 2016, were prepared by Bayer Aktiengesellschaft (Bayer AG) according to the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), London, United Kingdom, and the interpretations of the IFRS Interpretations Committee (IFRS IC), both as endorsed by the European Union and in effect at the end of the reporting period. The applicable further requirements of Section 315a of the German Commercial Code were also taken into account.

Bayer AG is a global enterprise based in Germany. Its registered office is at Kaiser-Wilhelm-Allee 1, 51368 Leverkusen. Its material business activities in the fields of health care, agriculture and high-tech polymer materials took place in the reporting period in the Pharmaceuticals, Consumer Health, Crop Science, Animal Health and Covestro segments. The activities of each segment are outlined in Note (5).

The declarations required under Section 161 of the German Stock Corporation Act concerning the German Corporate Governance Code have been issued and made available to stockholders.

The Board of Management of Bayer AG prepared the consolidated financial statements of the Bayer Group on February 14, 2017. They were discussed by the Audit Committee of the Supervisory Board of Bayer AG at its meeting on February 20, 2017, and approved by the Supervisory Board at its plenary meeting on February 21, 2017.

In the income statement and statement of comprehensive income, statement of financial position, statement of cash flows and statement of changes in equity, certain items are combined for the sake of clarity. These are explained in the Notes. The income statement is prepared using the cost-of-sales method. Assets and liabilities are classified by maturity. They are regarded as current if they mature within one year or within the normal business cycle of the company or the Group, or are held for sale. The normal business cycle is defined for this purpose as beginning with the procurement of the resources necessary for the production process and ending with the receipt of cash or cash equivalents as consideration for the sale of the goods or services produced in that process. Inventories and trade accounts receivable and payable are always presented as current items. Deferred tax assets and liabilities and pension provisions are always presented as noncurrent items.

The consolidated financial statements of the Bayer Group are drawn up in euros. Amounts are stated in millions of euros (€ million) except where otherwise indicated.

The financial statements of the individual consolidated companies are prepared as of the closing date of the Group financial statements.

3. Effects of new financial reporting standards

Financial reporting standards applied for the first time in 2016

The first-time application of the following amended financial reporting standards had no impact, or no material impact, on the presentation of Bayer's financial position or results of operations, or on earnings per share.

In May 2014, the IASB published amendments to IAS 16 (Property, Plant and Equipment) and IAS 38 (Intangible Assets) entitled "Clarification of Acceptable Methods of Depreciation and Amortisation." These amendments clarify that revenue-based depreciation of property, plant and equipment or amortization of intangible assets is inappropriate.

In May 2014, the IASB published amendments to IFRS 11 (Joint Arrangements) entitled "Accounting for Acquisitions of Interests in Joint Operations." The amendments clarify the accounting for the acquisition of an interest in a joint operation in which the activity constitutes a business.

In December 2014, the IASB published its Disclosure Initiative containing amendments to IAS 1 (Presentation of Financial Statements), which are intended to clarify the disclosure requirements. They relate to materiality, line-item aggregation, subtotals, the structure of the Notes to the financial statements, the identification of significant accounting policies and the separate disclosure of the other comprehensive income of associates and joint ventures.

In December 2014, the IASB published amendments to IFRS 10 (Consolidated Financial Statements), IFRS 12 (Disclosure of Interests in Other Entities) and IAS 28 (Investments in Associates and Joint Ventures) entitled

"Investment Entities: Applying the Consolidation Exception." The amendments largely clarify which subsidiaries an investment entity must consolidate and which must be recognized at fair value through profit or loss.

Changes in accounting methods

The legal and economic independence of Covestro results in changes to the global annual impairment tests for Covestro. In the future, from the perspective of the Bayer Group, the strategic business entities of Covestro will be subjected to impairment testing as a group of cash-generating units because the goodwill of Covestro will be monitored by Bayer Group management at this aggregated level from now on.

Published financial reporting standards that have not yet been applied

The IASB and the IFRS Interpretations Committee have issued the following standards, amendments to standards, and interpretations whose application was not yet mandatory for the 2016 fiscal year and is conditional upon their endorsement by the European Union.

In July 2014, the IASB published the most recent version of IFRS 9 (Financial Instruments). The new standard contains revised rules for the classification and measurement of financial assets and liabilities, impairments of financial assets, and hedge accounting. IFRS 9 defines three instead of four measurement categories for capitalized financial instruments, with classification to be based partly on the company's business model and partly on the characteristics of the contractual cash flows from the respective financial asset. In the case of equity instruments that are not held for trading, an entity may irrevocably opt at initial recognition either to account for such instruments at fair value through profit or loss or to recognize future changes in their fair value outside profit or loss in the statement of comprehensive income and not subsequently reclassify these changes in fair value, even upon their derecognition.

The new impairment model is based on the principle of accounting for an expected loss from the date of first-time recognition of a financial asset, before a loss event occurs. The aim of the revisions regarding hedge accounting is to achieve a more objective presentation of risk management in the financial statements. This also involved the revision of IFRS 7, leading to a requirement for additional disclosures in the Notes. IFRS 9 is to be applied for annual periods beginning on or after January 1, 2018. It was endorsed by the European Union in November 2016. The evaluation of this standard's impact on the presentation of Bayer's financial position and results of operations has not yet been completed. No decision has yet been made on whether to exercise the options the standard provides for facilitating the transition and for accounting for financial instruments recognized from January 1, 2018, onward. Based on current knowledge, the effects of applying the final version of IFRS 9 on the allocation of financial instruments to measurement categories and thus on the results of operations are estimated to be immaterial.

In May 2014, the IASB issued IFRS 15 (Revenue from Contracts with Customers). IFRS 15 is the new standard for revenue recognition. It clarifies that the expected consideration for goods or services must be recognized as revenue when the goods or intangible assets are transferred or the services are rendered to the customer. This principle is applied in five steps. In step 1, the contract with the customer is identified. In step 2, the distinct performance obligations in the contract are identified. In step 3, the transaction price is determined. In step 4, this transaction price is allocated to the distinct performance obligations. Finally, in step 5, revenue is recognized when the identified distinct performance obligations are satisfied, either over time or at a point in time. IFRS 15 replaces IAS 11 (Construction Contracts), IAS 18 (Revenue), IFRIC 13 (Customer Loyalty Programmes), IFRIC 15 (Agreements for the Construction of Real Estate), IFRIC 18 (Transfers of Assets from Customers) and SIC-31 (Revenue-Barter Transactions Involving Advertising Services). The new standard is to be applied for annual periods beginning on or after January 1, 2018.

Bayer currently plans to implement IFRS 15 on the basis of the modified retrospective method, accounting for the aggregate amount of any transition effects by way of an adjustment to retained earnings as of January 1, 2018, and presenting the comparative period in line with previous rules. All of the established business models for the Bayer Group's Life Science divisions were examined in the course of the implementation project. The analysis did not yet cover all material consolidated companies. Based on current knowledge, Bayer does not expect the new standard to materially affect the timing of revenue recognition for the transactions concerned or their components. The evaluation of certain individual licensing agreements has not yet been completed.

IFRS 15 clarifies the allocation of individual topics to (new) line items in the statement of financial position and to functional cost items in the income statement, and whether gross or net amounts are to be presented. Determination of the effects on the level of sales or selling expenses has not yet been completed. Based on current knowledge, however, we do not anticipate any material effects on these items. Overall, we do not currently expect any material effects on the presentation of Bayer's financial position or results of operations as a whole, or on earnings per share.

In September 2014, the IASB published amendments to IFRS 10 (Consolidated Financial Statements) and IAS 28 (Investments in Associates and Joint Ventures) entitled "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture." The amendments clarify that in a transaction involving an associate or joint venture the extent of gain or loss recognition depends on whether the assets sold or contributed constitute a business. An amendment issued in December 2015 indefinitely defers the effective date of the September 2014 amendments, which were originally intended to be applied for annual periods beginning on or after January 1, 2016. The IASB is to set a new effective date.

In January 2016, the IASB issued IFRS 16 (Leases), the new standard for lease accounting. IFRS 16 introduces a uniform lease accounting model for lessees, requiring recognition of assets and liabilities for all leases with a term of more than 12 months unless such leases are immaterial. It will eliminate the current requirement for lessees to classify lease contracts as either operating leases – without recognizing the respective assets or liabilities – or as finance leases. The new standard is to be applied for annual periods beginning on or after January 1, 2019. It has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the standard will have on the presentation of its financial position and results of operations.

In January 2016, the IASB published amendments to IAS 12 (Income Taxes) under the title "Recognition of Deferred Tax Assets for Unrealised Losses." These amendments clarify the accounting for deferred tax assets related to debt instruments measured at fair value. The amendments are to be applied for annual periods beginning on or after January 1, 2017. They have not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In January 2016, the IASB published amendments to IAS 7 (Statement of Cash Flows) under its Disclosure Initiative. The following changes in liabilities arising from financing activities must be disclosed in the future: a) changes from financing cash flows; b) changes arising from obtaining or losing control of subsidiaries or other businesses; c) the effect of changes in foreign exchange rates; d) changes in fair values; e) other changes. The amendments are to be applied for annual periods beginning on or after January 1, 2017. They have not yet been endorsed by the European Union.

In April 2016, the IASB issued Clarifications to IFRS 15 (Revenue from Contracts with Customers). These amendments address three topics: identifying performance obligations, principal versus agent considerations, and licensing. They also provide some transition relief for modified contracts and completed contracts. The amendments are to be applied for annual periods beginning on or after January 1, 2018. They have not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In June 2016, the IASB published an amendment to IFRS 2 (Share-based Payment) under the title "Classification and Measurement of Share-based Payment Transactions." This amendment provides guidance on certain accounting issues relating to cash-settled share-based payments. For example, the fair value of the equity instruments is not to be adjusted for service conditions or non-market-based performance conditions. Instead, these are to be taken into account by adjusting the number of equity instruments expected to vest. The amendment is to be applied for annual periods beginning on or after January 1, 2018. It has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendment will have on the presentation of its financial position and results of operations.

In December 2016, the IASB published an amendment to IAS 40 (Investment Property) under the title "Transfers of Investment Property." This specifies that a property may only be transferred to or from the investment property classification when there has been an actual change in use and not when there is a mere change of intent concerning the property. The amendment is to be applied for annual periods beginning on or after January 1, 2018. It has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendment will have on the presentation of its financial position and results of operations.

In December 2016, the IASB published "Annual Improvements to IFRS Standards 2014-2016 Cycle" as part of its annual improvements project. The amendments relate to IFRS 1 (First Time Adoption of IFRS), IFRS 12 (Disclosure of Interest in Other Entities) and IAS 28 (Investments in Associates and Joint Ventures). They mainly contain clarifications on the scope of application and other matters. The amendments to IFRS 1 and IAS 28 are to be applied for annual periods beginning on or after January 1, 2018, those to IFRS 12 for annual periods beginning on or after January 1, 2017. They have not yet been endorsed by the European Union. Bayer is currently evaluating the impact the amendments will have on the presentation of its financial position and results of operations.

In December 2016, the IASB published the IFRIC Interpretation 22 (Foreign Currency Transactions and Advance Consideration) relating to IAS 21 (The Effects of Changes in Foreign Exchange Rates). The Interpretation clarifies that the assets, income and expenses accounted for following a foreign currency transaction are to be translated at the same exchange rate as any related receipts or payments of advance consideration. IFRIC 22 is to be applied for annual periods beginning on or after January 1, 2018. It has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the Interpretation will have on the presentation of its financial position and results of operations.

4. Basic principles, methods and critical accounting estimates

The financial statements of the consolidated companies are prepared according to uniform accounting policies and measurement principles.

The consolidated financial statements of the Group are based on the principle of the historical cost of acquisition, construction or production, with the exception of the items reflected at fair value, such as financial assets held for trading or available for sale, and derivatives.

In preparing the consolidated financial statements, the management has to make certain assumptions and estimates that may substantially impact the presentation of the Group's financial position and / or results of operations.

Such estimates, assumptions or the exercise of discretion mainly relate to the useful life of noncurrent assets, the discounted cash flows used for impairment testing and purchase price allocations, and the recognition of provisions, including those for litigation-related expenses, pensions and other benefits, taxes, environmental compliance and remediation costs, sales allowances, product liability and guarantees. Essential estimates and assumptions that may affect reporting in the various item categories of the financial statements are described in the following sections of this Note. Estimates are based on historical experience and other assumptions that are considered reasonable under given circumstances. They are continually reviewed but may vary from the actual values.

Changes in accounting policies or measurement principles in light of new or revised standards are applied retrospectively, except as otherwise provided in the respective standard. The income statement for the previous year and the opening statement of financial position for that year are adjusted as if the new accounting policies and / or measurement principles had always been applied.

Consolidation

The consolidated financial statements include subsidiaries, joint arrangements and associates.

Subsidiaries are companies over which Bayer AG is currently able to exercise power by virtue of existing rights. Power means the ability to direct the activities that significantly influence a company's profitability. Control is therefore only deemed to exist if Bayer AG is exposed, or has rights, to variable returns from its involvement with a company and has the ability to use its power over that company to affect the amount of that company's returns. The ability to control another company generally derives from Bayer AG's direct or indirect ownership of a majority of the voting rights. In the case of structured entities, however, control is based on contractual agreements. Inclusion of an entity's accounts in the consolidated financial statements begins when the Bayer Group is able to exercise control over the entity and ceases when it is no longer able to do so.

Joint operations and **joint ventures** are based on joint arrangements. A joint arrangement is deemed to exist if the Bayer Group through a contractual agreement jointly controls activities managed with a third party. Joint control is only deemed to exist if decisions regarding the relevant activities require the unanimous consent of the parties sharing control.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. The Bayer Group recognizes the share of assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with its rights and obligations.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint ventures are accounted for using the equity method.

Associates over which Bayer AG exerts significant influence, generally through an ownership interest between 20% and 50%, are also accounted for using the equity method.

The carrying amount of a company accounted for using the equity method is adjusted annually by any change in its equity corresponding to Bayer's percentage interest in the company. Differences arising upon first-time inclusion using the equity method are accounted for according to full-consolidation principles. Bayer's share of changes in these companies' equities recognized in profit or loss – including impairment losses recognized on goodwill – are reflected in equity-method income / loss.

Companies that do not have a material impact on the Group's financial position or results of operations, either individually or in aggregate, are accounted for at cost of acquisition less any impairment losses.

Foreign currency translation

The financial statements of the individual companies for inclusion in the consolidated financial statements are prepared in their respective functional currencies. A company's functional currency is that of the economic environment in which it primarily generates and expends cash. The majority of consolidated companies carry out their activities autonomously from a financial, economic and organizational point of view, and their functional currencies are therefore the respective local currencies.

In the consolidated financial statements, the assets and liabilities of companies outside the eurozone at the start and end of the year are translated into euros at closing rates. All changes occurring during the year and all income and expense items and cash flows are translated into euros at average monthly rates. Equity components are translated at the historical exchange rates prevailing at the respective dates of their first-time recognition in Group equity.

The exchange differences arising between the resulting amounts and those obtained by translating at closing rates are recognized outside profit or loss as "Exchange differences on translation of operations outside the eurozone" (in other comprehensive income) or "Exchange differences" (in the tables in the Notes). When a company is deconsolidated or the net investment in a foreign operation is reduced, such exchange differences are reclassified from equity to profit or loss.

The exchange rates for major currencies against the euro varied as follows:

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Exchange Rates for Major Currencies

		Closing rate		Average rate	
€1/		2015	2016	2015	2016
BRL	Brazil	4.31	3.43	3.64	3.84
CAD	Canada	1.51	1.42	1.42	1.47
CHF	Switzerland	1.08	1.07	1.07	1.09
CNY	China	7.06	7.35	6.97	7.36
GBP	United Kingdom	0.73	0.86	0.73	0.82
JPY	Japan	131.07	123.36	134.28	120.06
MXN	Mexico	18.91	21.78	17.56	20.62
RUB	Russia	80.67	64.30	67.23	73.79
USD	United States	1.09	1.05	1.11	1.11

In 2016, as in prior years, the rules of IAS 29 (Financial Reporting in Hyperinflationary Economies) were relevant for Bayer S.A., Venezuela. Gains and losses incurred upon adjusting the carrying amounts of nonmonetary assets and liabilities and of items in the income statement for inflation are recognized in other operating income and expenses.

Starting in January 2016, foreign currency translation and valuation were switched to the "hyperinflation-adjusted" SIMADI exchange rate. This is determined internally because reliable exchange rates are not available externally. It was initially based on the official SIMADI rate and has subsequently been adjusted in line with published inflation rates. The exchange rate thus calculated was VEF 2,737 to the U.S. dollar at the end of December 2016. The resulting U.S. dollar amounts were then translated at the dollar / euro closing-date rate.

Foreign currency measurement

In the separate financial statements of the individual consolidated companies, monetary items, such as receivables and liabilities, that are denominated in currencies other than the respective functional currency are measured at closing rates. Related exchange differences are recognized in profit or loss as exchange gains or losses under other financial income or expenses.

Net sales and other operating income

All revenues derived from the selling of products or rendering of services or from licensing agreements are recognized as sales. Other operational revenues are recognized as other operating income. Sales are recognized in profit or loss when the significant risks and rewards of ownership of the goods have been transferred to the customer, the company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold, the amount of revenue and costs incurred or to be incurred can be measured reliably, and it is sufficiently probable that the economic benefits associated with the transaction will flow to the company.

Sales are stated net of sales taxes, other taxes and sales deductions at the fair value of the consideration received or to be received. Sales deductions are estimated amounts for rebates, cash discounts and product returns. They are deducted at the time the sales are recognized, and appropriate provisions are recorded. Sales deductions are estimated primarily on the basis of historical experience, specific contractual terms and future expectations of sales development. It is unlikely that factors other than these could materially affect sales deductions in the Bayer Group. Adjustments to provisions made in prior periods for rebates, cash discounts or product returns were of secondary importance for income before income taxes in the years under report.

Provisions for rebates in 2016 amounted to 4.2% of total net sales (2015: 3.8%). In addition to rebates, Group companies offer cash discounts for prompt payment in some countries. Provisions for cash discounts as of December 31, 2016 and December 31, 2015 were less than 0.1% of total net sales for the respective year.

Sales are reduced by the amount of the provisions for expected returns of defective goods or of saleable products that may be returned under contractual arrangements. The net sales are reduced on the date of sale or on the date when the amount of future returns can be reasonably estimated. Provisions for product returns in 2016 amounted to 0.4% of total net sales (2015: 0.4%). If future product returns cannot be reasonably estimated and are significant to a sales transaction, the revenues and the related cost of sales are deferred until a reasonable estimate can be made or the right to return the goods has expired.

Some of the Bayer Group's revenues are generated on the basis of licensing agreements under which third parties have been granted rights to products and technologies. Payments received, or expected to be received, that relate to the sale or out-licensing of technologies or technological expertise are recognized in profit or loss as of the effective date of the respective agreement if all rights relating to the technologies and all obligations resulting from them have been relinquished under the contract terms. However, if rights to the technologies continue to exist or obligations resulting from them have yet to be fulfilled, the payments received are deferred accordingly. Upfront payments and similar nonrefundable payments received under these agreements are recorded as other liabilities and recognized in profit or loss according to the degree of performance over the estimated performance period stipulated in the agreement.

License agreements and research and development collaboration agreements may be multiple-deliverable arrangements with varying consideration terms, such as upfront payments and milestone or similar payments. Such agreements therefore have to be assessed to determine whether the revenues allocated to individual deliverables must be recognized at different points in time and therefore form separate units of account.

To qualify as a separate unit of account for revenue recognition purposes, a deliverable must have value to the licensee on a standalone basis. If this is not the case, the agreement as a whole or a combination of individual deliverables that has value on a standalone basis forms a unit of account.

If necessary goods have yet to be delivered or necessary services provided for a unit of account and such delivery or provision is probable, nonrefundable (royalty) payments already received are recognized through profit or loss over the periods in which these goods are delivered or these services are provided.

Income may also arise from the exchange of intangible assets. The amount recognized is generally based on the fair value of the assets given up, calculated using the discounted cash flow method. If the assets given up are internally generated, the gain from the exchange generally equals their fair value.

Research and development expenses

For accounting purposes, research expenses are defined as costs incurred for current or planned investigations undertaken with the prospect of gaining new scientific or technical knowledge and understanding. Development expenses are defined as costs incurred for the application of research findings or specialist knowledge to plans or designs for the production, provision or development of new or substantially improved products, services or processes, respectively, prior to the commencement of commercial production or use.

Research and development expenses are incurred in the Bayer Group for in-house research and development activities as well as numerous research and development collaborations and alliances with third parties.

Research and development expenses mainly comprise the costs for active ingredient discovery, clinical studies, research and development activities in the areas of application technology and engineering, field trials, regulatory approvals and approval extensions.

Research costs cannot be capitalized. The conditions for capitalization of development costs are closely defined: an intangible asset must be recognized if, and only if, there is reasonable certainty of receiving future cash flows that will cover an asset's carrying amount. Since our own development projects are often subject to regulatory approval procedures and other uncertainties, the conditions for the capitalization of costs incurred before receipt of approvals are not normally satisfied.

In the case of research and development collaborations, a distinction is generally made between payments on contract signature, upfront payments, milestone payments and cost reimbursements for work performed. If an intangible asset (such as the right to the use of an active ingredient) is acquired in connection with any of these payment obligations, the respective payment is capitalized even if it is uncertain whether further development work will ultimately lead to the production of a saleable product. Reimbursements of the cost of research or development work are recognized in profit or loss, except where they are required to be capitalized.

Income taxes

Income taxes comprise the taxes levied on taxable income in the individual countries along with changes in deferred tax assets and liabilities that are recognized in profit or loss. The income taxes recognized are reflected at the amounts likely to be payable under the statutory regulations in force, or already enacted in relation to future periods, at the end of the reporting period.

Complex tax regulations may give rise to uncertainties with respect to their interpretation and the amounts and timing of future taxable income. Given the wide range of international business relationships and the long-term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate adjustments to tax income and expense in future periods. The Group establishes provisions for taxes, based on reasonable estimates, for liabilities to the tax authorities of the respective countries that are uncertain as to their amount and the probability of their occurrence. The amount of such provisions is based on various factors, such as experience with previous tax audits and differing legal interpretations by the taxable entity and the responsible tax authority.

In compliance with IAS 12 (Income Taxes), deferred taxes are recognized for temporary differences between the carrying amounts of assets and liabilities in the statement of financial position prepared according to IFRS and their tax bases. Deferred taxes are also recognized for consolidation measures and for loss carryforwards, interest carryforwards and tax credits that are likely to be usable.

Deferred tax assets relating to deductible temporary differences, tax credits, loss carryforwards and interest carryforwards are recognized where it is sufficiently probable that taxable income will be available in the future to enable them to be used. Deferred tax liabilities are recognized on temporary differences taxable in the future. Deferred taxes are calculated at the rates which – on the basis of the statutory regulations in force, or already enacted in relation to future periods, as of the closing date – are expected to apply in the individual countries at the time of realization. Deferred tax assets and deferred tax liabilities are offset if they relate to income taxes levied by the same

taxation authority and Bayer has a legal right to settle on a net basis. Material effects of changes in tax rates or tax law on deferred tax assets and liabilities are generally accounted for in the period in which the changes are enacted. Such effects are recognized in profit or loss except where they relate to deferred taxes that were recognized outside profit or loss, in which case they are recognized in other comprehensive income.

Deferred and current taxes are recognized in profit or loss unless they relate to items recognized outside profit or loss in other comprehensive income, in which case they, too, are recognized in other comprehensive income.

The probability that deferred tax assets resulting from temporary differences, loss carryforwards or interest carryforwards can be used in the future is the subject of forecasts by the individual consolidated companies regarding their future earnings situation and other parameters.

Deferred tax liabilities are recognized on planned dividend payments by subsidiaries. Where no dividend payment is planned for the foreseeable future, no deferred tax liability is recognized on the difference between the proportionate net assets according to IFRS and the tax base of the investment in the subsidiary.

Goodwill

In a business combination, goodwill is capitalized at the acquisition date. It is measured at its cost of acquisition, which is the excess of the acquisition price for shares in a company over the acquired net assets. The net assets are the balance of the fair values of the acquired identifiable assets and the assumed liabilities and contingent liabilities.

Goodwill is not amortized, but tested annually for impairment. Details of the annual impairment tests are given under "Procedure used in global impairment testing and its impact." Once an impairment loss has been recognized on goodwill, it is not reversed in subsequent periods.

Other intangible assets

An "other intangible asset" is an identifiable nonmonetary asset without physical substance, other than goodwill (such as a patent, a trademark or a marketing right). It is capitalized if the future economic benefits attributable to the asset will probably flow to the company and the cost of acquisition or generation of the asset can be reliably measured.

Other intangible assets are recognized at the cost of acquisition or generation. Those with a determinable useful life are amortized accordingly on a straight-line basis over a period of up to 30 years, except where their actual depletion demands a different amortization pattern. Determination of the expected useful lives of such assets and the amortization patterns is based on estimates of the period for which they will generate cash flows. An impairment test is performed if there is an indication of possible impairment.

Other intangible assets with an indefinite life (such as the Bayer Cross trademark) and intangible assets not yet available for use (such as research and development projects) are not amortized, but tested annually for impairment.

Property, plant and equipment

Property, plant and equipment is depreciated by the straight-line method over an asset's useful life, except where depreciation based on actual depletion is more appropriate.

The following depreciation periods are applied throughout the Group:

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Useful Life of Property, Plant and Equipment	
Buildings	20 to 50 years
Outdoor infrastructure	10 to 20 years
Storage tanks and pipelines	10 to 20 years
Plant installations	6 to 20 years
Machinery and equipment	6 to 12 years
Furniture and fixtures	4 to 10 years
Vehicles	5 to 8 years
Computer equipment	3 to 5 years
Laboratory and research facilities	3 to 5 years

When assets are sold, closed down or scrapped, the difference between the net proceeds and the net carrying amount of the assets is recognized as a gain or loss in other operating income or expenses, respectively.

Investment property comprises land and buildings not being used for operational or administrative purposes. It is measured using the cost model. The fair value of the investment property reported in the Notes is determined using the discounted cash flow method, comparisons with the current market values of similar properties, or reports from external experts.

Financial assets

Financial assets comprise loans and receivables, acquired equity and debt instruments, cash and cash equivalents, and derivatives with positive fair values.

Regular-way purchases and sales of financial assets are generally posted on the settlement date. Financial assets are initially recognized at fair value plus transaction costs. The transaction costs incurred for the purchase of financial assets held at fair value through profit or loss are expensed immediately.

If there are substantial and objective indications of a decline in the value of loans and receivables, held-to-maturity financial assets or available-for-sale financial assets, an impairment test is performed. Indications of possible impairment include a high probability of insolvency, a significant deterioration in credit standing, a material breach of contract, operating losses reported by a company over several years, a reduction in market value, the financial restructuring of the debtor, or the disappearance of an active market for the asset.

Financial assets are derecognized when contractual rights to receive cash flows from the financial assets expire or the financial assets are transferred together with all material risks and benefits.

Inventories

In accordance with IAS 2 (Inventories), inventories encompass assets consumed in production or in the rendering of services (raw materials and supplies), assets in the production process for sale (work in process), goods held for sale in the ordinary course of business (finished goods and goods purchased for resale), and advance payments on inventories. Inventories are recognized at their cost of acquisition or production – calculated by the weighted-average method – or at their net realizable value, whichever is lower. The net realizable value is the estimated selling price in the ordinary course of business less estimated cost to complete and selling expenses.

Cash and cash equivalents

Cash and cash equivalents comprise cash, checks received and balances with banks and companies. Cash equivalents are highly liquid short-term financial investments that are subject to an insignificant risk of changes in value, are easily convertible into a known amount of cash and have a maturity of three months or less from the date of acquisition or investment.

Provisions for pensions and other post-employment benefits

Within the Bayer Group, post-employment benefits are provided under defined contribution and / or defined benefit plans. In the case of defined contribution plans, the company pays contributions to publicly or privately administered pension plans on a mandatory, contractual or voluntary basis. Once the contributions have been paid, the company has no further payment obligations. The regular contributions constitute expenses for the year in which they are due and as such are included in the functional cost items, and thus in EBIT. All other post-employment benefit systems are defined benefit plans, which may be either unfunded, i.e. financed by provisions, or funded, i.e. financed through pension funds.

The present value of provisions for defined benefit plans and the resulting expense are calculated in accordance with IAS 19 (Employee Benefits) by the projected unit credit method. The future benefit obligations are valued by actuarial methods and spread over the entire employment period on the basis of specific assumptions regarding beneficiary structure and the economic environment. These relate mainly to the discount rate, future salary and pension increases, variations in health care costs, and mortality rates.

The discount rates used are calculated from the yields of high-quality corporate bond portfolios in specific currencies with cash flows approximately equivalent to the expected disbursements from the pension plans. The uniform discount rate derived from this interest-rate structure is thus based on the yields, at the closing date, of a portfolio of AA-rated corporate bonds whose weighted residual maturities approximately correspond to the duration necessary to cover the entire benefit obligation.

The fair value of plan assets is deducted from the present value of the defined benefit obligation for pensions and other post-employment benefits to determine the net defined benefit liability. The obligations and plan assets are valued at regular intervals of not more than three years. Comprehensive actuarial valuations for all major plans are performed annually as of December 31. Plan assets in excess of the benefit obligation are reflected in other receivables, subject to the asset ceiling specified in IAS 19 (Employee Benefits).

The balance of all income and expenses relating to defined benefit plans, except the net interest on the net liability, is recognized in EBIT. The net interest is reflected in the financial result under other financial income and expenses.

The effects of remeasurements of the net defined benefit liability are reflected in the statement of comprehensive income as other comprehensive income. They consist of actuarial gains and losses, the return on plan assets and changes in the effects of the asset ceiling, less the respective amounts included in net interest. Deferred taxes relating to the effects of remeasurements are also recognized in other comprehensive income.

Other provisions

Other provisions are recognized for present legal and constructive obligations arising from past events that will probably give rise to a future outflow of resources, provided that a reliable estimate can be made of the amount of the obligations.

If the projected obligation declines as a result of a change in the estimate, the provision is reversed by the corresponding amount and the resulting income recognized in the operating expense item(s) in which the original charge was recognized.

To enhance the information content of the estimates, certain provisions that could have a material effect on the financial position or results of operations of the Group are tested for their sensitivity to changes in the underlying parameters. To reflect uncertainty about the likelihood of the assumed events actually occurring, the impact of a five-percentage-point change in the probability of occurrence is examined in each case. This analysis has not shown other provisions to be materially sensitive.

Provisions for environmental protection are recorded if future cash outflows are likely to be necessary to ensure compliance with environmental regulations or to carry out remediation work, such costs can be reliably estimated and no future benefits are expected from such measures. Provisions for environmental protection mainly relate to the rehabilitation of contaminated land, recultivation of landfills, and redevelopment and water protection measures.

Estimating the future costs of environmental protection and remediation involves many uncertainties, particularly with regard to the status of laws, regulations and the information available about conditions in the various countries and at the individual sites. Significant factors in estimating the costs include previous experiences in similar cases, the conclusions in expert opinions obtained regarding the Group's environmental programs, current costs and new developments affecting costs, management's interpretation of current environmental laws and regulations, the number and financial position of third parties that may become obligated to participate in any remediation costs on the basis of joint liability, and the remediation methods likely to be deployed. Changes in these assumptions could impact future reported results of the Group.

Taking into consideration experience gained to date regarding environmental matters of a similar nature, provisions are believed to be adequate based upon currently available information. Given the difficulties inherent in estimating liabilities in the businesses in which the Group operates, especially those for which the risk of environmental damage is greater in relative terms (Crop Science and Covestro), it remains possible that material additional costs will be incurred beyond the amounts accrued. It may transpire during remediation work that additional expenditures are necessary over an extended period and that these exceed existing provisions and cannot be reasonably estimated.

Provisions for restructuring only cover expenses that arise directly from restructuring measures, are necessary for restructuring and are not related to future business operations. Such expenses include severance payments to employees and compensation payments in respect of rented property that can no longer be used.

Restructuring measures may include the sale or termination of business units, site closures, relocations of business activities or fundamental reorganizations of business units.

Trade-related provisions are recorded mainly for the granting of rebates or discounts, product returns, obligations in respect of services already received but not yet invoiced, and impending losses or onerous contracts.

As a global enterprise with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks for which **provisions for litigations** must be established under certain conditions – particularly in the areas of product liability, competition and antitrust law, patent disputes, tax law and environmental protection.

Litigations and other judicial proceedings often raise complex issues and are subject to many uncertainties and complexities including, but not limited to, the facts and circumstances of each particular case, the jurisdiction in which each suit is brought and differences in applicable law. The outcomes of currently pending and future proceedings generally cannot be predicted. It is particularly difficult to assess the likely outcomes of class actions for damages or mass compensation claims in the United States, which may give rise to significant financial risks for the Bayer Group. As a result of a judgment in court proceedings, regulatory decisions or the conclusion of a settlement, the Bayer Group may incur charges for which no accounting measures have yet been taken for lack of reasonable estimability or which exceed presently established provisions and the insurance coverage.

The Bayer Group considers the need for accounting measures in respect of pending or future litigations, and the extent of any such measures, on the basis of the information available to its legal department and in close consultation with legal counsel acting for the Bayer Group.

Where it is more likely than not that such a litigation will result in an outflow of resources that is already reasonably estimable, a provision for litigation is recorded in the amount of the present value of the expected cash outflows. Such provisions cover the estimated payments to the plaintiffs, court and procedural costs, attorney costs and the cost of potential settlements.

It is frequently impossible to reliably determine the existence of a present obligation or reasonably estimate the probability that a potential outflow of resources will result from a pending or future litigation. The status of the material "legal risks" is described in Note (32). Due to the special nature of these litigations, provisions generally are not established until initial settlements allow an estimate of potential amounts or judgments have been issued. Provisions for legal defense costs are established if it is probable that material costs will have to be incurred for external legal counsel to defend the company's legal position.

Internal and external legal counsel evaluates the current status of the Bayer Group's material legal risks at the end of each reporting period. The need to establish or adjust a provision and the amount of the provision or adjustment are determined on this basis. Adjusting events are reflected up to the date of preparation of the consolidated financial statements. The measurement of provisions in the case of class actions or mass compensation claims is mainly based on any settlements reached during the past year and on pending or anticipated future claims.

Provisions for personnel commitments mainly include those for variable one-time payments under short-term incentive programs and for stock-based compensation. Also reflected here are commitments for service awards, early retirements and pre-retirement part-time working arrangements. Provisions for severance payments resulting from restructuring are reflected in provisions for restructuring.

Miscellaneous provisions include those for other liabilities, contingent liabilities from business combinations, and asset retirement obligations (other than those included in provisions for environmental protection).

Financial liabilities

Financial liabilities comprise primary financial liabilities and negative fair values of derivatives.

Liabilities for contingent consideration arising from business combinations are measured at fair value. Changes in fair value are recognized through profit or loss as of the respective closing date.

Financial liabilities are derecognized when the contractual obligation is discharged or canceled, or has expired.

An assessment of the mandatory convertible notes issued in 2016 was performed to determine whether these should be accounted for entirely as debt or split into an equity component and a debt component. The assessment identified Bayer's right to early conversion of the notes as an important criterion in this regard, and the economic substance of this right was examined. The early conversion right has economic substance with respect to maintaining the current credit rating if early conversion can prevent a rating downgrade. In this event, future savings of credit interest would more than offset the cost of early conversion by Bayer.

On the basis of this assessment, the mandatory convertible notes are accounted for as a hybrid financial instrument. The directly attributable costs along with the debt component, which corresponds to the present value of the future interest payments, are deducted from the proceeds of the issue. The debt component is included in financial liabilities. The remaining amount is the equity component, which is reflected in capital reserves.

Other receivables and liabilities

Accrued items and other nonfinancial assets and liabilities are carried at amortized cost. They are amortized to income by the straight-line method or according to performance of the underlying transaction.

Grants and subsidies from third parties that serve to promote investment are reflected in the statement of financial position under other liabilities and amortized to income over the useful lives of the respective investments or in line with the terms of the grant or subsidy.

Derivatives

The Bayer Group uses derivatives to mitigate the risk of changes in exchange rates, interest rates or prices and to hedge stock-based compensation programs. The instruments used include forward exchange contracts, interest-rate swaps and stock options. Derivatives are recognized at the trade date.

Contracts concluded in order to receive or deliver nonfinancial items for the company's own purposes are not accounted for as derivatives but treated as pending transactions. Where embedded derivatives are identified that are required to be separated from the pending transactions, they are accounted for separately. To take advantage of market opportunities or cover possible peak demand, a nonmaterial volume of transactions may be entered into for which the possibility of immediate resale cannot be excluded. Such transactions are allocated to separate portfolios upon acquisition and accounted for as derivatives according to IAS 39.

Derivatives are carried at fair value. Positive fair values at the end of the reporting period are reflected in financial assets, negative fair values in financial liabilities. Changes in the fair values of these derivatives are recognized directly in profit or loss except where hedge accounting is used.

Changes in the fair values of the effective portion of derivatives designated as cash flow hedges are initially recognized outside profit or loss in accumulated other comprehensive income. They are reclassified to profit or loss when the underlying transaction is realized. If such a derivative is sold or ceases to qualify for hedge accounting, the change in its value continues to be recognized in accumulated other comprehensive income until the forecasted transaction is realized. If the forecasted transaction is no longer expected to occur, the amount previously recognized in accumulated other comprehensive income has to be reclassified to profit or loss. The ineffective portion of gains or losses on derivatives designated as cash flow hedges is recognized either in other operating income or expenses or in the financial result, depending on the type of underlying transaction.

Changes in the fair values of derivatives designated as fair-value hedges and the adjustments in the carrying amounts of the underlying transactions are recognized in profit or loss.

Changes in the fair values of forward exchange contracts and currency options serving as hedges of items in the statement of financial position are reflected in other financial income and expenses as exchange gains or losses, while changes in the values of interest-rate swaps and interest-rate options are recognized in interest income or expense. Changes in the fair values of commodity futures and options, and of forward exchange contracts used to hedge forecasted sales transactions in foreign currencies, are recognized in other operating income or expenses. Changes in the fair values of stock options or forward stock transactions used to hedge stock-based employee compensation are initially recognized outside profit or loss and subsequently reclassified to profit or loss in the functional costs over the periods of the Aspire programs.

The income and expense reflected in the financial result pertaining to the derivatives and the underlying transactions are shown separately. Income and expense are not offset.

Acquisition accounting

Acquired businesses are accounted for using the acquisition method, which requires that the assets acquired and liabilities assumed be recorded at their respective fair values on the date Bayer obtains control. Ancillary acquisition costs are recognized as expenses in the periods in which they occur.

The application of the acquisition method requires certain estimates and assumptions to be made, especially concerning the fair values of the acquired intangible assets, property, plant and equipment and the liabilities assumed at the acquisition date, and the useful lives of the acquired intangible assets, property, plant and equipment.

Measurement is based to a large extent on anticipated cash flows. If actual cash flows vary from those used in calculating fair values, this may materially affect the Group's future results of operations. In particular, the estimation of discounted cash flows from intangible assets under development, patented and non-patented technologies and brands is based on assumptions concerning, for example:

- The outcomes of research and development activities regarding the efficacy of a crop protection or seed product, compound, results of clinical trials, etc.
- The probability of obtaining regulatory approvals in individual countries
- Long-term sales projections
- Possible selling price erosion due to offerings of unpatented products following patent expirations
- The behavior of competitors (launch of competing products, marketing initiatives, etc.)

For significant acquisitions, the purchase price allocation is carried out with assistance from independent third-party valuation specialists. The valuations are based on the information available at the acquisition date.

In step acquisitions, the fair values of the acquired entity's assets and liabilities are measured in accordance with IFRS 3 (Business Combinations) at the date on which control is obtained. Any resulting adjustments to the fair value of the existing interest are recognized in profit or loss. The carrying amount of the assets and liabilities already recognized in the statement of financial position is then adjusted accordingly.

Divestment accounting

Divestments of shares in subsidiaries that result in a loss of control are generally accounted for in profit or loss.

When shares in a subsidiary are gradually divested in several tranches, a reduction in the majority shareholding without the loss of control is reflected outside profit or loss and results in an increase in the equity attributable to noncontrolling stockholders. If Bayer AG loses control of an entity but retains significant influence, the entity is accounted for as an associate using the equity method. If Bayer can no longer exert significant influence following a loss of control, the remaining interest is immediately classified as an available-for-sale financial asset and recognized at fair value outside profit or loss.

Procedure used in global impairment testing and its impact

Impairment tests are performed not only on individual items of intangible assets, property, plant and equipment, but also at the level of cash-generating units or groups of cash-generating units. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Bayer Group regards its strategic business entities or groups of strategic business entities, as well as certain product families, as cash-generating units and subjects them to global impairment testing. The strategic business entities constitute the second financial reporting level below the segments.

Cash-generating units and unit groups are globally tested if there is an indication of possible impairment. Those to which goodwill is allocated are tested at least annually.

Impairment testing involves comparing the carrying amount of each cash-generating unit, unit group or item of intangible assets, property, plant or equipment to the recoverable amount, which is the higher of its fair value less costs of disposal or value in use. If the carrying amount exceeds the recoverable amount, an impairment loss must be

recognized for the difference. In this case an impairment loss is first recognized on any goodwill allocated to the cash-generating unit or unit group. Any remaining part of the impairment loss is then allocated among the other noncurrent nonfinancial assets of the cash-generating unit or unit group in proportion to their carrying amounts. The resulting expense is reflected in the functional item of the income statement in which the depreciation or amortization of the respective assets is recognized. The same applies to income from impairment loss reversals.

The recoverable amount is generally determined on the basis of the fair value less costs of disposal, taking into account the present value of the future net cash flows as market prices for the individual units are not normally available. These are forecasted on the basis of the Bayer Group's current planning, the planning horizon normally being three to five years. Forecasting involves making assumptions, especially regarding future selling prices, sales volumes, costs, market growth rates, economic cycles and exchange rates. These assumptions are based on internal estimates along with external market studies. Where the recoverable amount is the fair value less costs of disposal, the cash-generating unit or unit group is measured from the viewpoint of an independent market participant. Where the recoverable amount is the value in use, the cash-generating unit, unit group or individual asset is measured as currently used. In either case, net cash flows beyond the planning period are determined on the basis of long-term business expectations using the respective individual growth rates derived from market information. The fair value less costs of disposal is determined on the basis of unobservable inputs (Level 3).

The net cash inflows are discounted at a rate equivalent to the weighted average cost of equity and debt capital. To allow for the different risk and return profiles of the Bayer Group's principal businesses, the after-tax cost of capital is calculated separately for each reporting segment, and a segment-specific capital structure is defined by benchmarking against comparable companies in the same industry sector. The cost of equity corresponds to the return expected by stockholders, while the cost of debt is based on the conditions on which comparable companies can obtain long-term financing. Both components are derived from capital market information.

The growth rates applied for impairment testing in 2016 and 2015 and the capital cost factors used to discount the expected cash flows are shown in the following table:

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Impairment Testing Parameters

	Growth rate		After-tax cost of capital	
%	2015	2016	2015	2016
Pharmaceuticals	0.0	0.0	6.2	5.5
Radiology	0.0	0.0	6.2	5.5
Consumer Health	0.0	0.0	6.2	5.2
Crop Protection	2.3	2.1	6.3	5.3
Seeds	1.9	1.7	6.3	5.3
Environmental Science	1.8	2.4	6.3	5.3
Animal Health	0.0	0.0	6.2	5.3
Covestro	1.8	1.8	6.1	5.4

In light of the legal and economic independence of Covestro, its strategic business entities were impairment-tested as a group of cash-generating units from the point of view of the Bayer Group.

No impairment losses were recognized on goodwill on the basis of the global annual impairment testing of the cash-generating units and unit groups in 2016 or 2015. Impairment losses on intangible assets, property, plant and equipment – net of €1 million (2015: €1 million) in impairment loss reversals – totaled €711 million (2015: €229 million). Details are provided in Notes (17) and (18).

Although the estimates of the useful lives of certain assets, assumptions concerning the macroeconomic environment and developments in the industries in which the Bayer Group operates, and estimates of the discounted future cash flows are believed to be appropriate, changes in assumptions or circumstances could require changes in the analysis. This could lead to the recognition of additional impairment losses in the future or – except in the case of goodwill – to reversals of previously recognized impairment losses if developments are contrary to expectations.

The sensitivity analysis for cash-generating units and unit groups to which goodwill is allocated was based on a 10% reduction in future cash flows, a 10% increase in the weighted average cost of capital or a one-percentage-point reduction in the long-term growth rate. Bayer concluded that no impairment loss would need to be recognized on goodwill in any cash-generating unit or unit group under these conditions.

5. Segment reporting

At Bayer, the Board of Management – as the chief operating decision-maker – allocates resources to the operating segments and assesses their performance. The reportable segments and regions are identified, and the disclosures selected, in line with the internal financial reporting system (management approach) and based on the Group accounting policies outlined in Note (4).

In 2015, the Bayer Group comprised three subgroups, with operations subdivided into strategic business entities known as divisions (HealthCare), business groups (CropScience) and business units (Covestro; formerly MaterialScience). On December 31, 2015, there were four reportable segments. In September 2015, it was decided to introduce a new organizational structure effective January 1, 2016, in line with Bayer's focus on the Life Science businesses. The former Bayer HealthCare subgroup was dissolved, and the Radiology business is now assigned to the Pharmaceuticals segment. The Consumer Health segment consists entirely of the consumer care business. Animal Health is a reportable segment. The Bayer Crop-Science subgroup became the Crop Science segment. Covestro remains a reportable segment.

In the Crop Science segment, the Crop Protection / Seeds and Environmental Science operating segments were combined, mainly in light of the comparable nature of their products for the agricultural industry, such as in the area of crop protection and the related comparable production processes and comparable distribution methods, including via wholesalers in particular.

The segments' activities are as follows:

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Activities of the Segments

Segment	Activities
Pharmaceuticals	Development, production and marketing of prescription products, especially for cardiology and women's health care; specialty therapeutics in the areas of oncology, hematology and ophthalmology; diagnostic imaging equipment and the necessary contrast agents
Consumer Health	Development, production and marketing of mainly nonprescription (OTC = over-the-counter) products in the dermatology, dietary supplement, analgesic, gastrointestinal, cold, allergy, sinus and flu, foot care and sun protection categories
Crop Science [1]	Development, production and marketing of a broad portfolio of products in seeds and plant traits, crop protection and nonagricultural pest control
Animal Health	Development, production and marketing of prescription and nonprescription veterinary products
Covestro	Development, production and marketing of raw materials for polyurethanes; polycarbonate granules and sheets; raw materials for coatings, adhesives and sealants; and by-products of polyether production and of chlorine production and use

[1] Following the signing of a sales agreement with SBM Développement SAS, Lyon, France, the Consumer business of the Environmental Science unit was no longer reported under continuing operations in 2016.

Business activities that cannot be allocated to any other segment are reported under "All other segments." These primarily include the services provided by the service areas: Business Services, Technology Services and Currenta.

The items in "Corporate Functions and Consolidation" mainly comprise the Bayer holding companies and the Bayer Lifescience Center, which focuses on the development of crucial, cross-species innovations. They also include the increase or decrease in expenses for Group-wide long-term stock-based compensation arising from fluctuations in the performance of Bayer stock, and the consolidation of intersegment sales (2016: €2.3 billion; 2015: €2.4 billion).

In Table B 1/2 "Key Data by Region" as of December 31, 2016, the Europe region is combined with the Middle East and Africa. Latin America is a separate region. The regional breakdown is in line with the internal regional responsibilities of the individual members of the Bayer AG Board of Management. The prior-year figures are restated accordingly. The reconciliation in the table "Key Data by Region" eliminates inter-regional items and transactions and reflects income, expenses, assets and liabilities not allocable to geographical areas.

The segment data are calculated as follows:

> Tables B 1/1 "Key Data by Segment" and B 1/2 "Key Data by Region" and the present chapter contain supplementary performance indicators that are not subject to requirements of the financial reporting standards governing the preparation of the Combined Management Report and the consolidated financial statements. The

most important of these indicators are EBIT, EBITDA, EBIT before special items, EBITDA before special items, and the return on capital employed. These supplementary indicators are defined, and their calculation explained, in Chapter 2.4 "Alternative Performance Measures Used by the Bayer Group" of the Combined Management Report in the Bayer Annual Report 2016.

> The intersegment sales reflect intra-Group transactions effected at transfer prices fixed on an arm's length basis.
> The net cash provided by operating activities is the cash flow from operating activities as defined in IAS 7 (Statement of Cash Flows).
> The segment assets comprise all assets serving the respective segment, stated as of December 31, including material participating interests of direct relevance to business operations.
> Starting in 2016, the cash flow return on investment (CFROI) was replaced by the return on capital employed (ROCE) as a value-based indicator. Both CFROI and ROCE constitute alternative performance measures.
> The equity items reflect the earnings and carrying amounts of investments accounted for using the equity method.
> Since the financial management of Group companies is carried out centrally by Bayer AG, financial liabilities are not directly allocated among the segments. Consequently, the liabilities shown for the individual segments do not include financial liabilities. These are included in the reconciliation.
> The number of employees on either permanent or temporary contracts is stated in full-time equivalents (FTE), with part-time employees included on a pro-rated basis in line with their contractual working hours. The figures do not include apprentices.

Reconciliations

The reconciliations of EBITDA before special items, EBIT before special items and EBIT to Group income before income taxes and of the assets and liabilities of the segments to the assets and liabilities, respectively, of the Group are given in the following tables.

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Reconciliation of Segments' EBITDA Before Special Items to Group Income Before Income Taxes

€ million	2015	2016
EBITDA before special items of segments	10,722	11,640
EBITDA before special items of Corporate Functions and Consolidation	(466)	(338)
EBITDA before special items[1]	**10,256**	**11,302**
Depreciation, amortization and impairment losses / loss reversals before special items of segments	(3,190)	(3,166)
Depreciation, amortization and impairment losses / loss reversals before special items of Corporate Functions and Consolidation	(6)	(6)
Depreciation, amortization and impairment losses / loss reversals before special items	**(3,196)**	**(3,172)**
EBIT before special items of segments	7,532	8,474
EBIT before special items of Corporate Functions and Consolidation	(472)	(344)
EBIT before special items[1]	**7,060**	**8,130**
Special items of segments	(792)	(1,068)
Special items of Corporate Functions and Consolidation	(27)	(20)
Special items[1]	**(819)**	**(1,088)**
EBIT of segments	6,740	7,406
EBIT of Corporate Functions and Consolidation	(499)	(364)
EBIT[1]	**6,241**	**7,042**
Financial result	(1,005)	(1,155)
Income before income taxes	**5,236**	**5,887**

2015 figures restated

[1] For definition see Combined Management Report, Chapter 2.4 "Alternative Performance Measures Used by the Bayer Group."

B 5/3

Reconciliation of Segments' Assets to Group Assets

€ million	2015	2016
Assets of the operating segments	**65,654**	**66,252**
Corporate Functions and Consolidation assets	181	507
Nonallocated assets	7,899	15,479
Assets of discontinued operations	183	–
Group assets	**73,917**	**82,238**

B 5/4

Reconciliation of Segments' Liabilities to Group Liabilities

€ million	2015	2016
Liabilities of the operating segments	**24,557**	**26,617**
Corporate Functions and Consolidation liabilities	2,645	1,996
Nonallocated liabilities	21,158	21,728
Liabilities directly related to discontinued operations	112	–
Group liabilities	**48,472**	**50,341**

The reconciliation of segment sales to Group sales is apparent from the table of key data by segment in Note (1).

Information on geographical areas

The following table provides a regional breakdown of external sales by market and of intangible assets, property, plant and equipment:

B 5/5

Information on Geographical Areas

	Net sales (external) – by market		Intangible assets and property, plant and equipment	
€ million	2015	2016	2015	2016
Germany	4,925	4,809	12,385	12,468
United States	11,168	11,310	14,420	14,297
China	4,212	4,603	3,260	2,938
Switzerland	691	662	5,298	5,047
Other	25,089	25,385	8,286	8,243
Total	**46,085**	**46,769**	**43,649**	**42,993**

2015 figures restated

Information on major customers

Revenues from transactions with a single customer in no case exceeded 10% of Bayer Group sales in 2016 or 2015.

6. Scope of consolidation; subsidiaries and affiliates

6.1 Changes in the scope of consolidation

Changes in the scope of consolidation in 2016 were as follows:

B 6.1/1

Change in Number of Consolidated Companies

Bayer AG and consolidated companies	Germany	Other countries	Total
December 31, 2015	68	239	307
Changes in scope of consolidation	–	1	1
Additions	–	2	2
Retirements	(4)	(5)	(9)
December 31, 2016	64	237	301

The decrease in the total number of consolidated companies in 2016 was primarily due to mergers among Group companies.

Bayer Pearl Polyurethane Systems LLC, United Arab Emirates, is fully consolidated because the Bayer Group holds a majority of the voting rights.

Pure Salt Baytown LLC, United States, is fully consolidated as a structured entity. The Bayer Group guarantees the liabilities of Pure Salt Baytown LLC to banks. These liabilities, which are reflected in full in the consolidated statement of financial position, amounted to €12 million as of December 31, 2016 (2015: €17 million).

The above table includes one joint operation, LyondellBasell Covestro Manufacturing Maasvlakte V.O.F., Netherlands, as of December 31, 2016 (2015: one). Pursuant to IFRS 11, Bayer's share of this company's assets, liabilities, revenues and expenses are included in the consolidated financial statements in accordance with Bayer's rights and obligations. The main purpose of LyondellBasell Covestro Manufacturing Maasvlakte V.O.F., Netherlands, is the joint production of propylene oxide (PO) for Covestro and its partner Lyondell.

In conjunction with the acquisition of the consumer care business of Merck & Co., Inc., United States, Bayer entered into a strategic collaboration with that company. This collaboration is included in the consolidated financial statements as a joint operation. Bayer and Merck & Co., Inc., have mutually agreed to collaborate on the development, production, life-cycle management and marketing of active ingredients and products in the field of soluble guanylate cyclase (sGC) modulation.

Five (2015: four) associates and six (2015: three) joint ventures were accounted for in the consolidated financial statements using the equity method. Details of these companies are given in Note (19).

Flagship Ventures V Agricultural Fund, L.P., United States, was included in the consolidated financial statements for the first time in 2015 and classified as an associate. Bayer has no control over this associate despite owning 99.9% of the capital, but is able to significantly influence its financial and operating policy decisions.

Bayer Trendlines AG Innovation Fund, Limited Partnership, Israel, was included in the consolidated financial statements for the first time in 2016 and classified as an associate. Bayer is a limited partner and has no control over this entity due to contractual restrictions, despite owning 100% of the capital.

Nanjing Baijingyu Pharmaceutical Co., Ltd., China, was classified as an associate in view of Bayer's representation on its executive committee and supervisory board. This enables Bayer to significantly influence its financial and operating policy decisions despite owning only 15% of its voting rights and capital.

A total of 72 (2015: 71) subsidiaries, including one (2015: one) structured entity and 12 (2015: 12) associates or joint ventures that in aggregate are immaterial to the Bayer Group's financial position and results of operations are neither consolidated nor accounted for using the equity method, but are recognized at cost. The immaterial subsidiaries accounted for less than 0.2% of Group sales, less than 0.2% of equity and less than 0.2% of total assets.

Details of subsidiary and affiliated companies pursuant to Section 313 of the German Commercial Code can be accessed at **www.bayer.com/owner16.**

The following domestic subsidiaries availed themselves in 2016 of certain exemptions granted under Section 264, Paragraph 3, and Section 264b of the German Commercial Code regarding the publication of legal-entity financial statements:

B 6.1/2

German Exempt Subsidiaries

Company name	Place of business	Bayer's interest (%)
Adverio Pharma GmbH	Schönefeld	100.0
AgrEvo Verwaltungsgesellschaft mbH	Frankfurt am Main	100.0
Alcafleu Management GmbH & Co. KG	Schönefeld	99.9
Bayer 04 Immobilien GmbH	Leverkusen	100.0
Bayer 04 Leverkusen Fußball GmbH	Leverkusen	100.0
Bayer Altersversorgung GmbH	Leverkusen	100.0
Bayer Animal Health GmbH	Leverkusen	100.0
Bayer Beteiligungsverwaltung Goslar GmbH	Leverkusen	100.0
Bayer Business Services GmbH	Leverkusen	100.0
Bayer Chemicals Aktiengesellschaft	Leverkusen	100.0
Bayer Consumer Care Deutschland GmbH	Berlin	100.0
Bayer CropScience Aktiengesellschaft	Monheim am Rhein	100.0
Bayer CropScience Biologics GmbH	Wismar	100.0

German Exempt Subsidiaries

Company name	Place of business	Bayer's interest (%)
Bayer CropScience Deutschland GmbH	Langenfeld	100.0
Bayer Direct Services GmbH	Leverkusen	100.0
Bayer Gastronomie GmbH	Leverkusen	100.0
Bayer Gesellschaft für Beteiligungen mbH	Leverkusen	100.0
Bayer Innovation GmbH	Leverkusen	100.0
Bayer Intellectual Property GmbH	Monheim am Rhein	100.0
Bayer Real Estate GmbH	Leverkusen	100.0
Bayer Schering Pharma AG	Berlin	100.0
Bayer Vital GmbH	Leverkusen	100.0
Bayer Weimar GmbH und Co. KG	Weimar	100.0
Bayer-Handelsgesellschaft mit beschränkter Haftung	Leverkusen	100.0
BGI Deutschland GmbH	Leverkusen	100.0
Chemion Logistik GmbH	Leverkusen	100.0
Dritte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Erste Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Erste K-W-A Beteiligungsgesellschaft mbH	Leverkusen	100.0
Fünfte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
GP Grenzach Produktions GmbH	Grenzach-Wyhlen	100.0
Hild Samen GmbH	Marbach am Neckar	100.0
Intendis GmbH	Berlin	100.0
Intraserv GmbH & Co. KG	Schönefeld	100.0
Jenapharm GmbH & Co. KG	Jena	100.0
KOSINUS Grundstücks-Verwaltungsgesellschaft mbH & Co. Gamma OHG	Schönefeld	100.0
KVP Pharma+Veterinär Produkte GmbH	Kiel	100.0
MENADIER Heilmittel GmbH	Berlin	100.0
Schering-Kahlbaum Gesellschaft mit beschränkter Haftung	Berlin	100.0
Sechste Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Siebte Bayer VV GmbH	Leverkusen	100.0
Steigerwald Arzneimittelwerk GmbH	Darmstadt	100.0
TECTRION GmbH	Leverkusen	100.0
TravelBoard GmbH	Leverkusen	100.0
Vierte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Zweite Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Zweite K-W-A Beteiligungsgesellschaft mbH	Leverkusen	100.0

6.2 Business combinations and other acquisitions

Business combinations and other acquisitions in 2016

Adjustments to purchase prices and purchase price allocations effected in 2016 relating to previous years' transactions totaled minus €5 million. Adjustments to purchase price allocations and other adjustments increased the total carrying amount of goodwill by €9 million.

The changes in goodwill mainly resulted from the following purchase price allocation adjustment: On July 1, 2015, Crop Science completed the acquisition of all the shares of SeedWorks India Pvt. Ltd., based in Hyderabad, India. The company is specialized in the breeding, production and marketing of hybrid seeds of tomato, hot pepper, okra and gourds. It has research and seed processing locations in Bangalore and Hyderabad, respectively. The purchase of SeedWorks India is intended to further strengthen Crop Science's vegetable seed business in India. A purchase price of €80 million was agreed, pertaining mainly to patents, research and development projects and goodwill.

Improved information obtained about the acquired assets in the first quarter of 2016 in the course of the global purchase price allocation led to decreases of €23 million in intangible assets and €8 million in deferred tax liabilities and a corresponding increase of €13 million in goodwill in the opening statement of financial position. In addition, the purchase price declined by €2 million to €78 million following completion of the final purchase price negotiations.

On February 12, 2016, Bayer and CRISPR Therapeutics AG, Basel, Switzerland, established the joint venture Casebia Therapeutics LLP, Ascot, United Kingdom. Its purpose is the development and commercialization of new methods to treat blood disorders, blindness and heart diseases. Capital contribution liabilities of US$255 million to Casebia Therapeutics LLP were recognized in the statement of financial position as of December 31, 2016. These liabilities mature on December 31, 2020, at the latest. US$45 million was already paid in 2016, and a further US$60 million was paid on January 3, 2017.

On December 9, 2016, Bayer and Versant Ventures, San Francisco, United States, established the joint venture BlueRock Therapeutics LP, San Francisco, United States. The company will be active in the field of next-generation regenerative medicine. Its goal is to develop induced pluripotent stem cell (iPSC) therapies to cure a range of diseases. As of December 31, 2016, Bayer had capital contribution obligations of US$150 million pertaining to the establishment of the joint venture. This amount should be paid by December 31, 2020, at the latest.

Acquisitions after the end of the reporting period

On January 3, 2017, Bayer acquired the Cydectin™ portfolio in the United States from Boehringer Ingel-heim Vetmedica Inc., St. Joseph, United States. The acquisition comprises the CYDECTIN Pour-On, CYDECTIN Injectable and CYDECTIN Oral Drench endectocides for cattle and sheep. The acquisition is intended to strengthen the antiparasitics portfolio in the United States through the addition of endectocides. An initial purchase price of approximately €150 million was agreed, which is subject to the usual price adjustment mechanisms. The purchase price was provisionally allocated mainly to trademarks and goodwill. The purchase price allocation currently remains incomplete pending compilation and review of the relevant financial information.

Planned acquisitions

On September 14, 2016, Bayer signed a definitive merger agreement with Monsanto Company, St. Louis, Missouri, United States, which provides for Bayer's acquisition of all outstanding shares in Monsanto Company against a cash payment of US$128 per share. At the time this corresponded to an expected transaction volume of approximately US$66 billion, comprising an equity value (purchase price) of approximately US$56 billion and net debt to be assumed in an amount of US$10 billion, which includes pension obligations as of May 31, 2016, as well as liabilities for payments under stock-based compensation programs. Bayer thus has a contingent financial commitment in the amount of approximately US$56 billion to acquire Monsanto's entire outstanding capital stock. The agreed transaction has been partially hedged against the euro / U.S. dollar currency risk using derivatives contracts.

The transaction brings together two different, but highly complementary businesses. Monsanto is a leading global provider of agricultural products, including seeds and seed technologies, herbicides, and digital platforms to give farmers agronomic recommendations. The combined business will offer a comprehensive set of solutions to meet growers' current and future needs, including enhanced solutions in high-quality seeds and traits, digital farming, and crop protection. The combination also brings together both companies' leading innovation capabilities and R&D technology platforms.

Syndicated bank financing of US$56.9 billion was committed by Bank of America Merrill Lynch, Credit Suisse, Goldman Sachs, HSBC and JP Morgan upon the signing of the merger agreement. The bank financing was subsequently syndicated to more than 20 other partner banks of Bayer.

Bayer intends to finance the transaction with a combination of debt and equity. The planned equity component amounts to approximately US$19 billion in total. As the first part of the equity component, Bayer placed €4 billion in mandatory convertible notes on November 22, 2016, excluding subscription rights for existing stockholders of the company. The remainder of the equity component is expected to be raised by way of a rights issue. The net proceeds from the issuance of the mandatory convertible notes were used for the early replacement of a portion of the undrawn syndicated bank credit facility. Details of the mandatory convertible notes issue are provided in Note (24).

The stockholders of Monsanto Company approved the merger with the requisite majority on December 13, 2016. The transaction remains subject to customary closing conditions, including relevant antitrust and other regulatory approvals. Closing of the transaction is currently expected by the end of 2017.

The merger agreement provides for payment by Bayer of a US$2 billion reverse break fee including, in particular, in the event that the necessary antitrust approvals are not granted by June 14, 2018, and Bayer or Monsanto therefore terminates the merger agreement.

Acquisitions in 2015

In 2015, the following acquisitions were accounted for in accordance with IFRS 3:

On March 2, 2015, Covestro successfully completed the acquisition of all the shares of Thermoplast Composite GmbH, Germany, a technology leader specializing in the production of thermoplastic fiber composites. The aim of the acquisition is to expand the range of polycarbonate materials for major industries to include composites made from continuous fiber-reinforced thermoplastics. A purchase price of €18 million was agreed, including a variable component of €4 million. The purchase price mainly pertained to patents and goodwill.

In connection with the acquisition of the consumer care business of Merck & Co., Inc., Whitehouse Station, New Jersey, United States, in 2014, the production facilities at the Pointe-Claire site in Canada were acquired on July 1, 2015. Of the agreed €67 million purchase price, €61 million pertains to property, plant and equipment.

The global purchase price allocation for the consumer care business acquired from Merck & Co., Inc. in 2014 was completed in September 2015. This resulted in an €821 million increase in deferred tax assets due to temporary differences between the carrying amounts of intangible assets in the IFRS financial statements and those reported for tax purposes, along with a corresponding decline in goodwill in the statement of financial position. These adjustments were effected retroactively as of the date of acquisition pursuant to IFRS 3.45 ff. In addition, the purchase price was reduced by €8 million in 2015 on the basis of agreed purchase price adjustment mechanisms.

Settlements were reached in August 2015 in the court proceedings initiated by former minority stockholders of Bayer Pharma AG (formerly Bayer Schering Pharma AG). The additional payment made as a result represents a subsequent purchase price adjustment according to the March 31, 2004, version of IFRS 3 in effect at the acquisition date. The goodwill was increased by €261 million in 2013 based on the status of the proceedings at that time. Following the settlements in August 2015, it was possible to finally determine the goodwill arising from the acquisition. It was therefore necessary to reduce the goodwill amount by €115 million in 2015 as a result of the proceedings. Both the increase and the reduction were recognized outside profit or loss against the liability resulting from the minority stockholders' compensation claim.

The global purchase price allocation for Dihon Pharmaceutical Group Co. Ltd., Kunming, Yunnan, China, acquired in 2014, was completed in October 2015. The main outcomes were increases in the amounts recognized for trademarks (€18 million), other provisions (€19 million) and other liabilities (€27 million). The purchase price was reduced by €43 million in 2015 due to adjustment mechanisms.

6.3 Divestments, material sale transactions and discontinued operations

Divestments and discontinued operations in 2016

The effects of divestments and discontinued operations in 2016 and those from previous years on the consolidated financial statements were as follows:

The sale of the Diabetes Care business to Panasonic Healthcare Holdings Co., Ltd., Tokyo, Japan, for around €1 billion was completed on January 4, 2016. The sale includes the leading Contour™ portfolio of blood glucose monitoring meters and strips, as well as other products such as Breeze™2, Elite™ and Microlet™ lancing devices.

The sale of the Diabetes Care business also comprises further significant obligations by Bayer that will be fulfilled over a period of up to two years subsequent to the date of divestment. The sale proceeds will be recognized accordingly over this period and reported as income from discontinued operations. Deferred income has been recognized in the statement of financial position and will be dissolved as the obligations are fulfilled. Of this, an amount of €497 million was recognized in sales in 2016. The €71 million outflow of net assets is reflected accordingly in the cost of goods sold.

The obligations to be fulfilled over a period of up to two years after the divestment of the Diabetes Care business are also reported as discontinued operations in the income statement and the statement of cash flows. These resulted in sales of €76 million in 2016. This information is provided from the standpoint of the Bayer Group and does not present these activities as a separate entity. It is therefore not possible to compare these sales against the proceeds from operational product sales achieved in 2015.

The items in the statement of financial position pertaining to the Diabetes Care business are shown in the segment reporting under "All Other Segments." In addition to the aforementioned deferred income (€469 million), the statement of financial position includes other receivables (net: €66 million), deferred tax assets (net: €73 million), income tax liabilities (€65 million) and miscellaneous provisions (€9 million).

The sale of the Consumer business (CS Consumer) of Bayer's Environmental Science unit to SBM Développement SAS, Lyon, France, was completed on October 4, 2016. The Consumer business encompasses the Bayer Garden and Bayer Advanced businesses in Europe and North America. These activities are reported as discontinued operations in the income statement and the statement of cash flows.

The effects of these and other, smaller divestments made in 2016 were as follows:

B 6.3/1

Divested Assets and Liabilities

€ million	2015	2016
Goodwill	–	36
Patents and technologies	–	4
Other intangible assets	–	16
Inventories	–	184
Provisions for pensions and other post-employment benefits	–	(28)
Other provisions	–	(97)
Divested net assets	**–**	**115**

The income statements for the discontinued operations are given below:

B 6.3/2

Income Statements for Discontinued Operations

	Diabetes Care		CS Consumer		Total	
€ million	2015	2016	2015	2016	2015	2016
Net sales	**947**	**573**	**239**	**195**	**1,186**	**768**
Cost of goods sold	(380)	(146)	(118)	(121)	(498)	(267)
Gross profit	**567**	**427**	**121**	**74**	**688**	**501**
Selling expenses	(386)	(9)	(95)	(83)	(481)	(92)
Research and development expenses	(48)	(1)	(7)	(11)	(55)	(12)
General administration expenses	(36)	(12)	(6)	(9)	(42)	(21)
Other operating income / expenses	(20)	(4)	(4)	(55)	(24)	(59)
EBIT [1]	**77**	**401**	**9**	(84)	**86**	**317**
Financial result	**–**	**–**	**–**	–	**–**	**–**
Income before income taxes	**77**	**401**	**9**	(84)	**86**	**317**
Income taxes	3	(76)	(4)	27	(1)	(49)
Income after income taxes	**80**	**325**	**5**	**(57)**	**85**	**268**

[1] For definition see Combined Management Report, Chapter 2.4 "Alternative Performance Measures Used by the Bayer Group."

The discontinued operations affected the Bayer Group statements of cash flows as follows:

B 6.3/3

Statements of Cash Flows for Discontinued Operations

	Diabetes Care		CS Consumer		Total	
€ million	2015	2016	2015	2016	2015	2016
Net cash provided by (used in) operating activities	43	788	11	42	54	830
Net cash provided by (used in) investing activities	(4)	–	(2)	–	(6)	–
Net cash provided by (used in) financing activities	(39)	(788)	(9)	(42)	(48)	(830)
Change in cash and cash equivalents	**–**	**–**	**–**	**–**	**–**	**–**

As no cash is assigned to discontinued operations, the balance of the cash provided is deducted again in financing activities.

Divestments and material sale transactions in 2015

On March 2, 2015, Animal Health completed the sale of two equine products, Legend / Hyonate and Marquis, to Merial, Inc., Duluth, Georgia, United States. A purchase price of €120 million was agreed. The one-time payment was accounted for as deferred income. The purchase prices for Legend / Hyonate and Marquis are being reflected in sales and earnings over a four-year and a three-year period, respectively, as Bayer has entered into further significant obligations.

Notes to the Income Statements

7. Net sales

Net sales are derived primarily from product deliveries. Total reported net sales for 2016 amounted to €46,769 million, rising by €684 million, or 1.5%, compared to 2015. The increase resulted from the following factors:

B 7/1

Factors in Sales Development

	2016	
	€ million	%
Volume	1,936	+4.2
Price	(348)	–0.7
Currency	(913)	–2.0
Portfolio	9	–
Total	684	+1.5

Breakdowns of net sales by segment and region are given in the table in Note (1).

8. Selling expenses

Selling expenses comprise all expenses incurred in the reporting period for the sale, storage and transportation of saleable products, advertising, the provision of advice to customers, and market research. Selling expenses were comprised as follows:

B 8/1

Selling Expenses

€ million	2015	2016
Internal and external sales force	4,761	4,828
Advertising and customer advice	2,986	2,970
Physical distribution and warehousing of finished products	1,255	1,421
Commission and licensing expenses	1,396	1,514
Other selling expenses	1,874	1,741
Total	12,272	12,474

2015 figures restated

9. Research and development expenses

Research and development expenses and their accounting treatment are defined in Note (4). Breakdowns of research and development expenses by segment and region are given in Note (1).

10. Other operating income

Other operating income was comprised as follows:

B 10/1

Other Operating Income

€ million	2015	2016
Gains on retirements of noncurrent assets	137	66
Reversals of impairment losses on receivables	32	20
Reversals of unutilized provisions	25	131
Gains from derivatives	272	259
Miscellaneous operating income	643	422
Total	**1,109**	898
of which special items	336	115

2015 figures restated

Income from reversals of unutilized provisions include an amount of €104 million from the reversal of provisions for the Yasmin™ / YAZ™ litigation.

Miscellaneous operating income included a €32 million gain incurred by Bayer 04 Leverkusen Fußball GmbH from the sale of transfer rights and a payment of €32 million received from insurers (Covestro segment). A reimbursement payment relating to the termination of a contract accounted for income of €27 million (Covestro segment). In the Crop Science segment, milestone payments led to income of €21 million. In the Pharmaceuticals segment, a €14 million compensation payment was received in connection with the closure of the production site in Putuo, China. Income of €19 million resulted from the reimbursement of indirect taxes paid in previous years (Covestro segment). A €10 million gain was incurred on the sale of the BAYQUIK™ technology to Chemetics, Inc., Canada (Other segments).

In 2015, gains from retirements of noncurrent assets included an amount of €53 million from the sale of trademark rights for the Biovital™, Benerva™, Bactine™ and ProPlus™ brands (Consumer Health segment).

Miscellaneous operating income in 2015 included €314 million in claims against Dow AgroSciences LLC, United States, for damages and royalty payments resulting from the infringement of Bayer's rights to the Liberty Link™ weed control system (Crop Science segment).

11. Other operating expenses

Other operating expenses were comprised as follows:

B 11/1

Other Operating Expenses

€ million	2015	2016
Losses on retirements of noncurrent assets	(32)	(22)
Impairment losses on receivables	(183)	(171)
Expenses related to significant legal risks	(151)	(262)
Losses from derivatives	(626)	(181)
Miscellaneous operating expenses	(283)	(298)
Total	**(1,275)**	**(934)**
of which special items	(247)	(205)

2015 figures restated

Of the impairment losses on receivables, €115 million pertained to past-due receivables in Brazil. In 2015, impairment losses of €91 million were recognized on receivables from the Venezuelan exchange control authority because the authority did not allocate U.S. dollars at the subsidized exchange rate with respect to the full amounts of older receivables.

The €262 million in expenses for significant legal risks mainly included accounting measures taken in connection with legal proceedings relating to the products Xarelto™, Essure™ and Cipro™/Avelox™. In 2015, the €151 million in expenses for significant legal risks mainly included accounting measures taken in connection with legal proceedings relating to the products Luna™, LL Rice™ and Xarelto™.

Miscellaneous operating expenses included €48 million (2015: €51 million) in donations to charitable causes (all segments). Expenses of €34 million pertained to provisions established for environmental protection measures in the United States (Crop Science segment).

As in the previous year, the remaining amount of miscellaneous operating expenses comprised a large number of individually immaterial items at the subsidiaries.

12. Personnel expenses and employee numbers

Personnel expenses for continuing operations rose in 2016 by €181 million to €11,357 million (2015: €11,176 million). The change was mainly due to compensation adjustments and increases in employee bonuses, which together offset opposing currency effects.

B 12/1

Personnel Expenses

€ million	2015	2016
Salaries	8,991	9,171
Social expenses and expenses for pensions and other benefits	2,185	2,186
of which for defined contribution pension plans	557	581
of which for defined benefit and other pension plans	503	483
Total	**11,176**	11,357

2015 figures restated

The personnel expenses shown here do not contain the interest portion of the allocation to personnel-related provisions – mainly for pensions and other post-employment benefits – which is included in the financial result under other financial expenses (Note (13.3)).

The average numbers of employees, classified by corporate function, were as shown in the table below:

B 12/2

Employees

	2015	2016
Production	51,280	50,326
Marketing and distribution	42,212	40,756
Research and development	14,462	15,016
General administration	9,376	9,590
Total	**117,330**	**115,688**
Apprentices	2,332	2,393

2015 figures restated

The number of employees on either permanent or temporary contracts is stated in full-time equivalents (FTE), with part-time employees included on a pro-rated basis in line with their contractual working hours. The figures do not include apprentices.

13. Financial result

The financial result for 2016 was minus €1,155 million (2015: minus €1,005 million), comprising an equity-method loss of €26 million (2015: €9 million), financial expenses of €1,280 million (2015: €1,367 million) and financial income of €151 million (2015: €371 million). Details of the components of the financial result are provided below.

13.1 Income (loss) from investments in affiliated companies

The net income (loss) from investments in affiliated companies was comprised as follows:

B 13.1/1

Income (Loss) from Investments in Affiliated Companies

€ million	2015	2016
Net loss from investments accounted for using the equity method (equity-method loss)	(9)	(26)
Expenses		
Impairment losses on investments in affiliated companies	(1)	(2)
Income		
Impairment loss reversals on investments in affiliated companies	–	–
Income / losses from investments in affiliated companies and from profit and loss transfer agreements (net)	3	–
Gains from the sale of investments in affiliated companies	31	6
Total	**24**	**(22)**

The main components of the loss (2015: income) from investments in affiliated companies were the €24 million (2015: €23 million) equity-method loss from the associate PO JV, LP, United States, and the minus €2 million (2015: €14 million) aggregate of the equity-method income and losses of the remaining joint ventures and associates accounted for using the equity method.

Further details of the companies accounted for using the equity method are given in Note (19).

13.2 Net interest expense

The net interest expense was comprised as follows:

B 13.2/1

Net Interest Expense

€ million	2015	2016
Expenses		
Interest and similar expenses	(752)	(684)
Interest expenses for derivatives (held for trading)	(25)	(3)
Income		
Interest and similar income	297	137
Interest income from derivatives (held for trading)	25	2
Total	**(455)**	**(548)**

Interest and similar expenses included interest expense of €42 million (2015: €49 million) relating to nonfinancial liabilities. Interest and similar income included interest income of €10 million (2015: €133 million) from nonfinancial assets.

13.3 Other financial income and expenses

Other financial income and expenses were comprised as follows:

B 13.3/1

Other Financial Income and Expenses

€ million	2015	2016
Expenses		
Interest portion of interest-bearing provisions	(287)	(294)
Exchange loss	(254)	(193)
Miscellaneous financial expenses	(48)	(104)
Income		
Miscellaneous financial income	15	6
Total	**(574)**	**(585)**

The interest portion of noncurrent provisions comprised €276 million (2015: €276 million) in interest expense for pension and other post-employment benefit provisions plus €18 million (2015: €11 million) in effects of interest expense and interest-rate fluctuations for other provisions and corresponding overfunding. The interest expense for pension and other post-employment benefit provisions included €736 million (2015: €712 million) for the unwinding of discount on the present value of the defined benefit obligation and €460 million (2015: €436 million) in interest income from plan assets.

The miscellaneous financial expenses included €51 million in commitment fees and other fees related to the syndicated bank financing for the planned acquisition of Monsanto.

14. Taxes

The breakdown of tax expense by origin was as follows:

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Tax Expense by Origin

€ million	2015	Of which income taxes	2016	Of which income taxes
Taxes paid or accrued				
Current income taxes				
Germany	(1,140)		(934)	
Other countries	(1,114)		(991)	
Other taxes				
Germany	(44)		(86)	
Other countries	(221)		(204)	
	(2,519)	**(2,254)**	**(2,215)**	**(1,925)**
Deferred taxes				
from temporary differences	1,056		577	
from tax loss carryforwards and tax credits	(25)		19	
	1,031	**1,031**	**596**	**596**
Total	**(1,488)**	**(1,223)**	**(1,619)**	**(1,329)**

2015 figures restated

The other taxes mainly include land, vehicle and other indirect taxes. They are reflected in the respective functional cost items.

The deferred tax assets and liabilities were allocable to the following items in the statements of financial position:

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Deferred Tax Assets and Liabilities

€ million	Dec. 31, 2015 Deferred tax assets	Dec. 31, 2015 Deferred tax liabilities	Dec. 31, 2016 Deferred tax assets	Dec. 31, 2016 Deferred tax liabilities
Intangible assets	1,411	1,910	1,478	1,766
Property, plant and equipment	253	678	264	692
Financial assets	18	183	240	224
Inventories	943	63	1,267	32
Receivables	98	580	71	547
Other assets	28	14	39	13
Provisions for pensions and other post-employment benefits	3,601	1,213	3,637	983
Other provisions	1,025	90	1,083	112
Liabilities	714	91	793	133
Tax loss and interest carryforwards	393	–	473	–
Tax credits	191	–	177	–
	8,675	**4,822**	**9,522**	**4,502**
of which noncurrent	7,398	4,750	7,868	3,662
Set-off	(3,996)	(3,996)	(3,172)	(3,172)
Total	**4,679**	**826**	**6,350**	**1,330**

Deferred taxes on remeasurements, recognized outside profit or loss, of the net liability for defined benefit pension and other post-employment benefits increased equity by €228 million (2015: diminished equity by €430 million). Deferred taxes on changes, recognized outside profit or loss, in fair values of available-for-sale financial assets and derivatives designated as cash flow hedges diminished equity by €24 million (2015: diminished equity by €27 million). These effects on equity are reported in the statement of comprehensive income.

The use of tax loss carryforwards reduced current income taxes in 2016 by €152 million (2015: €136 million). The use of tax credits reduced current income taxes by €18 million (2015: €21 million).

Of the total tax loss and interest carryforwards of €5,447 million, including interest carryforwards of €118 million (2015: €5,497 million, including interest carryforwards of €72 million), an amount of €2,269 million, including interest carryforwards of €0 million (2015: €1,812 million, including interest carryforwards of €0 million) is expected to be usable within a reasonable period. The decrease in tax loss and interest carryforwards was mainly due to the favorable overall business development. Deferred tax assets of €473 million (2015: €393 million) were recognized for the amount of tax loss and interest carryforwards expected to be usable.

The use of €3,178 million of tax loss and interest carryforwards, including interest carryforwards of €118 million (2015: €3,685 million, including interest carryforwards of €72 million) was subject to legal or economic restrictions. Consequently, no deferred tax assets were recognized for this amount. If these tax loss and interest carryforwards had been fully usable, deferred tax assets of €294 million (2015: €322 million) would have been recognized.

Tax credits of €177 million were recognized in 2016 (2015: €191 million) as deferred tax assets. The use of €38 million (2015: €41 million) of tax credits was subject to legal or economic restrictions. Consequently, no deferred tax assets were recognized for this amount.

Unusable tax credits, tax loss carryforwards and interest carryforwards will expire as follows:

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Expiration of Unusable Tax Credits, Tax Loss Carryforwards and Interest Carryforwards

	Tax credits		Tax loss and interest carryforwards	
€ million	Dec. 31, 2015	**Dec. 31, 2016**	Dec. 31, 2015	**Dec. 31, 2016**
Within one year	4	4	17	4
Within two years	–	–	70	1
Within three years	4	4	25	31
Within four years	–	–	32	132
Within five years	26	29	234	31
Thereafter	6	–	3,307	2,979
Total	**40**	**37**	**3,685**	**3,178**

In 2016, subsidiaries that reported losses for 2016 or 2015 recognized net deferred tax assets totaling €2,575 million (2015: €2,455 million) from temporary differences and tax loss carryforwards. These assets were considered to be unimpaired because the companies concerned were expected to generate taxable income in the future.

Deferred tax liabilities of €41 million were recognized in 2016 (2015: €35 million) for planned dividend payments by subsidiaries. Deferred tax liabilities were not recognized for temporary differences on €20,069 million (2015: €12,087 million) of retained earnings of subsidiaries because these earnings are to be reinvested for an indefinite period.

The reported tax expense of €1,329 million for 2016 (2015: €1,223 million) differed by €128 million (2015: €119 million) from the expected tax expense of €1,457 million (2015: €1,342 million) that would have resulted from applying an expected weighted average tax rate to the pre-tax income of the Group. This average rate, derived from the expected tax rates of the individual Group companies, was 24.7% in 2016 (2015: 25.6%). The effective tax rate was 22.6% (2015: 23.4%).

The reconciliation of expected to reported income tax expense and of the expected to the effective tax rate for the Group was as follows:

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Reconciliation of Expected to Actual Income Tax Expense

	2015		2016	
	€ million	%	€ million	%
Expected income tax expense and expected tax rate	**1,342**	**25.6**	**1,457**	**24.7**
Reduction in taxes due to tax-free income				
Income related to the operating business	(155)	(3.0)	(161)	(2.7)
Income from affiliated companies and divestment proceeds	(10)	(0.2)	(2)	–
First-time recognition of previously unrecognized deferred tax assets on tax loss and interest carryforwards	(30)	(0.6)	(27)	(0.5)
Use of tax loss and interest carryforwards on which deferred tax assets were not previously recognized	(6)	(0.1)	(19)	(0.3)
Increase in taxes due to non-tax-deductible expenses				
Expenses related to the operating business	148	2.8	153	2.6
Impairment losses on investments in affiliated companies	7	0.1	2	–
New tax loss and interest carryforwards unlikely to be usable	81	1.5	45	0.8
Existing tax loss and interest carryforwards on which deferred tax assets were previously recognized but which are unlikely to be usable	16	0.3	6	0.1
Tax income (-) and expenses (+) relating to other periods	(95)	(1.8)	(80)	(1.4)
Tax effects of changes in tax rates	(25)	(0.5)	(4)	(0.1)
Other tax effects	(50)	(0.7)	(41)	(0.6)
Actual income tax expense and effective tax rate	**1,223**	**23.4**	**1,329**	**22.6**

2015 figures restated

15. Income / losses attributable to noncontrolling interest

Income attributable to noncontrolling interest amounted to €468 million (2015: €115 million). Losses attributable to noncontrolling interest amounted to €173 million (2015: €127 million).

16. Earnings per share

Earnings per share from continuing operations are determined according to IAS 33 (Earnings per Share) by dividing net income (income after income taxes attributable to Bayer AG stockholders) minus income from discontinued operations after income taxes (attributable to Bayer AG stockholders) by the weighted average number of shares. Earnings per share for continuing and discontinued operations are calculated by dividing net income by the weighted average number of shares.

In November 2016, Bayer placed €4.0 billion in mandatory convertible notes without granting subscription rights to existing stockholders of the company. According to IAS 33.23, the weighted average number of shares increases as soon as the notes contract is signed, and this increase must be taken into account in calculating undiluted and diluted earnings per share. The new weighted average number of shares is based on the minimum conversion price of €90, which determines the maximum conversion ratio. Undiluted and diluted earnings per share are not adjusted for financing expenses incurred in connection with the mandatory convertible notes because the interest component was recognized outside profit or loss when the notes were placed. Further details of the mandatory convertible notes are provided in Note (24).

Because the undiluted and diluted earnings per share were determined for each interim reporting period, earnings per share for the full year or year to date may differ from the sum of the earnings per share for the respective interim reporting periods.

Earnings per Share

€ million	2015	2016
Income from continuing operations after income taxes	4,013	4,558
Income from discontinued operations after income taxes	85	268
Income after income taxes	4,098	4,826
of which attributable to noncontrolling interest	(12)	295
of which attributable to Bayer AG stockholders (net income)	4,110	4,531
	Shares	**Shares**
Weighted average number of shares	**826,947,808**	**832,502,808**
Earnings per share (€)		
From continuing operations		
Basic	4.87	5.12
Diluted	4.87	5.12
From discontinued operations		
Basic	0.10	0.32
Diluted	0.10	0.32
From continuing and discontinued operations		
Basic	4.97	5.44
Diluted	4.97	5.44

2015 figures restated

Notes to the Statements of Financial Position

17. Goodwill and other intangible assets

Changes in intangible assets in 2016 were as follows:

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Changes in Intangible Assets

€ million	Acquired goodwill	Patents and technol-ogies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
Cost of acquisition or generation, December 31, 2015	**16,096**	**13,069**	**10,952**	**1,944**	**2,172**	**946**	**2,600**	**47,779**
Changes in scope of consolidation	–	–	–	–	–	–	–	–
Acquisitions	9	1	–	–	–	(23)	–	(13)
Capital expenditures	–	55	3	47	5	96	157	363
Retirements	–	(6)	(47)	(14)	(25)	(108)	(80)	(280)
Transfers	–	5	–	50	3	(43)	(15)	–
Transfers (IFRS 5)	–	(5)	(8)	(15)	(16)	–	(11)	(55)
Inflation adjustment (IAS 29)	3	–	–	–	–	–	–	3
Exchange differences	204	43	145	32	(1)	19	15	457
December 31, 2016	**16,312**	**13,162**	**11,045**	**2,044**	**2,138**	**887**	**2,666**	**48,254**
Accumulated amortization and impairment losses, December 31, 2015	**–**	**8,277**	**3,083**	**1,134**	**2,021**	**225**	**1,765**	**16,505**
Changes in scope of consolidation	–	–	–	–	–	–	(1)	(1)
Retirements	–	(2)	(38)	(14)	(25)	(106)	(66)	(251)
Amortization and impairment losses in 2016	–	1,007	604	144	48	109	160	2,072
Amortization	–	708	393	137	28	–	129	1,395
Impairment losses	–	299	211	7	20	109	31	677
Impairment loss reversals	–	–	(1)	–	–	–	–	(1)
Transfers	–	–	–	–	–	–	–	–
Transfers (IFRS 5)	–	(5)	(8)	(15)	(16)	–	(11)	(55)
Exchange differences	–	35	33	19	(1)	7	13	106
December 31, 2016	**–**	**9,312**	**3,673**	**1,268**	**2,027**	**235**	**1,860**	**18,375**
Carrying amounts, December 31, 2016	**16,312**	**3,850**	**7,372**	**776**	**111**	**652**	**806**	**29,879**
Carrying amounts, December 31, 2015	**16,096**	**4,792**	**7,869**	**810**	**151**	**721**	**835**	**31,274**

The capitalized patents and technologies include an amount pertaining to the active ingredient alemtuzumab (product name: Lemtrada™) for the treatment of multiple sclerosis. Bayer gave back the worldwide distribution rights for alemtuzumab to Genzyme Corp., United States, in 2009 and in return received global co-promotion rights and an entitlement to royalties and revenue-based milestone payments. Genzyme Corp. received marketing approval for alemtuzumab in Europe in 2013 and in the United States in 2014. Bayer has decided not to exercise its co-promotion rights.

Impairment losses of €676 million were recognized on intangible assets, net of €1 million in impairment loss reversals. In the Pharmaceuticals reporting segment, the current assessment of the market environment and lower revenue expectations led to impairment losses of €391 million on intangible assets in connection with the product Essure™. In addition, impairment losses of €56 million were recognized on research and development projects, mainly in the oncology area. In the Consumer Health reporting segment, impairment losses of €132 million on a dermatology product trademark in Russia and €28 million on a nutritional supplement trademark in the United States were recognized due to a weaker market environment. In the Crop Science reporting segment, recent research findings necessitated impairment losses of €20 million on production rights in the Environmental Science unit, and a €20 million impairment loss was also recognized on a research and development project in Crop Protection due to a delayed market introduction.

The remaining impairment losses pertained to intangible assets in the Crop Science (€11 million), Pharmaceuticals (€9 million), Covestro (€9 million) and Consumer Health (€1 million) segments. A €1 million impairment loss in the Animal Health segment was reversed.

Details of acquisitions and divestments are provided in Notes (6.2) and (6.3). The impairment testing procedure for goodwill and other intangible assets is explained in Note (4).

Changes in intangible assets in 2015 were as follows:

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Changes in Intangible Assets (Previous Year)

€ million	Acquired goodwill	Patents and technol-ogies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
Cost of acquisition or generation, December 31, 2014	**15,347**	**12,827**	**10,242**	**1,808**	**2,168**	**882**	**3,189**	**46,463**
Changes in scope of consolidation	–	4	–	–	–	–	1	5
Acquisitions	(5)	39	53	–	–	26	(20)	93
Capital expenditures	–	77	–	52	–	107	152	388
Retirements	–	(33)	(35)	(55)	–	(7)	(966)	(1,096)
Transfers	–	40	–	75	(2)	(113)	–	–
Transfers (IFRS 5)	(34)	(2)	(14)	(33)	–	–	(20)	(103)
Inflation adjustment (IAS 29)	7	–	–	–	–	–	–	7
Exchange differences	781	117	706	97	6	51	264	2,022
December 31, 2015	**16,096**	**13,069**	**10,952**	**1,944**	**2,172**	**946**	**2,600**	**47,779**
Accumulated amortization and impairment losses, December 31, 2014	**–**	**7,428**	**2,588**	**1,039**	**1,911**	**153**	**2,344**	**15,463**
Changes in scope of consolidation	–	4	–	–	–	–	–	4
Retirements	–	(17)	(31)	(55)	–	(7)	(949)	(1,059)
Amortization and impairment losses in 2015	–	801	447	148	106	66	183	1,751
Amortization	–	801	422	147	106	–	161	1,637
Impairment losses	–	–	25	1	–	66	22	114
Impairment loss reversals	–	–	–	–	–	–	–	–
Transfers	–	–	1	1	(2)	–	–	–
Transfers (IFRS 5)	–	(1)	–	(25)	–	–	(19)	(45)
Exchange differences	–	62	78	26	6	13	206	391
December 31, 2015	**–**	**8,277**	**3,083**	**1,134**	**2,021**	**225**	**1,765**	**16,505**
Carrying amounts, December 31, 2015	**16,096**	**4,792**	**7,869**	**810**	**151**	**721**	**835**	**31,274**
Carrying amounts, December 31, 2014	**15,347**	**5,399**	**7,654**	**769**	**257**	**729**	**845**	**31,000**

Changes in the carrying amounts of goodwill for the reporting segments in 2016 and 2015 were as follows:

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Goodwill by Reporting Segment

€ million	Pharma-ceuticals	Consumer Health	Crop Science	Animal Health	Covestro	Bayer Group
Carrying amounts, January 1, 2015	**7,215**	**5,698**	**2,137**	**54**	**243**	**15,347**
Change in scope of consolidation	–	–	–	–	–	–
Acquisitions	(133)	71	50	–	7	(5)
Retirements	–	–	–	–	–	–
Impairment losses in 2015	–	–	–	–	–	–
Transfers	–	–	–	–	–	–
Transfers (IFRS 5)	–	(34)	–	–	–	(34)
Inflation adjustment (IAS 29)	1	6	–	–	–	7
Exchange differences	234	446	90	–	11	781
Carrying amounts, December 31, 2015	**7,317**	**6,187**	**2,277**	**54**	**261**	**16,096**
Change in scope of consolidation	–	–	–	–	–	–
Acquisitions	(3)	(1)	13	–	–	9
Retirements	–	–	–	–	–	–
Impairment losses in 2016	–	–	–	–	–	–
Transfers	–	–	–	–	–	–
Transfers (IFRS 5)	–	–	–	–	–	–
Inflation adjustment (IAS 29)	–	3	–	–	–	3
Exchange differences	84	84	31	2	3	204
Carrying amounts, December 31, 2016	**7,398**	**6,273**	**2,321**	**56**	**264**	**16,312**

2015 figures restated

Goodwill and other intangible assets with an indefinite useful life that are of material significance for the Bayer Group are allocated to the following cash-generating units or unit groups as of the end of the reporting period:

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Intangible Assets with an Indefinite Useful Life

Reporting segment	Cash-generating unit / unit group	Goodwill (€ million)	Material intangible assets with indefinite useful life (€ million)
Pharmaceuticals	Pharmaceuticals	6,114	454
Consumer Health	Consumer Care	6,273	22
Crop Science	Crop Protection	1,291	63
Crop Science	Seeds	540	129

In the case of research and development projects, the point in time from which a capitalized asset can be expected to generate an economic benefit for the company cannot be determined. Such assets are therefore classified as having an indefinite useful life. Development projects were capitalized at a total amount of €652 million as of the end of 2016 (2015: €721 million).

Another intangible asset classified as having an indefinite useful life is the Bayer Cross, which was reacquired for the North America region in 1994, having been awarded to the United States and Canada under the reparations agreements at the end of the First World War. The period for which the Bayer Group will derive an economic benefit from this name cannot be determined as Bayer intends to make continuous use of it. The Bayer Cross is capitalized at €108 million.

18. Property, plant and equipment

Changes in property, plant and equipment in 2016 were as follows:

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Changes in Property, Plant and Equipment

€ million	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
Cost of acquisition or construction, December 31, 2015	**9,685**	**19,418**	**2,142**	**2,295**	**33,540**
Changes in scope of consolidation	–	–	–	–	–
Acquisitions	–	–	–	–	–
Capital expenditures	248	369	206	1,441	2,264
Retirements	(69)	(262)	(158)	(9)	(498)
Transfers	407	698	82	(1,187)	–
Transfers (IFRS 5)	(14)	(4)	(1)	(1)	(20)
Inflation adjustment (IAS 29)	3	1	–	–	4
Exchange differences	86	115	26	12	239
December 31, 2016	**10,346**	**20,335**	**2,297**	**2,551**	**35,529**
Accumulated depreciation and impairment losses, December 31, 2015	**5,255**	**14,303**	**1,578**	**29**	**21,165**
Changes in scope of consolidation	–	–	–	–	–
Retirements	(49)	(245)	(139)	(6)	(439)
Depreciation and impairment losses in 2016	334	936	235	5	1,510
Depreciation	314	927	234	–	1,475
Impairment losses	20	9	1	5	35
Impairment loss reversals	–	–	–	–	–
Transfers	5	(4)	–	(1)	–
Transfers (IFRS 5)	(2)	(1)	(1)	–	(4)
Exchange differences	49	122	12	–	183
December 31, 2016	**5,592**	**15,111**	**1,685**	**27**	**22,415**
Carrying amounts, December 31, 2016	**4,754**	**5,224**	**612**	**2,524**	**13,114**
Carrying amounts, December 31, 2015	**4,430**	**5,115**	**564**	**2,266**	**12,375**

Impairment losses totaling €35 million were recognized on property, plant and equipment in the reporting segments Consumer Health (€14 million), Pharmaceuticals (€8 million), Covestro (€4 million), Crop Science (€1 million), Animal Health (€1 million) and All Other Segments (€7 million).

In 2016, borrowing costs of €31 million (2015: €33 million) were capitalized as components of the cost of acquisition or construction of qualifying assets, applying an average interest rate of 2.5% (2015: 2.5%).

Capitalized property, plant and equipment included assets with a total net value of €471 million (2015: €533 million) held under finance leases. The cost of acquisition or construction of these assets as of the closing date totaled €867 million (2015: €915 million). They comprised plant installations and machinery with a carrying amount of €191 million (2015: €220 million), buildings with a carrying amount of €146 million (2015: €168 million) and other property, plant and equipment with a carrying amount of €134 million (2015: €145 million). For information on the liabilities arising from finance leases, see Note (27).

In 2016, rental payments of €429 million (2015: €263 million) were made for assets leased under operating leases as defined in IAS 17 (Leases).

Lease payments of €3 million are expected to be received in 2017 from operating leases – as defined in IAS 17 (Leases) – pertaining to property, plant and equipment, excluding the investment property stated below. Lease payments totaling €4 million are expected to be received between 2018 and 2021 and lease payments totaling €0 million after 2021.

Investment property

The fair values of investment property are mainly determined using the income approach based on internal valuations for buildings and developed sites, and using the market comparison approach for undeveloped sites.

The total carrying amount of investment property as of December 31, 2016, was €136 million (December 31, 2015: €164 million). The fair value of this property was €507 million (2015: €484 million). The rental income from investment property was €18 million (2015: €13 million), and the operating expenses directly allocable to this property amounted to €11 million (2015: €8 million). A further amount of €3 million (2015: €1 million) in operating expenses was directly allocable to investment property from which no rental income was derived.

Changes in property, plant and equipment in 2015 were as follows:

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Changes in Property, Plant and Equipment (Previous Year)

€ million	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
Cost of acquisition or construction, December 31, 2014	**9,088**	**18,144**	**2,009**	**2,078**	**31,319**
Changes in scope of consolidation	–	3	1	–	4
Acquisitions	33	2	1	–	36
Capital expenditures	230	390	239	1,309	2,168
Retirements	(167)	(429)	(185)	(58)	(839)
Transfers	273	797	56	(1,126)	–
Transfers (IFRS 5)	1	(64)	(4)	–	(67)
Inflation adjustment (IAS 29)	7	2	1	–	10
Exchange differences	220	573	24	92	909
December 31, 2015	**9,685**	**19,418**	**2,142**	**2,295**	**33,540**
Accumulated depreciation and impairment losses, December 31, 2014	**4,940**	**13,426**	**1,482**	**43**	**19,891**
Changes in scope of consolidation	–	1	1	–	2
Retirements	(101)	(397)	(156)	(72)	(726)
Depreciation and impairment losses in 2015	317	945	232	38	1,532
Depreciation	294	892	230	–	1,416
Impairment losses	23	53	2	38	116
Impairment loss reversals	–	(1)	–	–	(1)
Transfers	–	(1)	1	–	–
Transfers (IFRS 5)	1	(57)	(3)	–	(59)
Exchange differences	98	387	21	20	526
December 31, 2015	**5,255**	**14,303**	**1,578**	**29**	**21,165**
Carrying amounts, December 31, 2015	**4,430**	**5,115**	**564**	**2,266**	**12,375**
Carrying amounts, December 31, 2014	**4,148**	**4,718**	**527**	**2,035**	**11,428**

19. Investments accounted for using the equity method

Five (2015: four) associates and six (2015: three) joint ventures were accounted for in the consolidated financial statements using the equity method.

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Associates and Joint Ventures Accounted for Using the Equity Method

Company name	Place of business	Bayer's interest (%)
Associates		
Bayer Trendlines AG Innovation Fund, L.P.[1]	Misgav, Israel	100
Flagship Ventures V Agricultural Fund, L.P.[1]	Cambridge, U.S.A.	99.9
Nanjing Baijingyu Pharmaceutical Co., Ltd.	Nanjing, China	15
Paltough Industries (1998) Ltd.	Kibbutz Ramat Yochanan, Israel	25
PO JV, LP	Wilmington, U.S.A.	39.4
Joint ventures		
Bayer Zydus Pharma Private Limited	Mumbai, India	50
BlueRock Therapeutics GP LLC	San Francisco, U.S.A.	50
BlueRock Therapeutics LP	San Francisco, U.S.A.	50
Casebia Therapeutics LLC	Cambridge, U.S.A.	50
DCSO Deutsche Cyber-Sicherheitsorganisation GmbH	Berlin, Germany	25
DIC Covestro Polymer Ltd.	Tokyo, Japan	50

[1] For information concerning the interest in this company see Note (6.1)

In 2000, Bayer acquired the polyols business and parts of the propylene oxide (PO) production operations of Lyondell Chemicals with the objective of ensuring access to patented technologies and safeguarding the long-term supply of PO, a starting product for polyurethane. As part of this strategy, a company was established to produce PO (PO JV, LP, United States, in which Covestro holds a 39.4% interest). Covestro benefits from fixed long-term supply quotas / volumes of PO from this company's production. The two following tables contain summarized data from the income statements and statements of financial position of the associated company PO JV, LP, United States, which is accounted for using the equity method, and show the respective amounts recognized in the consolidated financial statements of the Bayer Group.

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Income Statement Data PO JV, LP, Wilmington, U.S.A.

€ million	2015	2016
Net sales	1,695	1,659
Net loss after taxes	(56)	(53)
Share of net loss after taxes	(23)	(24)
Share of total comprehensive income after taxes	**(23)**	**(24)**

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Data from the Statements of Financial Position of PO JV, LP, Wilmington, U.S.A.

€ million	Dec. 31, 2015	Dec. 31, 2016
Noncurrent assets	475	469
Equity	475	469
Share of equity	**201**	**202**
Other	(3)	(4)
Carrying amount	**198**	**198**

The item "Other" mainly comprises differences arising from adjustments of data to Bayer's uniform accounting policies, along with purchase price allocations and their amortization in profit or loss.

In December 2015, Bayer and CRISPR Therapeutics AG, Switzerland, agreed to establish a company to develop and commercialize new, breakthrough therapeutics for blood disorders, blindness and congenital heart diseases. The joint venture Casebia Therapeutics, established at the beginning of 2016, has access to gene-editing technology from CRISPR Therapeutics in specific disease areas, as well as access to protein engineering expertise and relevant

disease know-how through Bayer. The two following tables contain summarized data from the income statements and statements of financial position of the joint venture Casebia Therapeutics LLC, United States, which is accounted for using the equity method, and show the respective amounts recognized in the consolidated financial statements of the Bayer Group.

B 19/4

Income Statement Data of Casebia Therapeutics LLC, Cambridge, U.S.A.

€ million	2015	**2016**
Net sales	–	–
Net loss after taxes	–	(8)
Share of net loss after taxes	–	(4)
Share of total comprehensive income after taxes	**–**	**(4)**

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Data from the Statements of Financial Position of Casebia Therapeutics LLC, Cambridge, U.S.A.

€ million	Dec. 31, 2015	**Dec. 31, 2016**
Noncurrent assets	–	68
Current assets	–	4
Noncurrent liabilities	–	–
Current liabilities	–	3
Equity	–	69
Share of equity	**–**	**38**
Other	–	242
Carrying amount	**–**	**280**

The item “Other” comprises Bayer’s outstanding capital contribution obligation.

The following table contains a summary of the aggregated income statement data and aggregated carrying amounts of the individually nonmaterial associates accounted for using the equity method.

B 19/6

Income Statement Data and Carrying Amount of Associates Accounted for Using the Equity Method

€ million	2015	**2016**
Income after taxes	12	11
Share of income after taxes	1	3
Share of total comprehensive income after taxes	**1**	**3**
Carrying amount	**37**	**49**

The following table contains a summary of the aggregated income statement data and aggregated carrying amounts of the individually nonmaterial joint ventures that are accounted for using the equity method.

B 19/7

Income Statement Data and Carrying Amount of Joint Ventures Accounted for Using the Equity Method

€ million	2015	**2016**
Income after taxes	6	–
Share of income after taxes	3	(1)
Share of total comprehensive income after taxes	**3**	**(1)**
Carrying amount	**11**	**57**

20. Other financial assets

The other financial assets were comprised as follows:

B 20/1

Other Financial Assets

€ million	Dec. 31, 2015 Total	Dec. 31, 2015 Of which current	Dec. 31, 2016 Total	Dec. 31, 2016 Of which current
Loans and receivables	65	21	2,140	2,087
Available-for-sale financial assets	1,177	266	4,629	3,517
of which debt instruments	1,092	262	4,371	3,514
of which equity instruments	85	4	258	3
Held-to-maturity financial investments	73	6	65	8
Receivables from derivatives	526	463	714	663
Receivables under lease agreements	7	–	8	–
Total	**1,848**	**756**	**7,556**	**6,275**

Loans and receivables included €1,770 million in bank deposits and €305 million in commercial paper.

The debt instruments categorized as available-for-sale financial assets included capital of €612 million (2015: €610 million) provided to Bayer-Pensionskasse VVaG (Bayer-Pensionskasse) for its effective initial fund, and jouissance right capital (Genussrechtskapital) of €154 million (2015: €153 million), also provided to Bayer-Pensionskasse. Also reported in this category were investments of €3,513 million (2015: €119 million) in money market funds.

The equity instruments categorized as available-for-sale financial assets included the €98 million interest held in CRISPR Therapeutics AG, Switzerland, along with €32 million (2015: €40 million) in instruments whose fair value could not be determined from a stock exchange or other market price or by discounting reliably determinable future cash flows. These equity instruments were recognized at cost.

Further information on the accounting for receivables from derivatives is given in Note (30).

Receivables under lease agreements relate to finance leases where Bayer is the lessor and the economic owner of the leased assets is the lessee. These receivables comprised expected lease payments of €39 million (2015: €38 million), including €31 million (2015: €31 million) in interest. Of the expected lease payments, €1 million (2015: €1 million) is due within one year, €2 million (2015: €2 million) within the following four years and €36 million (2015: €35 million) in subsequent years.

21. Inventories

Inventories were comprised as follows:

B 21/1

Inventories

€ million	Dec. 31, 2015	Dec. 31, 2016
Raw materials and supplies	2,296	2,396
Work in process, finished goods and goods purchased for resale	6,241	5,991
Advance payments	13	21
Total	**8,550**	**8,408**

Impairment losses recognized on inventories were reflected in the cost of goods sold. They were comprised as follows:

B 21/2

Impairments of Inventories

€ million	2015	2016
Accumulated impairment losses, January 1	**(477)**	**(427)**
Changes in scope of consolidation	(5)	–
Impairment losses in the reporting period	(216)	(321)
Impairment loss reversals or utilization	246	346
Exchange differences	21	(18)
Transfers (IFRS 5)	4	4
Accumulated impairment losses, December 31	**(427)**	**(416)**

22. Trade accounts receivable

Trade accounts receivable less impairment losses amounted to €10,969 million (2015: €9,933 million) on the closing date and were comprised as follows:

B 22/1

Trade Accounts Receivable

€ million	2015	2016
Trade accounts receivable (before impairments)	10,181	11,377
Accumulated impairment losses	(248)	(408)
Carrying amount, December 31	**9,933**	**10,969**
of which noncurrent	46	144

Changes in impairment losses on trade accounts receivable were as follows:

B 22/2

Impairments of Trade Accounts Receivable

€ million	2015	2016
Accumulated impairment losses, January 1	**(233)**	**(248)**
Impairment losses in the reporting period	(84)	(165)
Impairment loss reversals or utilization	46	35
Exchange differences	23	(30)
Accumulated impairment losses, December 31	**(248)**	**(408)**

Trade accounts receivable amounting to €10,954 million (2015: €9,858 million) were not individually impaired. Of this amount, €1,161 million (2015: €1,251 million) was past due or due immediately on the closing date.

The amounts of impaired and past-due trade accounts receivable are summarized in the following table:

B 22/3

Impaired and Past-Due Trade Accounts Receivable

		Of which neither impaired nor past due at the closing date	Of which unimpaired but past due at the closing date				Of which impaired at the closing date
Carrying amount € million			up to 3 months	3 – 6 months	6 – 12 months	more than 12 months	
December 31, 2016	10,969	9,793	780	162	125	94	15
December 31, 2015	9,933	8,607	823	202	109	117	75

The gross carrying amount of individually impaired trade accounts receivable was €192 million (2015: €245 million). The impairment losses recognized on these assets totaled €177 million (2015: €170 million), resulting in a net carrying amount of €15 million (2015: €75 million).

The unimpaired receivables were deemed to be collectible on the basis of established credit management processes and individual assessments of customer risks. Recognized impairment losses included an appropriate allowance for the default risk as of the end of the reporting period.

Receivables from government health service institutions, especially in Greece, Italy, Portugal and Spain, are under special observation in view of the government debt crisis. Although there were no material defaults on such receivables in 2016 or 2015, it is possible that future developments in these countries could result in payment delays and / or defaults. This could necessitate the recognition of impairment losses due to new occurrences. Trade accounts receivable from government health service institutions in the above countries at the end of 2016 totaled €134 million (2015: €168 million).

An excess-of-loss policy exists for the Pharmaceuticals, Consumer Health and Animal Health segments as part of a global credit insurance program. More than 80% of the receivables of these segments are insured up to a maximum total annual compensation payment of €150 million (2015: €100 million). A global excess-of-loss policy has also existed for the Crop Science segment since January 2016. In this global credit insurance program, more than 80% of this segment's receivables are insured up to a maximum total annual compensation payment of €300 million.

A further €743 million (2015: €559 million) of receivables was secured by advance payments, letters of credit or guarantees or by liens on land, buildings or harvest yields.

23. Other receivables

Other receivables were comprised as follows:

B 23/1

Other Receivables

	Dec. 31, 2015		Dec. 31, 2016	
€ million	Total	Of which current	Total	Of which current
Other tax receivables	746	658	764	746
Deferred charges	384	348	549	358
Reimbursement claims	97	81	120	104
Net defined benefit asset	30	–	26	–
Receivables from employees	39	36	50	49
Miscellaneous receivables	1,151	894	1,284	953
Total	**2,447**	**2,017**	**2,793**	**2,210**

The reimbursement claims of €120 million (2015: €97 million) mainly consisted of receivables from insurance companies in connection with product liability claims.

Miscellaneous receivables included a €441 million (2015: €423 million) receivable from Dow AgroSciences LLC, United States, for damages and royalty payments resulting from the infringement of Bayer's rights to the Liberty Link™ weed control system.

Of the €690 million (2015: €565 million) in financial receivables included in other receivables, €612 million (2015: €460 million) was neither impaired nor past due. Receivables of €50 million (2015: €65 million) were due immediately or up to three months past due. Receivables of €27 million (2015: €39 million) were more than three months past due.

Other receivables are stated net of impairment losses totaling €56 million (2015: €55 million), of which €52 million (2015: €52 million) related to a receivable from the Venezuelan exchange control authority reflecting the right to receive U.S. dollars at a preferential rate.

24. Equity

The foremost objectives of our financial management are to help bring about a sustained increase in Bayer's value for the benefit of all stakeholders, and to ensure the Group's creditworthiness and liquidity. The pursuit of these goals means reducing our cost of capital, optimizing our capital structure, improving our financing cash flow and effectively managing risk.

The rating agencies commissioned by Bayer assess Bayer's creditworthiness as follows:

B 24/1

Rating

	Long-term rating	Short-term rating
S & P Global Ratings	A–	A–2
Moody's	A3	P–2

These ratings reflect the company's good creditworthiness and ensure access to a broad investor base for financing. Both S & P Global Ratings and Moody's are currently considering a rating downgrade in view of the agreed acquisition of Monsanto Company. Bayer will continue to target an investment-grade rating after the successful closing of the Monsanto acquisition. We remain committed to the single "A" credit rating category over the long term.

Apart from utilizing cash inflows from our operating business to reduce net financial debt, we are implementing our financial strategy by way of vehicles such as the subordinated hybrid bonds issued in July 2014 and April 2015, the mandatory convertible notes issued in November 2016, the authorized and conditional capital created by resolutions of the Annual Stockholders' Meeting, and a potential share buyback program. Bayer's Articles of Incorporation do not stipulate capital ratios.

The changes in the various components of equity during 2015 and 2016 are shown in the consolidated statements of changes in equity.

Capital stock

The capital stock of Bayer AG on December 31, 2016 amounted to €2,117 million (2015: €2,117 million), divided into 826,947,808 (2015: 826,947,808) registered no-par shares, and was fully paid in. Each no-par share confers one voting right.

Authorized and conditional capital

The authorized and conditional capital was comprised as follows:

B 24/2

Authorized and Conditional Capital

Capital	Resolution	Amount / shares	Expires	Purpose
Authorized capital I	April 29, 2014	€530 million	April 28, 2019	Increase the capital stock by issuing new no-par shares against cash contributions and / or contributions in kind, the latter not to exceed €423 million
Authorized capital II	April 29, 2014	€212 million	April 28, 2019	Increase the capital stock by issuing new no-par shares against cash contributions
Conditional capital	April 29, 2014	€212 million / up to 82,694,750 shares	April 28, 2019	Increase the capital stock by granting no-par shares to the holders of bonds with warrants or convertible notes, profit participation certificates or income bonds; the authorizations to issue such instruments are limited to a total nominal amount of €6 billion.

Capital increases are effected by issuing new registered no-par shares. Stockholders must normally be granted subscription rights. However, subscription rights may be excluded under certain conditions stated in the authorization resolutions. Absent a further resolution of the Annual Stockholders' Meeting on the exclusion of stockholders' subscription rights, the Board of Management will only use the existing authorizations to increase the capital stock out of the authorized or conditional capital – while excluding stockholders' subscription rights – up to a total amount of 20% of the capital stock that existed when the respective resolutions were adopted by the Annual Stockholders' Meeting on April 29, 2014. All issuances or sales of no-par shares or of bonds with warrants or conversion rights or obligations that are effected while excluding stockholders' subscription rights also count toward this 20% limit. Details of the authorized and conditional capital are provided in the Notice of the Annual Stockholders' Meeting of April 29, 2014, and on the Bayer website.

On November 22, 2016, Bayer placed mandatory convertible notes in the amount of €4,000 million without granting subscription rights to existing stockholders of the company. The notes, denominated in units of €100,000, were issued by Bayer Capital Corporation B.V. under the subordinated guarantee of Bayer AG. At maturity, the outstanding amount of the notes will be mandatorily converted into registered no-par shares of Bayer AG. After deduction of €48 million in transaction costs and recognition of €191 million in deferred taxes, €3,491 million were allocated to capital reserves and €652 million to financial liabilities. The deferred taxes result from temporary differences in accounting for the liability component and were recognized outside profit or loss in equity. The issuance of the mandatory convertible notes constitutes a utilization of conditional capital.

The authorized capital has not been utilized so far.

Accumulated comprehensive income

Accumulated comprehensive income comprises retained earnings and accumulated other comprehensive income. The retained earnings include prior years' undistributed income of consolidated companies and all remeasurements of the net liability for defined benefit pension and other post-employment benefit plans that are recognized outside profit or loss. The accumulated other comprehensive income comprises exchange differences, the changes in fair values of cash flow hedges and available-for-sale financial assets, and the revaluation surplus. In 2016, an amount of €4 million (2015: €5 million) corresponding to the annual amortization / depreciation of the respective assets was transferred from the revaluation surplus to retained earnings. The reserves for exchange differences included an amount of minus €51 million (2015: minus €45 million) attributable to associates and joint ventures accounted for using the equity method.

Dividend

Under the German Stock Corporation Act (AktG), the dividend payment is determined by the distributable profit reported in the annual financial statements of Bayer AG, which are prepared according to the German Commercial Code. Retained earnings were diminished by payment of the dividend of €2.50 per share for 2015. The proposed dividend for the 2016 fiscal year is €2.70 per share, which would result in a total dividend payment of €2,233 million. Payment of the proposed dividend is contingent upon approval by the stockholders at the Annual Stockholders' Meeting and therefore is not recognized as a liability in the consolidated financial statements.

Noncontrolling interest

In April 2016, Bayer AG contributed 10 million shares it held in Covestro AG – equivalent to 4.9% of the outstanding shares – to Bayer Pension Trust e.V. Bayer therefore currently holds 64.2% of the shares in the capital stock of Covestro AG.

The changes in noncontrolling interest in equity during 2015 and 2016 are shown in the following table:

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Components of Noncontrolling Interest in Equity

€ million	2015	2016
January 1	**112**	**1,180**
Changes in equity not recognized in profit or loss		
Remeasurements of the net pension liability	10	(27)
Changes in fair value of cash flow hedges	–	–
Changes in fair value of securities	–	–
Exchange differences on translation of operations outside the eurozone	23	17
Other changes in equity	1,055	157
Dividend payments	(8)	(58)
Income after income taxes	**(12)**	**295**
December 31	**1,180**	**1,564**

The reserves for exchange differences included an amount of minus €28 million (2015: minus €20 million) attributable to associates and joint ventures accounted for using the equity method.

Noncontrolling interest mainly pertained to the following companies:

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Material Noncontrolling Interests

		Covestro AG *		Bayer CropScience Limited, India	
		2015	2016	2015	2016
Interest held	%	30.9	35.8	31.4	31.4
Equity attributable to noncontrolling interest	€ million	1,092	1,472	73	85
Dividends paid to noncontrolling interest	€ million	0	52	3	3
Current assets	€ million	4,237	4,268	52	55
Noncurrent assets	€ million	6,294	5,966	304	352
Current liabilities	€ million	4,564	2,474	11	11
Noncurrent liabilities	€ million	2,355	3,544	92	97
Sales	€ million	12,082	11,904	465	484
Income after income taxes	€ million	352	806	6	44
Total comprehensive income	€ million	558	747	15	47
Net cash provided by (used in) operating activities	€ million	1,473	1,786	44	–
Net cash provided by (used in) investing activities	€ million	(380)	(1,042)	53	(4)
Net cash provided by (used in) financing activities	€ million	(645)	(1,122)	(79)	(9)

* Including direct and indirect subsidiaries

25. Provisions for pensions and other post-employment benefits

Provisions were established for defined benefit obligations pertaining to pensions and other post-employment benefits. The net liability was accounted for as follows:

B 25/1

Net Defined Benefit Liability Reflected in the Statement of Financial Position

	Pensions		Other post-employment benefits		Total	
€ million	Dec 31, 2015	**Dec 31, 2016**	Dec 31, 2015	**Dec 31, 2016**	Dec 31, 2015	**Dec 31, 2016**
Provisions for pensions and other post-employment benefits (net liability)	**10,454**	**10,736**	**419**	**398**	**10,873**	**11,134**
of which Germany	8,972	9,176	–	–	8,972	9,176
of which other countries	1,482	1,560	419	398	1,901	1,958
Net defined benefit asset	**29**	**25**	**1**	**1**	**30**	**26**
of which Germany	23	23	–	–	23	23
of which other countries	6	2	1	1	7	3
Net defined benefit liability	**10,425**	**10,711**	**418**	**397**	**10,843**	**11,108**
of which Germany	8,949	9,153	–	–	8,949	9,153
of which other countries	1,476	1,558	418	397	1,894	1,955

The expenses for defined benefit plans for pensions and other post-employment benefits comprised the following components:

B 25/2

Expenses for Defined Benefit Plans

	Pension plans						Other post-employment benefit plans	
	Germany		Other countries		Total		Other countries	
€ million	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**
Current service cost	362	350	99	102	461	452	17	16
Past service cost	27	26	(3)	(5)	24	21	–	(1)
of which plan curtailments	–	–	(2)	1	(2)	1	–	–
Plan settlements	–	–	–	(9)	–	(9)	–	–
Plan administration cost paid out of plan assets	–	3	1	1	1	4	–	–
Net interest	204	204	52	52	256	256	20	20
Total	**593**	**583**	**149**	**141**	**742**	**724**	**37**	**35**

In addition, a total of minus €1,036 million in effects of remeasurements of the net defined benefit liability was recognized in 2016 outside profit or loss (2015: €1,216 million). Of this amount, minus €1,063 million (2015: €1,185 million) related to pension obligations, €34 million (2015: €53 million) to other post-employment benefit obligations, and minus €7 million (2015: minus €22 million) to the effects of the asset ceiling.

The net defined benefit liability developed as follows:

B 25/3

Changes in Net Defined Benefit Liability

€ million	Defined benefit obligation	Fair value of plan assets	Effects of the asset ceiling	Net defined benefit liability
Germany				
January 1, 2016	**19,148**	**10,199**	**–**	**(8,949)**
Acquisitions	–	–	–	–
Divestments / changes in the scope of consolidation	(4)	(2)	–	2
Current service cost	350			(350)
Past service cost	26			(26)
(Gains) / losses from plan settlements	–			–
Net interest	452	248	–	(204)
Net actuarial (gain) loss	1,610			(1,610)
of which due to changes in financial assumptions	1,563			(1,563)
of which due to changes in demographic assumptions	1			(1)
of which due to experience adjustments	46			(46)
Return on plan assets excluding amounts recognized as interest income		669		669
Remeasurement of asset ceiling			–	–
Employer contributions		878		878
Employee contributions	39	39		–
Payments due to plan settlements	–	–		–
Benefits paid out of plan assets	(219)	(219)		–
Benefits paid by the company	(440)			440
Plan administration cost paid from plan assets		(3)		(3)
Reclassification to current assets / liabilities held for sale	–	–	–	–
December 31, 2016	**20,962**	**11,809**	**–**	**(9,153)**
Other countries				
January 1, 2016	**7,660**	**5,799**	**(32)**	**(1,893)**
Acquisitions	–	1	–	1
Divestments / changes in the scope of consolidation	(4)	(3)	–	1
Current service cost	118			(118)
Past service cost	(6)			6
(Gains) / losses from plan settlements	(9)			9
Net interest	284	215	(3)	(72)
Net actuarial (gain) loss	515			(515)
of which due to changes in financial assumptions	650			(650)
of which due to changes in demographic assumptions	(89)			89
of which due to experience adjustments	(46)			46
Return on plan assets excluding amounts recognized as interest income		427		427
Remeasurement of asset ceiling			(7)	(7)
Employer contributions		152		152
Employee contributions	12	12		–
Payments due to plan settlements	(83)	(84)		(1)
Benefits paid out of plan assets	(295)	(295)		–
Benefits paid by the company	(87)	–		87
Plan administration costs paid out of plan assets	–	(1)		(1)
Reclassification to current assets / liabilities held for sale	–	–	–	–
Exchange differences	(72)	(96)	(7)	(31)
December 31, 2016	**8,033**	**6,127**	**(49)**	**(1,955)**
of which other post-employment benefits	867	471	–	(396)
Total, December 31, 2016	**28,995**	**17,936**	**(49)**	**(11,108)**

Changes in Net Defined Benefit Liability (Previous Year)

€ million	Defined benefit obligation	Fair value of plan assets	Effects of the asset ceiling	Net defined benefit liability
Germany				
January 1, 2015	**20,339**	**10,025**	**–**	**(10,314)**
Acquisitions	–	–	–	–
Divestments / changes in the scope of consolidation	21	17	–	(4)
Current service cost	362			(362)
Past service cost	27			(27)
(Gains) / losses from plan settlements	–			–
Net interest	425	221	–	(204)
Net actuarial (gain) loss	(1,393)			1,393
of which due to changes in financial assumptions	(1,371)			1,371
of which due to changes in demographic assumptions	–			–
of which due to experience adjustments	(22)			22
Return on plan assets excluding amounts recognized as interest income		(262)		(262)
Remeasurement of asset ceiling			–	–
Employer contributions		387		387
Employee contributions	37	37		–
Payments due to plan settlements	–	–		–
Benefits paid out of plan assets	(215)	(215)		–
Benefits paid by the company	(433)			433
Plan administration cost paid from plan assets		–		–
Reclassification to current assets / liabilities held for sale	(22)	11	–	11
December 31, 2015	**19,148**	**10,199**	**–**	**(8,949)**
Other countries				
January 1, 2015	**7,432**	**5,560**	**(9)**	**(1,881)**
Acquisitions	4	–	–	(4)
Divestments / changes in the scope of consolidation	–	–	–	–
Current service cost	116			(116)
Past service cost	(3)			3
(Gains) / losses from plan settlements	–			–
Net interest	287	215	–	(72)
Net actuarial (gain) loss	(318)			318
of which due to changes in financial assumptions	(310)			310
of which due to changes in demographic assumptions	(79)			79
of which due to experience adjustments	71			(71)
Return on plan assets excluding amounts recognized as interest income		(211)		(211)
Remeasurement of asset ceiling			(22)	(22)
Employer contributions		148		148
Employee contributions	11	11		–
Payments due to plan settlements	–	–		–
Benefits paid out of plan assets	(289)	(289)		–
Benefits paid by the company	(60)	–		60
Plan administration costs paid out of plan assets	–	(1)		(1)
Reclassification to current assets / liabilities held for sale	(20)	(8)	–	12
Exchange differences	501	374	(1)	(128)
December 31, 2015	**7,661**	**5,799**	**(32)**	**(1,894)**
of which other post-employment benefits	836	418	–	(418)
Total, December 31, 2015	**26,809**	**15,998**	**(32)**	**(10,843)**

The benefit obligations pertained mainly to Germany (72%; 2015: 71%), the United States (14%; 2015: 15%) and the United Kingdom (7%; 2015: 7%). In Germany, current employees accounted for about 46% (2015: 44%), retirees or their surviving dependents for about 47% (2015: 49%) and former employees with vested pension rights for about 7% (2015: 7%) of entitlements under defined benefit plans. In the United States, current employees accounted for about 25% (2015: 26%), retirees or their surviving dependents for about 53% (2015: 61%) and former employees with vested pension rights for about 22% (2015: 13%) of entitlements under defined benefit plans.

The actual return on the assets of defined benefit plans for pensions or other post-employment benefits amounted to €1,519 million (2015: minus €34 million) and €40 million (2015: minus €3 million), respectively.

The following table shows the defined benefit obligations for pensions and other post-employment benefits along with the funded status of the funded obligations.

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Defined Benefit Obligation and Funded Status

	Pension obligation		Other post-employment benefit obligation		Total	
€ million	2015	2016	2015	2016	2015	2016
Defined benefit obligation	**25,973**	**28,128**	**836**	**867**	**26,809**	**28,995**
of which unfunded	1,126	1,231	101	125	1,227	1,356
of which funded	24,847	26,897	735	742	25,582	27,639
Funded status of funded obligations						
Overfunding	61	74	1	1	62	75
Underfunding	9,328	9,506	318	272	9,646	9,778

Pension and other post-employment benefit obligations

Group companies provide retirement benefits for most of their employees, either directly or by contributing to privately or publicly administered funds. The way these benefits are provided varies according to the legal, fiscal and economic conditions of each country, the benefits generally being based on employee compensation and years of service. The obligations relate both to existing retirees' pensions and to pension entitlements of future retirees.

Bayer has set up funded pension plans for its employees in various countries. The most appropriate investment strategy is determined for each defined benefit pension plan based on the risk structure of the obligations (especially demographics, the current funded status, the structure of the expected future cash flows, interest sensitivity, biometric risks etc.), the regulatory environment and the existing level of risk tolerance or risk capacity. A strategic target investment portfolio is then developed in line with the plan's risk structure, taking capital market factors into consideration. Further determinants are risk diversification, portfolio efficiency and the need for both a country-specific and a global risk / return profile centered on ensuring the payment of all future benefits. As the capital investment strategy for each pension plan is developed individually in light of the plan-specific conditions listed above, the investment strategies for different pension plans may vary considerably. For example, the proportion of plan assets invested in equities is greater with the non-German pension plans than with the plans domiciled in Germany. The investment strategies are generally aligned less toward maximizing absolute returns and more toward the maximum probability of being able to finance pension commitments over the long term. For plan assets, stress scenarios are simulated and other risk analyses (such as value at risk) undertaken with the aid of risk management systems.

Bayer-Pensionskasse VVaG (Bayer-Pensionskasse), Leverkusen, Germany, is by far the most significant of the pension plans. It has been closed to new members since 2005. This legally independent fund is regarded as a life insurance company and therefore is subject to the German Insurance Supervision Act. The benefit obligations covered by Bayer-Pensionskasse comprise retirement, surviving dependents' and disability pensions. It constitutes a multi-employer plan, to which the active members and their employers contribute. The company contribution is a certain percentage of the employee contribution. This percentage is the same for all participating employers, including those outside the Bayer Group, and is set by agreement between the plan's executive committee and its supervisory board, acting on a proposal from the responsible actuary. It takes into account the differences between the actuarial estimates and the actual values for the factors used to determine liabilities and contributions. Bayer may also adjust the company contribution in agreement with the plan's executive committee and its supervisory board, acting on a proposal from the responsible actuary. The plan's liability is governed by Section 1, Paragraph 1, Sentence 3 of the German Law on the Improvement of Occupational Pensions. This means that if the pension plan exercises its right

under the articles of association to reduce benefits, each participating employer has to make up the resulting difference. Bayer is not liable for the obligations of participating employers outside the Bayer Group, even if they cease to participate in the plan.

Pension entitlements for people who joined Bayer in Germany in 2005 or later are granted via Rheinische Pensionskasse VVaG, Leverkusen. Future pension payments from this plan are based on contributions and the return on plan assets; a guaranteed interest rate applies.

Another important pension provision vehicle is Bayer Pension Trust e.V. (BPT). This covers further retirement provision arrangements of the Bayer Group, such as deferred compensation, pension obligations previously administered by Schering Altersversorgung Treuhand e.V., and components of other direct commitments.

The defined benefit pension plans in the United States have been frozen for some years, and no significant new entitlements can be earned under these plans. The assets of all the U.S. pension plans are held by a master trust for reasons of efficiency. The applicable regulatory framework is based on the Employee Retirement Income Security Act (ERISA), which includes a statutory 80% minimum funding requirement to avoid benefit restrictions. The actuarial risks, such as investment risk, interest-rate risk and longevity risk, remain with the company.

The defined benefit pension plans in the United Kingdom have been closed to new members for some years. Plan assets in the U.K. are administered by independent trustees, who are legally obligated to act solely in the interests of the beneficiaries. A technical assessment is performed every three years in line with U.K. regulations. This serves as the basis for developing a plan to cover any potential financing requirements. Here, too, the actuarial risks remain with the company.

The other post-employment benefit obligations outside Germany mainly comprised health care benefit payments for retirees in the United States.

The fair value of the plan assets to cover pension and other post-employment benefit obligations was as follows:

B 25/6

Fair Value of Plan Assets as of December 31

	Pension obligations				Other post-employment benefit obligations	
	Germany		Other countries		Other countries	
€ million	2015	2016	2015	2016	2015	2016
Plan assets based on quoted prices in active markets						
Real estate and special real estate funds	–	–	199	215	19	22
Equities and equity funds	2,105	2,919	1,855	1,861	130	149
Callable debt instruments	–	–	182	263	–	–
Noncallable debt instruments	112	556	752	736	121	128
Bond funds	3,543	3,754	1,744	1,823	90	104
Derivatives	18	11	(5)	(3)	–	–
Cash and cash equivalents	158	243	84	114	8	17
Other	–	–	4	6	–	–
	5,936	**7,483**	**4,815**	**5,015**	**368**	**420**
Plan assets for which quoted prices in active markets are not available						
Real estate and special real estate funds	517	563	83	124	–	–
Equities and equity funds	90	115	59	72	–	–
Callable debt instruments	1,555	1,525	2	–	–	–
Noncallable debt instruments	1,832	1,870	–	–	–	–
Bond funds	–	–	60	72	–	–
Derivatives	(2)	1	–	–	–	–
Other	271	252	362	373	50	51
	4,263	**4,326**	**566**	**641**	**50**	**51**
Total plan assets	**10,199**	**11,809**	**5,381**	**5,656**	**418**	**471**

The fair value of plan assets in Germany included real estate leased by Group companies, recognized at a fair value of €82 million (2015: €61 million), and Bayer AG shares and bonds held through investment funds, recognized at their fair value of €41 million (2015: €48 million) and €3 million (2015: €3 million), respectively. In April 2016, Bayer AG contributed 10 million shares it held in Covestro AG – equivalent to 4.9% of the outstanding shares – to BPT. This equity position had a market value of €652 million as of December 31, 2016. In 2016, Covestro placed short-term securities with a volume of €450 million into Metzler Trust e.V. In 2015, Bayer placed short-term securities with a volume of €300 million into BPT. The other plan assets comprised mortgage loans granted, other receivables and qualified insurance policies.

Risks

The risks from defined benefit plans arise partly from the defined benefit obligations and partly from the investment in plan assets. The risks lie in the possibility that higher direct pension payments will have to be made to the beneficiaries and / or that additional contributions will have to be made to plan assets in order to meet current and future pension obligations.

Demographic / biometric risks

Since a large proportion of the defined benefit obligations comprises lifelong pension payments to retirees or surviving dependents' pensions, longer claim periods or earlier claims may result in higher benefit obligations, higher benefit expense and / or higher pension payments than previously anticipated.

Investment risks

If the actual return on plan assets were below the return anticipated on the basis of the discount rate, the net defined benefit liability would increase, assuming there were no changes in other parameters. This could happen as a result of a drop in share prices, increases in market rates of interest, default of individual debtors or the purchase of low-risk but low-interest bonds, for example.

Interest-rate risk

A decline in capital market interest rates, especially for high-quality corporate bonds, would increase the defined benefit obligation. This effect would be at least partially offset by the ensuing increase in the market values of the debt instruments held.

Measurement parameters and their sensitivities

The following weighted parameters were used to measure the obligations for pensions and other post-employment benefits as of December 31 of the respective year:

B 25/7

Parameters for Benefit Obligations

	Germany		Other countries		Total	
%	2015	2016	2015	2016	2015	2016
Pension obligations						
Discount rate	2.40	1.80	3.85	3.25	2.75	2.15
of which U.S.A.			4.00	3.70	4.00	3.70
of which U.K.			3.80	2.65	3.80	2.65
Projected future salary increases	3.00	2.75	3.35	3.50	3.10	2.95
Projected future benefit increases	1.75	1.50	3.20	3.35	2.15	1.95
Other post-employment benefit obligations						
Discount rate	–	–	4.45	4.35	4.45	4.35

In Germany the Heubeck 2005 G mortality tables were used, in the United States the RP-2014 Mortality Tables, and in the United Kingdom 95% of S1NXA.

The following weighted parameters were used to measure the expense for pension and other post-employment benefits in the respective year:

B 25/8

Parameters for Benefit Expense

	Germany		Other countries		Total	
%	2015	2016	2015	2016	2015	2016
Pension obligations						
Discount rate	2.20	2.40	3.70	3.85	2.55	2.75
Projected future salary increases	3.00	3.00	3.65	3.35	3.15	3.10
Projected future benefit increases	1.75	1.75	3.30	3.20	2.10	2.15
Other post-employment benefit obligations						
Discount rate	–	–	3.95	4.45	3.95	4.45

The parameter sensitivities were computed by expert actuaries based on a detailed evaluation similar to that performed to obtain the data presented in Table B 25/4. Altering individual parameters by 5 percentage points (mortality by 10% per beneficiary) while leaving the other parameters unchanged would have impacted pension and other post-employment benefit obligations as of year end 2016 as follows:

B 25/9

Sensitivity of Benefit Obligations

	Germany		Other countries		Total	
€ million	Increase	Decrease	Increase	Decrease	Increase	Decrease
Pension obligations						
0.5%-pt. change in discount rate	(1,752)	2,014	(478)	539	(2,230)	2,553
0.5%-pt. change in projected future salary increases	135	(125)	50	(47)	185	(172)
0.5%-pt. change in projected future benefit increases	1,107	(1,009)	139	(94)	1,246	(1,103)
10% change in mortality	(670)	752	(195)	209	(865)	961
Other post-employment benefit obligations						
0.5%-pt. change in discount rate	–	–	(48)	53	(48)	53
10% change in mortality	–	–	(24)	27	(24)	27

B 25/10

Sensitivity of Benefit Obligations (prior year)

	Germany		Other countries		Total	
€ million	Increase	Decrease	Increase	Decrease	Increase	Decrease
Pension obligations						
0.5%-pt. change in discount rate	(1,544)	1,767	(450)	504	(1,994)	2,271
0.5%-pt. change in projected future salary increases	121	(113)	47	(44)	168	(157)
0.5%-pt. change in projected future benefit increases	1,006	(919)	127	(96)	1,133	(1,015)
10% change in mortality	(597)	669	(173)	185	(770)	854
Other post-employment benefit obligations						
0.5%-pt. change in discount rate	–	–	(46)	51	(46)	51
10% change in mortality	–	–	(21)	24	(21)	24

Provisions are also set up for the obligations, mainly of U.S. subsidiaries, to provide post-employment benefits in the form of health care cost payments for retirees. The valuation of health care costs was based on the assumption that they will increase at a rate of 6.8%, which should gradually decline to 5.0% by 2023 (assumption in 2015: 7.0%, which should gradually decline to 5.0% by 2023). The following table shows the impact on other post-employment benefit obligations and total benefit expense of a one-percentage-point change in the assumed cost increase rates:

B 25/11

Sensitivity to Health Care Cost Increases

	Increase of one percentage point		Decrease of one percentage point	
€ million	2015	2016	2015	2016
Impact on other post-employment benefit obligations	79	77	(68)	(66)
Impact on benefit expense	5	4	(4)	(3)

Payments made and expected future payments

The following payments or asset contributions correspond to the employer contributions made or expected to be made to funded benefit plans:

B 25/12

Employer Contributions Paid or Expected

	Germany			Other countries		
€ million	2015	2016	2017 expected	2015	2016	2017 expected
Pension obligations	387	878	74	148	151	123
Other post-employment benefit obligations	–	–	–	–	1	1
Total	**387**	**878**	**74**	**148**	**152**	**124**

Bayer has currently committed to make deficit contributions for its U.K. pension plans of approximately GBP 16 million annually through 2019. For its U.S. pension plans, Bayer made payments of US$50 million in 2016 and expects to make payments of US$50 million in 2017, the latter amount being subject to change depending on future circumstances.

Pensions and other post-employment benefits payable in the future from funded and unfunded plans are estimated as follows:

B 25/13

Future Benefit Payments

	Payments out of plan assets				Payments by the company			
		Pensions	Other post-employment benefits			Pensions	Other post-employment benefits	
€ million	Germany	Other countries	Other countries	**Total**	Germany	Other countries	Other countries	**Total**
2017	223	297	9	529	452	76	35	563
2018	226	305	9	540	457	77	38	572
2019	230	312	9	551	464	78	42	584
2020	236	321	9	566	471	83	43	597
2021	242	331	9	582	477	91	45	613
2022-2026	1,310	1,715	46	3,071	2,454	477	252	3,183

The weighted average term of the pension obligations is 18 years (2015: 17.3 years) in Germany and 13.3 years (2015: 13.4 years) in other countries. The weighted average term of the obligations for other post-employment benefits in other countries is 11.5 years (2015: 11.5 years).

26. Other provisions

Changes in the various provision categories in 2016 were as follows:

B 26/1

Changes in Other Provisions

€ million	Other Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	**Total**
December 31, 2015	**65**	**272**	**306**	**2,113**	**663**	**3,099**	**267**	**6,785**
Additions	18	67	113	4,679	240	3,109	382	8,608
Utilization	(32)	(23)	(121)	(4,019)	(280)	(2,503)	(230)	(7,208)
Reversal	(12)	(5)	(29)	(477)	(123)	(457)	(48)	(1,151)
Reclassification to current liabilities	–	–	–	(12)	–	(1)	–	(13)
Interest cost	–	4	–	–	–	18	–	22
Exchange differences	2	6	7	91	12	25	15	158
December 31, 2016	**41**	**321**	**276**	**2,375**	**512**	**3,290**	**386**	**7,201**

The provisions recognized in the statement of financial position as of December 31, 2016, were expected to be utilized as follows:

B 26/2

Expected Utilization of Other Provisions

€ million	Other Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
2017	17	69	93	2,241	280	2,451	270	5,421
2018	–	31	79	66	152	147	6	481
2019	–	21	71	28	3	90	1	214
2020	–	11	11	5	1	186	1	215
2021	1	4	6	6	4	57	24	102
2022 or later	23	185	16	29	72	359	84	768
Total	**41**	**321**	**276**	**2,375**	**512**	**3,290**	**386**	**7,201**

The provisions were partly offset by claims for refunds in the amount of €110 million (2015: €97 million), which were recognized as receivables. These claims mainly related to product liability.

Restructuring

Provisions for restructuring included €179 million (2015: €180 million) for severance payments and €97 million (2015: €126 million) for other restructuring expenses, which mainly comprised other costs related to the closure of production facilities.

In the Pharmaceuticals segment, restructuring took place mainly in the areas of marketing and supply network optimization as part of the Continuous Efficiency Program. Provisions were established for this restructuring primarily in Japan, France and the United States. Provisions for the above and other restructuring measures in Pharmaceuticals as of December 31, 2016, totaled €66 million. Of this amount, severance payments accounted for €62 million and other restructuring expenses for €4 million.

In the Consumer Health segment, the restructuring initiated in prior years to integrate the acquired businesses continued. Provisions for restructuring in this segment totaled €8 million as of December 31, 2016. Of this amount, severance payments accounted for €7 million and other restructuring expenses for €1 million.

In the Crop Science segment, restructuring took place mainly in connection with the “Advancing our leadership strategy” program, which aims to increase customer focus, promote innovation and improve efficiency. The restructuring initiated in the United States in prior years, involving the closure of several carbamate production facilities and a formulation plant, continued in addition. Provisions for the above and other restructuring measures in Crop Science as of December 31, 2016, totaled €104 million. Of this amount, severance payments accounted for €53 million and other restructuring expenses for €51 million.

Provisions for restructuring in the Animal Health segment as of December 31, 2016, totaled €8 million. Of this amount, severance payments accounted for €5 million and other restructuring expenses for €3 million.

Provisions for restructuring at Covestro mainly existed for the closure of an MDI production facility at the site in Tarragona, Spain. The restructuring provisions at Covestro as of December 31, 2016, totaled €66 million. Of this amount, severance payments accounted for €31 million and other restructuring expenses for €35 million.

Restructuring continued in the central functions, particularly in France, to enhance their efficiency. Also included here are provisions for the residual costs for the closure of a Covestro production facility at the Belford Roxo site in Brazil. The restructuring provisions in the central functions as of December 31, 2016, totaled €24 million. Of this amount, severance payments accounted for €21 million and other restructuring expenses for €3 million.

Litigations

The legal risks currently considered to be material, and their development, are described in Note (32).

Personnel commitments

Stock-based compensation programs
Bayer offers stock-based compensation programs collectively to different groups of employees. As required by IFRS 2 (Share-based Payment) for compensation systems involving cash settlement, awards to be made under the stock-based programs are covered by provisions in the amount of the fair value of the obligations existing as of the date of the financial statements vis-à-vis the respective employee group. All resulting valuation adjustments are recognized in profit or loss.

The following table shows the changes in provisions for the various programs:

B 26/3

Changes in Provisions for Stock-Based Compensation Programs

€ million	Aspire I	Aspire II	Aspire 2.0	Aspire I Covestro	Aspire II Covestro	Covestro Prisma	Total
December 31, 2015	**125**	**339**	**–**	**22**	**59**	**–**	**545**
Additions	61	204	90	5	13	15	388
Utilization	(54)	(149)	–	(8)	(23)	–	(234)
Reversal	(71)	(194)	(7)	(2)	(2)	–	(276)
Exchange differences	–	3	2	–	1	–	6
December 31, 2016	**61**	**203**	**85**	**17**	**48**	**15**	**429**

The value of the Aspire tranches that were fully earned at the end of 2016, resulting in payments at the beginning of 2017, was €241 million (2015: €230 million).

The net expense for all stock-based compensation programs in 2016 was €118 million (2015: €248 million), including €5 million (2015: €6 million) for the BayShare program, €2 million (2015: €0 million) for Covestro's stock participation program and €1 million income from (2015: €8 million expense for) grants of virtual Bayer shares.

The fair value of the obligations under the Aspire I, Aspire II and Aspire 2.0 programs (excluding Aspire programs for Covestro) was calculated using the Monte Carlo simulation method based on the following key parameters:

B 26/4

Parameters for Monte Carlo Simulation

	2015	2016
Dividend yield	1.96%	2.90%
Risk-free interest rate	(0.159)%	(0.670)%
Volatility of Bayer stock	25.61%	22.78%
Volatility of EURO STOXX 50	19.08%	11.66%
Correlation between Bayer stock price and the EURO STOXX 50	0.83	0.67

Long-term incentive program for members of the Board of Management and other senior executives (Aspire I)

From 2005 through 2015, members of the Board of Management and other senior executives were entitled to participate in Aspire I on the condition that they purchased a certain number of Bayer shares – determined for each individual according to specific guidelines – and retained them for the full term of the program. A percentage of the executive's annual base salary – according to his or her position – was defined as a target for variable payments (Aspire target opportunity). Depending on the performance of Bayer stock, both in absolute terms and relative to the EURO STOXX 50 index over a four-year performance period, participants receive a payment of up to 300% of their individual Aspire target opportunity at the end of the period. The prices used to determine the amount of the payment are the averages of the official closing prices of Bayer shares over the last 30 stock-exchange trading days of the respective year. The tranche issued in 2012 expired at the end of 2015, and the maximum payment of 300% was made at the beginning of 2016. The tranche issued in 2013 expired at the end of 2016, and a payment of 270% was made at the beginning of 2017.

Long-term incentive program for middle management (Aspire II)

From 2005 through 2015, other senior managers were offered Aspire II, which is similar to Aspire I but did not require a personal investment in Bayer shares. The amount of the payment is based entirely on the absolute performance of Bayer stock over a four-year period. The maximum payment is 250% of each manager's Aspire target opportunity. The prices used to determine the amount of the payment are the averages of the official closing prices of Bayer shares over the last 30 stock-exchange trading days of the respective year. The tranche issued in 2012 expired at the end of 2015, and the maximum payment of 250% was made at the beginning of 2016. The tranche issued in 2013 expired at the end of 2016, and a payment of 220% was made at the beginning of 2017.

Long-term incentive program Aspire 2.0

Since 2016, Aspire has been offered to all eligible employees in a new, standardized format named Aspire 2.0. For the Board of Management, there is an additional hurdle in the form of a comparison between the performance of Bayer stock and that of the EURO STOXX 50. Aspire 2.0 is also based on a target value, which is a percentage of each employee's annual base salary, the percentage varying according to his or her position. This target value is multiplied by the employee's STI payment factor for the previous year to give the Aspire grant value. The STI payment factor reflects the employee's individual performance and the business performance under the global short-term incentive program (STI). The Aspire grant value is converted into virtual Bayer shares by dividing it by the share price at the start of the program. The program's performance is based on these virtual shares. The fair value of the obligations is determined from the price of Bayer stock at year end and the dividends paid up to that time. The payment made at the end of each tranche is determined by multiplying the number of virtual shares by the Bayer share price at that time and adding an amount equivalent to the dividends paid during the period of the tranche. The maximum payment for Aspire 2.0 is 250% of the Aspire grant value.

Special arrangement for Covestro employees concerning the Aspire programs

The compensation programs described above were modified for Covestro employees in December 2015 in light of the legal carve-out of the Covestro companies and the subsequent stock exchange listing of Covestro AG.

The arrangement for the 2012 tranches of both Aspire programs was the same as for Bayer employees. Based on the development of Bayer's share price, the maximum payment amounts were reached for both programs (Aspire I and Aspire II). Payments of 300% and 250%, respectively, were therefore made at the beginning of 2016.

Valuation for the other three Aspire tranches issued in 2013, 2014 and 2015, respectively, was based on the average price of Bayer shares on the last 30 trading days of 2015 (€119.17). This price was fixed in advance as the end price. Thus the amounts of the payments from the three remaining tranches – where these were fully vested – were already finally determined at the end of 2015. A payment of at least 100% is guaranteed. The tranches issued in 2013 expired at the end of 2016, and payments of 300% (Aspire I) and 250% (Aspire II) were made at the beginning of 2017.

Long-term incentive program for members of the Board of Management and other senior executives of Covestro (Prisma)

Effective January 1, 2016, Covestro established a new long-term compensation program named Prisma for the 2016-2019 performance period. Senior executives and other managers are eligible to participate. A percentage of the executive's annual base salary – according to his or her position – is defined as a target for variable payments (Prisma target opportunity). Depending on the performance of Covestro stock including dividends paid (total shareholder return) – both in absolute terms and relative to the STOXX Europe 600 Chemicals index – over a four-year performance period, participants are granted a payment of up to 200% of their individual Prisma target opportunity at the end of the period. Payment for the performance period ending December 31, 2019, will be made in January 2020 according to the performance of Covestro stock over the period. This will be determined by comparing the average stock price on the last 30 trading days of 2019 to the price at the start of the performance period. The fair value of the obligations was calculated using the Monte Carlo simulation method based on parameters applicable at the closing date.

BayShare 2016

All management levels and nonmanagerial employees are offered an annual stock participation program known as BayShare, under which Bayer subsidizes their personal investments in the company's stock. The discount under this program in 2016 was 20% (2015: 20%) of the subscription amount. Employees stated a fixed amount that they wished to invest in shares. The maximum subscription amount in Germany was set at €2,500 (2015: €2,500) or €5,000 (2015: €5,000), depending on the employee's position. The shares thus acquired must be retained until December 31, 2017.

In 2016, employees purchased a total of about 259,000 shares (2015: 208,000 shares) under the BayShare program.

Stock participation program at Covestro in 2016

The stock participation program at Covestro named Covestment allowed employees of Covestro AG and participating Group companies in Germany to invest a fixed amount of their compensation – plus a subsidy from the company – in Covestro shares. The subsidy, which will be reassessed annually, was 30% in 2016. The total amount for which shares could be purchased was capped at €1,200 or €3,600, depending on the employee's position. The shares were purchased at the volume-weighted average price of Covestro shares on four trading days in November 2016. Employees purchased a total of about 126,000 shares under the Covestment program. These shares must be retained until December 31, 2017.

27. Financial liabilities

Financial liabilities were comprised as follows:

B 27/1

Financial Liabilities

	Dec. 31, 2015		Dec. 31, 2016	
€ million	Total	Of which current	Total	Of which current
Bonds and notes / promissory notes	15,547	1,235	15,991	2,010
Liabilities to banks	2,779	1,174	1,837	820
Liabilities under finance leases	474	59	436	59
Liabilities from derivatives	765	598	587	309
Other financial liabilities	369	355	730	203
Total	**19,934**	**3,421**	**19,581**	**3,401**

A breakdown of financial liabilities by contractual maturity is given below:

B 27/2

Maturities of Financial Liabilities

€ million	Dec. 31, 2015	€ million	Dec. 31, 2016
2016	3,421	2017	3,401
2017	2,245	2018	3,241
2018	2,828	2019	2,456
2019	2,066	2020	44
2020	45	2021	2,714
2021 or later	9,329	2022 or later	7,725
Total	**19,934**	**Total**	**19,581**

In addition to promissory notes in the amount of €45 million (2015: €120 million), the Bayer Group has issued the following bonds and notes:

B 27/3

Bonds and Notes

Effective interest rate	Stated rate		Nominal volume	Dec. 31, 2015 € million	Dec. 31, 2016 € million
		Bayer AG, Germany			
Floating [1]	Floating [1]	DIP bond 2014 / 2016	EUR 500 million	500	–
1.253%	1.125%	DIP bond 2014 / 2018	EUR 750 million	748	749
5.774%	5.625%	DIP bond 2006 / 2018	GBP 250 million	339	292
5.541%	5.625%	DIP bond 2006 / 2018 (increase)	GBP 100 million	137	117
2.086%	1.875%	DIP bond 2014 / 2021	EUR 750 million	753	755
3.811%	3.750%	Hybrid bond 2014 / 2024 [7] / 2074	EUR 1,500 million	1,493	1,494
2.517%	2.375%	Hybrid bond 2015 / 2022 [7] / 2075	EUR 1,300 million	1,289	1,290
3.093%	3.000%	Hybrid bond 2014 / 2020 [7] / 2075	EUR 1,750 million	1,743	1,745
		Bayer Capital Corporation B.V., Netherlands			
1.333%	1.250%	DIP bond 2014 / 2023	EUR 500 million	497	497
6.061%	5.625%	Mandatory Convertible Notes [8] 2016 / 2019	EUR 4,000 million	–	–
		Bayer Corporation, U.S.A.			
6.670%	6.650%	Notes 1998 / 2028	US$350 million	342	351
		Bayer Holding Ltd., Japan			
0.858%	0.816%	DIP bond 2012 / 2017	JPY 30 billion	229	243
1.493%	1.459%	DIP bond 2010 / 2017	JPY 10 billion	76	81
3.654%	3.575%	DIP bond 2008 / 2018	JPY 15 billion	115	122
0.629%	0.594%	DIP bond 2013 / 2019	JPY 10 billion	76	81
		Bayer Nordic SE, Finland			
Floating [2]	Floating [2]	DIP bond 2013 / 2016	EUR 200 million	200	–
Floating [3]	Floating [3]	DIP bond 2014 / 2017	EUR 500 million	500	500
		Bayer U.S. Finance LLC, U.S.A.			
Floating [4]	Floating [4]	Notes 2014 / 2016	US$500 million	459	–
Floating [5]	Floating [5]	Notes 2014 / 2017	US$400 million	367	379
1.615%	1.500%	Notes 2014 / 2017	US$850 million	779	806
2.564%	2.375%	Notes 2014 / 2019	US$2,000 million	1,826	1,889
3.096%	3.000%	Notes 2014 / 2021	US$1,500 million	1,372	1,419
3.579%	3.375%	Notes 2014 / 2024	US$1,750 million	1,587	1,642
		Covestro AG, Germany			
Floating [6]	Floating [6]	DIP bond 2016 / 2018	EUR 500 million	–	500
1.076%	1.000%	DIP bond 2016 / 2021	EUR 500 million	–	497
1.782%	1.750%	DIP bond 2016 / 2024	EUR 500 million	–	497
		Total		**15,427**	**15,946**

[1] Floating-rate coupon comprising three-month EURIBOR plus 22 basis points
[2] Floating-rate coupon comprising three-month EURIBOR plus 35 basis points
[3] Floating-rate coupon comprising three-month EURIBOR plus 22 basis points
[4] Floating-rate coupon comprising three-month USD-LIBOR plus 25 basis points
[5] Floating-rate coupon comprising three-month USD-LIBOR plus 28 basis points
[6] Floating-rate coupon comprising three-month EURIBOR plus 60 basis points
[7] Date of first option to early redeem the bond at par
[8] The mandatory convertible notes were allocated to capital reserves and to other financial liabilities.

Debt Issuance Programme

An important means of external financing are the bonds issued under the Debt Issuance Programme (DIP), previously known as the multi-currency European Medium Term Notes (EMTN) program. The Debt Issuance Programme allows bonds in different currencies and with different maturities to be placed flexibly with investors.

Hybrid bonds

The hybrid bonds issued by Bayer AG are subordinated, and 50% of their amount is treated by Moody's and S & P Global Ratings as equity. They therefore have a more limited effect on the Group's rating-relevant debt indicators than senior borrowings.

Mandatory convertible notes

On November 22, 2016, Bayer Capital Corporation B.V. placed subordinated mandatory convertible notes in the amount of €4,000 million, which will be converted into no-par shares of Bayer AG at maturity. The notes represented the first part of the equity component of the financing for the planned acquisition of Monsanto Company. After deducting transaction costs of €48 million and recognition of deferred taxes of €191 million, €3,491 million were allocated to capital reserves and €652 million to other financial liabilities.

Bayer AG guarantees all the notes and bonds issued by subsidiaries (except Covestro companies).

Lease liabilities

Lease payments totaling €609 million (2015: €646 million), including €173 million (2015: €172 million) in interest, are to be made under finance leases to the respective lessors in future years.

The liabilities under finance leases mature as follows:

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Lease Liabilities

€ million	Dec. 31, 2015			€ million	Dec. 31, 2016		
Maturity	Lease payments	Interest component	Liabilities under finance leases	Maturity	Lease payments	Interest component	Liabilities under finance leases
2016	86	27	59	2017	88	29	59
2017	76	23	53	2018	76	24	52
2018	68	20	48	2019	68	21	47
2019	60	18	42	2020	59	17	42
2020	60	15	45	2021	57	15	42
2021 or later	296	69	227	2022 or later	261	67	194
Total	**646**	**172**	**474**	**Total**	**609**	**173**	**436**

Other information

As of December 31, 2016, the Group had undrawn credit facilities at its disposal totaling €55 billion (2015: €6.2 billion), including €50 billion in bridge financing for the planned acquisition of Monsanto Company and €1.5 billion in facilities available to Covestro.

Further information on the accounting for liabilities from derivatives is given in Note (30).

28. Trade accounts payable

Trade accounts payable comprised €6,403 million (2015: €5,937 million) due within one year and €7 million (2015: €8 million) due after one year.

29. Other liabilities

Other liabilities comprised:

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Other Liabilities

	Dec. 31, 2015		Dec. 31, 2016	
€ million	Total	Of which current	Total	Of which current
Other tax liabilities	435	428	544	527
Deferred income	1,148	204	1,463	651
Liabilities to employees	217	210	229	219
Liabilities for social expenses	174	165	168	157
Accrued interest on liabilities	189	180	186	181
Miscellaneous liabilities	436	347	788	686
Total	**2,599**	**1,534**	**3,378**	**2,421**

Deferred income included an upfront payment, originally amounting to US$1 billion, in connection with the strategic pharmaceutical collaboration agreed between Bayer and Merck & Co., Inc., United States, in the field of soluble guanylate cyclase (sGC) modulation. This deferred income is being amortized over a period of 13.5 years as the obligations are satisfied. The remaining amount deferred at the end of 2016 was €660 million (2015: €719 million). The amount amortized in 2016 was €59 million (2015: €59 million).

Deferred income also included the proceeds from the sale of the Diabetes Care business at the beginning of 2016. The original sale proceeds of around €1 billion are being realized over a period of up to 24 months as the obligations are satisfied. €469 million remained deferred at the end of 2016.

The deferred income included €62 million (2015: €62 million) in grants and subsidies received from governments, of which €15 million (2015: €7 million) was reversed and recognized in profit or loss.

The miscellaneous liabilities included €271 million (2015: €125 million) from derivatives.

30. Financial instruments

The system used by the Bayer Group to manage credit risks, liquidity risks and the different types of market price risk (interest-rate and currency risks), together with its objectives, methods and procedures, is outlined in the Opportunity and Risk Report, which forms part of the Combined Management Report.

30.1 Financial instruments by category

The following table shows the carrying amounts and fair values of financial assets and liabilities for each financial instrument category and a reconciliation to the corresponding line item in the statements of financial position. Since the line items “Other receivables,” “Trade accounts payable” and “Other liabilities” contain both financial instruments and nonfinancial assets or liabilities (such as other tax receivables or advance payments for services to be received in the future), the reconciliation is shown in the column headed “Nonfinancial assets / liabilities.”

Carrying Amounts and Fair Values of Financial Instruments

						Dec. 31, 2016
	Carried at amortized cost	Carried at fair value (Fair value for information [1])			Non-financial assets / liabilities	
€ million	Carrying amount	Based on quoted prices in active markets (Level 1) Carrying amount	Based on observable market data (Level 2) Carrying amount	Based on unobservable inputs (Level 3) Carrying amount	Carrying amount	**Carrying amount in the statement of financial position**
Trade accounts receivable	10,969					10,969
Loans and receivables	10,969					10,969
Other financial assets	2,245	523	3,985	803		7,556
Loans and receivables	2,148		(2,145)	(16)		2,148
Available-for-sale financial assets	32	520	3,283	794		4,629
Held-to-maturity financial assets	65		(68)			65
Derivatives that qualify for hedge accounting			269			269
Derivatives that do not qualify for hedge accounting		3	433	9		445
Other receivables	633			57	2,103	2,793
Loans and receivables	633		(633)			633
Available-for-sale financial assets				57		57
Nonfinancial assets					2,103	2,103
Cash and cash equivalents	1,899					1,899
Loans and receivables	1,899		(1,899)			1,899
Total financial assets	**15,746**	**523**	**3,985**	**860**		**21,114**
of which loans and receivables	15,649					15,649
of which available-for-sale financial assets	32	520	3,283	851		4,686
Financial liabilities	18,994		587			19,581
Carried at amortized cost	18,994	(16,040)	(3,362)			18,994
Derivatives that qualify for hedge accounting			312			312
Derivatives that do not qualify for hedge accounting			275			275
Trade accounts payable	6,035				375	6,410
Carried at amortized cost	6,035					6,035
Nonfinancial liabilities					375	375
Other liabilities	840	2	252	25	2,259	3,378
Carried at amortized cost	840		(840)			840
Carried at fair value (nonderivative)				8		8
Derivatives that qualify for hedge accounting			165			165
Derivatives that do not qualify for hedge accounting		2	87	17		106
Nonfinancial liabilities					2,259	2,259
Total financial liabilities	**25,869**	**2**	**839**	**25**		**26,735**
of which carried at amortized cost	25,869					25,869
of which derivatives that qualify for hedge accounting			477			477
of which derivatives that do not qualify for hedge accounting		2	362	17		381

[1] The exemption provisions under IFRS 7.29(a) were applied for information on specific fair values.

Carrying Amounts and Fair Values of Financial Instruments

		Dec. 31, 2015				
	Carried at amortized cost	Carried at fair value (Fair value for information[1])			Non-financial assets / liabilities	
€ million	Carrying amount	Based on quoted prices in active markets (Level 1) Carrying amount	Based on observable market data (Level 2) Carrying amount	Based on unobservable inputs (Level 3) Carrying amount	Carrying amount	Carrying amount in the statement of financial position
Trade accounts receivable	9,933					9,933
Loans and receivables	9,933					9,933
Other financial assets	185	363	509	791		1,848
Loans and receivables	72		(64)	(18)		72
Available-for-sale financial assets	40	363		774		1,177
Held-to-maturity financial assets	73		(74)			73
Derivatives that qualify for hedge accounting			125			125
Derivatives that do not qualify for hedge accounting			384	17		401
Other receivables	506			59	1,882	2,447
Loans and receivables	506		(506)			506
Available-for-sale financial assets				59		59
Nonfinancial assets					1,882	1,882
Cash and cash equivalents	1,859					1,859
Loans and receivables	1,859		(1,859)			1,859
Total financial assets	**12,483**	**363**	**509**	**850**		**14,205**
of which loans and receivables	12,370					12,370
of which available-for-sale financial assets	40	363		833		1,236
Financial liabilities	19,169		765			19,934
Carried at amortized cost	19,169	(15,440)	(4,121)			19,169
Derivatives that qualify for hedge accounting			470			470
Derivatives that do not qualify for hedge accounting			295			295
Trade accounts payable	5,680				265	5,945
Carried at amortized cost	5,680					5,680
Nonfinancial liabilities					265	265
Other liabilities	606		117	45	1,831	2,599
Carried at amortized cost	606		(606)			606
Carried at fair value (nonderivative)				37		37
Derivatives that qualify for hedge accounting			93			93
Derivatives that do not qualify for hedge accounting			24	8		32
Nonfinancial liabilities					1,831	1,831
Total financial liabilities	**25,455**		**882**	**45**		**26,382**
of which carried at amortized cost	25,455					25,455
of which derivatives that qualify for hedge accounting			563			563
of which derivatives that do not qualify for hedge accounting			319	8		327

[1] The exemption provisions under IFRS 7.29(a) were applied for information on specific fair values.

The loans and receivables reflected in other financial assets and the liabilities measured at amortized cost also include receivables and liabilities under finance leases in which Bayer is the lessor or lessee and which are therefore measured in accordance with IAS 17.

Because of the short maturities of most trade accounts receivable and payable, other receivables and liabilities, and cash and cash equivalents, their carrying amounts at the closing date do not significantly differ from the fair values.

The fair values of loans and receivables, held-to-maturity financial investments and of financial liabilities carried at amortized cost that are given for information are the present values of the respective future cash flows. The present values are determined by discounting the cash flows at a closing-date interest rate, taking into account the term of the assets or liabilities and the creditworthiness of the counterparty. Where a market price is available, however, this is deemed to be the fair value.

The fair values of available-for-sale financial assets correspond to quoted prices in active markets (Level 1), are determined using valuation techniques based on observable market data as of the end of the reporting period (Level 2) or are the present values of the respective future cash flows, determined on the basis of unobservable inputs (Level 3).

The fair values of derivatives for which no publicly quoted prices exist in active markets (Level 1) are determined using valuation techniques based on observable market data as of the end of the reporting period (Level 2). In applying valuation techniques, credit value adjustments are determined to allow for the contracting party's credit risk.

Currency and commodity forward contracts are measured individually at their forward rates or forward prices on the closing date. These depend on spot rates or prices, including time spreads. The fair values of interest-rate hedging instruments and cross-currency interest-rate swaps are determined by discounting future cash flows over the remaining terms of the instruments at market rates of interest, taking into account any foreign currency translation as of the closing date.

Fair values estimated using unobservable inputs are categorized within Level 3 of the fair value hierarchy. This applies to certain available-for-sale debt or equity instruments, in some cases to the fair values of embedded derivatives, and to obligations for contingent consideration in business combinations. Credit risk is frequently the principal unobservable input used to determine the fair values of debt instruments classified as available-for-sale financial assets by the discounted cash flow method. Here the credit spreads of comparable issuers are applied. A significant increase in credit risk could result in a lower fair value, whereas a significant decrease could result in a higher fair value. However, a relative change of 10% in the credit spread does not materially affect the fair value.

Embedded derivatives are separated from their respective host contracts. Such host contracts are generally sale or purchase agreements relating to the operational business. The embedded derivatives cause the cash flows from the contracts to vary with exchange-rate or price fluctuations. The internal measurement of embedded derivatives is mainly performed using the discounted cash flow method, which is based on unobservable inputs. These include planned sales and purchase volumes, and prices derived from market data. Regular monitoring is carried out based on these fair values as part of quarterly reporting.

The changes in the amount of financial assets and liabilities recognized at fair value based on unobservable inputs (Level 3) for each financial instrument category were as follows:

B 30.1/3

Development of Financial Assets and Liabilities (Level 3)

	2015				2016			
€ million	Available-for-sale financial assets	Derivatives (net)	Liabilites measured at fair value (non-derivative)	Total	Available-for-sale financial assets	Derivatives (net)	Liabilites carried at fair value (non-derivative)	Total
Carrying amounts of net assets / (net liabilities), Jan. 1	**803**	**6**	**(31)**	**778**	**833**	**9**	**(37)**	**805**
Gains (losses) recognized in profit or loss	22	(12)	(3)	7	18	(17)	23	24
of which related to assets / liabilities recognized in the statements of financial position	22	(17)	(3)	2	18	(17)	–	1
Gains (losses) recognized outside profit or loss	19	–	–	19	9	–	–	9
Additions of assets / (liabilities)	11	–	(4)	7	46	–	–	46
Settlements of (assets) / liabilities	(22)	9	1	(12)	(23)	–	6	(17)
Transfers (IFRS 5)	–	6	–	6	–	–	–	–
Transfers to a different fair-value hierarchy	–	–	–	–	(32)	–	–	(32)
Net carrying amounts of assets / (liabilities), Dec. 31	**833**	**9**	**(37)**	**805**	**851**	**(8)**	**(8)**	**835**

The changes recognized in profit or loss were included in other operating income / expenses, interest income or exchange gains / losses.

Income, expense, gains and losses on financial instruments can be assigned to the following categories:

B 30.1/4

Income, Expense, Gains and Losses on Financial Instruments

	2016					
€ million	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Total
Interest income	44	–	21	2	62	129
Interest expense	–	–	–	(3)	(642)	(645)
Income / expenses from affiliated companies	–	–	–	–	–	–
Changes in fair value	–	–	–	(77)	–	(77)
Impairment losses	(171)	–	(2)	–	–	(173)
Impairment loss reversals	26	–	–	–	–	26
Exchange gains / losses	355	–	–	(103)	(374)	(122)
Gains / losses from retirements	–	–	6	–	–	6
Other financial income /expenses	(1)	–	–	–	(34)	(35)
Net result	**253**	**–**	**25**	**(181)**	**(988)**	**(891)**

Income, Expense, Gains and Losses on Financial Instruments (Previous Year)

						2015
€ million	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Total
Interest income	55	1	22	25	86	189
Interest expense	–	–	–	(25)	(703)	(728)
Income / expenses from affiliated companies	–	–	3	–	–	3
Changes in fair value	–	–	–	147	–	147
Impairment losses	(93)	–	(1)	–	–	(94)
Impairment loss reversals	32	–	–	–	–	32
Exchange gains / losses	450	–	–	(235)	(679)	(464)
Gains / losses from retirements	–	–	31	–	–	31
Other financial income /expenses	(1)	–	13	–	(12)	–
Net result	**443**	**1**	**68**	**(88)**	**(1,308)**	**(884)**

The interest expense of €642 million (2015: €703 million) from nonderivative financial liabilities also included the income and expense from interest-rate swaps that qualified for hedge accounting. Interest income from financial assets not measured at fair value through profit or loss amounted to €65 million (2015: €73 million). Interest income from interest-rate derivatives that qualified for hedge accounting was €62 million (2015: €86 million). The changes in fair values of financial assets held for trading related mainly to forward commodity contracts and embedded derivatives.

Derivatives that form part of a master netting arrangement, constitute a financial asset or liability and can only be netted in the event of breach of contract by, or insolvency of, one of the contracting parties do not satisfy, or only partially satisfy, the criteria for offsetting in the statement of financial position according to IAS 32. The volume of such derivatives with positive fair values was €630 million (2015: €415 million), and the volume with negative fair values was €762 million (2015: €761 million). Included here is an amount of €362 million (2015: €256 million) in positive and negative fair values of derivatives concluded with the same contracting party.

30.2 Maturity analysis

The liquidity risks to which the Bayer Group was exposed from its financial instruments at the end of the reporting period comprised obligations for future interest and repayment installments on financial liabilities and the liquidity risk arising from derivatives, as shown in the table in Note (30.3).

In addition, loan commitments existed for an as yet unpaid €1,213 million (2015: €1,213 million) portion of the effective initial fund of Bayer-Pensionskasse VVaG, which may result in further payments by Bayer AG (€1,005 million) and / or Covestro AG (€208 million) in subsequent years.

Maturity Analysis of Financial Instruments

€ million	Dec. 31, 2016 Carrying amount	2017	2018	2019	2020	2021	after 2021
		Interest and repayment					
Financial liabilities							
Bonds and notes / promissory notes	15,991	2,261	2,160	2,367	295	2,916	8,093
Liabilities to banks	1,837	884	998	39	–	–	9
Remaining liabilities	1,166	293	303	382	61	58	268
Trade accounts payable	6,035	6,028	4	2	1	–	–
Other liabilities							
Accrued interest on liabilities	186	181	1	1	1	–	2
Remaining liabilities	662	626	3	5	2	1	25
Liabilities from derivatives							
Derivatives that qualify for hedge accounting	477	178	231	157	2	–	–
Derivatives that do not qualify for hedge accounting	381	374	3	4	2	1	1
Receivables from derivatives							
Derivatives that qualify for hedge accounting	269	210	23	4	3	2	–
Derivatives that do not qualify for hedge accounting	445	467	2	2	1	1	1
Loan commitments	–	1,213	–	–	–	–	–
Financial guarantees	–	14	–	–	–	–	3

Maturity Analysis of Financial Instruments

€ million	Dec. 31, 2015 Carrying amount	2016	2017	2018	2019	2020	after 2020
		Interest and repayment					
Financial liabilities							
Bonds and notes / promissory notes	15,547	1,475	2,334	1,704	2,282	277	9,845
Liabilities to banks	2,779	1,221	298	1,387	38	–	10
Remaining liabilities	843	440	79	69	60	61	307
Trade accounts payable	5,680	5,673	3	3	2	–	–
Other liabilities							
Accrued interest on liabilities	189	180	1	2	1	1	4
Remaining liabilities	454	420	5	2	1	1	25
Liabilities from derivatives							
Derivatives that qualify for hedge accounting	563	397	11	122	50	–	–
Derivatives that do not qualify for hedge accounting	327	312	8	1	3	1	2
Receivables from derivatives							
Derivatives that qualify for hedge accounting	125	66	26	13	2	2	1
Derivatives that do not qualify for hedge accounting	401	379	2	3	2	2	4
Loan commitments	–	1,213	–	–	–	–	–
Financial guarantees	–	14	–	–	–	–	2

30.3 Information on derivatives

Asset and liability fair values and future cash flows are exposed to currency, interest-rate and commodity price risks. Derivatives are used to reduce this risk. In some cases they are designated as hedging instruments in a hedge accounting relationship.

Currency risks

Foreign currency receivables and liabilities are hedged using foreign exchange derivatives without the existence of a hedge accounting relationship. A bond of Bayer AG denominated in British pounds was swapped on the issuance date into a fixed-rate euro bond by means of a cross-currency interest-rate swap, which was designated as a cash flow hedge. Cross-currency interest-rate swaps used to hedge intra-Group loans were also designated as cash flow hedges.

Fluctuations in future cash flows resulting from forecasted foreign currency transactions and procurement activities are avoided partly through derivatives contracts, most of which are designated as cash flow hedges.

Foreign currency risks related to the planned acquisition of Monsanto Company were partially hedged with currency derivatives, which were designated as cash flow hedges.

Interest-rate risk

The interest-rate risks from fixed-interest borrowings are managed in part using interest-rate swaps. Two interest-rate swaps in the total amount of €200 million were designated as fair value hedges for the €750 million DIP bond issued in 2014 and maturing in 2021.

Losses of €1 million were recorded on fair-value hedging instruments in 2016 (2015: €26 million). Gains of €1 million were recorded on the underlying hedged items (2015: €25 million).

Commodity price risks

Hedging contracts are also used to partly reduce exposure to fluctuations in future cash outflows and inflows resulting from price changes on procurement and selling markets.

Hedging of obligations under stock-based employee compensation programs

A portion of the obligations to make variable payments to employees under stock-based compensation programs (Aspire) is hedged against share price fluctuations using derivatives contracts that are settled in cash at maturity. These derivatives are designated as cash flow hedges.

Further information on cash flow hedges

Accumulated other comprehensive income from cash flow hedges increased in 2016 by €44 million (2015: decreased by €203 million) due to changes in the fair values of derivatives net of tax. Total changes of €3 million in the fair values of derivatives were expensed in 2016 (2015: €304 million). The respective prorated deferred tax income of €2 million (2015: €88 million) was likewise recognized through profit or loss.

No material ineffective portions of hedges required recognition through profit or loss in 2016 or 2015.

The income and expense from cash flow hedges recognized in accumulated other comprehensive income mainly comprised gains of €204 million (2015: €91 million) and losses of €143 million (2015: €90 million) from the hedging of forecasted transactions in foreign currencies and the planned acquisition of Monsanto Company. Of these gains and losses, a net amount of minus €91 million (2015: minus €5 million) will be reclassifiable to profit or loss within one year, and a net amount of €2 million (2015: €6 million) in subsequent years.

The fair values of existing contracts in the major categories at the end of the reporting period are indicated in the following table together with the included volumes of cash flow hedges.

B 30.3/1

Fair Values of Derivatives

	Dec. 31, 2015			Dec. 31, 2016		
€ million	Notional amount [1]	Positive fair value	Negative fair value	Notional amount [1]	Positive fair value	Negative fair value
Currency hedging of recorded transactions	**22,275**	**337**	**(753)**	**22,645**	**299**	**(587)**
Forward exchange contracts	19,896	336	(283)	20,454	296	(273)
of which cash flow hedges	–	–	–	–	–	–
Cross-currency interest-rate swaps	2,379	1	(470)	2,191	3	(314)
of which cash flow hedges	2,362	–	(470)	2,146	3	(312)
Currency hedging of forecasted transactions	**4,082**	**99**	**(100)**	**17,799**	**317**	**(206)**
Forward exchange contracts	3,627	86	(99)	3,805	48	(145)
of which cash flow hedges	3,255	78	(90)	3,672	43	(138)
Currency options	455	13	(1)	13,994	269	(61)
of which cash flow hedges	368	13	(1)	13,698	161	(5)
Interest-rate hedging of recorded transactions	**200**	**13**	**–**	**200**	**14**	**–**
Interest-rate swaps	200	13	–	200	14	–
of which fair value hedges	200	13	–	200	14	–
Commodity price hedging	**91**	**14**	**(12)**	**168**	**5**	**(4)**
Forward commodity contracts	86	12	(10)	167	4	(4)
Commodity option contracts	5	2	(2)	1	1	–
Hedging of stock-based employee compensation programs	**80**	**21**	**(2)**	**532**	**48**	**(22)**
Share price options	30	21	–	152	48	–
of which cash flow hedges	30	21	–	152	48	–
Share price forwards	50	–	(2)	380	–	(22)
of which cash flow hedges	50	–	(2)	380	–	(22)
Total	**26,728**	**484**	**(867)**	**41,344**	**683**	**(819)**
of which current derivatives	25,022	435	(692)	38,349	635	(514)
for currency hedging	24,931	420	(680)	38,111	597	(510)
for interest-rate hedging [2]	–	1	–	–	3	–
for commodity price hedging	91	14	(12)	168	5	(4)
for hedging of stock-based employee compensation programs	–	–	–	70	30	–

[1] The notional amount is reported as gross volume, which also contains economically closed hedges.
[2] The portion of the fair value of long-term interest-rate swaps that relates to current interest payments is classified as current.

31. Contingent liabilities and other financial commitments

Contingent liabilities

The following warranty contracts, guarantees and other contingent liabilities existed at the end of the reporting period:

B 31/1

Contingent Liabilities

€ million	Dec. 31, 2015	Dec. 31, 2016
Warranties	99	100
Guarantees	123	264
Other contingent liabilities	562	444
Total	**784**	**808**

The guarantees mainly comprise a declaration issued by Bayer AG to the trustees of the U.K. pension plans guaranteeing the pension obligations of Bayer Public Limited Company and Bayer CropScience Limited. Under the declaration, Bayer AG – in addition to the two companies – undertakes to make further payments into the plans upon receipt of a payment request from the trustees. The net liability with respect to these defined benefit plans as of December 31, 2016, rose to €264 million (2015: €123 million) due to the sharp drop in interest rates.

Other financial commitments

The other financial commitments were as follows:

B 31/2

Other Financial Commitments

€ million	Dec. 31, 2015	Dec. 31, 2016
Operating leases	891	1,101
Orders already placed under purchase agreements	690	722
Capital contribution commitments	391	182
Definitive merger agreement with Monsanto Company, St. Louis, Missouri, U.S.A. [1]	–	53,000
Unpaid portion of the effective initial fund	1,213	1,213
Potential payment obligations under R&D collaboration agreements	2,887	2,444
Revenue-based milestone payment commitments	2,241	1,839
Total	**8,313**	**60,501**

[1] The contingent financial commitment of around US$56 billion was translated at the closing rate.

On September 14, 2016, Bayer signed a definitive merger agreement with Monsanto Company, St. Louis, Missouri, United States, which provides for Bayer's acquisition of all outstanding shares in Monsanto Company against a cash payment of US$128 per share. Bayer thus has a contingent financial commitment in the amount of approximately US$56 billion to acquire Monsanto's entire outstanding capital stock. Further details of this planned acquisition are given in Note (6.2).

The nondiscounted future minimum lease payments relating to operating leases totaled €1,101 million (2015: €891 million). The maturities of the respective payment obligations were as follows:

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Operating Leases

Maturing in	Dec. 31, 2015	Maturing in	Dec. 31, 2016
	€ million		€ million
2016	195	2017	237
2017	155	2018	192
2018	110	2019	161
2019	94	2020	138
2020	79	2021	102
2021 or later	258	2022 or later	271
Total	**891**	**Total**	**1,101**

Financial commitments resulting from orders already placed under purchase agreements related to planned or ongoing capital expenditure projects totaled €722 million (2015: €690 million).

The Bayer Group has entered into cooperation agreements with third parties under which it has agreed to fund various research and development projects or has assumed other payment obligations based on the achievement of certain milestones or other specific conditions. If all of these payments have to be made, their maturity distribution as of December 31, 2016, was expected to be as set forth in the following table. The amounts shown represent the maximum payments to be made, and it is unlikely that they will all fall due. Since the achievement of the conditions for payment is highly uncertain, both the amounts and the dates of the actual payments may vary considerably from those stated in the table.

Potential Payment Obligations Under R&D Collaboration Agreements

Maturing in	Dec. 31, 2015	Maturing in	Dec. 31, 2016
	€ million		€ million
2016	262	2017	233
2017	229	2018	151
2018	96	2019	333
2019	240	2020	66
2020	78	2021	28
2021 or later	1,982	2022 or later	1,633
Total	**2,887**	**Total**	**2,444**

In addition to the above commitments, there were also revenue-based milestone payment commitments totaling €1,839 million (2015: €2,241 million), of which €1,834 million (2015: €2,237 million) was not expected to fall due until 2022 (2015: 2021) or later. These commitments are also highly uncertain.

32. Legal risks

As a global company with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks, particularly in the areas of product liability, competition and antitrust law, anticorruption, patent disputes, tax assessments and environmental matters. The outcome of any current or future proceedings cannot normally be predicted. It is therefore possible that legal or regulatory judgments or future settlements could give rise to expenses that are not covered, or not fully covered, by insurers' compensation payments and could significantly affect our revenues and earnings.

Legal proceedings currently considered to involve material risks are outlined below. The legal proceedings referred to do not represent an exhaustive list.

Product-related litigation

Yasmin™ / YAZ™: Most of the lawsuits and claims concerning Bayer's drospirenone-containing oral contraceptives in the United States have been resolved. Claimants allege that users have suffered personal injuries, some of them fatal, from the use of Yasmin™ and / or YAZ™ or their generic versions, and seek compensatory and punitive damages, claiming, in particular, that Bayer had not adequately warned of the alleged risks.

As of January 23, 2017, lawsuits and claims of approximately 100 claimants remain pending against Bayer in the United States. Without admission of liability, Bayer is considering about a dozen of the lawsuits and claims for possible settlement after a case-specific analysis of medical records.

A few U.S. State Attorney Generals are investigating alleged violations of consumer protection statutes, including off-label promotion and failure to warn. One Attorney General has filed an action against Bayer.

As of January 23, 2017, 13 lawsuits seeking class action certification had been served upon Bayer in Canada. In two of these lawsuits a class has been certified. Two motions for certification of a class action are pending in Israel.

Bayer believes that it has meritorious defenses and will continue to defend itself vigorously against all claims that are not considered for settlement.

Mirena™: As of January 23, 2017, lawsuits from approximately 2,600 users of Mirena™, a levonorgestrel-releasing intrauterine system providing long-term contraception, had been served upon Bayer in the United States (excluding lawsuits no longer pending). Plaintiffs allege personal injuries resulting from the use of Mirena™, including perforation of the uterus, ectopic pregnancy or idiopathic intracranial hypertension, and seek compensatory and punitive damages. Plaintiffs claim, inter alia, that Mirena™ is defective and that Bayer knew or should have known of the risks associated with it and failed to adequately warn its users. Additional lawsuits are anticipated. Most of the cases pending in U.S. federal courts have been consolidated in a multidistrict litigation proceeding for common pre-trial management. In July 2016, the multidistrict litigation court granted summary judgment dismissing approximately 1,230 cases pending before that court. Plaintiffs have appealed the decision. As of January 23, 2017, five Canadian lawsuits relating to Mirena™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Xarelto™: As of January 23, 2017, U.S. lawsuits from approximately 16,400 recipients of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Xarelto™, including cerebral, gastrointestinal or other bleeding and death, and seek compensatory and punitive damages. They claim, amongst other things, that Xarelto™ is defective and that Bayer knew or should have known of these risks associated with the use of Xarelto™ and failed to adequately warn its users. Additional lawsuits are anticipated. Cases pending in U.S. federal courts have been consolidated in a multidistrict litigation for common pre-trial management. As of January 23, 2017, ten Canadian lawsuits relating to Xarelto™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Essure™: As of January 23, 2017, U.S. lawsuits from approximately 3,700 users of Essure™, a medical device offering permanent birth control with a nonsurgical procedure, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Essure™, including hysterectomy, perforation, pain, bleeding, weight gain, nickel sensitivity, depression and unwanted pregnancy. Additional lawsuits are anticipated. As of January 23, 2017, two Canadian lawsuits relating to Essure™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

In connection with the above-mentioned proceedings, Bayer is insured against statutory product liability claims against Bayer to the extent customary in the respective industries and has, based on the information currently available, taken appropriate accounting measures for anticipated defense costs. However, the accounting measures relating to Yasmin™ / YAZ™ and Essure™ claims exceed the available insurance coverage. Concerning Yasmin™ / YAZ™, the accounting measures include costs for agreed and anticipated future settlements based on the information currently available and based on the number of pending and estimated future claims alleging venous clot injuries.

Patent disputes

Beyaz™ / Safyral™: Beyaz™ and Safyral™ are Bayer's oral contraceptives containing folate. In 2015, a U.S. federal court ruled in favor of Bayer regarding both the validity of its patent and the infringement thereof by Watson Laboratories, Inc. ("Watson"). Watson had filed Abbreviated New Drug Applications with a Paragraph IV certification ("ANDA IV") seeking approval of generic versions of both Beyaz™ and Safyral™ in the United States. In May 2016, the U.S. Court of Appeals for the Federal Circuit invalidated the patent claims asserted by Bayer and reversed the judgment by the U.S. federal court. Bayer petitioned the U.S. Supreme Court to review the decision by the U.S. Court of Appeals for the Federal Circuit. In January 2017, the U.S. Supreme Court denied Bayer's petition. The decision by the U.S. Court of Appeals for the Federal Circuit against Bayer is now final. In 2015, Bayer filed two lawsuits against Lupin Ltd. and Lupin Pharmaceuticals, Inc. (together "Lupin") in a U.S. federal court for infringement of the same patent. Prior to this in 2015, Bayer had received two notices of an ANDA IV application by Lupin seeking approval to market generic versions of Safyral™ and Beyaz™ in the United States. In view of the May 2016 decision by the U.S. Court of Appeals for the Federal Circuit, the U.S. federal court ruled in favor of Lupin in November 2016. This decision is now also final.

Betaferon™ / Betaseron™: In 2010, Bayer filed a complaint against Biogen Idec MA Inc. in a U.S. federal court seeking a declaration by the court that a patent issued to Biogen in 2009 is invalid and not infringed by Bayer's production and distribution of Betaseron™, Bayer's drug product for the treatment of multiple sclerosis. Biogen is alleging patent infringement by Bayer through Bayer's production and distribution of Betaseron™ and Extavia™ and has sued Bayer accordingly. Bayer manufactures Betaseron™ and distributes the product in the United States. Extavia™ is also a drug product for the treatment of multiple sclerosis; it is manufactured by Bayer, but distributed in the United States by Novartis Pharmaceuticals Corporation, another defendant in the lawsuit. In March 2016, the U.S. federal court decided a disputed issue regarding the scope of the patent in Biogen's favor. Bayer disagrees with the decision, which may be appealed at the conclusion of the proceedings in the U.S. federal court.

Damoctocog alfa pegol (BAY 94-9027, long-acting rFVIII): In 2013, Bayer filed a lawsuit against Nektar Therapeutics in the district court of Munich, Germany. In this proceeding, Bayer claims rights to certain European patent applications based on a past collaboration between Bayer and Nektar in the field of hemophilia. The European patent applications with the title "Polymer-factor VIII moiety conjugates" are part of a patent family registered in the name of Nektar comprising further patent applications and patents in other countries including the United States. However, Bayer believes that the patent family does not include any valid patent claim relevant for Bayer's drug candidate BAY 94-9027 for the treatment of hemophilia A.

Nexavar™: In 2015, Bayer filed patent infringement lawsuits in a U.S. federal court against Mylan Pharmaceuticals Inc. and Mylan Inc. (together "Mylan"). In 2014 and 2015, Bayer had received notices of an ANDA IV application pursuant to which Mylan seeks approval of a generic version of Bayer's cancer drug Nexavar™ in the United States. In November 2016, Bayer received another notice of such an ANDA IV application by Teva Pharmaceuticals USA, Inc. In December 2016, Bayer filed a patent infringement lawsuit against Teva Pharmaceuticals USA, Inc. and Teva Pharmaceutical Industries LTD in the same U.S. federal court.

Stivarga™: In December 2016, Bayer filed patent infringement lawsuits in a U.S. federal court against Apotex, Inc. and Apotex Corp. (together "Apotex") and against Teva Pharmaceuticals USA, Inc. and Teva Pharmaceutical Industries LTD (together "Teva"). In November 2016, Bayer had received notices of an ANDA IV application pursuant to which Apotex and Teva each seek approval of a generic version of Bayer's cancer drug Stivarga™ in the United States.

Xarelto™: In 2015, Bayer and Janssen Pharmaceuticals, Inc. filed a patent infringement lawsuit in a U.S. federal court against Aurobindo Pharma Limited, Aurobindo Pharma USA, Inc. (together "Aurobindo"), Breckenridge Pharmaceutical Inc. ("Breckenridge"), Micro Labs Ltd., Micro Labs USA Inc. (together "Micro Labs"), Mylan Pharmaceuticals Inc., Mylan Inc. (together "Mylan"), Prinston Pharmaceutical Inc. ("Prinston"), Sigmapharm Laboratories, LLC ("Sigmapharm"), Torrent Pharmaceuticals, Limited and Torrent Pharma Inc. (together "Torrent"). Earlier in 2015, Bayer had received notices of an ANDA IV application by Aurobindo, Breckenridge, Micro Labs, Mylan, Prinston, Sigmapharm and Torrent, each seeking approval to market a generic version of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, in the United States. In January 2016, Bayer received another notice of such an ANDA IV application by InvaGen Pharmaceuticals, Inc. ("InvaGen"). In February 2016, Bayer and Janssen Pharmaceuticals, Inc. filed a patent infringement lawsuit against InvaGen in the same U.S. federal court.

Bayer believes it has meritorious defenses in the above ongoing patent disputes and intends to defend itself vigorously.

Further legal proceedings

Trasylol™ / Avelox™: A qui tam complaint relating to marketing practices for Trasylol™ (aprotinin) and Avelox™ (moxifloxacin) filed by a former Bayer employee is pending in the United States District Court in New Jersey. The U.S. government has declined to intervene at the present time.

Newark Bay Environmental Matters: In the United States, Bayer is one of numerous parties involved in a series of claims brought by federal and state environmental protection agencies. The claims arise from operations by entities which historically were conducted near Newark Bay or surrounding bodies of water, or which allegedly discharged hazardous waste into these waterways or onto nearby land. Bayer and the other potentially responsible parties are being asked to remediate and contribute to the payment of past and future remediation or restoration costs and damages. In August 2016, Bayer learned that two major potentially responsible parties had filed for protection under Chapter 11 of the U.S. Bankruptcy Code. While Bayer remains unable to determine the extent of its liability for these matters, this development is likely to adversely affect the share of costs potentially allocated to Bayer.

In the Lower Passaic River matter, a group of more than sixty companies including Bayer is investigating contaminated sediments in the riverbed under the supervision of the United States Environmental Protection Agency (EPA) and other governmental authorities. Future remediation will involve some form of dredging, the nature and scope of which are not yet defined, and potentially other tasks. The cost of the investigation and the remediation work may be substantial if the final remedy involves extensive dredging and disposal of impacted sediments. In the Newark Bay matter, an unaffiliated party is currently conducting an investigation of sediments in Newark Bay under EPA supervision. The investigation is in a preliminary stage. Bayer has contributed to certain investigation costs in the past and may incur costs for future investigation and remediation activities in Newark Bay.

Bayer has also been notified by governmental authorities acting as natural resource trustees that it may have liability for natural resource damages arising from the contamination of the Lower Passaic River, Newark Bay and surrounding water bodies. Bayer is currently unable to determine the extent of its liability.

Asbestos: A further risk may arise from asbestos litigation in the United States. In many cases, the plaintiffs allege that Bayer and co-defendants employed third parties on their sites in past decades without providing them with sufficient warnings or protection against the known dangers of asbestos. Additionally, a Bayer affiliate in the United States is the legal successor to companies that sold asbestos products until 1976. Union Carbide has agreed to indemnify Bayer for this liability. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Covestro U.S. Lawsuit: In September 2016, Covestro LLC – along with three other defendants – was served with a lawsuit filed by a law firm in a California federal court. The parties recently agreed to change the venue to a federal court in the District of Columbia. The aim of the lawsuit is to recover financial damages in the form of statutory fines allegedly owed by the defendants to the United States Environmental Protection Agency for the companies' failure to disclose health risk information associated with the manufacture and handling of TDI, MDI and PMDI. Under the pertinent statutes, the U.S. government was afforded an opportunity to intervene and prosecute the claims, but it has declined to do so. Accordingly, the law firm is prosecuting the claims on the government's behalf. Violations of the Toxic Substances Control Act ("TSCA") and False Claims Act ("FCA") are asserted. Covestro will defend itself vigorously and regards the claims asserted against the company as meritless.

Tax proceedings:

Stamp taxes in Greece: In 2014, 2016 and 2017, a Greek administrative court of first instance dismissed Bayer's lawsuits against the assessment of stamp taxes and contingent penalties in the total amounts of approximately €130 million on certain intra-Group loans to a Greek subsidiary. Bayer is convinced that the decisions are wrong and has appealed or will do so in due course. Bayer believes it has meritorious arguments to support its legal position and intends to defend itself vigorously.

Notes to the Statements of Cash Flows

The statement of cash flows shows how cash inflows and outflows during the fiscal year affected the cash and cash equivalents of the Bayer Group. Cash flows are classified by operating, investing and financing activities in accordance with IAS 7 (Statement of Cash Flows). Effects of changes in the scope of consolidation are stated separately.

Of the cash and cash equivalents, an amount of €15 million (2015: €17 million) had limited availability due to foreign exchange restrictions. Past experience has shown such restrictions to be of short duration. The above amount included €1 million (2015: €3 million) of exchange-restricted cash in Venezuela. The conversion of cash from Venezuelan bolivars (VEF) into U.S. dollars is subject to a government approval process.

The cash flows reported by consolidated companies outside the eurozone are translated at average monthly exchange rates, with the exception of cash and cash equivalents, which are translated at closing rates. The "Change in cash and cash equivalents due to exchange rate movements" is reported in a separate line item.

33. Net cash provided by (used in) operating activities

Following the switch to a different value management concept, the gross cash flow is no longer used as an indicator. The previous disclosure of "income taxes paid or accrued" is replaced by "income taxes paid." This has also resulted in amendments to "Changes in other working capital, other noncash items."

The transfers of bonds with a total value of €450 million (2015: €300 million) to pension funds and of Covestro shares with a value of €337 million to Bayer Pension Trust e.V. were noncash transactions and therefore did not result in operating cash outflows.

34. Net cash provided by (used in) investing activities

The net cash outflow for investing activities in 2016 amounted to €8,729 million (2015: €2,762 million).

Additions to property, plant and equipment and intangible assets in 2016 resulted in a cash outflow of €2,578 million (2015: €2,517 million). Cash inflows from sales of property, plant and equipment and intangible assets amounted to €111 million (2015: €193 million).

The net cash outflow for noncurrent and current financial assets amounted to €6,335 million (2015: €370 million).

The transfers of bonds in the total amount of €450 million (2015: €300 million) to pension funds were non-cash transactions and therefore did not result in investing cash inflows.

35. Net cash provided by (used in) financing activities

In 2016 there was a net cash outflow of €350 million (2015: €3,974 million) for financing activities. Net loan repayments amounted to €730 million (2015: €2,929 million).

Cash outflows for dividend payments amounted to €2,126 million (2015: €1,869 million). Net interest payments – including payments for and receipts from interest-rate swaps – rose to €794 million (2015: €652 million). The net inflow of €3,952 million from the mandatory convertible notes is reflected as a capital contribution of €3,300 million and a borrowing of €652 million. In 2015, the proceeds from the stock market flotation of Covestro AG accounted for a €1,490 million cash inflow.

The transfer of Covestro shares with a value of €337 million to Bayer Pension Trust e.V. was a noncash transaction and therefore did not result in a financing cash inflow.

Other Information

36. Audit fees

The following fees for the services of the worldwide network of PricewaterhouseCoopers (PwC), including PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft (PwC AG WPG), were recognized as expenses:

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Audit Fees

	PwC		of which PwC AG WPG	
€ million	2015	2016	2015	2016
Financial statements auditing	17	16	7	7
Audit-related services and other audit work	9	2	9	1
Tax consultancy	3	3	–	–
Other services	7	7	5	5
Total	**36**	**28**	**21**	**13**

The fees for the auditing of financial statements mainly comprised those for the audits of the consolidated financial statements of the Bayer Group and the financial statements of Bayer AG and its subsidiaries. The decrease in fees for audit-related services and other audit work mainly resulted from the absence of fees related to the carve-out and stock market flotation of Covestro, which took place in 2015.

The Independent Auditor's Report on the consolidated financial statements for fiscal 2016 was signed by Dr. Peter Bartels and Eckhard Sprinkmeier. Eckhard Sprinkmeier is the responsible audit partner. Dr. Peter Bartels signed the Independent Auditor's Report for the first time for the year ended December 31, 2012, and Eckhard Sprinkmeier for the year ended December 31, 2014. PwC has served as the auditor of Bayer's consolidated financial statements since the merger of Price Waterhouse Deutschland and Coopers & Lybrand Deutsche Revision in 1998. The predecessor firm of Coopers & Lybrand Deutsche Revision had already audited Bayer's consolidated financial statements for some years prior to that date.

37. Related parties

Related parties as defined in IAS 24 (Related Party Disclosures) are those legal entities and natural persons that are able to exert influence on Bayer AG and its subsidiaries or over which Bayer AG or its subsidiaries exercise control or joint control or have a significant influence. They include, in particular, nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, and post-employment benefit plans, as well as the corporate officers of Bayer AG whose compensation is reported in Note (38) and in the Compensation Report, which forms part of the Combined Management Report.

Transactions with nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, and post-employment benefit plans are carried out on an arm's-length basis.

The following table shows the volume of transactions with related parties included in the consolidated financial statements of the Bayer Group at amortized cost or using the equity method, and with post-employment benefit plans:

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Related Parties

	2015				2016			
€ million	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities
Nonconsolidated subsidiaries	21	4	11	22	4	5	9	19
Joint ventures	25	–	4	1	24	–	4	243
Associates	36	645	–	4	34	557	3	6
Post-employment benefit plans	–	–	822	68	–	–	823	63

Goods and services in the amount of €524 million (2015: €609 million) were purchased from the associate PO JV, LP, Wilmington, United States, mainly in the course of day-to-day business operations.

Liabilities rose mainly with respect to Casebia Therapeutics Limited Liability Partnership, Ascot, United Kingdom, the newly established joint venture with CRISPR Therapeutics AG, Basel, Switzerland.

Intercompany profits and losses for companies accounted for in the consolidated financial statements using the equity method were immaterial in 2016 and 2015.

Bayer AG has undertaken to provide jouissance right capital (Genussrechtskapital) in the form of an interest-bearing loan with a nominal volume of €150 million (2015: €150 million) for Bayer-Pensionskasse VVaG. The entire amount remained drawn as of December 31, 2016. The carrying amount as of December 31, 2016, was €154 million (2015: €153 million). Loan capital was first provided to Bayer-Pensionskasse VVaG in 2008 for its effective initial fund. This capital had a nominal volume of €595 million as of December 31, 2016 (2015: €595 million). The carrying amount as of December 31, 2016, was €612 million (2015: €610 million). The outstanding receivables, comprised of different tranches, are each subject to a five-year interest-rate adjustment mechanism. Interest income of €18 million was recognized for 2016 (2015: €22 million).

38. Total compensation of the Board of Management and the Supervisory Board, advances and loans

The compensation of the Board of Management comprises short-term payments, stock-based payments and post-employment benefits.

The following table shows the individual components of the Board of Management's compensation according to IFRS:

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Board of Management Compensation according to IFRS

€ thousand	2015	2016
Fixed annual compensation	4,455	6,385
Fringe benefits	207	664
Total short-term non-performance-related compensation	**4,662**	**7,049**
Short-term performance-related cash compensation	5,983	9,063
Total short-term compensation	**10,645**	**16,112**
Stock-based compensation (virtual Bayer shares) earned in the respective year	5,983	–
Change in value of existing entitlements to stock-based compensation (virtual Bayer shares)	556	(1,275)
Stock-based compensation (Aspire) earned in the respective year	2,330	5,217
Change in value of existing entitlements to stock-based compensation (Aspire)	272	(923)
Total stock-based compensation (long-term incentive)	**9,141**	**3,019**
Service cost for pension entitlements earned in the respective year	2,891	3,902
Total long-term compensation	**12,032**	**6,921**
Severance indemnity in connection with the termination of a service contract	1,131	4,542
Aggregate compensation (IFRS)	**23,808**	**27,575**

In addition to the above compensation, actuarial losses of €3,196 thousand (2015: gains of €2,309 thousand) incurred in connection with pension obligations to the currently serving members of the Board of Management were recognized outside profit or loss. These changes mainly resulted from the decline (2015: slight increase) in the level of interest rates.

Further details are provided in the Compensation Report, which forms part of the Combined Management Report.

In addition to the provisions of €6,575 thousand (2015: €5,983 thousand) for the short-term variable cash compensation, an amount of €7,777 thousand (2015: €18,663 thousand) was recognized in the statement of financial position for future payments of stock-based compensation based on virtual shares to the members of the Board of Management serving as of December 31, 2016.

An amount of €7,288 thousand (2015: €7,110 thousand) was recognized in the statement of financial position for future payments of stock-based compensation based on the Aspire program to the members of the Board of Management serving as of December 31, 2016.

The present value of the defined benefit pension obligation for the members of the Board of Management serving as of December 31, 2016, was €38,427 thousand (2015: €33,491 thousand).

Pension payments to former members of the Board of Management and their surviving dependents in 2016 amounted to €12,800 thousand (2015: €13,416 thousand). The defined benefit obligation for former members of the Board of Management and their surviving dependents amounted to €188,850 thousand (2015: €172,767 thousand).

The compensation of the Supervisory Board amounted to €3,479 thousand (2015: €3,291 thousand).

In addition to their compensation as members of the Supervisory Board, those employee representatives who are employees of Bayer Group companies receive compensation unrelated to their service on the Supervisory Board. The total amount of such compensation in 2016 was €939 thousand (2015: €741 thousand).

Pension obligations for employee representatives on the Supervisory Board amounted to €4,399 thousand (2015: €3,756 thousand).

There were no advances or loans to members of the Board of Management or the Supervisory Board outstanding as of December 31, 2016, or at any time during 2016 or 2015.

39. Events After the End of the Reporting Period

Acquisition of Cydectin™

On January 3, 2017, Bayer acquired the Cydectin™ portfolio in the United States from Boehringer Ingelheim Vetmedica Inc., St. Joseph, United States. A payment of €158 million was made on January 3, 2017, in connection with the acquisition.

Leverkusen, February 14, 2017

Bayer Aktiengesellschaft

The Board of Management

The following auditor's report (Bestätigungsvermerk) has been issued in accordance with Section 322 German Commercial Code (Handelsgesetzbuch) on the consolidated financial statements and combined management report (zusammengefasster Lagebericht) of Bayer Aktiengesellschaft as of and for the fiscal year ended December 31, 2016. The combined management report is neither included nor incorporated by reference in this Prospectus.

Independent Auditor's Report

To Bayer AG, Leverkusen

Report on the Audit of the Consolidated Financial Statements

Audit Opinion on the Consolidated Financial Statements

We have audited the consolidated financial statements of Bayer AG, Leverkusen, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2016, and the consolidated income statement, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from January 1, to December 31, 2016, and notes to the consolidated financial statements, including a summary of significant accounting policies.

According to § (Article) 322 Abs. (paragraph) 3 Satz (sentence) 1 zweiter Halbsatz (second half sentence) HGB ("Handelsgesetzbuch": German Commercial Code), we state that, in our opinion, based on the findings of our audit, the accompanying consolidated financial statements comply, in all material respects, with IFRS, as adopted by the EU, and the additional requirements of German commercial law pursuant to § 315a Abs. 1 HGB, and give a true and fair view of the net assets and financial position of the Group as at December 31, 2016, as well as the results of operations for the financial year from January 1 to December 31, 2016, in accordance with these requirements.

According to § 322 Abs. 3 Satz 1 erster Halbsatz HGB, we state that our audit has not led to any reservations with respect to the propriety of the consolidated financial statements.

Basis for Audit Opinion on the Consolidated Financial Statements

We conducted our audit in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW), and additionally considered the International Standards on Auditing (ISA). Our responsibilities under those provisions and standards, as well as supplementary standards, are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements" section of our report. We are independent of the Group entities in accordance with the provisions under German commercial law and professional requirements, and we have fulfilled our other German ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from January 1 to December 31, 2016. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon, and we do not provide a separate audit opinion on these matters.

In our view, the key audit matters were as follows:

❶ Change in segment reporting
❷ Impairment of goodwill and intangible assets with indefinite useful lives
❸ Financial instruments – Issuance of mandatory convertible notes
❹ Financial instruments – Accounting treatment of hedging transactions
❺ Accounting treatment of the discontinued operation "Diabetes Care"
❻ Accounting treatment of legal risks stemming from product-related disputes
❼ Adjusting EBITDA and earnings per share for non-recurring items

Our presentation of these key audit matters has been structured as follows:

① Matter and issue
② Audit approach and findings
③ Reference to further information

❶ Change in segment reporting

① As part of the organizational and strategic restructuring of the Bayer Group following the spin-off of the former MaterialScience subgroup, which has been listed under the name Covestro AG since the 2015 financial year, the Bayer Group's internal reporting structure was reorganized. Since the internal reporting structure is used as a basis for determining the reportable segments under IFRS 8, the revised reporting structure consequently resulted in a change in the Bayer Group's segment reporting. From our point of view, this matter was of particular importance because, in the context of capital market communications, segment reporting has a special significance and the change in the segment structure also affects other accounting-related areas.

② During our audit we, among other procedures, considered the internal reporting and its sub-categorization of the individual reporting units and the changes in presentation, and reconciled this structure to the presentation used in the segment reporting. Moreover, we examined the method applied for the reallocation of goodwill and questioned the decision-makers on the Board of Management about the allocation of resources. We were able to satisfy ourselves that the changes in segment reporting applied by management were consistent with the reorganization of the internal reporting structure.

③ The Company's disclosures about the change of the internal reporting structure in connection with the organizational and strategic restructuring of the Bayer Group are contained in section 5 of the notes to the consolidated financial statements.

❷ Impairment of goodwill and intangible assets with indefinite useful lives

① An amount of EUR 16,312 million (20% of consolidated total assets) is reported under the line item "Goodwill" in the consolidated financial statements. Intangible assets with indefinite useful lives amounting to EUR 760 million (1% of consolidated total assets) are reported under "Other intangible assets." The Company allocates goodwill to strategic business units or groups of strategic business units within the Bayer Group. As part of the regular impairment testing of goodwill and intangible assets with indefinite useful lives the carrying amounts of the Company's strategic business units or intangible assets with indefinite useful lives are compared against their respective recoverable amount. In general, the recoverable amount is calculated on the basis of the fair value less costs to sell. This is based on the present value of future cash flows since, as a rule, market values are not available for the individual business units. The present value is calculated using discounted cash flow models on the basis of the Bayer Group's three-year operating plan prepared by management and approved by the Supervisory Board and extrapolated on the basis of assumptions about long-term growth rates. The discount rate used is the weighted average cost of capital for the relevant reporting segment. The result of this measurement depends to a large extent on management's assessment of future cash inflows of the respective strategic business unit and the discount rate used, and is therefore subject to considerable uncertainty. Against this background and due to the underlying complexity of the measurement models, this matter was of particular importance during our audit.

② As part of our audit, we, among other things, reviewed the method used for performing impairment tests and assessed the calculation of the weighted average cost of capital. We satisfied ourselves as to the appropriateness of the future cash inflows used in the measurement by, inter alia, comparing this data with the current budgets in the three-year plan prepared by management and approved by the Supervisory Board, and reconciling them against general and sector-specific market expectations. We also satisfied ourselves that the costs of the corporate functions reported in the "Corporate Functions and Consolidation" segment in the segment reporting were properly taken into consideration when testing the respective strategic business units for impairment. With the knowledge that even relatively small changes in the discount rate applied can have material effects on the recoverable amount calculated in this way, we also focused our testing in particular on the parameters used to determine the discount rate applied, and evaluated the measurement model. Furthermore, due to the materiality of goodwill, we also performed our own sensitivity analyses for the strategic business units (comparison of carrying and recoverable amounts) and determined that the respective goodwill was sufficiently covered by the discounted future cash flows. Overall, we consider the measurement inputs and assumptions used by management to be in line with our expectations.

③ The Company's disclosures pertaining to goodwill and intangible assets with indefinite useful lives are contained in sections 4 and 17 of the notes to the consolidated financial statements.

❸ Financial instruments – Issuance of mandatory convertible notes

① On November 22, 2016, the Bayer Group placed mandatory convertible notes amounting to EUR 4.0 billion, excluding the pre-emptive subscription rights of the Company's existing shareholders. The mandatory convertible notes are issued in denominations of EUR 100,000 by Bayer Capital Corporation B.V. under the subordinate guarantee of Bayer AG. The notes carry a fixed coupon of 5.625% p.a. until maturity. The coupon is payable annually in arrears on the respective coupon payment date. At maturity in 2019, the notes will automatically convert into ordinary shares of Bayer AG (these shares will either already exist or will stem from a conditional capital increase). The conversion ratio will be calculated on the basis of the share price on the conversion date. Both the "Minimum Conversion Price" and the "Maximum Conversion Price" were fixed upon conclusion of the agreement. In addition to the mandatory conversion upon maturity, the issuer may exercise its right to early conversion at any time during the "Conversion Period." In the case of an early conversion, the issuer must deliver shares at the "Maximum Conversion Ratio." Upon initial recognition, the present value of the coupon payments (taking into account the expected coupon payment dates) was recognized as a financial liability, and the difference to the fair value of the instrument as a whole was recognized as equity. Of the mandatory convertible notes, EUR 3.3 billion was recognized as capital reserves and EUR 0.7 billion as financial liabilities. Since the classification of mandatory convertible notes as debt or partially as equity and partially as debt impacts the Bayer Group's capital structure (and thus the credit quality as well as the cost of capital for new loans), this matter was of particular importance during our audit.

② As part of our audit, we critically assessed the terms and conditions for the issuance of the mandatory convertible notes and evaluated whether the mandatory convertible bond constitutes a contract within the meaning of IAS 32.13 that must be recognized in Bayer AG's consolidated financial statements as a financial liability and as an equity instrument in accordance with IAS 32.28. For the equity component, we, inter alia, assessed to what extent the requirements under IAS 32.16 were met and whether the substance of the contractual terms and conditions of the mandatory convertible notes suffice to classify the notes as equity (IAS 32.16 in conjunction with IFRIC Update, January 2014). We evaluated the obligation to make ongoing coupon payments in accordance with IAS 32.16 in conjunction with IAS 32.19 in order to determine to what extent Bayer AG does not have a right to avoid delivering cash to settle a contractual obligation, thus giving rise to a financial liability. Ultimately, the mandatory convertible notes represent a compound financial instrument that must be broken down into an equity component and a liability component upon initial recognition. Therefore, the obligation to make ongoing coupon payments must be classified as a financial liability whereas the obligation to redeem, i.e. convert, the notes must be classified as an equity component.

③ The Company's disclosures pertaining to the accounting treatment of the mandatory convertible notes are contained in sections 24 and 27 of the notes to the consolidated financial statements.

❹ Financial instruments – Accounting treatment of hedging transactions

① The companies of the Bayer Group use a number of different derivative financial instruments to hedge against currency, commodity price and interest rate risks associated with ordinary business activities. Management's hedging policy is documented in corresponding internal guidelines and serves as the basis for these transactions. Currency risks arise primarily from revenue, sales and procurement transactions (in particular commodities) and financing denominated in foreign currencies. Interest rate hedges are entered into for the purpose of achieving a sensible ratio of variable and fixed interest rate exposures. Derivative financial instruments are recognized at fair value as of the balance sheet date. The positive fair value of the derivative financial instruments used as hedges amounts to EUR 683 million as of the balance sheet date and the negative fair value amounts to EUR 819 million. If the financial instruments used by the Bayer Group are effective hedges of future cash flows in the context of hedging relationships in accordance with the requirements of IAS 39, the effective portion of the changes in fair value are recognized over the duration of the hedging relationships directly in equity until the maturity of the hedged cash flows. As of the balance sheet date, a cumulative EUR 61 million were recognized outside profit or loss as expenses and income before taxes on income. We believed that these matters were of particular importance due to the high complexity and number of transactions as well as the extensive accounting and reporting requirements under IAS 39.

② As a part of our audit and together with the help of our internal specialists from Corporate Treasury Solutions, we, among other things, assessed the contractual and financial parameters and reviewed the accounting treatment, including the effects on equity and profit or loss, of the various hedging transactions. Together with these specialists, we also assessed the Company's internal control system with regard to derivative financial instruments, including the

internal activities to monitor compliance with the hedging policy. Furthermore, we also used market data to review the measurement method applied to measure the fair value of the financial instruments. In addition, we also obtained bank confirmations in order to assess the completeness of and to examine the fair values of the recorded transactions. With regard to the expected cash flows and the assessment of the effectiveness of hedges, we essentially retrospectively assessed past hedge levels. We verified that hedges were accounted for and measured in accordance with the provisions of IAS 39.

③ The Company's disclosures pertaining to the accounting treatment of hedging transactions are contained in sections 4 and 30 of the notes to the consolidated financial statements.

❺ Accounting treatment of the discontinued operation "Diabetes Care"

① During the financial year, as part of optimizing its portfolio and on the basis of a share and asset purchase agreement dated June 10, 2015 with Panasonic Healthcare Holdings Co., Ltd., Tokyo, Japan, the Company disposed of its global Diabetes Care business for approximately EUR 1 billion on January 4, 2016. The business will continue to operate as an independent enterprise under the name Ascensia Diabetes Care ("ADC"). Until such a time that ADC has established its own, appropriate and functioning infrastructure, Bayer Group companies – for a transition period of up to two years – will act, among other things, as a distributor for ADC in various countries and provide ADC with accounting services. The Diabetes Care business generated revenue of EUR 573 million in financial year 2016. The business activities of the Diabetes Care business were presented as a discontinued operation in the consolidated financial statements of Bayer AG in accordance with the provisions of IFRS 5. The assets, liabilities, expenses and income from this discontinued operation are calculated and allocated in accordance with the share and asset purchase agreement. In our view, this matter was of particular importance during our audit due to the complexity of the underlying agreement and the inherent risk that not all of the assets and liabilities transferring to ADC as part of the sale would be identified.

② As part of our audit, we, among other things, conducted an in-depth review of the provisions of the underlying share and asset purchase agreement. We assessed the Bayer Group's plan for identifying and recognizing the assets and liabilities that will transfer to ADC in accordance with the share and asset purchase agreement, and reconciled this with the underlying agreement. In identifying those assets and liabilities that are assigned to the Diabetes Care business and that will transfer to ADC in 2016 in accordance with the share and asset purchase agreement, we reviewed whether management's actions were in line with the underlying plan and whether all of the relevant assets and liabilities had been identified. We also assessed and reviewed the determination of the income and expenses that are to be assigned to the discontinued operation "Diabetes Care" and that must be recognized separately in the income statement and in the notes to the financial statements in accordance with IFRS 5. We found that the assets, liabilities, income and expenses of the discontinued operation "Diabetes Care" were appropriately recognized in the consolidated financial statements in accordance with the provisions of IFRS 5.

③ The Company's disclosures pertaining to the discontinued operation "Diabetes Care" are contained in section 6.3 of the notes to the consolidated financial statements.

❻ Accounting treatment of legal risks stemming from product-related disputes

① Bayer Group entities are involved in court and out-of-court proceedings with authorities, peers and other parties. This gives rise to legal risks, in particular in the area of product liability, competition and antitrust law, patent law, tax law and environmental protection.

As of January 23, 2017, 100 claims had been asserted against Bayer Group in the United States of America both in and out-of-court, with regard to Yasmin™/YAZ™ products. Several attorneys general in U.S. states are reviewing allegations that consumer protection provisions had been violated and one attorney general has brought legal action against Bayer Group. Furthermore, class action lawsuits are pending in Canada and Israel and claims are known to have been asserted in other countries. Against the background of the pending and expected product liability lawsuits in connection with Mirena™, as of January 23, 2017, approximately 2,600 (previous year: 3,500) users of Mirena™ had brought action against the Bayer Group in the United States of America. Furthermore, as of January 23, 2017, approximately 16,400 (previous year: 4,300) users of Xarelto™ had asserted claims for compensatory and punitive damages against the Bayer Group in the United States of America. As of January 23, 2017, in Canada 10 lawsuits had also been brought against the Bayer Group in connection with Xarelto™; in each of those lawsuits, the plaintiffs were applying for class action status. As of January 23, 2017, approximately 3,700 users of Essure™ had brought action against the Bayer Group in the United States of America, and two lawsuits had been filed in Canada; in each of those lawsuits, the plaintiffs were applying for class action status.

The evaluation whether or not a provision should be recognized to cover the risks stemming from a pending legal dispute, and if so, in what amount, is shaped to a high degree by estimates and assumptions made by management. In the light of this background and due to the high monetary amount of the asserted claims, we considered the aforementioned product-related disputes of the Bayer Group to be of particular importance.

② As part of our audit, we, among other things, assessed the process established by the Company to ensure that a legal dispute is recorded, its outcome is assessed, and the dispute is accounted for. Furthermore, we also hold regular meetings with the Company's legal department in order to receive updates on current developments and the reasons for the corresponding assessments. The development of material legal disputes, including management's assessments as to their potential outcome, is provided to us by the company in writing. As of the balance sheet date, we also obtained external legal confirmations that support management's risk assessments with regard to the product-related disputes discussed under ① above. In connection with these product-related disputes, we reviewed management's assessments on the basis of the grounds of the claims asserted against the Bayer Group, and we agree with the assessments taken by management.

③ The Company's disclosures relating to the aforementioned legal disputes are contained in section 32 of the notes to the consolidated financial statements.

❼ Adjusting EBITDA and earnings per share for non-recurring items

① For the Bayer Group's management and analysis purposes, EBITDA (earnings before interests, taxes, depreciation and amortization) is used and adjusted for special items (by their nature and amount of specific effects). Adjustments to EBITDA in the amount of EUR 517 million have been reported in the consolidated financial statements of the Bayer AG. The adjusted EBITDA is used for capital market communication as a core financial performance indicator. Furthermore, the adjusted EBITDA is used as a target achievement measure for the annual performance-related remuneration of the Bayer Group's employees. The adjustments to EBITDA were of particular importance during our audit, because the applied adjustments are based on the Bayer Group's internal accounting guidelines and there is a risk of bias in management's judgment.

② We reviewed the calculation of underlying EBITDA and critically assessed the special items identified by the management. Based on the knowledge obtained during the audit and the information provided to us by management, we examined at the same time whether the adjustments had been applied in accordance with the definition and approach presented in the segment reporting disclosures. We were able to satisfy ourselves that the adjustments applied to EBITDA by management were in line with the segment reporting disclosures and had been applied consistently.

③ The Company's disclosures about the adjustments to and determination of EBITDA are presented under section 5 of the notes to the consolidated financial statements.

Other Information

Management is responsible for the other information. The other information comprises

- the Corporate Governance Report according to section 3.10 of the German Corporate Governance Code,
- the Corporate Governance Statement pursuant to § 289a HGB and § 315 Abs. 5 HGB, as well as
- other parts of the annual report of Bayer AG, Leverkusen, for the financial year ended on December 31, 2016, which were not subject of our audit.

Our audit opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information, and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation of the consolidated financial statements, which comply with IFRS, as adopted by the EU, and the additional German legal requirements applicable under § 315a Abs. 1 HGB, and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our audit opinion on the consolidated financial statements. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW), under additional consideration of the ISA, will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW), under additional consideration of the ISA, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or the group management report or, if such disclosures are inadequate, to modify our audit opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the net assets and financial position as well as the results of operations of the Group in accordance with IFRS, as adopted by the EU, and the additional German legal requirements applicable under § 315a Abs. 1 HGB.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an audit opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our report on the audit of the consolidated financial statements unless law or regulation precludes public disclosure about the matter.

Other Legal and Regulatory Requirements

Report on the Audit of the Group Management Report

Audit Opinion on the Group Management Report

We have audited the group management report of Bayer AG, Leverkusen, which is combined with the Company's management report, for the financial year from January 1 to December 31, 2016.

In our opinion, based on the findings of our audit, the accompanying group management report as a whole provides a suitable view of the Group's position. In all material respects, the group management report is consistent with the consolidated financial statements, complies with legal requirements and suitably presents the opportunities and risks of future development.

Our audit has not led to any reservations with respect to the propriety of the group management report.

Basis for Audit Opinion on the Group Management Report

We conducted our audit of the group management report in accordance with § 317 Abs. 2 HGB and German generally accepted standards for the audit of management reports promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW). We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management and Those Charged with Governance for the Group Management Report

Management is responsible for the preparation of the group management report, which as a whole provides a suitable view of the Group's position, is consistent with the consolidated financial statements, complies with legal requirements, and suitably presents the opportunities and risks of future development. Furthermore, management is responsible for such policies and procedures (systems) as management determines are necessary to enable the preparation of a group management report in accordance with the German legal requirements applicable under § 315 Abs. 1 HGB and to provide sufficient and appropriate evidence for the assertions in the group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the group management report.

Auditor's Responsibilities for the Audit of the Group Management Report

Our objective is to obtain reasonable assurance about whether the group management report as a whole provides a suitable view of the Group's position as well as, in all material respects, is consistent with the consolidated financial statements as well as the findings of our audit, complies with legal requirements, and suitably presents the opportunities and risks of future development, and to issue an auditor's report that includes our audit opinion on the group management report.

As part of an audit, we examine the group management report in accordance with § 317 Abs. 2 HGB and German generally accepted standards for the audit of management reports promulgated by the IDW. In this connection, we draw attention to the following:

- The audit of the group management report is integrated into the audit of the consolidated financial statements.
- We obtain an understanding of the policies and procedures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these policies and procedures (systems).
- We perform audit procedures on the prospective information presented by management in the group management report. Based on appropriate and sufficient audit evidence, we hereby, in particular, evaluate the material assumptions used by management as a basis for the prospective information and assess the reasonableness of these assumptions as well as the appropriate derivation of the prospective information from these assumptions. We are not issuing a separate audit opinion on the prospective information or the underlying assumptions. There is a significant, unavoidable risk that future events will deviate significantly from the prospective information.
- We are also not issuing a separate audit opinion on individual disclosures in the group management report; our audit opinion covers the group management report as a whole.

Responsible Auditor

The auditor responsible for the audit is Eckhard Sprinkmeier.

Essen, February 15, 2017

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Dr. Peter Bartels	Eckhard Sprinkmeier
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

Audited Consolidated Financial Statements of Bayer AG as of and for Fiscal Year Ended December 31, 2015

Bayer Group Consolidated Income Statements

(Table 4.1)

€ million	Note	2014	2015
Net sales	(7)	**41,339**	**46,324**
Cost of goods sold		(19,909)	(21,158)
Gross profit		**21,430**	**25,166**
Selling expenses	(8)	(10,669)	(12,367)
Research and development expenses	(9)	(3,537)	(4,281)
General administration expenses		(1,703)	(2,098)
Other operating income	(10)	710	1,110
Other operating expenses	(11)	(836)	(1,280)
EBIT [1]		**5,395**	**6,250**
Equity-method loss	(13.1)	(13)	(9)
Financial income		343	371
Financial expenses		(1,311)	(1,367)
Financial result	(13)	**(981)**	**(1,005)**
Income before income taxes		**4,414**	**5,245**
Income taxes	(14)	(1,071)	(1,227)
Income from continuing operations after income taxes		**3,343**	**4,018**
Income from discontinued operations after income taxes	(6.3)	**100**	**80**
Income after income taxes		**3,443**	**4,098**
of which attributable to noncontrolling interest	(15)	17	(12)
of which attributable to Bayer AG stockholders (net income)		**3,426**	**4,110**
€			
Earnings per share	(16)		
From continuing operations	(16)		
Basic		4.02	4.87
Diluted		4.02	4.87
From discontinued operations	(16)		
Basic		0.12	0.10
Diluted		0.12	0.10
From continuing and discontinued operations	(16)		
Basic		4.14	4.97
Diluted		4.14	4.97

2014 figures restated

[1] EBIT: earnings before financial result and taxes

Bayer Group Consolidated Statements of Comprehensive Income

(Table 4.2)

€ million	Note	2014	2015
Income after income taxes		**3,443**	**4,098**
of which attributable to noncontrolling interest	(15)	*17*	*(12)*
of which attributable to Bayer AG stockholders		*3,426*	*4,110*
Remeasurements of the net defined benefit liability for post-employment benefit plans	(25)	(5,159)	1,216
Income taxes	(14)	1,621	(430)
Other comprehensive income from remeasurements of the net defined benefit liability for post-employment benefit plans		**(3,538)**	**786**
Other comprehensive income that will not be reclassified subsequently to profit or loss		**(3,538)**	**786**
Changes in fair values of derivatives designated as cash flow hedges	(30.3)	(146)	(266)
Reclassified to profit or loss		(46)	304
Income taxes	(14)	57	(25)
Other comprehensive income from cash flow hedges		**(135)**	**13**
Changes in fair values of available-for-sale financial assets	(20)	–	(5)
Reclassified to profit or loss		–	1
Income taxes	(14)	(2)	(2)
Other comprehensive income from available-for-sale financial assets		**(2)**	**(6)**
Changes in exchange differences recognized on translation of operations outside the eurozone		1,424	748
Changes in exchange differences recognized on translation of operations outside the eurozone, relating to associates accounted for using the equity method		(40)	(20)
Reclassified to profit or loss		–	–
Other comprehensive income from exchange differences		**1,384**	**728**
Other comprehensive income that may be reclassified subsequently to profit or loss		**1,247**	**735**
Effects of changes in scope of consolidation		**–**	**–**
Total other comprehensive income [1]		**(2,291)**	**1,521**
of which attributable to noncontrolling interest		*11*	*33*
of which attributable to Bayer AG stockholders		*(2,302)*	*1,488*
Total comprehensive income		**1,152**	**5,619**
of which attributable to noncontrolling interest		*28*	*21*
of which attributable to Bayer AG stockholders		*1,124*	*5,598*

[1] total changes recognized outside profit or loss

Bayer Group Consolidated Statements of Financial Position

(Table 4.3)

€ million	Note	Dec. 31, 2014	Dec. 31, 2015
Noncurrent assets			
Goodwill	(17)	15,347	16,096
Other intangible assets	(17)	15,653	15,178
Property, plant and equipment	(18)	11,428	12,375
Investments accounted for using the equity method	(19)	223	246
Other financial assets	(20)	1,107	1,092
Other receivables	(23)	447	430
Deferred taxes	(14)	3,802	4,679
		48,007	**50,096**
Current assets			
Inventories	(21)	8,478	8,550
Trade accounts receivable	(22)	9,097	9,933
Other financial assets	(20)	723	756
Other receivables	(23)	1,488	2,017
Claims for income tax refunds		588	509
Cash and cash equivalents		1,853	1,859
Assets held for sale and discontinued operations	(6.3)	–	197
		22,227	**23,821**
Total assets		**70,234**	**73,917**
Equity	(24)		
Capital stock of Bayer AG		2,117	2,117
Capital reserves of Bayer AG		6,167	6,167
Other reserves		11,822	15,981
Equity attributable to Bayer AG stockholders		**20,106**	**24,265**
Equity attributable to noncontrolling interest		112	1,180
		20,218	**25,445**
Noncurrent liabilities			
Provisions for pensions and other post-employment benefits	(25)	12,236	10,873
Other provisions	(26)	1,593	1,740
Financial liabilities	(27)	18,484	16,513
Income tax liabilities		423	475
Other liabilities	(29)	1,088	1,065
Deferred taxes	(14)	689	826
		34,513	**31,492**
Current liabilities			
Other provisions	(26)	4,530	5,045
Financial liabilities	(27)	3,376	3,421
Trade accounts payable	(28)	5,363	5,945
Income tax liabilities		445	923
Other liabilities	(29)	1,789	1,534
Liabilities directly related to assets held for sale and discontinued operations	(6.3)	–	112
		15,503	**16,980**
Total equity and liabilities		**70,234**	**73,917**

2014 figures restated

Bayer Group Consolidated Statements of Cash Flows

(Table 4.4)

€ million	Note	2014	2015
Income after income taxes		3,343	4,018
Income taxes		1,071	1,227
Financial result		981	1,005
Income taxes paid or accrued		(1,304)	(2,258)
Depreciation, amortization and impairments		2,920	3,333
Change in pension provisions		(334)	(221)
(Gains) losses on retirements of noncurrent assets		30	(105)
Gross cash flow		**6,707**	**6,999**
Decrease (increase) in inventories		(748)	(187)
Decrease (increase) in trade accounts receivable		(1,072)	(1,061)
(Decrease) increase in trade accounts payable		485	402
Changes in other working capital, other noncash items		325	694
Net cash provided by (used in) operating activities (net cash flow) from continuing operations		**5,697**	**6,847**
Net cash provided by (used in) operating activities (net cash flow) from discontinued operations		113	43
Net cash provided by (used in) operating activities (net cash flow)	(33)	**5,810**	**6,890**
Cash outflows for additions to property, plant, equipment and intangible assets		(2,371)	(2,517)
Cash inflows from sales of property, plant, equipment and other assets		143	193
Cash inflows from divestitures		304	2
Cash inflows from (outflows for) noncurrent financial assets		(10)	(26)
Cash outflows for acquisitions less acquired cash		(13,545)	(176)
Interest and dividends received		107	106
Cash inflows from (outflows for) current financial assets		(167)	(344)
Net cash provided by (used in) investing activities	(34)	**(15,539)**	**(2,762)**
Proceeds from shares of Covestro AG		–	1,490
Dividend payments		(1,739)	(1,869)
Issuances of debt		27,584	16,620
Retirements of debt		(15,746)	(19,549)
Interest paid including interest-rate swaps		(541)	(812)
Interest received from interest-rate swaps		179	160
Cash outflows for the purchase of additional interests in subsidiaries		(1)	(14)
Net cash provided by (used in) financing activities	(35)	**9,736**	**(3,974)**
Change in cash and cash equivalents due to business activities		**7**	**154**
Cash and cash equivalents at beginning of year		**1,662**	**1,853**
Change in cash and cash equivalents due to changes in scope of consolidation		–	5
Change in cash and cash equivalents due to exchange rate movements		184	(153)
Cash and cash equivalents at end of year		**1,853**	**1,859**

2014 figures restated

Bayer Group Consolidated Statements of Changes in Equity

(Table 4.5)

€ million	Capital stock of Bayer AG	Capital reserves of Bayer AG	Retained earnings including net income	Accumulated total comprehensive income: Exchange differences	Accumulated total comprehensive income: Fair-value measurement of securities	Accumulated total comprehensive income: Cash flow hedges	Accumulated total comprehensive income: Revaluation surplus	Equity attributable to Bayer AG stockholders	Equity attributable to noncontrolling interest	Equity
Dec. 31, 2013	**2,117**	**6,167**	**14,817**	**(2,545)**	**32**	**99**	**31**	**20,718**	**86**	**20,804**
Equity transactions with owners										
Capital increase/decrease										
Dividend payments			(1,737)					(1,737)	(2)	(1,739)
Other changes			6				(5)	1		1
Other comprehensive income			(3,538)	1,373	(2)	(135)		(2,302)	11	(2,291)
Income after income taxes			3,426					3,426	17	3,443
Dec. 31, 2014	**2,117**	**6,167**	**12,974**	**(1,172)**	**30**	**(36)**	**26**	**20,106**	**112**	**20,218**
Equity transactions with owners										
Capital increase/decrease										
Dividend payments			(1,861)					(1,861)	(8)	(1,869)
Other changes			582	(155)			(5)	422	1,055	1,477
Other comprehensive income			776	705	(6)	13		1,488	33	1,521
Income after income taxes			4,110					4,110	(12)	4,098
Dec. 31, 2015	**2,117**	**6,167**	**16,581**	**(622)**	**24**	**(23)**	**21**	**24,265**	**1,180**	**25,445**

Notes to the Consolidated Financial Statements of the Bayer Group

1. Key data by segment and region

(Table 4.6)

Key Data by Segment

	HealthCare				CropScience		Covestro		Reconciliation					
	Pharmaceuticals		Consumer Health		CropScience		Covestro		All Other Segments		Corporate Center and Consolidation		Group	
€ million	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Net sales (external)	12,052	13,745	7,023	9,129	9,494	10,367	11,651	11,982	1,112	1,097	7	4	41,339	46,324
Change	+7.7%	+14.0%	+4.4%	+30.0%	+7.7%	+9.2%	+3.7%	+2.8%	–4.9%	–1.3%	–	–42.9%	+5.6%	+12.1%
Currency-adjusted change	+11.6%	+9.9%	+8.3%	+25.0%	+11.4%	+2.3%	+4.5%	–5.1%	–4.4%	–0.8%	–	–42.9%	+8.5%	+6.2%
Intersegment sales	99	38	8	5	49	34	59	64	2,243	2,249	(2,458)	(2,390)	–	–
Net sales (total)	12,151	13,783	7,031	9,134	9,543	10,401	11,710	12,046	3,355	3,346	(2,451)	(2,386)	41,339	46,324
Other operating income	184	137	150	129	208	644	81	67	16	69	71	64	710	1,110
EBIT	2,371	2,807	1,099	1,243	1,806	2,103	555	635	(11)	(39)	(425)	(499)	5,395	6,250
EBIT before special items	2,657	3,061	1,144	1,589	1,838	1,881	598	967	21	43	(425)	(472)	5,833	7,069
EBITDA before special items	3,699	4,195	1,658	2,224	2,360	2,416	1,187	1,659	200	238	(419)	(466)	8,685	10,266
Gross cash flow	2,745	2,737	1,153	1,384	1,835	1,941	961	1,113	331	147	(318)	(323)	6,707	6,999
Capital invested	17,288	17,661	19,718	21,172	11,772	11,854	11,019	11,293	1,197	757	(117)	(217)	60,877	62,520
CFROI	15.3%	14.1%	9.8%	5.9%	15.3%	14.8%	6.0%	7.0%	–	–	–	–	11.7%	9.6%
Net cash flow	3,266	2,863	1,065	1,458	950	761	880	1,452	360	26	(824)	287	5,697	6,847
Equity-method income (loss)	1	1	–	–	–	(1)	(14)	(9)	–	–	–	–	(13)	(9)
Equity-method investments	2	3	6	11	–	4	215	227	–	–	–	1	223	246
Assets	19,377	19,477	19,387	20,263	12,676	14,230	9,347	9,360	2,253	2,324	7,194	8,263	70,234	73,917
Capital expenditures	668	701	202	288	699	737	647	514	261	311	7	5	2,484	2,556
Additions to noncurrent assets from acquisitions	2,645	(122)	10,153	126	166	98	–	27	–	–	821	–	13,785	129
Depreciation, amortization and impairments	1,075	1,180	514	684	552	535	594	733	179	195	6	6	2,920	3,333
of which impairment losses	39	48	69	73	100	35	11	69	6	4	–	–	225	229
of which impairment loss reversals	–	–	–	(1)	–	–	(2)	–	–	–	–	–	(2)	(1)
Liabilities	7,075	7,487	3,079	3,172	5,214	5,344	3,520	3,740	4,682	4,814	26,446	23,915	50,016	48,472
Research and development expenses	1,878	2,333	386	501	974	1,089	210	262	29	32	60	64	3,537	4,281
Number of employees (as of Dec. 31)	39,069	38,927	20,130	18,894	23,060	23,496	14,122	15,770	20,256	19,015	734	709	117,371	116,811

2014 figures restated

(Table 4.7)

Key Data by Region

	Europe		North America		Asia/Pacific		Latin America/ Africa/Middle East		Reconciliation		Total	
€ million	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Net sales (external) – by market	15,312	15,949	9,953	12,740	9,067	10,264	7,007	7,371	–	–	41,339	46,324
Change	+5.2%	+4.2%	+7.0%	+28.0%	+5.7%	+13.2%	+4.4%	+5.2%	–	–	+5.6%	+12.1%
Currency-adjusted change	+6.3%	+5.2%	+8.4%	+10.8%	+8.7%	+1.4%	+12.9%	+8.1%	–	–	+8.5%	+6.2%
Net sales (external) – by point of origin	16,999	17,704	9,787	12,450	8,820	10,023	5,733	6,147	–	–	41,339	46,324
Change	+5.6%	+4.1%	+6.6%	+27.2%	+5.1%	+13.6%	+4.5%	+7.2%	–	–	+5.6%	+12.1%
Currency-adjusted change	+6.7%	+5.1%	+8.0%	+9.4%	+8.2%	+1.5%	+14.8%	+11.3%	–	–	+8.5%	+6.2%
Interregional sales	9,096	10,865	3,294	3,995	719	828	545	695	(13,654)	(16,383)	–	–
Other operating income	324	572	146	109	70	107	170	322	–	–	710	1,110
EBIT	3,481	4,019	808	1,490	594	546	937	694	(425)	(499)	5,395	6,250
Assets	29,378	33,420	23,035	20,522	8,540	9,492	5,479	5,804	3,802	4,679	70,234	73,917
Capital expenditures	1,286	1,424	639	588	403	402	156	142	–	–	2,484	2,556
Depreciation, amortization and impairments	1,795	1,860	655	834	381	496	83	137	6	6	2,920	3,333
Liabilities	32,120	28,914	12,298	13,461	3,436	3,583	1,473	1,688	689	826	50,016	48,472
Research and development expenses	2,412	2,947	866	1,051	198	214	61	69	–	–	3,537	4,281
Number of employees (as of Dec. 31)	54,595	55,892	15,819	15,985	30,132	28,818	16,825	16,116	–	–	117,371	116,811

2014 figures restated

2. General information

The consolidated financial statements of the Bayer Group as of December 31, 2015, were prepared by Bayer-Aktiengesellschaft (Bayer AG) according to the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), London, and the interpretations of the IFRS Interpretations Committee (IFRS IC), both as endorsed by the European Union and in effect at the end of the reporting period. The applicable further requirements of Section 315a of the German Commercial Code were also taken into account.

Bayer AG is a global enterprise based in Germany. Its registered office is at Kaiser-Wilhelm-Allee 1, 51368 Leverkusen. Its material business activities in the fields of health care, agriculture and high-tech polymer materials took place in the reporting period in the HealthCare, CropScience and Covestro subgroups. The activities of the various segments are outlined in NOTE (5).

A declaration concerning the German Corporate Governance Code has been issued pursuant to Section 161 of the German Stock Corporation Act and made available to stockholders.

The Board of Management of Bayer AG prepared the consolidated financial statements of the Bayer Group on February 16, 2016. They were discussed by the Audit Committee of the Supervisory Board of Bayer AG at its meeting on February 23, 2016, and approved by the Supervisory Board at its plenary meeting on February 24, 2016.

In the income statement and statement of comprehensive income, statement of financial position, statement of cash flows and statement of changes in equity, certain items are combined for the sake of clarity. These are explained in the Notes. The income statement is prepared using the cost-of-sales method. Assets and liabilities are classified by maturity. They are regarded as current if they mature within one year or within the normal business cycle of the company or the Group, or are held for sale. The normal business cycle is defined for this purpose as beginning with the procurement of the resources necessary for the production process and ending with the receipt of cash or cash equivalents as consideration for the sale of the goods or services produced in that process. Inventories and trade accounts receivable and payable are always presented as current items. Deferred tax assets and liabilities and pension provisions are always presented as noncurrent items.

The consolidated financial statements of the Bayer Group are drawn up in euros. Amounts are stated in millions of euros (€ million) except where otherwise indicated.

The financial statements of the individual consolidated companies are prepared as of the closing date of the Group financial statements.

3. Effects of new financial reporting standards

FINANCIAL REPORTING STANDARDS APPLIED FOR THE FIRST TIME IN 2015

In December 2013, the IASB published the fifth and sixth sets of “Annual Improvements to IFRSs.” The amendments address details of the recognition, measurement and disclosure of business transactions and serve to standardize terminology. They consist mainly of editorial changes to existing standards. The first-time application of these amendments had no material impact on the presentation of Bayer’s financial position or results of operations, or on earnings per share.

PUBLISHED FINANCIAL REPORTING STANDARDS THAT HAVE NOT YET BEEN APPLIED

The IASB and the IFRS Interpretations Committee have issued the following standards, amendments to standards, and interpretations whose application was not yet mandatory for the 2015 fiscal year and is conditional upon their endorsement by the European Union.

In November 2009, the IASB issued IFRS 9 (Financial Instruments), containing rules for the classification and measurement of financial assets. In October 2010, it issued new requirements for the classification and measurement of financial liabilities, incorporating them into IFRS 9. The new standard defines two instead of four measurement categories for financial assets, with classification to be based partly on the company’s business model and partly on the characteristics of the contractual cash flows from the respective financial asset. In the case of equity investments that are not held for trading, an entity may irrevocably opt at initial recognition to recognize future changes in their fair value outside profit or loss in the statement of comprehensive income. In November 2013, the IASB issued further amendments under the title “Hedge Accounting and amendments to IFRS 9, IFRS 7 and IAS 39.” The focus of the amendments is on a thorough revision of hedge accounting rules with the aim of more appropriately reflecting risk

management activities in the financial statements. This involves additional disclosures in the notes. In July 2014, the IASB published the new rules for the disclosure of financial instrument impairments. This new impairment model is based on the principle of accounting for expected losses. It also introduces a third measurement category "fair value through other comprehensive income" for certain debt instruments. IFRS 9 is to be applied for annual periods beginning on or after January 1, 2018. The standard has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the standard will have on the presentation of the Group's financial position and results of operations.

In January 2014, the IASB issued IFRS 14 (Regulatory Deferral Accounts). This standard addresses the accounting for regulatory deferral account balances by first-time adopters of the IFRS and therefore does not apply to entities that already prepare their financial statements according to the IFRS. IFRS 14 is to be applied for annual periods beginning on or after January 1, 2016. The standard has not yet been endorsed by the European Union. IFRS 14 will have no impact on the presentation of Bayer's financial position or results of operations.

In May 2014, the IASB published amendments to IAS 16 (Property, Plant and Equipment) and IAS 38 (Intangible Assets) entitled "Clarification of Acceptable Methods of Depreciation and Amortisation." These amendments clarify that revenue-based depreciation of property, plant and equipment or amortization of intangible assets is inappropriate. The amendments are to be applied for annual periods beginning on or after January 1, 2016. They will have no impact on the presentation of Bayer's financial position or results of operations.

In May 2014, the IASB published amendments to IFRS 11 (Joint Arrangements) entitled "Accounting for Acquisitions of Interests in Joint Operations." The amendments clarify the accounting for the acquisition of an interest in a joint operation in which the activity constitutes a business. They are to be applied for annual periods beginning on or after January 1, 2016. The possible impact on the future presentation of Bayer's financial position and results of operations depends on future acquisitions of interests in joint operations. These cannot be reliably predicted.

In May 2014, the IASB issued IFRS 15 (Revenue from Contracts with Customers). IFRS 15 is the new standard for revenue recognition. It clarifies that the expected consideration for goods or services must be recognized as revenue when the goods or intangible assets are transferred or the services are rendered to the customer. This principle is applied in five steps. In step 1, the contract with the customer is identified. In step 2, the distinct performance obligations in the contract are identified. In step 3, the transaction price is determined. In step 4, this transaction price is allocated to the distinct performance obligations. Finally, in step 5, revenue is recognized when the identified distinct performance obligations are satisfied, either over time or at a point in time. IFRS 15 replaces IAS 11 (Construction Contracts), IAS 18 (Revenue), IFRIC 13 (Customer Loyalty Programmes), IFRIC 15 (Agreements for the Construction of Real Estate), IFRIC 18 (Transfers of Assets from Customers) and SIC-31 (Revenue-Barter Transactions Involving Advertising Services). An amendment to IFRS 15 was issued in September 2015, deferring the date of first-time application from January 1, 2017 to January 1, 2018. The new standard is thus to be applied for annual periods beginning on or after January 1, 2018. The standard has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the changes will have on the presentation of its financial position and results of operations.

In June 2014, the IASB issued amendments to IAS 16 (Property, Plant and Equipment) and IAS 41 (Agriculture) entitled "Agriculture: Bearer Plants." The amendments clarify that plants used solely to grow agricultural produce are to be accounted for according to IAS 16 (Property, Plant and Equipment). The amendments are to be applied for annual periods beginning on or after January 1, 2016. The changes are not expected to have a material impact on the presentation of Bayer's financial position or results of operations.

In September 2014, the IASB published the seventh set of "Annual Improvements to IFRSs." The amendments address details of the recognition, measurement and disclosure of business transactions and serve to standardize terminology. They consist mainly of editorial changes to existing standards. They are applicable for annual periods beginning on or after July 1, 2016. The changes are not expected to have a material impact on the presentation of Bayer's financial position or results of operations.

In September 2014, the IASB published amendments to IFRS 10 (Consolidated Financial Statements) and IAS 28 (Investments in Associates and Joint Ventures) entitled "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture." The amendments clarify that in a transaction involving an associate or joint venture the extent of gain or loss recognition depends on whether the assets sold or contributed constitute a business. An amendment issued in December 2015 indefinitely defers the effective date of the September 2014 amendments, which were originally intended to be applied for annual periods beginning on or after January 1, 2016. The IASB is to set a new effective date.

In December 2014, further amendments were issued to IFRS 10 (Consolidated Financial Statements), IFRS 12 (Disclosure of Interests in Other Entities) and IAS 28 (Investments in Associates and Joint Ventures) entitled "Investment Entities: Applying the Consolidation Exception." The amendments largely clarify which subsidiaries an investment entity must consolidate and which must be recognized at fair value through profit or loss. The amendments are to be applied for annual periods beginning on or after January 1, 2016. The amendments have not yet been endorsed by the European Union. The changes are not expected to have a material impact on the presentation of Bayer's financial position or results of operations.

In December 2014, the IASB published amendments to IAS 1 (Presentation of Financial Statements) under its Disclosure Initiative. The amendments are intended to clarify the disclosure requirements and relate to materiality, line-item aggregation, subtotals, the structure of the notes to the financial statements, the identification of significant accounting policies and the separate disclosure of the other comprehensive income of associates and joint ventures. The amendments are to be applied for annual periods beginning on or after January 1, 2016. The changes are not expected to have a material impact on the presentation of Bayer's financial position or results of operations.

In January 2016, the IASB issued IFRS 16 (Leases), the new standard for lease accounting. IFRS 16 introduces a uniform lease accounting model for lessees, requiring recognition of assets and liabilities for all leases with a term of more than 12 months unless such leases are immaterial. It will eliminate the current requirement for lessees to classify leases as either operating leases – without recognizing the respective assets or liabilities – or as finance leases. The new standard is to be applied for annual periods beginning on or after January 1, 2019. The standard has not yet been endorsed by the European Union. Bayer is currently evaluating the impact the standard will have on the presentation of its financial position and results of operations.

In January 2016, the IASB published amendments to IAS 12 (Income Taxes) under the title "Recognition of Deferred Tax Assets for Unrealised Losses." These amendments clarify the accounting for deferred tax assets related to debt instruments measured at fair value. The amendments are to be applied for annual periods beginning on or after January 1, 2017. They have not yet been endorsed by the European Union. Bayer is currently evaluating the impact the changes will have on the presentation of its financial position and results of operations.

In January 2016, the IASB published amendments to IAS 7 (Statement of Cash Flows) under its Disclosure Initiative. The following changes in liabilities arising from financing activities must be disclosed in the future: (i) changes from financing cash flows; (ii) changes arising from obtaining or losing control of subsidiaries or other businesses; (iii) the effect of changes in foreign exchange rates; (iv) changes in fair values; (v) other changes. The amendments are to be applied for annual periods beginning on or after January 1, 2017. They have not yet been endorsed by the European Union. Bayer is currently evaluating the impact the changes will have on the presentation of its financial position and results of operations.

4. Basic principles, methods and critical accounting estimates

The financial statements of the consolidated companies are prepared according to uniform accounting policies and measurement principles.

The consolidated financial statements of the Group are based on the principle of the historical cost of acquisition, construction or production, with the exception of the items reflected at fair value, such as financial assets held for trading or available for sale, and derivatives.

In preparing the consolidated financial statements, the management has to make certain assumptions and estimates that may substantially impact the presentation of the Group's financial position and / or results of operations.

Such estimates, assumptions or the exercise of discretion mainly relate to the useful life of noncurrent assets, the discounted cash flows used for impairment testing and purchase price allocations, and the recognition of provisions, including those for litigation-related expenses, pensions and other benefits, taxes, environmental compliance and remediation costs, sales allowances, product liability and guarantees. Essential estimates and assumptions that may affect reporting in the various item categories of the financial statements are described in the following sections of this note. Estimates are based on historical experience and other assumptions that are considered reasonable under given circumstances. They are continually reviewed but may vary from the actual values.

Changes in accounting policies or measurement principles in light of new or revised standards are applied retrospectively, except as otherwise provided in the respective standard. The income statement for the previous year

and the opening statement of financial position for that year are adjusted as if the new accounting policies and / or measurement principles had always been applied.

CONSOLIDATION

The consolidated financial statements include subsidiaries, joint arrangements and associates.

Subsidiaries are companies over which Bayer AG is currently able to exercise power by virtue of existing rights. Power means the ability to direct the activities that significantly influence a company's profitability. Control is therefore only deemed to exist if Bayer AG is exposed, or has rights, to variable returns from its involvement with a company and has the ability to use its power over that company to affect the amount of that company's returns. The ability to control another company generally derives from Bayer AG's direct or indirect ownership of a majority of the voting rights. In the case of structured entities, however, control is based on contractual agreements. Inclusion of an entity's accounts in the consolidated financial statements begins when the Bayer Group is able to exercise control over the entity and ceases when it is no longer able to do so.

Sales revenues, income and expenses, and gains and losses arising from transactions among the consolidated companies, along with receivables and liabilities existing between them, are eliminated. Deferred income tax effects are reflected in consolidation.

Capital consolidation is performed by offsetting the carrying amounts of subsidiaries against their underlying equity. When a majority interest in a company is acquired, its pro-rated equity at the acquisition date is measured using the acquisition method. Identifiable assets and liabilities (including contingent liabilities) are recognized at their fair values along with attributable deferred tax assets and liabilities. Any remaining difference to the purchase price is recognized as goodwill. The purchase prices of acquired companies domiciled outside the eurozone are translated at the exchange rates in effect at the respective dates of acquisition.

The purchase of shares from other owners is presented as an equity transaction. The difference between the equity acquired from other owners and the purchase price is therefore directly offset against equity.

Joint operations and joint ventures are based on joint arrangements. A joint arrangement is deemed to exist if the Bayer Group through a contractual agreement jointly controls activities managed with a third party. Joint control is only deemed to exist if decisions regarding the relevant activities require the unanimous consent of the parties sharing control.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. The Bayer Group recognizes the share of assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with its rights and obligations.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint ventures are accounted for using the equity method.

Associates over which Bayer AG exerts significant influence, generally through an ownership interest between 20% and 50%, also are accounted for using the equity method.

The carrying amount of a company accounted for using the equity method is adjusted annually by the percentage of any change in its equity corresponding to Bayer's percentage interest in the company. Differences arising upon first-time inclusion using the equity method were accounted for according to full-consolidation principles. Bayer's share of changes in these companies' equities recognized in profit or loss – including impairment losses recognized on goodwill – are reflected in equity-method income / loss.

Companies that do not have a material impact on the Group's financial position or results of operations, either individually or in aggregate, are accounted for at cost of acquisition less any impairment losses.

FOREIGN CURRENCY TRANSLATION

The financial statements of the individual companies for inclusion in the consolidated financial statements are prepared in their respective functional currencies. A company's functional currency is that of the economic environment in which it primarily generates and expends cash. The majority of combined companies carry out their activities autonomously from a financial, economic and organizational point of view, and their functional currencies are therefore the respective local currencies.

In the separate financial statements of the individual consolidated companies, receivables and liabilities in currencies other than the respective functional currency are translated at closing rates. Related exchange differences are recognized in profit or loss as exchange gains or losses under other financial income and expenses.

In the consolidated financial statements, the assets and liabilities of companies outside the eurozone at the start and end of the year are translated into euros at closing rates. All changes occurring during the year and all income and expense items and cash flows are translated into euros at average monthly rates. Equity components are translated at the historical exchange rates prevailing at the respective dates of their first-time recognition in Group equity.

The exchange differences arising between the resulting amounts and those obtained by translating at closing rates are recognized outside profit or loss as "Exchange differences on translation of operations outside the eurozone" (in other comprehensive income) or "Exchange differences" (in the tables in the notes). When a company is deconsolidated, such exchange differences are reclassified from equity to profit or loss.

The exchange rates for major currencies against the euro varied as follows:

(Table 4.8)

Exchange Rates for Major Currencies

		Closing rate		Average rate	
€1/		2014	2015	2014	2015
BRL	Brazil	3.22	4.31	3.12	3.64
CAD	Canada	1.41	1.51	1.47	1.42
CHF	Switzerland	1.20	1.08	1.21	1.07
CNY	China	7.54	7.06	8.17	6.97
GBP	United Kingdom	0.78	0.73	0.81	0.73
JPY	Japan	145.23	131.07	140.32	134.28
MXN	Mexico	17.87	18.91	17.65	17.56
RUB	Russia	72.34	80.67	50.25	67.23
USD	United States	1.21	1.09	1.33	1.11

Subsidiaries whose functional currencies have experienced a cumulative inflation rate of more than 100% over the past three years apply the rules of IAS 29 (Financial Reporting in Hyperinflationary Economies). Gains and losses incurred upon adjusting the carrying amounts of nonmonetary assets and liabilities for inflation are recognized in other operating income and expenses.

In 2015, as in prior years, the rules of IAS 29 were relevant for Bayer S.A., Venezuela.

Several widely differing official exchange rates for the Venezuelan bolivar (vef) against the U.S. dollar were published in 2014. Bayer S.A., Venezuela, was included in the consolidated financial statements for 2014 at the official exchange rate potentially applicable to future capital transfers if permission for conversion into U.S. dollars is granted (SICAD I).

In 2015, a further official exchange rate (simadi) was introduced. In view of the low U.S. dollar allocation at the more favorable government-subsidized exchange rates and the continued deterioration in the Venezuelan economy, currency translation was switched to the simadi rate. The resulting U.S. dollar amount is translated at the respective dollar / euro rate.

As of December 31, 2015, Bayer S.A., Venezuela, had trade accounts equivalent to €121 million (2014: €150 million) payable to other Group companies in U.S. dollars. Impairment losses of €91 million were recognized on receivables in 2015 because the Venezuelan exchange control authority did not allocate U.S. dollars at the subsidized exchange rate with respect to the full amounts of older receivables. Hyperinflationary exchange gains of €43 million were incurred in 2015 (2014: losses of €59 million), mainly from the net foreign currency position, in connection with the depreciation of the VEF against the U.S. dollar.

NET SALES AND OTHER OPERATING INCOME

All revenues derived from the selling of products or rendering of services or from licensing agreements are recognized as sales. Other operational revenues are recognized as other operating income. Sales are recognized in profit or loss when the significant risks and rewards of ownership of the goods have been transferred to the customer, the company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold, the amount of revenue and costs incurred or to be incurred can be measured reliably, and it is sufficiently probable that the economic benefits associated with the transaction will flow to the company.

Sales are stated net of sales taxes, other taxes and sales deductions at the fair value of the consideration received or to be received. Sales deductions are estimated amounts for rebates, cash discounts and product returns. They are deducted at the time the sales are recognized, and appropriate provisions are recorded. Sales deductions are estimated primarily on the basis of historical experience, specific contractual terms and future expectations of sales development. It is unlikely that factors other than these could materially affect sales deductions in the Bayer Group. Adjustments to provisions made in prior periods for rebates, cash discounts or product returns were of secondary importance for income before income taxes in the years under report.

Provisions for rebates in 2015 amounted to 3.8% of total net sales (2014: 3.4%). In addition to rebates, Group companies offer cash discounts for prompt payment in some countries. Provisions for cash discounts as of December 31, 2015 and December 31, 2014 were less than 0.1% of total net sales for the respective year.

Sales are reduced by the amount of the provisions for expected returns of defective goods or of saleable products that may be returned under contractual arrangements. The net sales are reduced on the date of sale or on the date when the amount of future returns can be reasonably estimated. Provisions for product returns in 2015 amounted to 0.4% of total net sales (2014: 0.5%). If future product returns cannot be reasonably estimated and are significant to a sales transaction, the revenues and the related cost of sales are deferred until a reasonable estimate can be made or the right to return the goods has expired.

Some of the Bayer Group's revenues are generated on the basis of licensing agreements under which third parties have been granted rights to products and technologies. Payments received, or expected to be received, that relate to the sale or outlicensing of technologies or technological expertise are recognized in profit or loss as of the effective date of the respective agreement if all rights relating to the technologies and all obligations resulting from them have been relinquished under the contract terms. However, if rights to the technologies continue to exist or obligations resulting from them have yet to be fulfilled, the payments received are deferred accordingly. Upfront payments and similar nonrefundable payments received under these agreements are recorded as other liabilities and recognized in profit or loss according to the degree of performance over the estimated performance period stipulated in the agreement.

License agreements and research and development collaboration agreements may be multiple-deliverable arrangements with varying consideration terms, such as upfront payments and milestone or similar payments. Such agreements therefore have to be assessed to determine whether the revenues allocated to individual deliverables must be recognized at different points in time and therefore form separate units of account.

To qualify as a separate unit of account for revenue recognition purposes, a deliverable must have value to the licensee on a standalone basis. If this is not the case, the agreement as a whole or a combination of individual deliverables that has value on a standalone basis forms a unit of account.

If necessary goods have yet to be delivered or necessary services provided for a unit of account and such delivery or provision is probable, nonrefundable (royalty) payments already received are recognized through profit or loss over the periods in which these goods are delivered or these services are provided.

Income may also arise from the exchange of intangible assets. The amount recognized is generally based on the fair value of the assets given up, calculated using the discounted cash flow method. If the assets given up are internally generated, the gain from the exchange generally equals their fair value.

RESEARCH AND DEVELOPMENT EXPENSES

For accounting purposes, research expenses are defined as costs incurred for current or planned investigations undertaken with the prospect of gaining new scientific or technical knowledge and understanding. Development expenses are defined as costs incurred for the application of research findings or specialist knowledge to plans or designs for the production, provision or development of new or substantially improved products, services or processes, respectively, prior to the commencement of commercial production or use.

Research and development expenses are incurred in the Bayer Group for in-house research and development activities as well as numerous research and development collaborations and alliances with third parties.

Research and development expenses mainly comprise the costs for active ingredient discovery, clinical studies, research and development activities in the areas of application technology and engineering, field trials, regulatory approvals and approval extensions.

Research costs cannot be capitalized. The conditions for capitalization of development costs are closely defined: an intangible asset must be recognized if, and only if, there is reasonable certainty of receiving future cash flows that will cover an asset's carrying amount. Since our own development projects are often subject to regulatory approval procedures and other uncertainties, the conditions for the capitalization of costs incurred before receipt of approvals are not normally satisfied.

In the case of research and development collaborations, a distinction is generally made between payments on contract signature, upfront payments, milestone payments and cost reimbursements for work performed. If an intangible asset (such as the right to the use of an active ingredient) is acquired in connection with any of these payment obligations, the respective payment is capitalized even if it is uncertain whether further development work will ultimately lead to the production of a saleable product. Reimbursements of the cost of research or development work are recognized in profit or loss, except where they are required to be capitalized.

INCOME TAXES

Income taxes comprise the taxes levied on taxable income in the individual countries along with changes in deferred tax assets and liabilities that are recognized in profit or loss. The income taxes recognized are reflected at the amounts likely to be payable under the statutory regulations in force, or already enacted in relation to future periods, at the end of the reporting period.

In compliance with IAS 12 (Income Taxes), deferred taxes are recognized for temporary differences between the carrying amounts of assets and liabilities in the statement of financial position prepared according to IFRS and their tax bases. Deferred taxes are also recognized for consolidation measures and for tax loss carryforwards and tax credits that are likely to be usable.

Deferred tax assets relating to deductible temporary differences, tax credits or tax loss carryforwards are recognized where it is sufficiently probable that taxable income will be available in the future to enable them to be used. Deferred tax liabilities are recognized on temporary differences taxable in the future. Deferred taxes are calculated at the rates which – on the basis of the statutory regulations in force, or already enacted in relation to future periods, as of the closing date – are expected to apply in the individual countries at the time of realization. Deferred tax assets and deferred tax liabilities are offset if they relate to income taxes levied by the same taxation authority and Bayer has a legal right to settle on a net basis. Material effects of changes in tax rates or tax law on deferred tax assets and liabilities are generally accounted for in the period in which the changes are enacted. Such effects are recognized in profit or loss except where they relate to deferred taxes that were recognized outside profit or loss, in which case they are recognized in other comprehensive income.

Deferred and current taxes are recognized in profit or loss unless they relate to items recognized outside profit or loss in other comprehensive income, in which case they, too, are recognized in other comprehensive income.

The probability that deferred tax assets resulting from temporary differences or loss carryforwards can be used in the future is the subject of forecasts by the individual consolidated companies regarding their future earnings situation and other parameters.

Deferred tax liabilities are recognized on planned dividend payments by subsidiaries. Where no dividend payment is planned for the foreseeable future, no deferred tax liability is recognized on the difference between the proportionate net assets according to IFRS and the tax base of the investment in the subsidiary.

GOODWILL

In a business combination, goodwill is capitalized at the acquisition date. It is measured at its cost of acquisition, which is the excess of the acquisition price for shares in a company over the acquired net assets. The net assets are the balance of the fair values of the acquired identifiable assets and the assumed liabilities and contingent liabilities.

Goodwill is not amortized, but tested annually for impairment. Details of the annual impairment tests are given under "Procedure used in global impairment testing and its impact." Once an impairment loss has been recognized on goodwill, it is not reversed in subsequent periods.

OTHER INTANGIBLE ASSETS

An “other intangible asset” is an identifiable nonmonetary asset without physical substance, other than goodwill (such as a patent, a trademark or a marketing right). It is capitalized if the future economic benefits attributable to the asset will probably flow to the company and the cost of acquisition or generation of the asset can be reliably measured.

Other intangible assets are recognized at the cost of acquisition or generation. Those with a determinable useful life are amortized accordingly on a straight-line basis over a period of up to 30 years, except where their actual depletion demands a different amortization pattern. Determination of the expected useful lives of such assets and the amortization patterns is based on estimates of the period for which they will generate cash flows. An impairment test is performed if there is an indication of possible impairment.

Other intangible assets with an indefinite life (such as the Bayer Cross trademark) and intangible assets not yet available for use (such as research and development projects) are not amortized, but tested annually for impairment.

Any impairment losses are recognized in profit or loss. If the reasons for a previously recognized impairment loss no longer apply, the impairment loss is reversed provided that the reversal does not cause the carrying amount to exceed the (amortized) cost of acquisition or generation.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is carried at the cost of acquisition or construction and depreciated over its estimated useful life. An impairment loss is recognized in addition if an asset’s recoverable amount falls below its carrying amount.

The cost of self-constructed property, plant and equipment comprises the direct cost of materials, direct manufacturing expenses, and appropriate allocations of material and manufacturing overheads. Where an obligation exists to dismantle or remove an asset or restore a site to its former condition at the end of its useful life, the present value of the related future payments is capitalized along with the cost of acquisition or construction upon completion and a corresponding liability is recognized.

If the construction phase of property, plant or equipment extends over a substantial period of time, the interest incurred on borrowed capital up to the date of completion is capitalized as part of the cost of acquisition or construction in accordance with IAS 23 (Borrowing Costs).

Costs for regular, comprehensive maintenance work (such as the major overhaul of a technical facility) are capitalized as a separate component if they satisfy the recognition criteria.

Property, plant and equipment is depreciated by the straight-line method over an asset’s useful life, except where depreciation based on actual depletion is more appropriate.

The following depreciation periods are applied throughout the Group:

(Table 4.9)

Useful Life of Property, Plant and Equipment	
Buildings	20 to 50 years
Outdoor infrastructure	10 to 20 years
Storage tanks and pipelines	10 to 20 years
Plant installations	6 to 20 years
Machinery and equipment	6 to 12 years
Furniture and fixtures	4 to 10 years
Vehicles	5 to 8 years
Computer equipment	3 to 5 years
Laboratory and research facilities	3 to 5 years

Significant asset components with different useful lives are accounted for and depreciated separately.

If there are indications that an individual item of property, plant and equipment may be impaired, the recoverable amount is compared to the carrying amount. If the recoverable amount is less than the carrying amount, an

impairment loss is recognized for the difference. If the reasons for a previously recognized impairment loss no longer apply, the impairment loss is reversed provided that the reversal does not cause the carrying amount to exceed the cost of acquisition or construction less depreciation.

When assets are sold, closed down or scrapped, the difference between the net proceeds and the net carrying amount of the assets is recognized as a gain or loss in other operating income or expenses, respectively.

Investment property comprises land and buildings not being used for operational or administrative purposes. It is measured using the cost model. The fair value of the investment property reported in the Notes is determined using the discounted cash flow method, comparisons with the current market values of similar properties, or reports from external experts.

FINANCIAL ASSETS

Financial assets comprise loans and receivables, acquired equity and debt instruments, cash and cash equivalents, and derivatives with positive fair values.

They are recognized and measured in accordance with IAS 39 (Financial Instruments: Recognition and Measurement). Accordingly, financial assets are recognized in the consolidated financial statements if the Bayer Group has a contractual right to receive cash or other financial assets from another entity. Regular-way purchases and sales of financial assets are generally posted on the settlement date. Financial assets are initially recognized at fair value plus transaction costs. The transaction costs incurred for the purchase of financial assets held at fair value through profit or loss are expensed immediately. Interest-free or low-interest receivables are initially reflected at the present value of the expected future cash flows. Upon first-time recognition, each financial asset is assigned to one of the categories prescribed in IAS 39. Subsequent measurement takes place according to the measurement rules for the respective category. The measurement rules for each category are set forth below:

Financial assets held at fair value through profit or loss comprise those financial assets that are held for trading. Receivables from forward commodity contracts and receivables from other derivatives that are included in other financial assets are allocated to this category, except where hedge accounting is used. Changes in the fair value of financial assets in this category are recognized in profit or loss when the increase or decrease in fair value occurs.

Loans and receivables are nonderivative financial assets with fixed or determinable payments that are not quoted in an active market. They are accounted for at amortized cost using the effective interest method. This category comprises trade accounts receivable, the loans and receivables included in other financial assets, the additional financial receivables reflected in other receivables, and cash and cash equivalents. Interest income from items assigned to this category is determined using the effective interest method.

Held-to-maturity financial assets are nonderivative financial assets, with fixed or determinable payments, that the Bayer Group is willing and able to hold until maturity. They are accounted for at amortized cost using the effective interest method. Held-to-maturity financial investments are recognized in other financial assets.

Available-for-sale financial assets are those nonderivative financial assets that are not assigned to any of the above categories. They mainly include equity instruments (such as shares), debt instruments with indefinite maturities, and debt instruments not to be held to maturity that are included in other financial assets. After their first-time recognition, available-for-sale financial assets are measured at fair value and any unrealized gains or losses are recognized outside profit or loss in equity. These are only reclassified to profit or loss if the assets are sold or if there are objective indications of impairment, in which case the accumulated loss is recognized in profit or loss. An objective indication of impairment is a significant or prolonged decrease in the fair value of an equity instrument to below its acquisition cost. Previously recognized impairment losses are reversed if the reasons for them no longer apply. Impairment loss reversals for equity instruments are recognized outside profit or loss, while those for debt instruments are recognized in profit or loss. Where possible, a fair value for equity and debt securities is derived from market data. Financial assets for which no market price is available and whose fair value cannot be reasonably estimated are recognized at cost less any impairment losses.

If there are substantial and objective indications of a decline in the value of loans and receivables, held-to-maturity financial assets or available-for-sale financial assets, an impairment test is performed. Indications of possible impairment include a high probability of insolvency, a significant deterioration in credit standing, a material breach of contract, operating losses reported by a company over several years, a reduction in market value, the financial restructuring of the debtor, or the disappearance of an active market for the asset.

In the case of loans and receivables, and held-to-maturity financial assets, an impairment test is performed in which the carrying amount is compared to the present value of the expected future cash flows, discounted at the original effective interest rate. If the carrying amount exceeds the present value, an impairment loss is recognized for the difference between the two amounts. If the reasons for previously recognized impairment losses no longer apply, the impairment losses are reversed provided that this does not cause the carrying amounts to exceed the amortized cost of acquisition.

Financial assets are derecognized when contractual rights to receive cash flows from the financial assets expire or the financial assets are transferred together with all material risks and benefits.

INVENTORIES

In accordance with IAS 2 (Inventories), inventories encompass assets consumed in production or in the rendering of services (raw materials and supplies), assets in the production process for sale (work in process), goods held for sale in the ordinary course of business (finished goods and goods purchased for resale), and advance payments on inventories. Inventories are recognized at their cost of acquisition or production – calculated by the weighted-average method – or at their net realizable value, whichever is lower. The net realizable value is the estimated selling price in the ordinary course of business less estimated cost to complete and selling expenses.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents comprise cash, checks received, and balances with banks and companies. Cash equivalents are highly liquid short-term financial investments that are subject to an insignificant risk of changes in value, are easily convertible into a known amount of cash and have a maturity of three months or less from the date of acquisition or investment.

ASSETS HELD FOR SALE

Assets held for sale comprise noncurrent assets or disposal groups (together with any liabilities), the carrying amounts of which will be realized principally through a highly probable sale transaction within the next twelve months or an already contractually agreed sale transaction, and not through continued use. At the time of their classification as “held for sale,” such assets are collectively measured at the lower of the carrying amount and fair value less costs of disposal, and depreciation or amortization ceases.

Groups of assets held for sale that represent a standalone business and correspond to at least one strategic business entity are combined in the income statement, statement of comprehensive income, statement of financial position and statement of cash flows and reported under assets held for sale or discontinued operations.

PROVISIONS FOR PENSIONS AND OTHER POST-EMPLOYMENT BENEFITS

Within the Bayer Group, post-employment benefits are provided under defined contribution and / or defined benefit plans. In the case of defined contribution plans, the company pays contributions to publicly or privately administered pension plans on a mandatory, contractual or voluntary basis. Once the contributions have been paid, the company has no further payment obligations. The regular contributions constitute expenses for the year in which they are due and as such are included in the functional cost items, and thus in EBIT. All other post-employment benefit systems are defined benefit plans, which may be either unfunded, i.e. financed by provisions, or funded, i.e. financed through pension funds.

The present value of provisions for defined benefit plans and the resulting expense are calculated in accordance with IAS 19 (Employee Benefits) by the projected unit credit method. The future benefit obligations are valued by actuarial methods and spread over the entire employment period on the basis of specific assumptions regarding beneficiary structure and the economic environment. These relate mainly to the discount rate, future salary and pension increases, variations in health care costs, and mortality rates.

The discount rates used are calculated from the yields of high-quality corporate bond portfolios in specific currencies with cash flows approximately equivalent to the expected disbursements from the pension plans. The uniform discount rate derived from this interest-rate structure is thus based on the yields, at the closing date, of a portfolio of “AA” rated corporate bonds whose weighted residual maturities approximately correspond to the duration necessary to cover the entire benefit obligation.

The fair value of plan assets is deducted from the present value of the defined benefit obligation for pensions and other post-employment benefits to determine the net defined benefit liability. The obligations and plan assets are valued at regular intervals of not more than three years. Comprehensive actuarial valuations for all major plans are performed annually as of December 31. Plan assets in excess of the benefit obligation are reflected in other receivables, subject to the asset ceiling specified in IAS 19 (Employee Benefits).

The balance of all income and expenses relating to defined benefit plans, except the net interest on the net liability, is recognized in EBIT. The net interest is reflected in the financial result under other financial income and expenses.

The effects of remeasurements of the net defined benefit liability are reflected in the statement of comprehensive income as other comprehensive income. They consist of actuarial gains and losses, the return on plan assets and changes in the effects of the asset ceiling, less the respective amounts included in net interest. Deferred taxes relating to the effects of remeasurements are also recognized in other comprehensive income.

OTHER PROVISIONS

Other provisions are recognized for present legal and constructive obligations arising from past events that will probably give rise to a future outflow of resources, provided that a reliable estimate can be made of the amount of the obligations.

Other provisions are measured in accordance with IAS 37 (Provisions, Contingent Liabilities and Contingent Assets) or, where applicable, IAS 19 (Employee Benefits). Where the cash outflow to settle an obligation is expected to occur after one year, the provision is recognized at the present value of the expected cash outflow. Claims for reimbursements from third parties are separately reflected in other receivables if their realization is virtually certain.

If the projected obligation declines as a result of a change in the estimate, the provision is reversed by the corresponding amount and the resulting income recognized in the operating expense item(s) in which the original charge was recognized.

To enhance the information content of the estimates, certain provisions that could have a material effect on the financial position or results of operations of the Group are selected and tested for their sensitivity to changes in the underlying parameters. To reflect uncertainty about the likelihood of the assumed events actually occurring, the impact of a five-percentage-point change in the probability of occurrence is examined in each case. This analysis has not shown other provisions to be materially sensitive.

Complex tax regulations may give rise to uncertainties with respect to their interpretation and the amount and timing of future taxable income. Given the wide range of international business relationships and the long-term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate adjustments to tax income and expense in future periods. The Group establishes **provisions for taxes,** based on reasonable estimates, for liabilities to the tax authorities of the respective countries that are uncertain as to their amount and the probability of their occurrence. The amount of such provisions is based on various factors, such as experience with previous tax audits and differing legal interpretations by the taxable entity and the responsible tax authority.

Provisions for environmental protection are recorded if future cash outflows are likely to be necessary to ensure compliance with environmental regulations or to carry out remediation work, such costs can be reliably estimated and no future benefits are expected from such measures.

Estimating the future costs of environmental protection and remediation involves many uncertainties, particularly with regard to the status of laws, regulations and the information available about conditions in the various countries and at the individual sites. Significant factors in estimating the costs include previous experiences in similar cases, the conclusions in expert opinions obtained regarding the Group's environmental programs, current costs and new developments affecting costs, management's interpretation of current environmental laws and regulations, the number and financial position of third parties that may become obligated to participate in any remediation costs on the basis of joint liability, and the remediation methods likely to be deployed. Changes in these assumptions could impact future reported results.

Taking into consideration experience gained to date regarding environmental matters of a similar nature, provisions are believed to be adequate based upon currently available information. Given the difficulties inherent in estimating liabilities in the businesses in which the Group operates, especially those for which the risk of environmental damage

is greater in relative terms (CropScience and Covestro), it remains possible that material additional costs will be incurred beyond the amounts accrued. It may transpire during remediation work that additional expenditures are necessary over an extended period and that these exceed existing provisions and cannot be reasonably estimated.

Provisions for restructuring only cover expenses that arise directly from restructuring measures, are necessary for restructuring and are not related to future business operations. Such expenses include severance payments to employees and compensation payments in respect of rented property that can no longer be used.

Restructuring measures may include the sale or termination of business units, site closures, relocations of business activities or fundamental reorganizations of business units.

The respective provisions are established when a detailed restructuring plan has been drawn up, resolved upon by the responsible decision-making level of management and communicated to the employees and / or their representatives. Provisions for restructuring are established at the present value of future disbursements.

Trade-related provisions are recorded mainly for the granting of rebates or discounts, product returns, or obligations in respect of services already received but not yet invoiced.

As a global enterprise with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks for which **provisions for litigations** must be established under certain conditions – particularly in the areas of product liability, competition and antitrust law, patent disputes, tax law and environmental protection.

Litigation and other judicial proceedings often raise complex issues and are subject to many uncertainties and complexities including, but not limited to, the facts and circumstances of each particular case, the jurisdiction in which each suit is brought and differences in applicable law. The outcomes of currently pending and future proceedings generally cannot be predicted. It is particularly difficult to assess the likely outcomes of class actions for damages in the United States, which may give rise to significant financial risks for the Bayer Group. As a result of a judgment in court proceedings, regulatory decisions or the conclusion of a settlement, the Bayer Group may incur charges for which no accounting measures have yet been taken for lack of reasonable estimability or which exceed presently established provisions and the insurance coverage.

The Bayer Group considers the need for accounting measures in respect of pending or future litigations, and the extent of any such measures, on the basis of the information available to its legal department and in close consultation with legal counsel acting for the Bayer Group.

Where it is more likely than not that such a litigation will result in an outflow of resources that is already reasonably estimable, a provision for litigation is recorded in the amount of the present value of the expected cash outflows. Such provisions cover the estimated payments to the plaintiffs, court and procedural costs, attorney costs and the cost of potential settlements.

It is frequently impossible to reliably determine the existence of a present obligation or reasonably estimate the probability that a potential outflow of resources will result from a pending or future litigation. The status of the material "legal risks" is described in NOTE (32). Due to the special nature of these litigations, provisions generally are not established until initial settlements allow an estimate of potential amounts or judgments have been issued. Provisions for legal defense costs are established if it is probable that material costs will have to be incurred for external legal counsel to defend the company's legal position.

Internal and external legal counsel evaluate the current status of the Bayer Group's material legal risks at the end of each reporting period. The need to establish or adjust a provision and the amount of the provision or adjustment are determined on this basis. Adjusting events are reflected up to the date of preparation of the consolidated financial statements. The measurement of provisions in the case of class actions or mass compensation claims is mainly based on any settlements reached during the past year and on pending or anticipated future claims.

Personnel-related provisions are mainly those recorded for annual bonus payments, variable one-time payments, individual performance awards, long-service awards, severance payments in connection with early retirement arrangements, surpluses on long-term accounts and other personnel costs. Obligations under stock-based compensation programs that provide for awards payable in cash are also included here.

FINANCIAL LIABILITIES

Financial liabilities comprise primary financial liabilities and negative fair values of derivatives.

Primary financial liabilities are initially recognized in the consolidated financial statements at fair value if the Bayer Group has a contractual obligation to transfer cash or other financial assets to another party. In subsequent periods, such liabilities are measured at amortized cost using the effective interest method.

Liabilities for contingent consideration arising from business combinations are measured at fair value. Changes in fair value are recognized through profit or loss as of the respective closing date.

Financial liabilities are derecognized when the contractual obligation is discharged or canceled, or has expired.

OTHER RECEIVABLES AND LIABILITIES

Accrued items and other nonfinancial assets and liabilities are carried at amortized cost. They are amortized to income by the straight-line method or according to performance of the underlying transaction.

Grants and subsidies from third parties that serve to promote investment are reflected in the statement of financial position under other liabilities and amortized to income over the useful lives of the respective investments or in line with the terms of the grant or subsidy.

DERIVATIVES

The Bayer Group uses derivatives – such as forward exchange contracts and interest-rate swaps – to mitigate the risk of changes in exchange rates, interest rates or prices. Derivatives are recognized at the trade date.

Contracts concluded in order to receive or deliver nonfinancial goods for the company's own purposes are not accounted for as derivatives but treated as pending transactions. Where embedded derivatives are identified that are required to be separated from the pending transactions, they are accounted for separately. To take advantage of market opportunities or cover possible peak demand, a nonmaterial volume of transactions may be entered into for which the possibility of immediate resale cannot be excluded. Such transactions are allocated to separate portfolios upon acquisition and accounted for as derivatives according to IAS 39.

Derivatives are carried at fair value. Positive fair values at the end of the reporting period are reflected in financial assets, negative fair values in financial liabilities. Changes in the fair values of these derivatives are recognized directly in profit or loss except where hedge accounting is used. Changes in the fair values of forward exchange contracts and currency options serving as hedges of items in the statement of financial position are reflected in other financial income and expenses as exchange gains or losses, while changes in the values of interest-rate swaps and interest-rate options are recognized in interest income or expense. Changes in the fair values of commodity futures and options, and of forward exchange contracts used to hedge forecasted transactions in foreign currencies, are recognized in other operating income or expenses.

Changes in the fair values of derivatives designated as fair-value hedges and the adjustments in the carrying amounts of the underlying transactions are recognized in profit or loss.

Changes in the fair values of the effective portion of derivatives designated as cash flow hedges are initially recognized outside profit or loss in accumulated other comprehensive income. They are reclassified to profit or loss when the underlying transaction is realized. If such a derivative is sold or ceases to qualify for hedge accounting, the change in its value continues to be recognized in accumulated other comprehensive income until the forecasted transaction is realized. If the forecasted transaction is no longer probable, the amount previously recognized in accumulated other comprehensive income has to be reclassified to profit or loss. The ineffective portion of gains or losses on derivatives designated as cash flow hedges is recognized either in other operating income or expenses or in the financial result, depending on the type of underlying transaction.

The income and expense reflected in the financial result pertaining to the derivatives and the underlying transactions are shown separately. Income and expense are not offset.

LEASES

A lease is an agreement whereby the lessor assigns to the lessee the right to use an asset for an agreed period of time in return for a payment or series of payments. Leases are classified as either finance or operating leases. Lease transactions that transfer substantially all the risks and rewards incidental to ownership of the leased asset to the lessee are treated as finance leases. All other lease agreements are classified as operating leases. Whether an agreement constitutes a lease or contains a lease is determined upon inception of the lease.

Where the Bayer Group is the lessee in a finance lease, the leased asset is capitalized at the lower of the fair value of the asset and the present value of the minimum lease payments at the beginning of the lease term and simultaneously recognized under financial liabilities. The minimum lease payments are divided into the principal portion of the remaining obligation and the financing costs, which are determined using the effective-interest method. The leased asset is depreciated by the straight-line method over the shorter of its estimated useful life or the lease term.

Where the Bayer Group is the lessee in an operating lease, the lease payments are expensed. Where it is the lessor, the lease payments received are recognized in profit or loss. The leased asset continues to be recognized under property, plant and equipment in the Bayer Group's statement of financial position.

ACQUISITION ACCOUNTING

Acquired businesses are accounted for using the acquisition method, which requires that the assets acquired and liabilities assumed be recorded at their respective fair values on the date Bayer obtains control. Ancillary acquisition costs are recognized as expenses in the periods in which they occur.

The application of the acquisition method requires certain estimates and assumptions to be made, especially concerning the fair values of the acquired intangible assets, property, plant and equipment and the liabilities assumed at the acquisition date, and the useful lives of the acquired intangible assets, property, plant and equipment.

Measurement is based to a large extent on anticipated cash flows. If actual cash flows vary from those used in calculating fair values, this may materially affect the Group's future results of operations. In particular, the estimation of discounted cash flows from intangible assets under development, patented and nonpatented technologies and brands is based on assumptions concerning, for example:

- the outcomes of research and development activities regarding compound efficacy, results of clinical trials, etc.,
- the probability of obtaining regulatory approvals in individual countries,
- long-term sales trends,
- possible selling price erosion due to generic competition in the market following patent expirations,
- the behavior of competitors (launch of competing products, marketing initiatives, etc.).

For significant acquisitions, the purchase price allocation is carried out with assistance from independent third-party valuation specialists. The valuations are based on the information available at the acquisition date.

In step acquisitions, the fair values of the acquired entity's assets and liabilities are measured in accordance with IFRS 3 (Business Combinations) at the date on which control is obtained. Any resulting adjustments to the fair value of the existing interest are recognized in profit or loss. The carrying amount of the assets and liabilities already recognized in the statement of financial position is then adjusted accordingly.

PROCEDURE USED IN GLOBAL IMPAIRMENT TESTING AND ITS IMPACT

Impairment tests are performed not only on individual items of intangible assets, property, plant and equipment, but also at the level of cash-generating units or groups of cash-generating units. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Bayer Group regards its strategic business entities or groups of strategic business entities, as well as certain product families, as cash-generating units and subjects them to global impairment testing. The strategic business entities constitute the second financial reporting level below the segments.

Cash-generating units and unit groups are globally tested if there is an indication of possible impairment. Those to which goodwill is allocated are tested at least annually.

Impairment testing involves comparing the carrying amount of each cash-generating unit, unit group or item of intangible assets, property, plant or equipment to the recoverable amount, which is the higher of its fair value less costs of disposal or value in use. If the carrying amount exceeds the recoverable amount, an impairment loss must be recognized for the difference. If a strategic business entity or entity group is found to be impaired, an impairment loss is first recognized on any goodwill allocated to it. Any remaining part of the impairment loss is then allocated among the other noncurrent nonfinancial assets of the strategic business entity or entity group in proportion to their carrying amounts. The resulting expense is reflected in the functional item of the income statement in which the depreciation or amortization of the respective assets is recognized. The same applies to income from impairment loss reversals.

The recoverable amount is generally determined on the basis of the fair value less costs of disposal, taking into account the present value of the future net cash flows as market prices for the individual units are not normally available. These are forecasted on the basis of the Bayer Group's current planning, the planning horizon normally being three to five years. Forecasting involves making assumptions, especially regarding future selling prices, sales volumes, costs, market growth rates, economic cycles and exchange rates. These assumptions are based on internal estimates along with external market studies. Where the recoverable amount is the fair value less costs of disposal, the cash-generating unit or unit group is measured from the viewpoint of an independent market participant. Where the recoverable amount is the value in use, the cash-generating unit, unit group or individual asset is measured as currently used. In either case, net cash flows beyond the planning period are determined on the basis of long-term business expectations using the respective individual growth rates derived from market information. The fair value less costs of disposal is determined on the basis of unobservable inputs (Level 3).

The net cash inflows are discounted at a rate equivalent to the weighted average cost of equity and debt capital. To allow for the different risk and return profiles of the Bayer Group's principal businesses, the after-tax cost of capital is calculated separately for each subgroup and a subgroup-specific capital structure is defined by benchmarking against comparable companies in the same industry sector. The cost of equity corresponds to the return expected by stockholders, while the cost of debt is based on the conditions on which comparable companies can obtain long-term financing. Both components are derived from capital market information.

The growth rates applied for impairment testing in 2015 and 2014 and the capital cost factors used to discount the expected cash flows are shown in the following table:

(Table 4.10)

Impairment Testing Parameters

	Growth rate		After-tax cost of capital	
%	2014	2015	2014	2015
Pharmaceuticals	0.0	0.0	6.5	6.2
Consumer Care	0.0	0.0	6.5	6.2
Radiology	0.0	0.0	6.5	6.2
Animal Health	0.0	0.0	6.5	6.2
Crop Protection	2.0	2.3	6.7	6.3
Seeds	2.8	1.9	6.7	6.3
Environmental Science	1.3	1.8	6.7	6.3
Diphenylmethane Diisocyanate (MDI)	1.5	2.0	6.0	6.1
Toluene Diisocyanate (TDI)	–	2.0	–	6.1
Polyether (PET)	0.0	0.0	6.0	6.1
Polycarbonates (PCS)	1.5	2.0	6.0	6.1
Base & Modified Isocyanates (BMI)	2.0	2.0	6.0	6.1
Resins (RES)	2.0	2.0	6.0	6.1
Specialty Films (SF)	1.0	2.0	6.0	6.1

No impairment losses were recognized on goodwill on the basis of the global annual impairment testing of the cash-generating units and unit groups in 2015 or 2014. In 2014, a €6 million impairment loss was recognized on a goodwill item following an impairment test performed in connection with a divestiture. Impairment losses on goodwill, other intangible assets, property, plant and equipment – net of €1 million (2014: €2 million) in impairment loss reversals – totaled €229 million (2014: €223 million). Details are provided in NOTES (17) and (18).

Although the estimates of the useful lives of certain assets, assumptions concerning the macroeconomic environment and developments in the industries in which the Bayer Group operates, and estimates of the discounted future cash flows are believed to be appropriate, changes in assumptions or circumstances could require changes in the analysis. This could lead to additional impairment losses in the future or – except in the case of goodwill – to reversals of previously recognized impairment losses if developments are contrary to expectations.

The sensitivity analysis for cash-generating units and unit groups to which goodwill is allocated was based on a 10% reduction in future cash flows, a 10% increase in the weighted average cost of capital or a one-percentage-point reduction in the long-term growth rate. Bayer concluded that no impairment loss would need to be recognized on goodwill in any cash-generating unit or unit group under these conditions.

5. Segment reporting

At Bayer the Board of Management, as the chief operating decision maker, allocates resources to the operating segments and assesses their performance. The reportable segments and regions are identified, and the disclosures selected, in line with the internal financial reporting system (management approach) and based on the Group accounting policies outlined in NOTE (4).

As of December 31, 2015, the Bayer Group comprised three subgroups, with operations subdivided into strategic business entities known as divisions (HealthCare), business groups (CropScience) or business units (Covestro; formerly MaterialScience). Their activities were aggregated into four reportable segments according to economic characteristics, products, production processes, customer relationships, methods of distribution and regulatory environment.

The segments' activities were as follows:

(Table 4.11)

Activities of the Segments

Subgroup / Segment	Activities
HealthCare	
Pharmaceuticals	Development, production and marketing of prescription pharmaceuticals, such as anticoagulants, treatments for hemophilia, multiple sclerosis, cancer, eye diseases, pulmonary hypertension, high blood pressure and infectious diseases; and contraceptives
Consumer Health [1]	Development, production and marketing of over-the-counter medications, dermatology products, nutritional supplements, veterinary medicines and animal grooming products; medical products such as injection systems and contrast agents for diagnostic procedures
CropScience	
CropScience	Development, production and marketing of a comprehensive product portfolio in the areas of seeds and plant traits, crop protection, home and garden, the green industry and nonagricultural pest control
Covestro	
Covestro	Development, production and marketing of raw materials for polyurethanes; polycarbonate resins and sheets; raw materials for coatings, adhesives and sealants; and selected chemical intermediates

[1] The Diabetes Care business unit (diagnostic systems, such as blood glucose meters) was no longer reported under continuing operations in 2015 following the signing of the agreement to sell it to Panasonic Healthcare Holdings, Ltd., Tokyo, Japan.

Business activities that cannot be allocated to any other segment are reported under "All other segments." These primarily include the services provided by the service areas: Business Services, Technology Services and Currenta.

The items in "Corporate Center and Consolidation" comprise the activities of the Bayer holding companies, the increase or decrease in expenses for Group-wide long-term stock-based compensation arising from fluctuations in the performance of Bayer stock, and the consolidation of intersegment sales (2015: €2.4 billion; 2014: €2.5 billion).

The reconciliation in the table "Key Data by Region" eliminates interregional items and transactions and reflects income, expenses, assets and liabilities not allocable to geographical areas, particularly those relating to the Corporate Center.

The segment data are calculated as follows:

- The intersegment sales reflect intra-Group transactions effected at transfer prices fixed on an arm's-length basis.

- EBIT – income after income taxes, plus income taxes, plus financial result – which is not defined in the International Financial Reporting Standards, is influenced by one-time special effects and by the amortization of intangible assets and depreciation of property, plant and equipment, along with impairment losses and impairment loss reversals. To elucidate the effects of these parameters on the operational business and facilitate the comparability of operational earning power over time, we determine additional indicators: EBITDA, EBIT before special items, EBITDA before special items and the EBITDA margin before special items. These indicators also are not defined in the International Financial Reporting Standards. EBITDA (EBIT plus the amortization of intangible assets and the depreciation of property, plant and equipment, plus impairment losses, minus impairment loss reversals, recognized in profit or loss in the reporting period) serves to characterize the operational business irrespective of the effects of amortization, depreciation or impairment losses / impairment loss reversals. EBIT before special items and EBITDA before special items show the development of the operational business irrespective of the effects of special items – those that are nonrecurring or do not regularly recur or attain similar magnitudes. EBIT before special items and EBITDA before special items are determined by adding special charges and subtracting special gains. They constitute relevant key data for Bayer. The EBITDA margin before special items, which is calculated by dividing EBITDA before special items by sales, serves as an indicator of relative operational earning power for purposes of internal and external comparison.
- The gross cash flow comprises income after income taxes, plus income taxes, plus financial result, minus income taxes paid or accrued, plus depreciation, amortization and impairment losses, minus impairment loss reversals, plus / minus changes in pension provisions, minus gains / plus losses on retirements of noncurrent assets, minus gains from the remeasurement of already held assets in step acquisitions. The change in pension provisions includes the elimination of noncash components of EBIT. It also contains benefit payments during the year. Gross cash flow is not defined in the International Financial Reporting Standards.
- The net cash flow is the cash flow from operating activities as defined in IAS 7 (Statement of Cash Flows).
- The capital invested and the segment assets include all assets serving the respective segment that are required to yield a return on their cost of acquisition. Segment assets include, in addition, assets held for sale where the return is covered by the sale proceeds. Similarly, the segment liabilities include the liabilities directly related to assets held for sale. Also included in the capital invested and in segment assets are material participating interests of direct relevance to business operations. Intangible assets and property, plant and equipment are included in the capital invested at cost of acquisition, generation or construction throughout their useful lives. Interest-free liabilities are deducted from the capital invested, which is stated as of December 31.
- The CFROI – a measure of the return on the capital employed – is the difference between the gross cash flow and the cost of reproducing depletable assets, divided by the average capital invested for the year.
- The equity items reflect the earnings and carrying amounts of companies accounted for using the equity method.
- Since the financial management of Group companies is carried out centrally by Bayer AG, financial liabilities are not directly allocated among the segments. Consequently, the liabilities shown for the individual segments do not include financial liabilities. These are included in the reconciliation.
- The number of employees on either permanent or temporary contracts is stated in full-time equivalents (FTE), with part-time employees included on a pro-rated basis in line with their contractual working hours. The figures do not include apprentices.

RECONCILIATIONS

The reconciliations of EBITDA before special items, EBIT before special items and EBIT to Group income before income taxes and of the assets and liabilities of the segments to the assets and liabilities, respectively, of the Group are given in the following tables:

(Table 4.12)

Reconciliation of Segments' EBITDA Before Special Items to Group Income Before Income Taxes

€ million	2014	2015
EBITDA before special items of segments	9,104	10,732
EBITDA before special items of Corporate Center and Consolidation	(419)	(466)
EBITDA before special items	**8,685**	**10,266**
Depreciation, amortization and impairment losses/loss reversals before special items of segments	(2,846)	(3,191)
Depreciation, amortization and impairment losses/loss reversals before special items of Corporate Center and Consolidation	(6)	(6)
Depreciation, amortization and impairment losses/loss reversals before special items	**(2,852)**	**(3,197)**
EBIT before special items of segments	6,258	7,541
EBIT before special items of Corporate Center and Consolidation	(425)	(472)
EBIT before special items	**5,833**	**7,069**
Special items of segments	(438)	(792)
Special items of Corporate Center and Consolidation	–	(27)
Special items	**(438)**	**(819)**
EBIT of segments	5,820	6,749
EBIT of Corporate Center and Consolidation	(425)	(499)
EBIT	**5,395**	**6,250**
Financial result	(981)	(1,005)
Income before income taxes	**4,414**	**5,245**

2014 figures restated

(Table 4.13)

Reconciliation of Segments' Assets to Group Assets

€ million	2014	2015
Assets of the operating segments	**63,040**	**65,654**
Corporate Center and Consolidation assets	195	181
Nonallocated assets	6,999	7,899
Assets of discontinued operations	–	183
Group assets	**70,234**	**73,917**

2014 figures restated

(Table 4.14)

Reconciliation of Segments' Liabilities to Group Liabilities

€ million	2014	2015
Liabilities of the operating segments	**23,570**	**24,557**
Corporate Center and Consolidation liabilities	3,409	2,645
Nonallocated liabilities	23,037	21,158
Liabilities directly related to discontinued operations	–	112
Group liabilities	**50,016**	**48,472**

The reconciliation of segment sales to Group sales is apparent from the table of key data by segment in NOTE (1).

INFORMATION ON GEOGRAPHICAL AREAS

The following table provides a regional breakdown of external sales by market and of intangible assets, property, plant and equipment:

(Table 4.15)

Information on Geographical Areas

	Net sales (external) – by market		Intangible assets and property, plant and equipment	
€ million	2014	2015	2014	2015
Germany	4,804	4,946	12,403	12,385
United States	8,715	11,286	17,486	14,420
China	3,597	4,213	3,102	3,260
Switzerland	625	691	905	5,298
Other	23,598	25,188	8,532	8,286
Total	**41,339**	**46,324**	**42,428**	**43,649**

2014 figures restated

INFORMATION ON MAJOR CUSTOMERS

Revenues from transactions with a single customer in no case exceeded 10% of Bayer Group sales in 2015 or 2014.

SEGMENT REPORTING EFFECTIVE 2016

In September 2015, it was decided to introduce a new organizational structure effective January 1, 2016, in line with Bayer's focus on the Life Science businesses. The former Bayer HealthCare subgroup has now been dissolved and the Radiology business assigned to the Pharmaceuticals Division. The Consumer Health Division now consists entirely of the Consumer Care business. Animal Health has become a reportable segment. The Bayer CropScience subgroup is now the Crop Science Division.

The segments' activities are as follows:

(Table 4.16)

Activities of the Segments

Division /Segment	Activities
Pharmaceuticals	Development, production and marketing of prescription pharmaceuticals, such as anticoagulants, treatments for hemophilia, multiple sclerosis, cancer, eye diseases, pulmonary hypertension, high blood pressure and infectious diseases; contraceptives; and medical products such as injection systems and contrast agents for diagnostic procedures
Consumer Health	Development, production and marketing of over-the-counter medications, dermatology products and nutritional supplements
Crop Science	Development, production and marketing of a comprehensive product portfolio in the areas of seeds and plant traits, crop protection, home and garden, the green industry and nonagricultural pest control
Animal Health	Development, production and marketing of veterinary medicines and animal grooming products
Covestro	Development, production and marketing of raw materials for polyurethanes; polycarbonate resins and sheets; raw materials for coatings, adhesives and sealants; and selected chemical intermediates

If the new organizational structure had already been in place as of December 31, 2015, selected segment reporting items would appear as follows:

(Table 4.17)

Selected Key Data by Segment

	Pharmaceuticals		Consumer Health		Crop Science		Animal Health		Reconciliation				Life Sciences*		Covestro		Group	
									All Other Segments		Corporate Center and Consolidation							
€ million	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Net sales (external)	13,512	15,308	4,245	6,076	9,494	10,367	1,318	1,490	1,112	1,097	7	4	29,688	34,342	11,651	11,982	41,339	46,324
Change	+6.3%	+13.3%	+8.7%	+43.1%	+7.7%	+9.2%	+0.9%	+13.1%	–4.9%	–1.3%	–	–42.9%	+6.4%	+15.7%	+3.7%	+2.8%	+5.6%	+12.1%
Currency-adjusted change	+10.0%	+8.7%	+13.6%	+40.4%	+11.4%	+2.3%	+4.0%	+4.5%	–4.4%	–0.8%	–	–42.9%	+10.1%	+10.6%	+4.5%	–5.1%	+8.5%	+6.2%
Intersegment sales	102	38	2	2	49	34	22	20	2,243	2,249	(2,477)	(2,407)	–	–	59	64	–	–
Net sales (total)	13,614	15,345	4,247	6,079	9,543	10,401	1,340	1,510	3,355	3,346	(2,470)	(2,403)	29,688	34,342	11,710	12,046	41,339	46,324
EBIT	2,627	3,027	609	769	1,806	2,103	234	254	(11)	(39)	(425)	(499)	4,840	5,615	555	635	5,395	6,250
EBIT before special items	2,836	3,327	731	1,005	1,838	1,881	234	318	21	43	(425)	(472)	5,235	6,102	598	967	5,833	7,069
EBITDA before special items	4,081	4,615	991	1,456	2,360	2,416	285	348	200	238	(419)	(466)	7,498	8,607	1,187	1,659	8,685	10,266
Gross cash flow	2,996	3,009	685	886	1,835	1,941	217	226	331	147	(318)	(323)	5,746	5,886	961	1,113	6,707	6,999
Net cash flow	3,533	3,157	564	816	950	761	234	348	360	26	(824)	287	4,817	5,395	880	1,452	5,697	6,847

* Including Currenta

6. Scope of consolidation; subsidiaries and affiliates

6.1 Changes in the scope of consolidation

Changes in the scope of consolidation in 2015 were as follows:

(Table 4.18)

Change in Number of Consolidated Companies

Bayer AG and consolidated companies	Germany	Other countries	Total
December 31, 2014	67	235	302
Changes in scope of consolidation	2	8	10
Additions	2	6	8
Retirements	(3)	(10)	(13)
December 31, 2015	**68**	**239**	**307**

The increase in the total number of consolidated companies in 2015 was primarily due to changes in the scope of consolidation and to acquisitions. Derecognitions were primarily due to mergers among Group companies.

Bayer Pearl Polyurethane Systems llc, United Arab Emirates, is fully consolidated because the Bayer Group holds a majority of the voting rights.

Pure Salt Baytown llc, United States, is fully consolidated as a structured entity. The Bayer Group guarantees the liabilities of Pure Salt Baytown llc to banks. These liabilities, which are reflected in full in the consolidated statement of financial position, amounted to €17 million as of December 31, 2015 (2014: €20 million).

The above table includes one joint operation, Lyondell Bayer Manufacturing Maasvlakte VOF, Netherlands, as of December 31, 2015, and December 31, 2014. Pursuant to IFRS 11, Bayer's share of this company's assets, liabilities, revenues and expenses are included in the consolidated financial statements in accordance with Bayer's rights and obligations. The main purpose of Lyondell Bayer Manufacturing Maasvlakte VOF is the joint production of propylene oxide (po) for Bayer and its partner Lyondell.

In conjunction with the acquisition of the consumer care business of Merck & Co., Inc., United States, Bayer entered into a strategic collaboration with that company. This collaboration is included in the consolidated financial statements as a joint operation. Bayer and Merck & Co., Inc., have mutually agreed to collaborate on the development, production, life-cycle management and marketing of active ingredients and products in the field of soluble guanylate cyclase (sGC) modulation.

Four (2014: three) associates and three (2014: three) joint ventures were accounted for in the consolidated financial statements using the equity method. Details of these companies are given in NOTE (19).

Flagship Ventures V Agricultural Fund, L.P., United States, was included in the consolidated financial statements for the first time in 2015 and classified as an associate. Bayer has no control over this associate despite owning 99.9% of the capital, but is able to significantly influence its financial and operating policy decisions.

Nanjing Baijingyu Pharmaceutical Co., Ltd., China, was classified as an associate in view of Bayer's representation on its executive committee and supervisory board. This enables Bayer to significantly influence its financial and operating policy decisions despite owning only 15% of its voting rights and capital.

A total of 71 (2014: 78) subsidiaries, including one (2014: one) structured entity and 12 (2014: 12) associates or joint ventures that in aggregate are immaterial to the Bayer Group's financial position and results of operations are not consolidated but recognized at cost. The immaterial subsidiaries accounted for less than 0.2% of Group sales, less than 0.3% of equity and less than 0.2% of total assets.

Details of subsidiary and affiliated companies pursuant to Section 313 of the German Commercial Code can be accessed at WWW.ANNUALREPORT2015.BAYER.COM/COMPANYLIST.PDF.

The following domestic subsidiaries availed themselves in 2015 of certain exemptions granted under Section 264, Paragraph 3, and Section 264b of the German Commercial Code regarding the publication of legal-entity financial statements:

(Table 4.19)

German Exempt Subsidiaries

Company Name	Place of Business	Bayer's interest %
Adverio Pharma GmbH	Schönefeld	100.0
AgrEvo Verwaltungsgesellschaft mbH	Frankfurt am Main	100.0
Alcafleu Management GmbH & Co. KG	Schönefeld	99.9
Bayer 04 Immobilien GmbH	Leverkusen	100.0
Bayer 04 Leverkusen Fußball GmbH	Leverkusen	100.0
Bayer Altersversorgung GmbH	Leverkusen	100.0
Bayer Animal Health GmbH	Leverkusen	100.0
Bayer Beteiligungsverwaltung Goslar GmbH	Leverkusen	100.0
Bayer Business Services GmbH	Leverkusen	100.0
Bayer Chemicals Aktiengesellschaft	Leverkusen	100.0
Bayer Consumer Care Deutschland GmbH	Berlin	100.0
Bayer CropScience Aktiengesellschaft	Monheim	100.0
Bayer CropScience Biologics GmbH	Wismar	100.0
Bayer CropScience Deutschland GmbH	Langenfeld	100.0
Bayer Direct Services GmbH	Leverkusen	100.0
Bayer Gastronomie GmbH	Leverkusen	100.0
Bayer Gesellschaft für Beteiligungen mbH	Leverkusen	100.0
Bayer HealthCare Aktiengesellschaft	Leverkusen	100.0
Bayer Innovation GmbH	Leverkusen	100.0
Bayer Intellectual Property GmbH	Monheim	100.0
Bayer Real Estate GmbH	Leverkusen	100.0
Bayer Schering Pharma AG	Berlin	100.0
Bayer Technology Services GmbH	Leverkusen	100.0
Bayer Vital GmbH	Leverkusen	100.0
Bayer Weimar GmbH und Co. KG	Weimar	100.0
Bayer-Handelsgesellschaft mit beschränkter Haftung	Leverkusen	100.0
BGI Deutschland GmbH	Leverkusen	100.0
Chemion Logistik GmbH	Leverkusen	100.0
Dritte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Erste Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Erste K-W-A Beteiligungsgesellschaft mbH	Leverkusen	100.0
Euroservices Bayer GmbH	Leverkusen	100.0
Fünfte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Generics Holding GmbH	Leverkusen	100.0
GP Grenzach Produktions GmbH	Grenzach-Wyhlen	100.0
Hild Samen GmbH	Marbach am Neckar	100.0
Intendis GmbH	Schönefeld	100.0
Intraserv GmbH & Co. KG	Schönefeld	100.0
Jenapharm GmbH & Co. KG	Jena	100.0
KOSINUS Grundstücks-Verwaltungsgesellschaft mbH & Co. Gamma OHG	Schönefeld	100.0
KVP Pharma+Veterinär Produkte GmbH	Kiel	100.0
MENADIER Heilmittel GmbH	Berlin	100.0
Schering-Kahlbaum Gesellschaft mit beschränkter Haftung	Berlin	100.0
Sechste Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Siebte Bayer VV GmbH	Leverkusen	100.0
Steigerwald Arzneimittelwerk GmbH	Darmstadt	100.0
TECTRION GmbH	Leverkusen	100.0
TravelBoard GmbH	Leverkusen	100.0
Vierte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Zweite Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100.0
Zweite K-W-A Beteiligungsgesellschaft mbH	Leverkusen	100.0

6.2 Business combinations and other acquisitions

ACQUISITIONS IN 2015

The purchase prices for the acquisitions made in 2015, along with adjustments to purchase prices and purchase price allocations effected in 2015 relating to previous years' transactions, totaled €8 million (2014: €13,741 million). The purchase prices of the acquired companies or businesses were settled mainly in cash. Adjustments to purchase price allocations and other adjustments reduced the total carrying amount of goodwill by €5 million (2014: €5,169 million increase). The changes in goodwill mainly resulted from the following transactions:

On March 2, 2015, Covestro successfully completed the acquisition of all the shares of Thermoplast Composite GmbH, Germany, a technology leader specializing in the production of thermoplastic fiber composites. The aim of the acquisition is to expand the range of polycarbonate materials for major industries to include composites made from continuous fiber-reinforced thermoplastics. A purchase price of €18 million was agreed. This includes a variable component of €4 million. The purchase price mainly pertained to patents and goodwill.

On July 1, 2015, CropScience completed the acquisition of all the shares of SeedWorks India Pvt. Ltd., based in Hyderabad, India. The company is specialized in the breeding, production and marketing of hybrid seeds of tomato, hot pepper, okra and gourds. It has research and seed processing locations in Bangalore and Hyderabad, respectively. The purchase of SeedWorks India is intended to further strengthen CropScience's vegetable seed business in India. A purchase price of €80 million was agreed, subject to the usual purchase price adjustments. The purchase price mainly pertained to patents, research and development projects and goodwill.

As part of the acquisition of the consumer care business of Merck & Co., Inc., Whitehouse Station, New Jersey, United States, the production facilities at the Pointe-Claire site in Canada were acquired on July 1, 2015. A purchase price of €67 million was agreed.

The global purchase price allocation for the consumer care business acquired from Merck & Co., Inc. in 2014 was completed in September 2015.

This resulted in an adjustment to deferred tax assets due to temporary differences between the carrying amounts of intangible assets in the IFRS financial statements and those reported for tax purposes, along with a corresponding decline in goodwill in the statement of financial position. These deferred tax assets were retroactively restated to the date of acquisition pursuant to IFRS 3.45ff.

(Table 4.20)

Change in Purchase Price Allocation

	Dec. 31, 2014		
€ million	Before change in purchase price allocation	Change in purchase price allocation	After change in purchase price allocation
Goodwill	16,168	(821)	15,347
Deferred taxes	2,981	821	3,802

In addition, the purchase price was reduced by €8 million in 2015 on the basis of agreed purchase price adjustment mechanisms.

The court proceedings initiated by former minority stockholders of Bayer Pharma AG (formerly Bayer Schering Pharma AG), Berlin, Germany, were settled in August 2015. The additional payment made as a result represents a subsequent purchase price adjustment according to the March 31, 2004, version of IFRS 3 in effect at the acquisition date. The goodwill was increased by €261 million in 2013 based on the status of the proceedings at that time. The settlements made it possible to finally determine the goodwill arising from the acquisition. It was therefore necessary to reduce the goodwill amount by €115 million in 2015 as a result of the proceedings. Both the increase and the reduction were recognized outside profit or loss against the liability resulting from the minority stockholders' compensation claim.

The global purchase price allocation for Dihon Pharmaceutical Group Co. Ltd., Kunming, Yunnan, China, acquired in 2014, was completed in October 2015. The purchase price was reduced by €43 million in 2015 due to adjustment mechanisms.

The purchase price allocations for SeedWorks India Pvt. Ltd. and the production facilities at the Pointe-Claire site in Canada acquired from Merck & Co., Inc. currently remain incomplete pending compilation and review of the relevant financial information. It is therefore possible that changes will be made in the allocation of the purchase prices to the individual assets and liabilities.

The businesses of the above-mentioned acquired companies Thermoplast Composite GmbH and SeedWorks India Pvt. Ltd. contributed a total of €5 million to Bayer Group sales in 2015. EBIT of these businesses in 2015 totaled minus €5 million. Their total income after taxes since the respective dates of their first-time consolidation was minus €5 million. This includes the financing costs incurred since the respective acquisition dates.

If the above acquisitions had already been made as of January 1, 2015, the Bayer Group would have had total sales of €46,334 million in 2015. Group income after taxes and earnings per share would not have been materially affected.

The effects of these transactions and other, smaller transactions made in 2015 – along with adjustments to purchase prices and purchase price allocations made in 2015 relating to previous years' transactions – on the Group's assets and liabilities as of the respective acquisition or adjustment dates are shown in the table. Net of acquired cash and cash equivalents, the transactions resulted in the following cash outflow:

(Table 4.21)

Acquired Assets and Assumed Liabilities (Fair Values at the Respective Acquisition Dates)

€ million	2014	Of which Merck CC	Of which Dihon	2015	Of which Merck CC	Of which Merck Canada	Of which Dihon
Goodwill	5,169	4,316	96	(5)	49	3	1
Patents and technologies	1,762	–	–	39	–	–	–
Trademarks	5,672	5,362	295	53	35	–	18
Production rights	71	–	–	–	–	–	–
R&D projects	16	–	–	26	–	–	–
Other rights	30	–	6	(20)	(20)	–	–
Property, plant and equipment	235	146	66	36	(23)	61	(2)
Other noncurrent assets	9	–	9	–	–	–	–
Deferred tax assets	1,264	1,222	3	(5)	(5)	–	–
Inventories	331	295	18	(44)	(46)	4	(8)
Receivables	222	106	70	57	43	3	(4)
Other current assets	–	–	–	–	–	–	–
Cash and cash equivalents	105	3	12	2	–	–	–
Provisions for pensions and other post-employment benefits	–	–	–	–	–	–	–
Other provisions	(105)	(101)	(3)	(85)	(50)	(3)	(19)
Financial liabilities	(213)	(20)	(65)	–	–	–	–
Other liabilities	(292)	(150)	(60)	(25)	7	(1)	(27)
Deferred tax liabilities	(535)	(2)	(46)	(21)	2	–	(2)
Net assets	**13,741**	**11,177**	**401**	**8**	**(8)**	**67**	**(43)**
Changes in noncontrolling interest	–	–	–	–	–	–	–
Purchase price	**13,741**	**11,177**	**401**	**8**	**(8)**	**67**	**(43)**
Acquired cash and cash equivalents	(105)	(3)	(12)	(2)	–	–	–
Advance purchase price payments made in prior years	–	–	–	(11)	–	(11)	–
Settlement gain from pre-existing relationship	(35)	–	–	111	–	–	–
Liabilities for future payments	(92)	(65)	–	–	–	–	–
Payments for previous years' acquisitions	4	–	–	65	63	–	–
Purchase price adjustment	33	–	33	5	–	–	5
Net cash outflow for acquisitions	**13,546**	**11,109**	**422**	**176**	**55**	**56**	**(38)**

2014 figures restated

On December 19, 2015, Bayer entered into an agreement to create a joint venture with CRISPR Therapeutics AG, Basel, Switzerland. The joint venture is to be established in the first quarter of 2016. Its purpose is the development and commercialization of new methods to treat blood disorders, blindness and heart diseases. As of December 31, 2015, Bayer had capital contribution commitments of US$370 million to CRISPR Therapeutics AG and the joint venture yet to be established. These commitments mature on December 31, 2020, at the latest.

ACQUISITIONS IN 2014

In 2014, the following acquisitions were accounted for in accordance with IFRS 3:

On March 6, 2014, CropScience completed the acquisition of all the shares of Biagro Group, a producer and distributor of biological seed treatment solutions headquartered in General Las Heras in the province of Buenos Aires, Argentina. The company operates production facilities in Argentina and Brazil. Its portfolio of established brands includes seed-applied inoculants, plant-growth-promoting microorganisms and other products for integrated pest management based on bacterial and fungal strains. The acquisition helps CropScience to build on the success of its soybean seed business in Latin America. A one-time payment and purchase price adjustment totaling €10 million were agreed upon along with potential milestone payments reflected at €6 million in the purchase price allocation. The milestone payments are mainly dependent on the achievement of certain sales targets and product approvals. The purchase price mainly pertained to the technology platform and goodwill.

In March 2014, HealthCare successfully completed the takeover offer for the shares of Algeta ASA, Oslo, Norway, and acquired 100% of the outstanding shares. Bayer issued a takeover offer for all the shares of Algeta at a price of NOK 362 per share in cash on January 20, 2014. On expiration of the offer deadline, Bayer had received acceptances from Algeta shareholders representing about 98% of the share capital. On March 14, 2014, a compulsory acquisition process was carried out to obtain the remaining 2% of the shares, also at a price of NOK 362 per share.

Algeta creates novel cancer therapies based on its world-leading, patented technologies. The company develops alpha-pharmaceuticals designed to target cancers using the unique properties of alpha particle radiation. HealthCare and Algeta began collaborating in 2009 to develop and commercialize radium-223 dichloride, which was approved in the United States in May 2013 under the tradename Xofigo™. The acquisition strengthened the oncology business of Pharmaceuticals. The purchase price was €1,974 million, including €35 million for the settlement of the pre-existing relationship between Algeta and Bayer. The latter amount represented the value of the advantage enjoyed by the acquirer from the contractual relationship that existed prior to the acquisition compared to market conditions for similar collaborations. The settlement amount was reflected in other operating income and at the same time increased the consideration transferred.

The purchase price mainly pertained to an intangible asset for the product-specific radium-223 technology along with goodwill. The goodwill is mainly attributable to synergies in administration processes and infrastructure, including cost savings in the selling, research and development, and general administration functions.

On September 30, 2014, CropScience completed the acquisition of the seeds business of Granar S.A., headquartered in Encarnación, Paraguay. Granar specializes in the breeding, production and marketing of improved seed, especially soybean seed, that is adapted to the growing conditions in subtropical regions. It has a strong presence in Paraguay and Uruguay and an increasing presence in Brazil. Granar continued to sell the seed for its own account for the 2014 / 15 sowing season. Bayer took over marketing in 2015. Part of the agreed one-time payment of €15 million to acquire the business has been retained for disbursement over the next six years and is reflected at €2 million in the purchase price allocation.

On October 1, 2014, HealthCare completed the acquisition of the consumer care business of U.S. company Merck & Co., Inc., Whitehouse Station, New Jersey. The acquired business is primarily comprised of products in the cold, allergy, sinus & flu, dermatology (including sun care), foot health and gastrointestinal categories. The most important brands are Claritin™ (allergy), Coppertone™ (sun care), Mira™ (gastrointestinal) and Afrin™ (cold), and – in North America and Latin America – Dr. Scholl's™ (foot health). These products complement Bayer's existing range of nonprescription medicines.

In those countries where the consumer care business was acquired via an asset deal, Merck & Co., Inc. continued the sales activities in its own name for a transitional period until the marketing authorizations had been transferred to Bayer or Bayer was able to take over the business as distributor. During this period, the economic rewards and risks already accrued to Bayer, and Bayer received the operating profit on the business from Merck. The transitional period has ended.

Where the business was acquired via a share deal, Bayer purchased 100% of the respective company's shares.

In 2014, Bayer paid a provisional purchase price of €11,177 million, less specific amounts that were retained pending the receipt of antitrust approvals in the Republic of Korea and the transfer of further assets. The provisional purchase price allocation mainly comprised goodwill of €5,137 million and acquired trademarks valued at €5,362 million. The

goodwill amount was retroactively adjusted to €4,316 million as of the acquisition date. It is largely based on cost synergies, especially in marketing and manufacturing, as well as on sales synergies resulting from the increased distribution capability and use of the global infrastructure. As expected, a goodwill amount of €2,084 million is tax-deductible.

Upon closure of this acquisition, the strategic pharmaceutical collaboration agreed between Bayer and Merck & Co., Inc. in the field of soluble guanylate cyclase (sGC) modulation also came into effect. Bayer's aim in entering into the global co-development and co-commercialization agreement, which has already received antitrust clearance, is to strengthen its development potential in the cardiovascular therapeutic area. In this connection, Merck & Co., Inc. is to make payments to Bayer of up to US$2.1 billion, comprising an up-front payment of US$1.0 billion (€793 million) made in 2014 and sales milestone payments of up to US$1.1 billion related to future joint activities with certain compounds, including Adempas™ (riociguat) to treat pulmonary hypertension. The one-time payment of €793 million is to be recognized in sales and earnings over a period of 13.5 years as the obligations are satisfied.

On November 1, 2014, Consumer Health acquired all the shares of Dihon Pharmaceutical Group Co. Ltd., Kunming, Yunnan, China. Dihon is a pharmaceutical company specializing in the manufacture and marketing of over-the-counter (otc) and herbal traditional Chinese medicine products. A provisional purchase price of €401 million was accounted for in 2014. This was based on a purchase price adjustment mechanism. The purchase price mainly pertained to acquired trademarks and goodwill.

On December 1, 2014, CropScience completed the acquisition of land management assets in the United States, Canada, Mexico, Australia and New Zealand from E. I. DuPont de Nemours and Company, United States. The acquisition provides CropScience with access to the growing forestry and range & pasture business segments in North America. Bayer paid a provisional purchase price of €120 million in 2014. A potential milestone payment for a successful registration was agreed upon in addition. This payment was included at €18 million in the purchase price allocation. The purchase price mainly pertained to intangible assets for product-related technologies and goodwill.

6.3 Divestitures, material sale transactions and discontinued operation

DIVESTITURES AND MATERIAL SALE TRANSACTIONS IN 2015

The effects of divestitures and material sale transactions made in 2015 and previous years on the consolidated financial statements were as follows:

On March 2, 2015, Consumer Health completed the sale of two equine products, Legend / Hyonate and Marquis, to Merial, Inc., Duluth, Georgia, United States. A purchase price of €120 million was agreed. The one-time payment is accounted for as deferred income. The purchase prices for Legend / Hyonate and Marquis will be reflected in sales and earnings over a four-year and a three-year period, respectively, as Bayer has entered into further significant obligations.

No assets or liabilities were derecognized in 2015 as a result of this divestiture.

(Table 4.22)

Divested Assets and Liabilities

€ million	2014	2015
Goodwill	286	–
Patents and technologies	62	–
Other intangible assets	17	–
Property, plant and equipment	18	–
Other noncurrent assets	2	–
Inventories	10	–
Other current assets	–	–
Other provisions	–	–
Other liabilities	–	–
Divested net assets	**395**	**–**

DIVESTITURES AND MATERIAL SALE TRANSACTIONS IN 2014

On August 29, 2014, Consumer Health completed the sale of the Interventional device business to Boston Scientific Corporation, Natick, Massachusetts, United States. The sale comprised the AngioJet™ thrombectomy system and the Jetstream™ atherectomy system, as well as the Fetch™2 aspiration catheter used in cardiology, radiology and peripheral vascular procedures. The total transaction price, including fees for transitional services to Boston Scientific and before working capital adjustments, was €315 million. Disregarding the transitional services, a special gain of €80 million was recognized in other operating income, and deferred income of €2 million was recognized in liabilities.

On October 1, 2014, the strategic pharmaceutical collaboration agreed between Bayer and Merck & Co., Inc., United States, in the area of soluble guanylate cyclase (sGC) modulation came into effect. Pharmaceuticals and Merck & Co., Inc. assumed joint control of the sGC modulators business. The collaboration agreement provides for future net cash flows to be equally shared between Bayer and Merck & Co., Inc. Of the goodwill allocated to the Pharmaceuticals segment, €173 million was derecognized through profit or loss as of the date the collaboration came into effect.

DISCONTINUED OPERATION

On June 8, 2015, an agreement was signed to sell the Diabetes Care business to Panasonic Healthcare Holdings Co., Ltd., Tokyo, Japan, for approximately €1 billion. The sale includes the leading Contour™ portfolio of blood glucose monitoring meters and strips, as well as other products such as Breeze™2, Elite™ and Microlet™ lancing devices. Implementation of the agreement began on January 4, 2016. Bayer has entered into further significant obligations, which are to be met over the next two years.

The Diabetes Care activities are reported as a discontinued operation. The respective information is provided from the standpoint of the Bayer Group and is not intended to present these activities as a separate entity.

The income statements for the discontinued operation are given below:

(Table 4.23)

Income Statements for Discontinued Operations

€ million	2014	2015
Net sales	**900**	**947**
Cost of goods sold	(357)	(380)
Gross profit	**543**	**567**
Selling expenses	(349)	(386)
Research and development expenses	(37)	(48)
General administration expenses	(38)	(36)
Other operating income / expenses	(8)	(20)
EBIT [1]	**111**	**77**
Financial result	**–**	**–**
Income before income taxes	**111**	**77**
Income taxes	(11)	3
Income after income taxes	**100**	**80**

[1] EBIT = earnings before financial result and taxes

The assets and liabilities of the discontinued operation are shown in the following table:

(Table 4.24)

Assets and Liabilities of Discontinued Operations

€ million	Dec. 31, 2015
Noncurrent assets	
Goodwill	36
Other intangible assets	4
Property, plant and equipment	8
	48
Current assets	
Inventories	135
	135
Total assets	**183**
Noncurrent liabilities	
Provisions for pensions and other post-employment benefits	23
	23
Current liabilities	
Other provisions	89
	89
Total liabilities	**112**

In addition to the assets of the discontinued Diabetes Care business amounting to €183 million, the statement of financial position as of December 31, 2015, reflects a further €14 million in assets held for sale.

The discontinued operation affected the Bayer Group statement of cash flows as follows:

(Table 4.25)

Cash Flows of Discontinued Operations

€ million	2014	2015
Net cash provided by (used in) operating activities (net cash flow)	113	43
Net cash provided by (used in) investing activities	(6)	(4)
Net cash provided by (used in) financing activities	(107)	(39)
Change in cash and cash equivalents	**–**	**–**

Notes to the Income Statements

7. Net sales

Net sales are derived primarily from product deliveries. Total reported net sales for 2015 amounted to €46,324 million, rising by €4,985 million, or 12.1%, compared to 2014. The increase resulted from the following factors:

(Table 4.26)

Factors in Sales Development

	2015	
	€ million	%
Volume	1,817	+4.4
Price	(713)	–1.7
Currency	2,420	+5.9
Portfolio	1,461	+3.5
Total	**4,985**	**+12.1**

Breakdowns of net sales by segment and by region are given in the table in NOTE (1).

8. Selling expenses

Selling expenses comprise all expenses incurred in the reporting period for the sale, storage and transportation of saleable products, advertising, the provision of advice to customers, and market research. Selling expenses were comprised as follows:

(Table 4.27)

Selling Expenses

€ million	2014	2015
Internal and external sales force	4,452	4,808
Advertising and customer advice	2,491	3,006
Physical distribution and warehousing of finished products	1,139	1,273
Commission and licensing expenses	1,082	1,401
Other selling expenses	1,505	1,879
Total	**10,669**	**12,367**

2014 figures restated

9. Research and development expenses

Research and development expenses and their accounting treatment are defined in NOTE (4). Breakdowns of research and development expenses by segment and region are given in NOTE (1).

10. Other operating income

Other operating income was comprised as follows:

(Table 4.28)

Other Operating Income

€ million	2014	2015
Gains on retirements of noncurrent assets	133	137
Reversal of impairment losses on receivables	23	32
Reversals of unutilized provisions	44	25
Gains from derivatives	149	272
Miscellaneous operating income	361	644
Total	**710**	**1,110**
of which special items	118	336

2014 figures restated

Gains from the retirements of noncurrent assets included a €53 million gain from the sale of trademark rights for the Biovital™, Benerva™, Bactine™ and ProPlus™ brands (Consumer Health segment). In addition, a €29 million gain was realized on the sale of transfer rights by Bayer 04 Leverkusen Fußball GmbH. In the CropScience segment, a gain of €19 million was received from the sale of a parcel of land in Tolichowki, India. In the Covestro segment, the sale of the polyurethanes production site in Anyer, Indonesia, yielded a gain of €13 million, and a €6 million gain resulted from the sale of a parcel of land in Nanjing, China.

Miscellaneous operating income included €314 million in claims against Dow AgroSciences llc, United States, for damages and royalty payments resulting from the infringement of Bayer's rights to the Liberty Link™ weed control system (CropScience segment). Also reflected here is a €16 million compensation payment for a production shortfall in Toulouse, France. A €12 million gain was realized by Bayer 04 Leverkusen Fußball GmbH from the sale of noncapitalized transfer rights.

In 2014, gains from the retirements of noncurrent assets included a gain of €80 million in the Consumer Health segment from the divestiture of the Interventional device business to Boston Scientific Corporation, Natick, Massachusetts, United States. A gain of €9 million was also incurred from the sale of transfer rights by Bayer 04 Leverkusen Fußball GmbH. The Consumer Health segment recorded a gain of €10 million from the termination of the licensing and distribution agreement for the pain reliever Flector™. The sale of the Monroe production site in Argentina and the Xochimilco site in Mexico resulted in gains of €9 million and €6 million, respectively, in the Pharmaceuticals segment.

The miscellaneous operating income in 2014 included a gain of €35 million in the Pharmaceuticals segment resulting from the pre-existing partnership between Algeta ASA, Norway, and Bayer to develop and commercialize radium-223 dichloride. A gain of €21 million was recorded from the divestiture of the Consumer Health products Bronkaid™ and Neo-Synephrine™. A gain of €18 million resulted from the divestiture of the pharmaceutical product Betapace™. Also reflected in this item was income of €64 million from insurance reimbursements.

11. Other operating expenses

Other operating expenses were comprised as follows:

(Table 4.29)

Other Operating Expenses

€ million	2014	2015
Losses on retirements of noncurrent assets	(198)	(32)
Impairment losses on receivables	(87)	(183)
Expenses related to significant legal risks	(168)	(151)
Losses from derivatives	(74)	(628)
Miscellaneous operating expenses	(309)	(286)
Total	**(836)**	**(1,280)**
of which special items	(356)	(247)

2014 figures restated

The losses on retirements of noncurrent assets included €6 million in expenses for the termination of rice breeding activities in Brazil.

Impairment losses of €91 million were recognized in 2015 on receivables from the Venezuelan exchange control authority. Of this amount, the Pharmaceuticals segment accounted for €67 million, Consumer Health for €7 million, CropScience for €13 million, Covestro for €3 million and the Corporate Center for €1 million. Details are provided in NOTE (4).

The €151 million in expenses for significant legal risks mainly included accounting measures taken in connection with legal proceedings relating to the products Luna™, LL Rice™ and Xarelto™.

The miscellaneous operating expenses included €38 million in restructuring charges related to the legal carve-out of the Covestro Group, of which the Corporate Center segment accounted for €30 million and Covestro for €8 million. Consumer Health incurred expenses of €41 million for the integration of the business acquired from Merck & Co., Inc., United States.

As in the previous year, the remaining amount of miscellaneous operating expenses comprised a large number of individually immaterial items at the subsidiaries.

In 2014, the losses on retirements of noncurrent assets included €173 million from the derecognition of the goodwill allocated to the Pharmaceuticals segment in connection with the pharmaceutical collaboration between Bayer and Merck & Co., Inc., United States.

The miscellaneous operating expenses in 2014 included €10 million in restructuring charges, which were incurred entirely by Covestro. Pharmaceuticals and Consumer Health incurred expenses of €12 million and €71 million, respectively, for the integration of acquired businesses.

12. Personnel expenses and employee numbers

Personnel expenses for continuing operations rose in 2015 by €1,510 million to €11,203 million (2014: €9,693 million), mainly as a result of currency effects, the increase in the average number of employees, and higher employee bonuses based on the company's financial success.

(Table 4.30)

Personnel Expenses

€ million	2014	2015
Salaries	7,875	9,012
Social expenses and expenses for pensions and other benefits	1,818	2,191
of which for defined contribution pension plans	483	559
of which for defined benefit and other pension plans	351	502
Total	**9,693**	**11,203**

2014 figures restated

The personnel expenses shown here do not contain the interest portion of the allocation to personnel-related provisions – mainly for pensions and other post-employment benefits – which is included in the financial result under other financial expenses (NOTE (13.3)).

The average numbers of employees, classified by corporate function, were as shown in the table below:

(Table 4.31)

Employees

	2014	2015
Production	46,351	48,630
Marketing and distribution	44,150	45,078
Research and development	13,609	14,466
General administration	9,006	9,377
Total	**113,116**	**117,551**
Apprentices	2,349	2,332

2014 figures restated

The number of employees on either permanent or temporary contracts is stated in full-time equivalents, with part-time employees included on a pro-rated basis in line with their contractual working hours. The figures do not include apprentices.

13. Financial result

The financial result for 2015 was minus €1,005 million (2014: minus €981 million), comprising an equity-method loss of €9 million (2014: €13 million), financial expenses of €1,367 million (2014: €1,311 million) and financial income of €371 million (2014: €343 million). Details of the components of the financial result are provided below.

13.1 Income (loss) from investments in affiliated companies

The net income (loss) from investments in affiliated companies was comprised as follows:

(Table 4.32)

Income (Loss) from Investments in Affiliated Companies

€ million	2014	2015
Net loss from investments accounted for using the equity method (equity-method loss)	(13)	(9)
Expenses		
Impairment losses on investments in affiliated companies	–	(1)
Gains		
Impairment loss reversals on investments in affiliated companies	2	–
Gains/losses from investments in affiliated companies and from profit and loss transfer agreements (net)	1	3
Gains from the sale of investments in affiliated companies	–	31
Total	**(10)**	**24**

The main components of the income from investments in affiliated companies were a €29 million gain from the sale of the interest in Kythera Biopharmaceuticals, Inc., United States, and the €23 million (2014: €18 million) equity-method loss from the associate PO JV, LP, United States. The €14 million (2014: €5 million) aggregate of the equity-method gains and losses of the remaining joint ventures and associates accounted for using the equity method included a €10 million gain from the sale of the interest in Bayer IMSA, S.A. de C.V., Mexico.

Further details of the companies accounted for using the equity method are given in NOTE (19).

13.2 Net interest expense

The net interest expense was comprised as follows:

(Table 4.33)

Net Interest Expense

€ million	2014	2015
Expenses		
Interest and similar expenses	(618)	(752)
Interest expenses for derivatives (held for trading)	(75)	(25)
Income		
Interest and similar income	283	297
Interest income from derivatives (held for trading)	54	25
Total	**(356)**	**(455)**

Interest and similar expenses included interest expense of €49 million (2014: €55 million) relating to nonfinancial liabilities. Interest and similar income included interest income of €133 million (2014: €48 million) from nonfinancial assets. Interest income of €109 million resulted from claims against Dow AgroSciences LLC, United States, for damages and royalty payments resulting from the infringement of Bayer's rights to the Liberty Link™ weed control system.

Settlements were reached in August 2015 in the court proceedings initiated by former minority stockholders of Bayer Pharma AG (formerly Bayer Schering Pharma AG). Further details are given in NOTE (6.2). The interest expense was reduced in 2015 by an aggregate of €24 million in connection with the additional payment agreed upon (2014: increased by €10 million).

The change in the liability for redeemable noncontrolling interest is reflected in interest income or expense. In 2015 a €5 million (2014: €46 million) decrease in this liability was recognized as interest income.

13.3 Other financial income and expenses

Other financial income and expenses were comprised as follows:

(Table 4.34)

Other Financial Income and Expenses

€ million	2014	2015
Expenses		
Interest portion of interest-bearing provisions	(322)	(287)
Exchange loss	(248)	(254)
Miscellaneous financial expenses	(48)	(48)
Income		
Miscellaneous financial income	3	15
Total	(615)	(574)

The interest portion of noncurrent provisions comprised €276 million (2014: €275 million) in interest expense for pension and other post-employment benefit provisions plus €11 million (2014: €47 million) in effects of interest expense and interest-rate fluctuations for other provisions and corresponding overfunding. The interest expense for pension and other post-employment benefit provisions included €712 million (2014: €828 million) for the un-winding of discount on the present value of the defined benefit obligation and €436 million (2014: €553 million) in interest income from plan assets.

14. Taxes

The breakdown of tax expenses by origin was as follows:

(Table 4.35)

Tax Expense by Origin

€ million	2014	Of which income taxes	2015	Of which income taxes
Taxes paid or accrued				
Income taxes				
Germany	(566)		(1,140)	
other countries	(739)		(1,118)	
Other taxes				
Germany	(48)		(44)	
other countries	(189)		(220)	
	(1,542)	**(1,305)**	**(2,522)**	**(2,258)**
Deferred taxes				
from temporary differences	164		1,056	
from tax loss carryforwards and tax credits	70		(25)	
	234	**234**	**1,031**	**1,031**
Total	**(1,308)**	**(1,071)**	**(1,491)**	**(1,227)**

2014 figures restated

The other taxes mainly include land, vehicle and other indirect taxes. They are reflected in the respective functional cost items.

The deferred tax assets and liabilities were allocable to the following items in the statement of financial position:

(Table 4.36)

Deferred Tax Assets and Liabilities

€ million	Dec. 31, 2014 Deferred tax assets	Dec. 31, 2014 Deferred tax liabilities	Dec. 31, 2015 Deferred tax assets	Dec. 31, 2015 Deferred tax liabilities
Intangible assets	1,586	2,520	1,411	1,910
Property, plant and equipment	86	672	253	678
Financial assets	57	207	18	183
Inventories	652	50	943	63
Receivables	286	627	98	580
Other assets	24	13	28	14
Provisions for pensions and other post-employment benefits	3,508	1,037	3,601	1,213
Other provisions	976	129	1,025	90
Liabilities	674	71	714	91
Tax loss carryforwards	446	–	393	–
Tax credits	144	–	191	–
	8,439	**5,326**	**8,675**	**4,822**
of which noncurrent	7,182	4,912	7,398	4,750
Set-off	(4,637)	(4,637)	(3,996)	(3,996)
Total	**3,802**	**689**	**4,679**	**826**

2014 figures restated

Deferred taxes on remeasurements, recognized outside profit or loss, of the net liability for defined benefit pension and other post-employment benefits diminished equity by €430 million (2014: increased equity by €1,621 million). Deferred taxes on changes, recognized outside profit or loss, in fair values of available-for-sale financial assets and derivatives designated as cash flow hedges diminished equity by €27 million (2014: increased equity by €55 million). These effects on equity are reported in the statement of comprehensive income.

The use of tax loss carryforwards reduced the income taxes paid or accrued in 2015 by €136 million (2014: €24 million). The use of tax credits reduced income taxes paid or accrued by €21 million (2014: €10 million).

Of the total tax loss carryforwards of €5,497 million in 2015 (2014: €4,535 million), an amount of €1,812 million (2014: €1,737 million) is expected to be usable within a reasonable period. The increase in loss carryforwards was mainly due to losses that newly arose in 2015 and tax reassessments for prior years. Deferred tax assets of €393 million (2014: €446 million) were recognized for the amount of loss carryforwards expected to be usable. The deferred tax assets included an amount of €0 million (2014: €39 million) that resulted from purchase price allocations and was recognized outside profit or loss.

The use of €3,685 million (2014: €2,798 million) of tax loss carryforwards was subject to legal or economic restrictions. Consequently, no deferred tax assets were recognized for this amount. If these tax loss carryforwards had been fully usable, deferred tax assets of €322 million (2014: €138 million) would have been recognized.

Tax credits of €191 million were recognized in 2015 (2014: €144 million) as deferred tax assets, including €0 million (2014: €0 million) outside profit or loss. The use of €41 million (2014: €45 million) of tax credits was subject to legal or economic restrictions. Consequently, no deferred tax assets were recognized for this amount.

Unusable tax credits and tax loss carryforwards will expire as follows:

(Table 4.37)

Expiration of Unusable Tax Credits and Tax Loss Carryforwards

	Tax credits		Tax loss carryforwards	
€ million	Dec. 31, 2014	Dec. 31, 2015	Dec. 31, 2014	Dec. 31, 2015
Within one year	4	4	14	17
Within two years	–	–	9	70
Within three years	3	4	3	25
Within four years	–	–	24	32
Within five years	23	26	82	234
Thereafter	15	6	2,666	3,307
Total	**45**	**40**	**2,798**	**3,685**

In 2015, subsidiaries that reported losses for 2015 or 2014 recognized net deferred tax assets totaling €2,455 million (2014: €2,117 million) from temporary differences and tax loss carryforwards. These assets were considered to be unimpaired because the companies concerned were expected to generate taxable income in the future.

Deferred tax liabilities of €35 million were recognized in 2015 (2014: €6 million) for planned dividend payments by subsidiaries. Deferred tax liabilities were not recognized for temporary differences on €12,087 million (2014: €8,648 million) of retained earnings of subsidiaries because these earnings are to be reinvested for an indefinite period.

The reported tax expense of €1,227 million for 2015 (2014: €1,071 million) differed by €119 million (2014: €58 million) from the expected tax expense of €1,346 million (2014: €1,129 million) that would have resulted from applying an expected weighted average tax rate to the pre-tax income of the Group. This average rate, derived from the expected tax rates of the individual Group companies, was 25.7% in 2015 (2014: 25.6%). The effective tax rate was 23.4% (2014: 24.3%).

The reconciliation of expected to reported income tax expense and of the expected to the effective tax rate for the Group was as follows:

(Table 4.38)

Reconciliation of Expected to Actual Income Tax Expense

	2014		2015	
	€ million	%	€ million	%
Expected income tax expense and expected tax rate	**1,129**	**25.6**	**1,346**	**25.7**
Reduction in taxes due to tax-free income				
Income related to the operating business	(92)	(2.1)	(155)	(3.0)
Income from affiliated companies and divestiture proceeds	(2)	–	(10)	(0.2)
First-time recognition of previously unrecognized deferred tax assets on tax loss carryforwards	(15)	(0.3)	(30)	(0.6)
Use of tax loss carryforwards on which deferred tax assets were not previously recognized	(1)	–	(6)	(0.1)
Increase in taxes due to non-tax-deductible expenses				
Expenses related to the operating business	149	3.4	148	2.8
Impairment losses on investments in affiliated companies	2	–	7	0.1
New tax loss carryforwards unlikely to be usable	57	1.3	81	1.5
Existing tax loss carryforwards on which deferred tax assets were previously recognized but which are unlikely to be usable	7	0.2	16	0.3
Tax income (–) and expenses (+) relating to other periods	(119)	(2.7)	(95)	(1.8)
Tax effects of changes in tax rates	(10)	(0.2)	(25)	(0.5)
Other tax effects	(34)	(0.9)	(50)	(0.8)
Actual income tax expense and effective tax rate	**1,071**	**24.3**	**1,227**	**23.4**

2014 figures restated

15. Income/losses attributable to noncontrolling interest

Income attributable to noncontrolling interest amounted to €115 million (2014: €19 million). Losses attributable to noncontrolling interest amounted to €127 million (2014: €2 million).

16. Earnings per share

Earnings per share are determined according to IAS 33 (Earnings per Share) by dividing net income by the weighted average number of ordinary shares in issue during the year.

(Table 4.39)

Earnings per Share

€ million	2014	2015
Income from continuing operations after income taxes	3,343	4,018
Income from discontinued operations after income taxes	100	80
Income after income taxes	3,443	4,098
of which attributable to noncontrolling interest	17	(12)
of which attributable to Bayer AG stockholders (net income)	3,426	4,110
	Shares	Shares
Weighted average number of issued ordinary shares	826,947,808	826,947,808
€		
Earnings per share		
From continuing operations		
Basic	4.02	4.87
Diluted	4.02	4.87
From discontinued operations		
Basic	0.12	0.10
Diluted	0.12	0.10
From continuing and discontinued operations		
Basic	4.14	4.97
Diluted	4.14	4.97

2014 figures restated

Notes to the Statements of Financial Position

17. Goodwill and other intangible assets

Changes in intangible assets in 2015 were as follows:

(Table 4.40)

Changes in Intangible Assets

€ million	Acquired goodwill	Patents and technologies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
Cost of acquisition or generation, December 31, 2014	**15,347**	**12,827**	**10,242**	**1,808**	**2,168**	**882**	**3,189**	**46,463**
Changes in scope of consolidation	–	4	–	–	–	–	1	5
Acquisitions	(5)	39	53	–	–	26	(20)	93
Capital expenditures	–	77	–	52	–	107	152	388
Retirements	–	(33)	(35)	(55)	–	(7)	(966)	(1,096)
Transfers	–	40	–	75	(2)	(113)	–	–
Transfers (IFRS 5)	(34)	(2)	(14)	(33)	–	–	(20)	(103)
Inflation adjustment (IAS 29)	7	–	–	–	–	–	–	7
Exchange differences	781	117	706	97	6	51	264	2,022
December 31, 2015	**16,096**	**13,069**	**10,952**	**1,944**	**2,172**	**946**	**2,600**	**47,779**
Accumulated amortization and impairment losses, December 31, 2014	**–**	**7,428**	**2,588**	**1,039**	**1,911**	**153**	**2,344**	**15,463**
Changes in scope of consolidation	–	4	–	–	–	–	–	4
Retirements	–	(17)	(31)	(55)	–	(7)	(949)	(1,059)
Amortization and impairment losses in 2015	–	801	447	148	106	66	183	1,751
Amortization	–	801	422	147	106	–	161	1,637
Impairment losses	–	–	25	1	–	66	22	114
Impairment loss reversals	–	–	–	–	–	–	–	–
Transfers	–	–	1	1	(2)	–	–	–
Transfers (IFRS 5)	–	(1)	–	(25)	–	–	(19)	(45)
Exchange differences	–	62	78	26	6	13	206	391
December 31, 2015	**–**	**8,277**	**3,083**	**1,134**	**2,021**	**225**	**1,765**	**16,505**
Carrying amounts, December 31, 2015	**16,096**	**4,792**	**7,869**	**810**	**151**	**721**	**835**	**31,274**
Carrying amounts, December 31, 2014	**15,347**	**5,399**	**7,654**	**769**	**257**	**729**	**845**	**31,000**

2014 figures restated

The capitalized patents and technologies include an amount pertaining to the active ingredient alemtuzumab (product name: Lemtrada) for the treatment of multiple sclerosis. Bayer gave back the worldwide distribution rights for alemtuzumab to Genzyme Corp., United States, in 2009 and in return received global co-promotion rights and an entitlement to royalties and revenue-based milestone payments. Genzyme Corp. received marketing approval for alemtuzumab in Europe in 2013 and in the United States in 2014. Bayer has decided not to exercise its co-promotion rights.

Impairment losses of €114 million were recognized on intangible assets. In the Pharmaceuticals segment, development activities for an intangible asset in the oncology area were discontinued. A €42 million impairment loss was recognized as a result. In the CropScience segment, impairment losses totaling €20 million were recognized on two research and development projects in the crop protection area due to a delayed market introduction and new research findings. In the Consumer Health reporting segment, impairment losses totaling €17 million were recognized on trademarks based on a portfolio review associated with the closure of a production site.

Impairment losses were also recognized on further intangible assets in the Consumer Health segment (€23 million), the CropScience segment (€9 million) and the Pharmaceuticals segment (€3 million).

Details of acquisitions and divestitures are provided in NOTES (6.2) and (6.3). The impairment testing procedure for goodwill and other intangible assets is explained in NOTE (4).

Changes in intangible assets in 2014 were as follows:

(Table 4.41)

Changes in Intangible Assets (Previous Year)

€ million	Acquired goodwill	Patents and technologies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
Cost of acquisition or generation, December 31, 2013	**9,862**	**11,021**	**4,282**	**1,598**	**2,062**	**775**	**2,994**	**32,594**
Changes in scope of consolidation	–	–	–	–	–	–	2	2
Acquisitions	5,169	1,762	5,672	–	71	16	30	12,720
Capital expenditures	–	39	18	124	–	115	127	423
Retirements	(38)	(33)	(21)	(21)	(6)	(61)	(143)	(323)
Transfers	–	9	–	18	34	(17)	(44)	–
Transfers (IFRS 5)	(254)	(126)	(27)	–	–	–	–	(407)
Inflation adjustment (IAS 29)	6	–	–	–	–	–	–	6
Exchange differences	602	155	318	89	7	54	223	1,448
December 31, 2014	**15,347**	**12,827**	**10,242**	**1,808**	**2,168**	**882**	**3,189**	**46,463**
Accumulated amortization and impairment losses, December 31, 2013	**–**	**6,653**	**2,262**	**834**	**1,773**	**131**	**2,165**	**13,818**
Changes in scope of consolidation	–	–	–	–	–	–	2	2
Retirements	(6)	(22)	(2)	(20)	(6)	(4)	(135)	(195)
Amortization and impairment losses in 2014	6	803	269	188	104	15	182	1,567
Amortization	–	800	228	135	104	–	171	1,438
Impairment losses	6	3	41	53	–	15	11	129
Impairment loss reversals	–	(2)	–	–	–	–	–	(2)
Transfers	–	–	–	1	34	–	(35)	–
Transfers (IFRS 5)	–	(67)	(11)	–	–	–	–	(78)
Exchange differences	–	63	70	36	6	11	165	351
December 31, 2014	**–**	**7,428**	**2,588**	**1,039**	**1,911**	**153**	**2,344**	**15,463**
Carrying amounts, December 31, 2014	**15,347**	**5,399**	**7,654**	**769**	**257**	**729**	**845**	**31,000**
Carrying amounts, December 31, 2013	**9,862**	**4,368**	**2,020**	**764**	**289**	**644**	**829**	**18,776**

2014 figures restated

Changes in the carrying amounts of goodwill for the reporting segments in 2015 and 2014 were as follows:

(Table 4.42)

Goodwill by Reporting Segment

€ million	Pharma-ceuticals	Consumer Health	HealthCare	CropScience	Covestro	Bayer Group
Carrying amounts, January 1, 2014	**5,238**	**2,435**	**7,673**	**1,951**	**238**	**9,862**
Change in scope of consolidation	–	–	–	–	–	–
Acquisitions	751	4,349	5,100	69	–	5,169
Retirements	(30)	(2)	(32)	–	–	(32)
Impairment losses in 2014	–	–	–	–	(6)	(6)
Transfers	–	–	–	–	–	–
Transfers (IFRS 5)	(143)	(111)	(254)	–	–	(254)
Inflation adjustment (IAS 29)	–	6	6	–	–	6
Exchange differences	185	289	474	117	11	602
Carrying amounts, December 31, 2014	**6,001**	**6,966**	**12,967**	**2,137**	**243**	**15,347**
Change in scope of consolidation	–	–	–	–	–	–
Acquisitions	(111)	49	(62)	50	7	(5)
Retirements	–	–	–	–	–	–
Impairment losses in 2015	–	–	–	–	–	–
Transfers	–	–	–	–	–	–
Transfers (IFRS 5)	–	(34)	(34)	–	–	(34)
Inflation adjustment (IAS 29)	1	7	8	–	–	8
Exchange differences	165	514	679	90	11	780
Carrying amounts, December 31, 2015	**6,056**	**7,502**	**13,558**	**2,277**	**261**	**16,096**

2014 figures restated

Goodwill and other intangible assets with an indefinite useful life that are of material significance for the Bayer Group are allocated to the following cash-generating units or unit groups as of the end of the reporting period:

(Table 4.43)

Intangible Assets with an Indefinite Useful Life

Reporting segment	Cash-generating unit/ unit group	Goodwill	Material intangible assets with an indefinite useful life
		€ million	€ million
Pharmaceuticals	Pharmaceuticals	6,056	485
Consumer Health	Consumer Care	6,187	22
CropScience	Crop Protection	1,287	74
CropScience	Seeds	507	149

In the case of research and development projects, the point in time from which a capitalized asset can be expected to generate an economic benefit for the company cannot be determined. Such assets are therefore classified as having an indefinite useful life. Development projects were capitalized at a total amount of €721 million as of the end of 2015 (2014: €729 million).

Another intangible asset classified as having an indefinite useful life is the Bayer Cross, which was reacquired for the North America region in 1994, having been awarded to the United States and Canada under the reparations agreements at the end of the First World War. The period for which the Bayer Group will derive an economic benefit from this name cannot be determined as Bayer intends to make continuous use of it. The Bayer Cross is capitalized at €107 million.

PATENTS

The Bayer Group endeavors to obtain patent protection for its products and technologies in the major markets.

The following table sets forth the expiration dates in our major markets of the most important patents covering Adempas™, Avalox™ / Avelox™, Betaferon™ / Betaseron™, Eylea™, Kogenate™, Levitra™, Mirena™, Nexavar™, Stivarga™, Xarelto™, Xofigo™, YAZ™, Yasmin™ and Yasminelle™:

(Table 4.44)

Patent Expiration Dates

	Market								
	Germany	France	U.K.	Italy	Spain	Japan	China	U.S.A.	Canada
Products									
Adempas™									
Active ingredient	2023[a]	2028[i]	2023[a]	2028[i]	2028[i]	2027[i]	2023	2023[a]	2023
Production process / intermediate	2030	2030	2030	2030	2030	2030[b]	2030	2030	2030[b]
Avalox™ / Avelox™									
Active ingredient	–	–	–	–	–	–	–	–	2015
Active ingredient monohydrate	2016	2016	2016	2016	2016	2016	2016	2016	2016
Tablets	2019	2019	2019	2019	2019	2019	2019	2019	2019
Betaferon™ / Betaseron™									
Active ingredient	–	–	–	–	–	–	–	–	2016
Eylea™									
Active ingredient	2020[a]	2025	2020[a]	2025	2025	2021[a/f]	2020	–	2020
Kogenate™									
Active ingredient	–	–	–	–	–	–	–	–	2021
Formulation	2017	2017	2017	2017	2017	2020	2017	2016	2017
Levitra™									
Active ingredient	2018	2018	2018	2018	2018	2020	2018	2018	2018
Mirena™									
Inserter	2015	2015	2015	2015	2015	–	2015	2015	2015
Inserter (improved)	2029[d]	2029[d]	2029[d]	2029[d]	2029[d]	2029	2029	2029[b]	2029[b]
Nexavar™									
Active ingredient	2021	2021	2021	2021	2021	2021[g]	2020	2020	2020
Polymorph	2025	2025	2025	2025	2025	2025[h]	2025	2027	2025
Formulation	2026	2026	2026	2026	2026	2026[h]	2026	2026[k]	2026
Stivarga™									
Active ingredient	2028[j]	2028	2024[a]	2028	2028	2026[j]	2024	2031[c]	2024
Formulation	2025	2025	2025	2025	2025	2026[j]	2025	2025[b]	2025
Production process	2031	2031	2031	2031	2031	2031	2031	2031	2031
Xarelto™									
Active ingredient	2023	2023	2023	2023	2023	2024	2020	2020[l]	2020
Formulation	2024	2024	2024	2024	2024	2025	2024	2024[b]	2024
Xofigo™									
Use	2024[i]	2024[i]	2024[i]	2024[i]	2024[i]	2019	2019	2020[a]	2019
Production process	2031[k]	2031[k]	2031[k]	2031[k]	2031[k]	2031[b]	2031[b]	2031	2031[b]
YAZ™									
Formulation	–	–	–	–	–	2021	2020	–	2020
Production process	2025	2025	2025	2025	2025	2026	2026	2026[c]	2026
Yasmin™									
Formulation	–	–	–	–	–	2020	2020	–	2020
Production process	2025	2025	2025	2025	2025	2026	2026	2026[c]	2026
Yasminelle™									
Formulation	–	–	–	–	–	2020	2020	–	2020
Production process	2025	2025	2025	2025	2025	2026	2026	2026[c]	2026

[a] Current expiration date; patent term extension applied for
[b] Patent application pending
[c] Patent term revised
[d] Opposition to EP patent terminated; appeal possible
[e] Additional patent term adjustment being calculated
[f] Indication-specific term extensions until 2021 for AMD, until 2022 for CRVO and until 2023 for mCNV and DME
[g] Patent term extension granted for kidney cancer until 2021, liver cancer until 2022, and thyroid cancer until 2025
[h] Patent term extension granted for thyroid cancer until 2026 (polymorph) and 2027 (tablet)
[i] Patent term extension granted
[j] Patent term extension granted for colorectal cancer and GIST until 2026
[k] Notice of allowance received
[l] Patent term revised due to a terminal disclaimer; extension applied for

18. Property, plant and equipment

Changes in property, plant and equipment in 2015 were as follows:

(Table 4.45)

Changes in Property, Plant and Equipment

€ million	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
Cost of acquisition or construction, December 31, 2014	**9,088**	**18,144**	**2,009**	**2,078**	**31,319**
Changes in scope of consolidation	–	3	1	–	4
Acquisitions	33	2	1	–	36
Capital expenditures	230	390	239	1,309	2,168
Retirements	(167)	(429)	(185)	(58)	(839)
Transfers	273	797	56	(1,126)	–
Transfers (IFRS 5)	1	(64)	(4)	–	(67)
Inflation adjustment (IAS 29)	7	2	1	–	10
Exchange differences	220	573	24	92	909
December 31, 2015	**9,685**	**19,418**	**2,142**	**2,295**	**33,540**
Accumulated depreciation and impairment losses, December 31, 2014	**4,940**	**13,426**	**1,482**	**43**	**19,891**
Changes in scope of consolidation	0	1	1	–	2
Retirements	(101)	(397)	(156)	(72)	(726)
Depreciation and impairment losses in 2015	317	945	232	38	1,532
Depreciation	294	892	230	–	1,416
Impairment losses	23	53	2	38	116
Impairment loss reversals	–	(1)	–	–	(1)
Transfers	–	(1)	1	–	–
Transfers (IFRS 5)	1	(57)	(3)	–	(59)
Exchange differences	98	387	21	20	526
December 31, 2015	**5,255**	**14,303**	**1,578**	**29**	**21,165**
Carrying amounts, December 31, 2015	**4,430**	**5,115**	**564**	**2,266**	**12,375**
Carrying amounts, December 31, 2014	**4,148**	**4,718**	**527**	**2,035**	**11,428**

Impairment losses of €115 million, net of a €1 million impairment loss reversal, were recognized on property, plant and equipment in the Covestro segment (€69 million), the Consumer Health segment (€33 million), the CropScience segment (€6 million), the Pharmaceuticals segment (€3 million), and Other Segments (€4 million).

In 2015, borrowing costs of €33 million (2014: €32 million) were capitalized as components of the cost of acquisition or construction of qualifying assets, applying an average interest rate of 2.5% (2014: 3.1%).

Capitalized property, plant and equipment included assets with a total net value of €533 million (2014: €504 million) held under finance leases. The cost of acquisition or construction of these assets as of the closing date totaled €915 million (2014: €827 million). They comprised plant installations and machinery with a carrying amount of €220 million (2014: €233 million), buildings with a carrying amount of €168 million (2014: €132 million) and other property, plant and equipment with a carrying amount of €145 million (2014: €139 million). For information on the liabilities arising from finance leases, see NOTE (27).

In 2015, rental payments of €263 million (2014: €219 million) were made for assets leased under operating leases as defined in IAS 17 (Leases).

Lease payments of €2 million are expected to be received in 2016 from operating leases – as defined in IAS 17 (Leases) – pertaining to property, plant and equipment, excluding the investment property stated below. Lease payments totaling €7 million are expected to be received in 2017-2020 and lease payments totaling €1 million after 2020.

INVESTMENT PROPERTY

The fair values of investment property are mainly determined using the income approach based on internal valuations for buildings and developed sites, and using the market comparison approach for undeveloped sites.

The total carrying amount of investment property as of December 31, 2015, was €164 million (December 31, 2014: €175 million). The fair value of this property was €484 million (2014: €501 million). The rental income from investment property was €13 million (2014: €14 million), and the operating expenses directly allocable to this property amounted to €8 million (2014: €9 million). A further amount of €1 million (2014: €2 million) in operating expenses was directly allocable to investment property from which no rental income was derived.

Changes in property, plant and equipment in 2014 were as follows:

(Table 4.46)

Changes in Property, Plant and Equipment (Previous Year)

€ million	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
Cost of acquisition or construction, December 31, 2013	**8,375**	**16,556**	**1,853**	**1,671**	**28,455**
Changes in scope of consolidation	5	3	–	–	8
Acquisitions	74	85	27	49	235
Capital expenditures	248	468	216	1,135	2,067
Retirements	(165)	(351)	(176)	(6)	(698)
Transfers	233	611	34	(878)	–
Transfers (IFRS 5)	(11)	(6)	(5)	(1)	(23)
Inflation adjustment (IAS 29)	5	1	–	2	8
Exchange differences	324	777	60	106	1,267
December 31, 2014	**9,088**	**18,144**	**2,009**	**2,078**	**31,319**
Accumulated depreciation and impairment losses, December 31, 2013	**4,630**	**12,414**	**1,390**	**6**	**18,440**
Changes in scope of consolidation	4	3	–	–	7
Retirements	(122)	(329)	(156)	(3)	(610)
Depreciation and impairment losses in 2014	282	819	205	39	1,345
Depreciation	258	786	205	–	1,249
Impairment losses	24	33	–	39	96
Impairment loss reversals	–	–	–	–	–
Transfers	1	–	(1)	–	–
Transfers (IFRS 5)	(1)	(3)	(2)	–	(6)
Exchange differences	146	522	46	1	715
December 31, 2014	**4,940**	**13,426**	**1,482**	**43**	**19,891**
Carrying amounts, December 31, 2014	**4,148**	**4,718**	**527**	**2,035**	**11,428**
Carrying amounts, December 31, 2013	**3,745**	**4,142**	**463**	**1,665**	**10,015**

19. Investments accounted for using the equity method

Four (2014: three) associates and three (2014: three) joint ventures were accounted for in the consolidated financial statements using the equity method.

(Table 4.47)

Associates and Joint Ventures Accounted for Using the Equity Method

Company Name	Place of Business	Bayer's interest %
Associates		
Flagship Ventures V Agricultural Fund, LP[1]	Cambridge, U.S.A.	99.9
Nanjing Baijingyu Pharmaceutical Co., Ltd.	Nanjing, China	15
Paltough Industries (1998) Ltd.	Kibbutz Ramat Yochanan, Israel	25
PO JV, LP	Wilmington, U.S.A.	39.4
Joint ventures		
Bayer Zydus Pharma Private Limited	Mumbai, India	50
DCSO Deutsche Cyber-Sicherheitsorganisation GmbH	Berlin, Germany	25
DIC Covestro Polymer Ltd.	Tokyo, Japan	50

[1] For information concerning the interest in this company see NOTE (6.1)

In 2000, Bayer acquired the polyols business and parts of the propylene oxide (PO) production operations of Lyondell Chemicals with the objective of ensuring access to patented technologies and safeguarding the long-term supply of PO, a starting product for polyurethane. As part of this strategy, a company was established to produce PO (PO JV, LP, United States, in which Covestro holds a 39.4% interest). Covestro benefits from fixed long-term supply quotas/ volumes of PO from this company's production. The two following tables contain summarized data from the income statements and statements of financial position of the associated company PO JV, LP, United States, which is accounted for using the equity method, and show the respective amounts recognized in the consolidated financial statements of the Bayer Group.

(Table 4.48)

Income Statement Data of PO JV, LP, Accounted for Using the Equity Method

€ million	2014	2015
Net sales	2,414	1,695
Net loss after taxes	(44)	(56)
Share of net loss after taxes	(17)	(23)
Share of total comprehensive income after taxes	**(17)**	**(23)**
Gain (loss) after taxes from impairments / derecognition of other interests	(1)	–
Recognized loss after taxes of PO JV, LP, accounted for using the equity method	**(18)**	**(23)**

(Table 4.49)

Data from the Statements of Financial Position of PO JV, LP, Accounted for Using the Equity Method

€ million	Dec. 31, 2014	Dec. 31, 2015
Noncurrent assets	462	475
Equity	462	475
Share of equity	**182**	**201**
Other	2	(3)
Carrying amount of PO JV, LP, accounted for using the equity method	**184**	**198**

The item "Other" mainly comprised differences arising from adjustments of data to Bayer's uniform accounting policies, along with purchase price allocations and their amortization in profit or loss.

The following table contains a summary of the aggregated income statement data and aggregated carrying amounts of the individually nonmaterial associates that are accounted for using the equity method.

(Table 4.50)

Income Statement Data and Carrying Amount of Associates Accounted for Using the Equity Method

€ million	2014	2015
Income after taxes	4	12
Share of income after taxes	1	1
Share of total comprehensive income after taxes	**1**	**1**
Carrying amount of associates accounted for using the equity method	**27**	**37**

The following table contains a summary of the aggregated income statement data and aggregated carrying amounts of the individually nonmaterial joint ventures that are accounted for using the equity method.

(Table 4.51)

Income Statement Data and Carrying Amount of Joint Ventures Accounted for Using the Equity Method

€ million	2014	2015
Income after taxes	8	6
Share of income after taxes	4	3
Share of total comprehensive income after taxes	**4**	**3**
Gain (loss) after taxes from impairments / derecognition of other interests	–	–
Recognized income after taxes of joint ventures accounted for using the equity method	**4**	**3**
Carrying amount of joint ventures accounted for using the equity method	**12**	**11**

20. Other financial assets

The other financial assets were comprised as follows:

(Table 4.52)

Other Financial Assets

	Dec. 31, 2014		Dec. 31, 2015	
€ million	Total	Of which current	Total	Of which current
Loans and receivables	170	127	65	21
Available-for-sale financial assets	1,099	193	1,177	266
of which debt instruments	1,006	186	1,092	262
of which equity instruments	93	7	85	4
Held-to-maturity financial investments	69	11	73	6
Receivables from derivatives	484	392	526	463
Receivables under lease agreements	8	–	7	–
Total	**1,830**	**723**	**1,848**	**756**

2014 figures restated

The debt instruments reported as available-for-sale financial assets included €610 million (2014: €595 million) provided to Bayer-Pensionskasse VVaG (Bayer-Pensionskasse) for its effective initial fund, and jouissance right capital (Genussrechtskapital) of €153 million (2014: €150 million), also provided to Bayer-Pensionskasse. Also reported in this category were investments of €119 million (2014: €10 million) in money market funds along with German treasury bills in the amount of €125 million (2014: €125 million). These treasury bills, which were lent to a bank, continue to be recognized as available-for-sale financial assets because the related risks and rewards remain with Bayer. Upon maturity or redemption of the treasury bills, Bayer is obligated until June 2016 to replace them with German government securities.

The equity instruments reported as available-for-sale financial assets included €40 million (2014: €29 million) in instruments whose fair value could not be determined from a stock exchange or other market price or by discounting reliably determinable future cash flows. These equity instruments were recognized at cost.

In 2015, impairment losses totaling €1 million (2014: impairment loss reversals totaling €2 million) on available-for-sale financial assets were recognized in profit or loss.

Unimpaired other financial assets of €5 million (2014: €8 million) were past due on the closing date.

Further information on the accounting for receivables from derivatives is given in NOTE (30).

Receivables under lease agreements relate to finance leases where Bayer is the lessor and the economic owner of the leased assets is the lessee. These receivables comprised expected lease payments of €38 million (2014: €46 million), including €31 million (2014: €37 million) in interest. Of the expected lease payments, €1 million (2014: €1 million) is due within one year, €2 million (2014: €2 million) within the following four years and €35 million (2014: €43 million) in subsequent years.

21. Inventories

Inventories were comprised as follows:

(Table 4.53)

Inventories

€ million	Dec. 31, 2014	Dec. 31, 2015
Raw materials and supplies	1,603	2,296
Work in process, finished goods and goods purchased for resale	6,781	6,241
Advance payments	94	13
Total	**8,478**	**8,550**

Impairment losses recognized on inventories were reflected in the cost of goods sold. They were comprised as follows:

(Table 4.54)

Impairments of Inventories

€ million	2014	2015
Accumulated impairment losses, January 1	**(423)**	**(477)**
Changes in scope of consolidation	–	(5)
Impairment losses in the reporting period	(214)	(216)
Impairment loss reversals or utilization	176	246
Exchange differences	(16)	21
Transfers (IFRS 5)	–	4
Accumulated impairment losses, December 31	**(477)**	**(427)**

22. Trade accounts receivable

Trade accounts receivable less impairment losses amounted to €9,933 million (2014: €9,097 million) on the closing date and were comprised as follows:

(Table 4.55)

Trade Accounts Receivable

€ million	2014	2015
Trade accounts receivable (before impairments)	9,330	10,181
Accumulated impairment losses	(233)	(248)
Carrying amount, December 31	**9,097**	**9,933**
of which noncurrent	32	46

Changes in impairment losses on trade accounts receivable were as follows:

(Table 4.56)

Impairments of Trade Accounts Receivable

€ million	2014	2015
Accumulated impairment losses, January 1	**(200)**	**(233)**
Impairment losses in the reporting period	(73)	(84)
Impairment loss reversals or utilization	39	46
Exchange differences	1	23
Accumulated impairment losses, December 31	**(233)**	**(248)**

Trade accounts receivable amounting to €9,858 million (2014: €9,029 million) were not individually impaired. Of this amount, €1,251 million (2014: €1,105 million) was past due or due immediately on the closing date.

The amounts of impaired and past-due trade accounts receivable are summarized in the following table:

(Table 4.57)

Impaired and Past-Due Trade Accounts Receivable

€ million	Carrying amount	Of which neither impaired nor past due at the closing date	Of which unimpaired but past due at the closing date: up to 3 months	3 – 6 months	6 – 12 months	more than 12 months	Of which impaired at the closing date
December 31, 2015	9,933	8,607	823	202	109	117	75
December 31, 2014	9,097	7,924	738	165	85	117	68

The gross carrying amount of individually impaired trade accounts receivable was €245 million (2014: €217 million). The impairment losses recognized on these assets totaled €170 million (2014: €149 million), resulting in a net carrying amount of €75 million (2014: €68 million).

The unimpaired receivables were deemed to be collectible on the basis of established credit management processes and individual assessments of customer risks. Recognized impairment losses included an appropriate allowance for the default risk as of the end of the reporting period.

Receivables from government health service institutions, especially in Greece, Italy, Portugal and Spain, are under special observation in view of the government debt crisis. Although there were no material defaults on such receivables in 2015 or 2014, it is possible that future developments in these countries could result in payment delays and / or defaults. This could necessitate the recognition of impairment losses due to new occurrences. Trade accounts receivable from government health service institutions in the above countries at the end of 2015 totaled €168 million (2014: €183 million).

An excess-of-loss policy exists for the HealthCare subgroup as part of a global credit insurance program. More than 80% of the receivables of the HealthCare subgroup are insured up to a maximum total annual compensation payment of €100 million (2014: €100 million).

A further €559 million (2014: €459 million) of receivables was secured by advance payments, letters of credit or guarantees or by liens on land, buildings or harvest yields.

23. Other receivables

Other receivables, after impairment losses of €55 million (2014: €3 million), were comprised as follows:

(Table 4.58)

Other Receivables

	Dec. 31, 2014		Dec. 31, 2015	
€ million	Total	Of which current	Total	Of which current
Other tax receivables	612	528	746	658
Deferred charges	297	273	384	348
Reimbursement claims	127	113	97	81
Net defined benefit asset	41	–	30	–
Receivables from employees	48	44	39	36
Miscellaneous receivables	810	530	1,151	894
Total	**1,935**	**1,488**	**2,447**	**2,017**

The reimbursement claims of €97 million (2014: €127 million) mainly consisted of receivables from insurance companies in connection with product liability claims.

Miscellaneous receivables included a €423 million receivable from Dow AgroSciences LLC, United States, for damages and royalty payments resulting from the infringement of Bayer's rights to the Liberty Link™ weed control system. In addition, there was a €62 million receivable from the Venezuelan exchange control authority reflecting the right to receive U.S. dollars at a preferential rate. A €52 million impairment loss was recognized on this receivable.

Of the €565 million (2014: €678 million) in financial receivables included in other receivables, €564 million (2014: €675 million) was unimpaired. Of this amount, €104 million (2014: €313 million) was past due or due immediately on the closing date. The gross carrying amount of individually impaired other receivables was €4 million (2014: €6 million). The impairment losses recognized on these assets totaled €3 million (2014: €3 million), resulting in a net carrying amount of €1 million (2014: €3 million).

The amounts of impaired and past-due financial receivables included in other receivables are summarized in the following table:

(Table 4.59)

Impaired and Past-Due Other Financial Receivables

		Of which neither impaired nor past due at the closing date	Of which unimpaired but past due at the closing date				Of which impaired at the closing date
€ million	Carrying amount		up to 3 months	3 – 6 months	6 – 12 months	more than 12 months	
December 31, 2015	565	460	65	13	15	11	1
December 31, 2014	678	362	259	17	9	28	3

24. Equity

The foremost objectives of our financial management are to help bring about a sustained increase in Bayer's value for the benefit of all stakeholders, and to ensure the Group's creditworthiness and liquidity. The pursuit of these goals means reducing our cost of capital, optimizing our capital structure, improving our financing cash flow and effectively managing risk.

The rating agencies commissioned by Bayer assess Bayer's creditworthiness as follows:

(Table 4.60)

Rating

	Long-term rating	Outlook	Short-term rating
Standard & Poor's	A-	stable	A-2
Moody's	A3	stable	P-2

These investment-grade ratings reflect the company's good creditworthiness and ensure access to a broad investor base. Bayer's financial management is partly based on the debt ratios published by rating agencies, which – by somewhat differing methods – take into account the cash flows for a given period in relation to debt, for example. Bayer's financial strategy focuses on an "A" category rating and on preserving our financial flexibility. Apart from utilizing cash inflows from our operating business to reduce net financial debt, we are implementing our financial strategy by way of vehicles such as the subordinated hybrid bonds issued in July 2014 and April 2015, the authorized and conditional capital amounts created by resolutions of the Annual Stockholders' Meeting, and a potential share buyback program. Bayer's Articles of Incorporation do not stipulate capital ratios.

The changes in the various components of equity during 2014 and 2015 are shown in the consolidated statements of changes in equity.

CAPITAL STOCK

The capital stock of Bayer AG on December 31, 2015 amounted to €2,117 million (2014: €2,117 million), divided into 826,947,808 (2013: 826,947,808) registered shares, and was fully paid in. Each share confers one voting right.

AUTHORIZED CAPITAL

Authorized capital of €530 million was approved by the Annual Stockholders' Meeting on April 29, 2014. It expires on April 28, 2019. It can be used to increase the capital stock by issuing new no-par registered shares against cash contributions and / or contributions in kind, but capital increases against contributions in kind may not exceed a total of €423 million (Authorized Capital I). Stockholders must normally be granted subscription rights. However, the Board of Management is authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights where the subscription ratio gives rise to fractions in the case of capital increases against cash and / or contributions in kind, and also to the extent necessary to grant the holders of bonds with warrants or conversion rights or obligations issued by the Company or its group companies a right to subscribe for new shares to the extent to which they would be entitled after exercise of their warrants or conversion rights, or performance of their exercise or conversion obligations. The Board of Management is also authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights if the shares are issued in connection with the admission of shares to a foreign stock exchange and the total interest in the capital stock attributable to the new shares for which subscription rights are excluded does not exceed 10% of the existing capital stock on the date of entry of the authorization in the commercial register or, in the event that this amount is lower, 10% of the existing capital stock on the date of issuance of the new shares. The Board of Management is further authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights if the capital is increased against contributions in kind to issue shares either for the purpose of acquiring companies, parts of companies, interests in companies, or other assets, or for the purpose of implementing a scrip dividend, where stockholders are given the option of contributing their dividend entitlements to the Company (either in whole or in part) as a contribution in kind against the issuance of new shares out of the Authorized Capital I. The amount of capital stock represented by shares issued against cash contributions and / or contributions in kind without granting subscription rights to the stockholders must not exceed a total of 20% of the capital stock that existed on the date the authorized capital was approved by the Annual Stockholders' Meeting.

Further authorized capital of €212 million was approved by the Annual Stockholders' Meeting on April 29, 2014. It expires on April 28, 2019. The Board of Management is authorized, with the consent of the Supervisory Board, to increase the capital stock by up to a total of €212 million by issuing new no-par registered shares against cash contributions (Authorized Capital II). Stockholders must normally be granted subscription rights. However, the Board of Management is authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights where the subscription ratio gives rise to fractions and also if the shares are issued against cash contributions and the total interest in the capital stock attributable to the new shares for which subscription rights are excluded does not exceed 10% of the existing capital stock on the date of entry of the authorization in the commercial register or, in the

event that this amount is lower, 10% of the existing capital stock on the date of issuance of the new shares, and the issue price of the new shares is not significantly below the market price of the already listed shares of the company of the same class at the time when the issue price is finalized by the Board of Management within the meaning of Section 203, Paragraphs 1 and 2, in conjunction with Section 186, Paragraph 3, sentence 4, of the German Stock Corporation Act. Any own shares that are sold on or after April 29, 2014, while excluding stockholders' subscription rights pursuant to Section 71, Paragraph 1, No. 8, Sentence 5, in conjunction with Section 186, Paragraph 3, Sentence 4, of the German Stock Corporation Act count toward the above 10% limit. Shares that have been or may be issued to service bonds with warrants or conversion rights or obligations, where such bonds are issued on or after April 29, 2014, while excluding stockholders' subscription rights in analogous application of Section 186, Paragraph 3, Sentence 4, of the German Stock Corporation Act also count toward this limit.

Neither of these authorized capital amounts has been utilized so far.

CONDITIONAL CAPITAL

The Annual Stockholders' Meeting on April 29, 2014 approved the creation of Conditional Capital 2014, again authorizing a conditional increase of up to €212 million in the capital stock through the issuance of up to 82,694,750 new no-par registered shares. The conditional capital increase serves to grant registered no-par value shares to the holders of bonds with warrants or convertible bonds, profit participation certificates, or income bonds (or combinations of these instruments) (collectively referred to as "debt instruments"), each with options or conversion rights or obligations, that may be issued up to April 28, 2019, on the basis of the authorization resolved by the Annual Stockholders' Meeting on April 29, 2014, by Bayer AG or a group company of Bayer AG within the meaning of Section 18 of the German Stock Corporation Act in which Bayer AG has a direct or indirect interest in at least 90% of the votes and capital. Such new shares are to be issued at the option premium or conversion price to be determined in accordance with the authorizing resolution referred to above. The authorization to issue such instruments is limited to a total nominal amount of €6 billion. In principle, stockholders have a statutory right to be granted subscription rights to such instruments. However, the Board of Management is authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights where the subscription ratio gives rise to fractions and also to the extent necessary to grant the holders of bonds with warrants or conversion rights or obligations a right to subscribe for new shares to the extent to which they would be entitled after exercise of their warrants or conversion rights, or performance of their exercise or conversion obligations. Furthermore, the Board of Management is authorized, with the consent of the Supervisory Board, to fully exclude stockholders' subscription rights to debt instruments with options or conversion rights or obligations issued against cash contributions if the Board of Management, after due consideration, is of the opinion that the issue price of the debt instruments is not significantly below their hypothetical fair value determined in accordance with accepted methods, and in particular, valuation techniques. This authorization to exclude subscription rights applies to bonds with warrants or conversion rights or exercise or conversion obligations for shares with a proportionate interest in the capital stock not exceeding 10% of the total capital stock either at the date when the resolution is adopted or, in the event that this amount is lower, at the date on which this authorization is exercised. New shares that are issued on or after April 29, 2014, while excluding stockholders' subscription rights in accordance with Sections 203, Paragraphs 1 and 2, in conjunction with Section 186, Paragraph 3, Sentence 4, of the German Stock Corporation Act as well as own shares that are sold on or after April 29, 2014, while excluding stockholders' subscription rights pursuant to Section 71, Paragraph 1, Number 8, Sentence 5, in conjunction with Section 186, Paragraph 3, Sentence 4, of the German Stock Corporation Act also count toward this 10% limit.

Absent a further resolution of the Annual Stockholders' Meeting on the exclusion of stockholders' subscription rights, the Board of Management will only use the existing authorizations to increase the capital stock out of the Authorized Capital or the Conditional Capital – while excluding stockholders' subscription rights – up to a total amount of 20% of the capital stock that existed when the respective resolutions were adopted by the Annual Stockholders' Meeting on April 29, 2014. All issuances or sales of shares or of bonds with warrants or conversion rights or obligations that are effected while excluding stockholders' subscription rights also count toward this 20% limit.

ACCUMULATED COMPREHENSIVE INCOME

Accumulated comprehensive income comprises retained earnings and accumulated other comprehensive income. The retained earnings include prior years' undistributed income of consolidated companies and all remeasurements of the net liability for defined benefit pension and other post-employment benefit plans that are recognized outside profit or loss. The accumulated other comprehensive income comprises exchange differences, the changes in fair values of cash flow hedges and available-for-sale financial assets, and the revaluation surplus. In 2015, an amount of €5 million

(2014: €5 million) corresponding to the annual amortization / depreciation of the respective assets was transferred from the revaluation surplus to retained earnings. The exchange differences included an amount of minus €45 million (2014: minus €28 million) attributable to associates and joint ventures accounted for using the equity method.

DIVIDEND

Under the German Stock Corporation Act (AktG), the dividend payment is determined by the distributable profit reported in the annual financial statements of Bayer AG, which are prepared according to the German Commercial Code. Retained earnings were diminished by payment of the dividend of €2.25 per share for 2014. The proposed dividend for the 2015 fiscal year is €2.50 per share, which would result in a total dividend payment of €2,067 million. Payment of the proposed dividend is contingent upon approval by the stockholders at the Annual Stockholders' Meeting and therefore is not recognized as a liability in the consolidated financial statements.

NONCONTROLLING INTEREST

The former MaterialScience subgroup became a separate economic and legal entity on September 1, 2015, operating under the name Covestro. Following the stock exchange listing of Covestro AG on October 6, 2015, 30.9% of the shares in the equity of Covestro AG and its subsidiaries are reflected in noncontrolling interest.

The changes in noncontrolling interest in equity during 2014 and 2015 are shown in the following table:

(Table 4.61)

Components of Noncontrolling Interest in Equity

€ million	2014	2015
January 1	**86**	**112**
Changes in equity not recognized in profit or loss		
Remeasurements of the net pension liability	–	10
Changes in fair value of cash flow hedges	–	–
Changes in fair value of securities	–	–
Exchange differences on translation of operations outside the eurozone	11	23
Other changes in equity	–	1,055
Dividend payments	(2)	(8)
Changes in equity recognized in profit or loss	**17**	**(12)**
December 31	**112**	**1,180**

The exchange differences included an amount of minus €20 million (2014: €0 million) attributable to associates and joint ventures accounted for using the equity method.

Noncontrolling interest mainly pertained to the following companies:

(Table 4.62)

Material Noncontrolling Interests

		Covestro AG *)		Bayer CropScience Limited, India	
		2014	2015	2014	2015
Interest held	%	–	30.9	31.4	31.4
Voting rights	%	–	30.9	31.4	31.4
Equity attributable to noncontrolling interest	€ million	–	1,092	85	73
Dividends paid to noncontrolling interest	€ million	–	–	1	3
Noncurrent assets	€ million	–	4,237	48	52
Current assets	€ million	–	6,294	317	304
Noncurrent liabilities	€ million	–	4,564	10	11
Current liabilities	€ million	–	2,355	85	92
Sales	€ million	–	12,082	410	465
Income (loss) after income taxes	€ million	–	352	45	6
Total comprehensive income	€ million	–	558	25	15
Net cash provided by (used in) operating activities	€ million	–	1,473	21	44
Net cash provided by (used in) investing activities	€ million	–	(380)	(1)	53
Net cash provided by (used in) financing activities	€ million	–	(645)	(5)	(79)

* including direct and indirect subsidiaries

25. Provisions for pensions and other post-employment benefits

Provisions were established for defined benefit obligations pertaining to pensions and other post-employment benefits. The net liability was accounted for as follows:

(Table 4.63)

Net Defined Benefit Liability Reflected in the Statement of Financial Position

	Pensions		Other post-employment benefits		Total	
€ million	Dec. 31, 2014	Dec. 31, 2015	Dec. 31, 2014	Dec. 31, 2015	Dec. 31, 2014	Dec. 31, 2015
Provisions for pensions and other post-employment benefits (net liability)	**11,796**	**10,454**	**440**	**419**	**12,236**	**10,873**
of which Germany	10,336	8,972	–	–	10,336	8,972
of which other countries	1,460	1,482	440	419	1,900	1,901
Net defined benefit asset	**38**	**29**	**3**	**1**	**41**	**30**
of which Germany	22	23	–	–	22	23
of which other countries	16	6	3	1	19	7
Net defined benefit liability	**11,758**	**10,425**	**437**	**418**	**12,195**	**10,843**
of which Germany	10,314	8,949	–	–	10,314	8,949
of which other countries	1,444	1,476	437	418	1,881	1,894

The expenses for defined benefit plans for pensions and other post-employment benefits comprised the following components:

(Table 4.64)

Expenses for Defined Benefit Plans

	Pension plans						Other post-employment benefit plans	
	Germany		Other countries		Total		Other countries	
€ million	2014	2015	2014	2015	2014	2015	2014	2015
Current service cost	236	362	66	99	302	461	28	17
Past service cost	23	27	(25)	(3)	(2)	24	2	–
of which plan curtailments	–	–	(15)	(2)	(15)	(2)	–	–
Plan settlements	–	–	21	–	21	–	–	–
Net interest	223	204	34	52	257	256	18	20
Total	**482**	**593**	**96**	**148**	**578**	**741**	**48**	**37**

In addition, a total of €1,216 million in effects of remeasurements of the net defined benefit liability was recognized in 2015 outside profit or loss (2014: minus €5,159 million). Of this amount, €1,185 million (2014: minus €5,098 million) related to pension obligations, €53 million (2014: minus €61 million) to other post-employment benefit obligations, and minus €22 million (2014: €0 million) to the effects of the asset ceiling.

The net defined benefit liability developed as follows:

(Table 4.65)

Changes in Net Defined Benefit Liability

	Defined benefit obligation		Fair value of plan assets		Effects of the asset ceiling		Net defined benefit liability	
€ million	2014	2015	2014	2015	2014	2015	2014	2015
Germany								
January 1	**14,870**	**20,339**	**8,735**	**10,025**	**–**	**–**	**(6,135)**	**(10,314)**
Acquisitions	–	–	–	–	–	–	–	–
Divestitures / changes in the scope of consolidation	–	21	–	17	–	–	–	(4)
Current service cost	236	362					(236)	(362)
Past service cost	23	27					(23)	(27)
Gains / losses from plan settlements	–	–					–	–
Net interest	553	425	330	221	–	–	(223)	(204)
Net actuarial (gain) loss	5,254	(1,393)					(5,254)	1,393
of which due to changes in financial assumptions	*5,208*	*(1,371)*					*(5,208)*	*1,371*
of which due to changes in demographic assumptions	–	–					–	–
of which due to experience adjustments	*46*	*(22)*					*(46)*	*22*
Return on plan assets excluding amounts recognized as interest income			802	(262)			802	(262)
Remeasurement of asset ceiling					–	–	–	–
Employer contributions			331	387			331	387
Employee contributions	38	37	38	37			–	–
Payments due to plan settlements	–	–	–	–			–	–
Benefits paid out of plan assets	(211)	(215)	(211)	(215)			–	–
Benefits paid by the company	(424)	(433)					424	433
Reclassification to current assets / liabilities held for sale	–	(22)	–	(11)	–	–	–	11
December 31	**20,339**	**19,148**	**10,025**	**10,199**	**–**	**–**	**(10,314)**	**(8,949)**
Other countries								
January 1	**5,812**	**7,432**	**4,705**	**5,560**	**(9)**	**(9)**	**(1,116)**	**(1,881)**
Acquisitions	–	4	–	–	–	–	–	(4)
Divestitures / changes in the scope of consolidation	–	–	–	–	–	–	–	–
Current service cost	94	116					(94)	(116)
Past service cost	(23)	(3)					23	3
Gains / losses from plan settlements	21	–					(21)	–
Net interest	275	287	223	215	–	–	(52)	(72)
Net actuarial (gain) loss	1,094	(318)					(1,094)	318
of which due to changes in financial assumptions	*815*	*(310)*					*(815)*	*310*
of which due to changes in demographic assumptions	*264*	*(79)*					*(264)*	*79*
of which due to experience adjustments	*15*	*71*					*(15)*	*(71)*
Return on plan assets excluding amounts recognized as interest income			387	(211)			387	(211)
Remeasurement of asset ceiling					–	(22)	–	(22)
Employer contributions			130	148			130	148
Employee contributions	9	11	9	11			–	–
Payments due to plan settlements	(64)	–	(64)	–			–	–
Benefits paid out of plan assets	(254)	(289)	(254)	(289)			–	–
Benefits paid by the company	(53)	(60)					53	60
Plan administration costs paid out of plan assets			(1)	(1)			(1)	(1)
Reclassification to current assets / liabilities held for sale	–	(20)	–	(8)	–	–	–	12
Exchange differences	521	501	425	374	–	(1)	(96)	(128)
December 31	**7,432**	**7,661**	**5,560**	**5,799**	**(9)**	**(32)**	**(1,881)**	**(1,894)**
of which other post-employment benefits	*918*	*836*	*481*	*418*	–	–	*(437)*	*(418)*
Total, December 31	**27,771**	**26,809**	**15,585**	**15,998**	**(9)**	**(32)**	**(12,195)**	**(10,843)**

The benefit obligations pertained mainly to Germany (71%; 2014: 73%), the United States (15%; 2014: 14%) and the United Kingdom (7%; 2014: 6%). In Germany, current employees accounted for about 44% (2014: 45%), retirees or their surviving dependents for about 49% (2014: 47%) and former employees with vested pension rights for about 7% (2014: 8%) of entitlements under defined benefit plans. In the United States, current employees accounted for about 26% (2014: 26%), retirees or their surviving dependents for about 61% (2014: 61%) and former employees with vested pension rights for about 13% (2014: 13%) of entitlements under defined benefit plans.

The changes in the net defined benefit liability in Germany reported as due to changes in the scope of consolidation mainly resulted from employee transfers outside the consolidated group of companies.

The actual return on the assets of defined benefit plans for pensions or other post-employment benefits amounted to minus €34 million (2014: €1,691 million) and minus €3 million (2014: €51 million), respectively.

The following table shows the defined benefit obligations for pensions and other post-employment benefits along with the funded status of the funded obligations.

(Table 4.66)

Defined Benefit Obligation and Funded Status

	Pension obligation		Other post-employment benefit obligation		Total	
€ million	2014	2015	2014	2015	2014	2015
Defined benefit obligation	**26,853**	**25,973**	**918**	**836**	**27,771**	**26,809**
of which unfunded	1,117	1,126	104	101	1,221	1,227
of which funded	25,736	24,847	814	735	26,550	25,582
Funded status of funded obligations						
Overfunding	47	61	3	1	50	62
Underfunding	10,679	9,328	336	318	11,015	9,646

PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS

Group companies provide retirement benefits for most of their employees, either directly or by contributing to privately or publicly administered funds. The way these benefits are provided varies according to the legal, fiscal and economic conditions of each country, the benefits generally being based on employee compensation and years of service. The obligations relate both to existing retirees' pensions and to pension entitlements of future retirees.

Bayer has set up funded pension plans for its employees in various countries. The most appropriate investment strategy is determined for each defined benefit pension plan based on the risk structure of the obligations (especially demographics, the current funded status, the structure of the expected future cash flows, interest sensitivity, biometric risks etc.), the regulatory environment and the existing level of risk tolerance or risk capacity. A strategic target investment portfolio is then developed in line with the plan's risk structure, taking capital market factors into consideration. Further determinants are risk diversification, portfolio efficiency and the need for both a country-specific and a global risk / return profile centered on ensuring the payment of all future benefits. As the capital investment strategy for each pension plan is developed individually in light of the plan-specific conditions listed above, the investment strategies for different pension plans may vary considerably. For example, the proportion of plan assets invested in equities is greater with the non-German pension plans than with the plans domiciled in Germany. The investment strategies are generally aligned less toward maximizing absolute returns and more toward the reasonable assurance of financing pension commitments over the long term. For plan assets, stress scenarios are simulated and other risk analyses (such as value at risk) undertaken with the aid of risk management systems.

Bayer-Pensionskasse VVaG (Bayer-Pensionskasse), Leverkusen, Germany, is by far the most significant of the pension plans. It was closed to new members effective January 1, 2005. This legally independent fund is regarded as a life insurance company and therefore is subject to the German Insurance Supervision Act. The benefit obligations covered by Bayer-Pensionskasse comprise retirement, surviving dependents' and disability pensions. It constitutes a multi-employer plan, to which the active members and their employers contribute. The company contribution is a certain percentage of the employee contribution. This percentage is the same for all participating employers, including those outside the Bayer Group, and is set by agreement between the plan's executive committee and its supervisory board, acting on a proposal from the responsible actuary. It takes into account the differences between the actuarial estimates and the actual values for the factors used to determine liabilities and contributions. Bayer may also adjust the company contribution in agreement with the plan's executive committee and its supervisory board, acting on a

proposal from the responsible actuary. The plan's liability is governed by Section 1, Paragraph 1, Sentence 3 of the German Law on the Improvement of Occupational Pensions. This means that if the pension plan exercises its right under the articles of association to reduce benefits, each participating employer has to make up the resulting difference. Bayer is not liable for the obligations of participating employers outside the Bayer Group, even if they cease to participate in the plan.

Pension entitlements for people who joined Bayer in Germany on or after January 1, 2005, are granted via Rheinische Pensionskasse VVaG, Leverkusen. Future pension payments from this plan are based on contributions and the return on plan assets; a guaranteed interest rate applies.

Another important pension provision vehicle is Bayer Pension Trust e.V. (BPT). This covers further retirement provision arrangements of the Bayer Group, such as deferred compensation, pension obligations previously administered by Schering Altersversorgung Treuhand e.V., and components of other direct commitments. In October 2015, a total of €293 million in investments, representing the equivalent of the Covestro group's obligations, was transferred from Bayer Pension Trust to another trust fund, which now (partially) covers the respective obligations of Covestro.

The defined benefit pension plans in the United States have been frozen for some years, and no significant new entitlements can be earned under these plans. The assets of all the U.S. pension plans are held by a master trust for reasons of efficiency. The applicable regulatory framework is based on the Employee Retirement Income Security Act (ERISA), which includes a statutory 80% minimum funding requirement to avoid benefit reductions. The actuarial risks, such as investment risk, interest-rate risk and longevity risk, remain with the company.

The defined benefit pension plans in the United Kingdom are closed to new members. Plan assets in the U.K. are administered by independent trustees, who are legally obligated to act solely in the interests of the beneficiaries. A technical assessment is performed every three years in line with U.K. regulations. This serves as the basis for developing a plan to cover any potential financing requirements. Here, too, the actuarial risks remain with the company.

The other post-employment benefit obligations outside Germany mainly comprised health care benefit payments for retirees in the United States.

The fair value of the plan assets to cover pension and other post-employment benefit obligations was as follows:

(Table 4.67)

Fair Value of Plan Assets as of December 31

	Pension obligations				Other post-employment obligations	
	Germany		Other countries		Other countries	
€ million	2014	2015	2014	2015	2014	2015
Plan assets based on quoted prices in active markets						
Real estate and special real estate funds	–	–	205	199	18	19
Equities and equity funds	1,941	2,105	1,669	1,855	125	130
Callable debt instruments	–	–	162	182	–	–
Noncallable debt instruments	–	112	690	752	110	121
Bond funds	3,345	3,543	1,509	1,744	90	90
Derivatives	28	18	86	(5)	–	–
Cash and cash equivalents	409	158	98	84	14	8
Other	–	–	236	4	–	–
	5,723	**5,936**	**4,655**	**4,815**	**357**	**368**
Plan assets for which quoted prices in active markets are not available						
Real estate and special real estate funds	544	517	41	83	–	–
Equities and equity funds	70	90	59	59	–	–
Callable debt instruments	1,493	1,555	6	2	–	–
Noncallable debt instruments	1,931	1,832	–	–	–	–
Bond funds	–	–	60	60	–	–
Derivatives	(4)	(2)	–	–	–	–
Other	268	271	258	362	124	50
	4,302	**4,263**	**424**	**566**	**124**	**50**
Total plan assets	**10,025**	**10,199**	**5,079**	**5,381**	**481**	**418**

The fair value of plan assets in Germany included real estate leased by Group companies, recognized at a fair value of €61 million (2014: €65 million), and Bayer AG shares and bonds held through investment funds, recognized at their fair value of €48 million (2014: €58 million) and €3 million (2014: €6 million), respectively. The other plan assets comprised mortgage loans granted, other receivables and qualified insurance policies.

RISKS

The risks from defined benefit plans arise partly from the defined benefit obligations and partly from the investment in plan assets. The risks lie in the possibility that higher direct pension payments will have to be made to the beneficiaries and / or that additional contributions will have to be made to plan assets in order to meet current and future pension obligations.

Demographic / biometric risks

Since a large proportion of the defined benefit obligations comprises lifelong pension payments to retirees or surviving dependents' pensions, longer claim periods or earlier claims may result in higher benefit obligations, higher benefit expense and / or higher pension payments than previously anticipated.

Investment risks

If the actual return on plan assets were below the return anticipated on the basis of the discount rate, the net defined benefit liability would increase, assuming there were no changes in other parameters. This could happen as a result of a drop in share prices, increases in market rates of interest, default of individual debtors or the purchase of low-risk but low-interest bonds, for example.

Interest-rate risk

A decline in capital market interest rates, especially for high-quality corporate bonds, would increase the defined benefit obligation. This effect would be at least partially offset by the ensuing increase in the market values of the debt instruments held.

MEASUREMENT PARAMETERS AND THEIR SENSITIVITIES

The following weighted parameters were used to measure the obligations for pensions and other post-employment benefits as of December 31 of the respective year:

(Table 4.68)

Parameters for Benefit Obligations

	Germany		Other countries		Total	
	2014	2015	2014	2015	2014	2015
	%	%	%	%	%	%
Pension obligations						
Discount rate	2.00	2.40	3.70	3.85	2.40	2.75
of which U.S.A.			3.70	4.00	3.70	4.00
of which U.K.			3.60	3.80	3.60	3.80
Projected future salary increases	3.00	3.00	3.65	3.35	3.15	3.10
Projected future benefit increases	1.75	1.75	3.30	3.20	2.10	2.15
Other post-employment benefit obligations						
Discount rate	–	–	3.95	4.45	3.95	4.45

The data selection criteria used to determine the discount rate in the eurozone were modified at the beginning of 2015. The modification of the data selection criteria diminished provisions by €1.0 billion. The discount rate obtained by applying the previous data selection criteria would have been lower by 30 basis points as of December 31, 2015. The change in the way the discount rate is determined reduced the net pension expense for the 2015 fiscal year by €17 million. As before, the underlying bond portfolio consists entirely of high-quality corporate bonds with a minimum AA or AAA rating. It no longer includes government-guaranteed or covered bonds.

In Germany the Heubeck 2005 G mortality tables were used, in the United States the RP-2014 Combined Healthy Mortality Tables, and in the United Kingdom 95% of S1NXA. In the United States, adjustments contained in the MP-2015 mortality improvement scale were taken into account in 2015. This led to an actuarial gain of approximately €66 million.

The following weighted parameters were used to measure the expense for pension and other post-employment benefits in the respective year:

(Table 4.69)

Parameters for Benefit Expense

	Germany		Other countries		Total	
	2014	2015	2014	2015	2014	2015
	%	%	%	%	%	%
Pension obligations						
Discount rate	3.80	2.20	4.70	3.70	4.05	2.55
Projected future salary increases	3.00	3.00	3.95	3.65	3.95	3.15
Projected future benefit increases	1.75	1.75	3.60	3.30	3.60	2.10
Other post-employment benefit obligations						
Discount rate	–	–	4.90	3.95	4.90	3.95

The parameter sensitivities were computed by expert actuaries based on a detailed evaluation similar to that performed to obtain the data presented in Table 4.65. Altering individual parameters by 0.5 percentage points (mortality by 10% per beneficiary) while leaving the other parameters unchanged would have impacted pension and other post-employment benefit obligations as of year end 2015 as follows:

(Table 4.70)

Sensitivity of Benefit Obligations

	Germany		Other countries		Total	
€ million	Increase	Decrease	Increase	Decrease	Increase	Decrease
Pension obligations						
0.5%-pt. change in discount rate	(1,544)	1,767	(450)	504	(1,994)	2,271
0.5%-pt. change in projected future salary increases	121	(113)	47	(44)	168	(157)
0.5%-pt. change in projected future benefit increases	1,006	(919)	127	(96)	1,133	(1,015)
10% change in mortality	(597)	669	(173)	185	(770)	854
Other post-employment benefit obligations						
0.5%-pt. change in discount rate	–	–	(46)	51	(46)	51
10% change in mortality	–	–	(21)	24	(21)	24

(Table 4.71)

Sensitivity of Benefit Obligations (prior year)

	Germany		Other countries		Total	
€ million	Increase	Decrease	Increase	Decrease	Increase	Decrease
Pension obligations						
0.5%-pt. change in discount rate	(1,712)	1,969	(441)	494	(2,153)	2,463
0.5%-pt. change in projected future salary increases	145	(135)	44	(41)	189	(176)
0.5%-pt. change in projected future benefit increases	1,119	(1,020)	106	(76)	1,225	(1,096)
10% change in mortality	(657)	737	(168)	179	(825)	916
Other post-employment benefit obligations						
0.5%-pt. change in discount rate	–	–	(51)	56	(51)	56
10% change in mortality	–	–	(22)	24	(22)	24

Provisions are also set up for the obligations, mainly of U.S. subsidiaries, to provide post-employment benefits in the form of health care cost payments for retirees. The valuation of health care costs was based on the assumption that they will increase at a rate of 7.0%, which should gradually decline to 5.0% by 2023 (assumption in 2014: 7.0%, which should gradually decline to 5.0% by 2018). The following table shows the impact on other post-employment benefit obligations and total benefit expense of a one-percentage-point change in the assumed cost increase rates:

(Table 4.72)

Sensitivity to Health Care Cost Increases

	Increase of one percentage point		Decrease of one percentage point	
€ million	2014	2015	2014	2015
Impact on other post-employment benefit obligations	86	79	(72)	(68)
Impact on benefit expense	4	5	(4)	(4)

PAYMENTS MADE AND EXPECTED FUTURE PAYMENTS

The following payments correspond to the employer contributions made or expected to be made to funded benefit plans:

(Table 4.73)

Employer Contributions Paid or Expected

	Germany			Other countries		
€ million	2014	2015	2016 expected	2014	2015	2016 expected
Pension obligations	331	387	74	112	148	133
Other post-employment benefit obligations	–	–	–	18	–	1
Total	**331**	**387**	**74**	**130**	**148**	**134**

Bayer has currently committed to make deficit contributions for its U.K. pension plans of GBP 21 million in 2016 and of approximately GBP 16 million annually thereafter through 2019 and expects to make payments of US$50 million in 2016 for its U.S. pension plans, the latter amount being subject to change depending on future circumstances.

Pensions and other post-employment benefits payable in the future from funded and unfunded plans are estimated as follows:

(Table 4.74)

Future Benefit Payments

	Payments out of plan assets				Payments by the company			
		Pensions	Other post-employment benefits			Pensions	Other post-employment benefits	
€ million	Germany	Other countries	Other countries	Total	Germany	Other countries	Other countries	Total
2016	219	303	9	531	447	66	35	548
2017	221	311	9	541	451	68	37	556
2018	224	322	10	556	458	71	39	568
2019	229	328	9	566	470	71	42	583
2020	234	340	9	583	476	75	43	594
2021-2025	1,260	1,763	46	3,069	2,471	436	241	3,148

The weighted average term of the pension obligations is 17.3 years (2014: 17.6 years) in Germany and 13.4 years (2014: 13.9 years) in other countries. The weighted average term of the obligations for other post-employment benefits in other countries is 11.5 years (2014: 12.1 years).

26. Other provisions

Changes in the various provision categories in 2015 were as follows:

(Table 4.75)

Changes in Other Provisions

€ million	Other Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
December 31, 2014	**65**	**283**	**173**	**1,851**	**770**	**2,751**	**230**	**6,123**
Acquisitions / divestments	–	–	–	48	26	–	2	76
Additions	37	51	290	4,297	97	2,836	292	7,900
Utilization	(21)	(64)	(131)	(3,569)	(269)	(2,283)	(175)	(6,512)
Reversal	(5)	(4)	(20)	(509)	(19)	(281)	(71)	(909)
Reclassification to current liabilities	–	–	–	(76)	–	–	(5)	(81)
Interest cost	–	(1)	–	–	–	11	1	11
Exchange differences	(11)	7	(6)	71	58	65	(7)	177
December 31, 2015	65	272	306	2,113	663	3,099	267	6,785

2014 figures restated

The provisions recognized in the statement of financial position as of December 31, 2015 were expected to be utilized as follows:

(Table 4.76)

Expected Utilization of Other Provisions

€ million	Other Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
2016	28	31	102	2,006	539	2,123	216	5,045
2017	1	29	73	46	50	230	5	434
2018	–	27	78	33	5	152	1	296
2019	–	16	6	7	1	146	1	177
2020	1	4	5	6	3	55	1	75
2021 or later	35	165	42	15	65	393	43	758
Total	**65**	**272**	**306**	**2,113**	**663**	**3,099**	**267**	**6,785**

The provisions were partly offset by claims for refunds in the amount of €97 million (2014: €124 million), which were recognized as receivables. These claims mainly related to product liability.

26.1 Other taxes

Provisions for other taxes mainly related to sales tax back-payments and to local taxes in Brazil.

26.2 Environmental protection

Provisions for environmental protection mainly related to the rehabilitation of contaminated land, recultivation of landfills, and redevelopment and water protection measures.

26.3 Restructuring

Provisions for restructuring included €180 million (2014: €126 million) for severance payments and €126 million (2014: €47 million) for other restructuring expenses, which mainly comprised other costs related to the closure of production facilities.

At HealthCare – as part of the Continuous Efficiency Program – restructuring was carried out mainly in the areas of marketing and supply network optimization. A further focus was on the continuing integration of the businesses acquired the previous year in the Consumer Health segment. Provisions for the above and other restructuring measures at HealthCare as of December 31, 2015, amounted to €94 million. Of this amount, severance payments accounted for €83 million and other restructuring expenses for €11 million.

In CropScience, the restructuring initiated in the United States in prior years, involving the closure of several carbamate production facilities and a formulation plant, continued in 2015. At the same time, the provisions were increased in view of expected future requirements. Provisions for the above and other restructuring measures at CropScience as of December 31, 2015, amounted to €99 million, comprising €34 million for severance payments and €65 million for other restructuring expenses.

Restructuring measures at Covestro mainly comprised the closure of the production facilities at Belford Roxo, Brazil, and an MDI facility at the site in Tarragona, Spain. Both of these plant closures mainly related to the Polyurethanes business unit. Provisions for restructuring at Covestro as of December 31, 2015, amounted to €105 million, consisting of €55 million for severance payments and €50 million for other restructuring expenses.

Restructuring was carried out in the central functions to increase efficiency. The restructuring provisions associated with these measures as of December 31, 2015, amounted to €8 million and pertained entirely to severance payments.

26.4 Trade-related commitments

Provisions for trade-related commitments comprised provisions for rebates, discounts and other price adjustments, product returns, outstanding invoices, pending losses and onerous contracts.

26.5 Litigations

The legal risks currently considered to be material, and their development, are described in NOTE (32).

26.6 Personnel commitments

Provisions for personnel commitments mainly include those for variable one-time payments under short-term incentive programs and for stock-based compensation. Also reflected here are commitments for service awards, early retirements and pre-retirement part-time working arrangements. Provisions for severance payments resulting from restructuring are reflected in provisions for restructuring.

STOCK-BASED COMPENSATION PROGRAMS

Bayer offers stock-based compensation programs collectively to different groups of employees. As required by IFRS 2 (Share-based Payment) for compensation systems involving cash settlement, awards to be made under the stock-based programs are covered by provisions in the amount of the fair value of the obligations existing as of the date of the financial statements vis-à-vis the respective employee group. All resulting valuation adjustments are recognized in profit or loss.

The following table shows the changes in provisions for the various programs:

(Table 4.77)

Changes in Provisions for Stock-Based Compensation Programs

€ million	Aspire I Four-Year Program	Aspire II Four-Year Program	Aspire I Four-Year Program Covestro	Aspire II Four-Year Program Covestro	Total
December 31, 2014	142	311	0	0	453
Additions	81	229	2	5	317
Utilization	(57)	(106)	–	–	(163)
Reversal	(24)	(59)	–	–	(83)
Reallocation	(20)	(54)	20	54	–
Exchange differences	3	18	–	–	21
December 31, 2015	**125**	**339**	**22**	**59**	**545**

The value of the Aspire tranches that were fully earned at the end of 2015, resulting in payments at the beginning of 2016, was €230 million (2014: €151 million).

The net expense for all stock-based compensation programs in 2015 was €248 million (2014: €212 million), including €6 million (2014: €5 million) for the BayShare stock participation program and €8 million (2014: €10 million) for grants of virtual Bayer shares.

The fair value of obligations under the standard stock-based compensation programs was calculated using the Monte Carlo simulation method based on the following key parameters:

(Table 4.78)

Parameters for Monte Carlo Simulation

	2014	2015
Dividend yield	1.89%	1.96%
Risk-free interest rate for the four-year program	(0.079)%	(0.159)%
Volatility of Bayer stock	23.39%	25.61%
Volatility of the EURO STOXX 50	18.11%	19.08%
Correlation between Bayer stock price and the EURO STOXX 50	0.76	0.83

LONG-TERM INCENTIVE PROGRAM FOR MEMBERS OF THE BOARD OF MANAGEMENT AND OTHER SENIOR EXECUTIVES (ASPIRE I)

Since 2005, members of the Board of Management and other senior executives have been entitled to participate in Aspire I on the condition that they purchase a certain number of Bayer shares – determined for each individual according to specific guidelines – and retain them for the full term of the program. A percentage of the executive's annual base salary – according to his / her position – is defined as a target for variable payments (Aspire target opportunity). Depending on the performance of Bayer stock, both in absolute terms and relative to the EURO STOXX 50 benchmark index during a four-year performance period, participants are granted an award of up to 300% of their individual Aspire target opportunity. The start and end prices used to determine the amount of the award are the averages of the official closing prices of Bayer shares over the last 30 stock-exchange trading days of the respective year. The four-year tranche issued in 2011 expired at the end of 2014, and payment of the maximum resulting amount (300%) was made at the beginning of 2015.

LONG-TERM INCENTIVE PROGRAM FOR MIDDLE MANAGEMENT (ASPIRE II)

Also since 2005, other senior managers and middle managers have been offered Aspire II, which is similar to Aspire I but does not require a personal investment in Bayer shares. This program was extended to further managerial employees in 2012. The amount of the award is based entirely on the absolute performance of Bayer stock over a four-year period. The maximum award is 250% of each manager's Aspire target opportunity. The start and end prices used to determine the amount of the award are the averages of the official closing prices of Bayer shares over the last 30 stock-exchange trading days of the respective year. The four-year tranche issued in 2011 expired at the end of 2014, and payment of the maximum resulting amount (250%) was made at the beginning of 2015.

BAYSHARE 2015

All management levels and nonmanagerial employees are offered an annual stock participation program known as BayShare, under which Bayer subsidizes their personal investments in the company's stock. The discount under this program is set separately each year. In 2015 it was 20% (2014: 20%) of the subscription amount. Employees stated a fixed amount that they wished to invest in shares. The maximum subscription amount in Germany was set at €2,500 (2014: €2,500) or €5,000 (2014: €5,000), depending on the employee's position. The shares thus acquired must be retained until December 31 of the year following the year of purchase, irrespective of continued employment with the Bayer Group.

In 2015, employees purchased a total of about 208,000 shares (2014: 225,000 shares) under the BayShare program.

SPECIAL ARRANGEMENT FOR COVESTRO EMPLOYEES CONCERNING THE ASPIRE PROGRAMS

The compensation programs described above were modified for Covestro employees in December 2015 in light of the legal carve-out of the Covestro companies and the subsequent stock exchange listing of Covestro AG.

The arrangement for the 2012 tranches of both Aspire programs was the same as for Bayer employees. Based on the development of Bayer's share price, the maximum award amounts were reached for both programs (Aspire I and Aspire II). Payments of 300% and 250%, respectively, were therefore made at the beginning of 2016.

Valuation for the other three current Aspire tranches issued in 2013, 2014 and 2015, respectively, was based on the average price of Bayer shares on the last 30 trading days of 2015 (€119.17). This price was fixed in advance as the end price. Thus the amounts of the payments from the three remaining tranches – where these were fully vested – were already finally determined at the end of 2015. A payment of at least 100% is guaranteed. This plan amendment gave rise to additional expenses of €7 million in 2015.

26.7 Miscellaneous provisions

Miscellaneous provisions included those for other liabilities, contingent liabilities from business combinations, and asset retirement obligations (other than those included in provisions for environmental protection).

27. Financial liabilities

Financial liabilities were comprised as follows:

(Table 4.79)

Financial Liabilities

	Dec. 31, 2014		Dec. 31, 2015	
€ million	Total	Of which current	Total	Of which current
Bonds and notes / promissory notes	14,964	169	15,547	1,235
Liabilities to banks	3,835	1,221	2,779	1,174
Liabilities under finance leases	441	53	474	59
Liabilities from derivatives	644	296	765	598
Other financial liabilities	1,976	1,637	369	355
Total	**21,860**	**3,376**	**19,934**	**3,421**

A breakdown of financial liabilities by contractual maturity is given below:

(Table 4.80)

Maturities of Financial Liabilities

Maturity	Dec. 31, 2014	Maturity	Dec. 31, 2015
	€ million		€ million
2015	3,376	2016	3,421
2016	2,191	2017	2,245
2017	2,075	2018	2,828
2018	3,359	2019	2,066
2019	1,857	2020	45
2020 or later	9,002	2021 or later	9,329
Total	**21,860**	**Total**	**19,934**

The Bayer Group's financial liabilities are mostly unsecured and – with the exception of the three subordinated hybrid bonds with nominal volumes of €1,500 million, €1,750 million and €1,300 million – are of equal priority.

In addition to promissory notes in the amount of €120 million (2014: €120 million), the Bayer Group has issued the following bonds and notes:

(Table 4.81)

Bonds and Notes

Effective interest rate	Stated rate		Nominal volume	Dec. 31, 2014 € million	Dec. 31, 2015 € million
		Bayer AG, Germany			
Floating[1]	Floating[1]	EMTN bond 2014 / 2016	EUR 500 million	500	500
1.253%	1.125%	EMTN bond 2014 / 2018	EUR 750 million	747	748
5.774%	5.625%	EMTN bond 2006 / 2018	GBP 250 million	319	339
5.541%	5.625%	EMTN bond 2006 / 2018 (increase)	GBP 100 million	129	137
2.086%	1.875%	EMTN bond 2014 / 2021	EUR 750 million	753	753
3.811%	3.750%	Hybrid bond 2014 / 2024[6] / 2074	EUR 1,500 million	1,493	1,493
2.517%	2.375%	Hybrid bond 2015 / 2022[6] / 2075	EUR 1,300 million	–	1,289
3.093%	3.000%	Hybrid bond 2014 / 2020[6] / 2075	EUR 1,750 million	1,742	1,743
5.155%	5.000%	Hybrid bond 2005 / 2015[6] / 2105	EUR 1,300 million	1,317	–
		Bayer Capital Corporation B.V., Netherlands			
1.333%	1.250%	EMTN bond 2014 / 2023	EUR 500 million	497	497
		Bayer Corporation, U.S.A.			
7.180%	7.125%	Notes 1995 / 2015	US$ 200 million	169	–
6.670%	6.650%	Notes 1998 / 2028	US$ 350 million	308	342
		Bayer Holding Ltd., Japan			
0.858%	0.816%	EMTN bond 2012 / 2017	JPY 30 billion	206	229
1.493%	1.459%	EMTN bond 2010 / 2017	JPY 10 billion	69	76
3.654%	3.575%	EMTN bond 2008 / 2018	JPY 15 billion	103	115
0.629%	0.594%	EMTN bond 2013 / 2019	JPY 10 billion	69	76
		Bayer Nordic SE, Finland			
Floating[2]	Floating[2]	EMTN bond 2013 / 2016	EUR 200 million	200	200
Floating[3]	Floating[3]	EMTN bond 2014 / 2017	EUR 500 million	499	500
		Bayer U.S. Finance LLC, U.S.A.			
Floating[4]	Floating[4]	Notes 2014 / 2016	US$ 500 million	411	459
Floating[5]	Floating[5]	Notes 2014 / 2017	US$ 400 million	329	367
1.615%	1.500%	Notes 2014 / 2017	US$ 850 million	698	779
2.564%	2.375%	Notes 2014 / 2019	US$ 2,000 million	1,635	1,826
3.096%	3.000%	Notes 2014 / 2021	US$ 1,500 million	1,230	1,372
3.579%	3.375%	Notes 2014 / 2024	US$ 1,750 million	1,421	1,587
		Total		**14,844**	**15,427**

[1] Floating-rate coupon comprising three-month EURIBOR plus 22 basis points
[2] Floating-rate coupon comprising three-month EURIBOR plus 35 basis points
[3] Floating-rate coupon comprising three-month EURIBOR plus 22 basis points
[4] Floating-rate coupon comprising three-month USD-LIBOR plus 25 basis points
[5] Floating-rate coupon comprising three-month USD-LIBOR plus 28 basis points
[6] Date of first option to early redeem the bond at par

MULTI-CURRENCY EUROPEAN MEDIUM TERM NOTES PROGRAM

An important means of external financing are the bonds issued under the multi-currency European Medium Term Notes (EMTN) program. The following transactions took place in 2015 and 2014:

In January 2014, Bayer AG issued three tranches of EMTN bonds with a total nominal volume of €2 billion. One of these tranches had a nominal volume of €500 million, and the other two had a nominal volume of €750 million each. In March 2014, Bayer Nordic SE issued an EMTN bond with a nominal volume of €500 million. In November 2014, Bayer Capital Corporation B.V. issued an EMTN bond with a nominal volume of €500 million.

OTHER BONDS

In October 2014, Bayer U.S. Finance LLC issued six tranches of bonds in 144a / Reg S format with a total volume of US$7,000 million. The six tranches had nominal volumes of US$500 million, US$400 million, US$850 million, US$2,000 million, US$1,500 million and US$1,750 million.

In October 2015, Bayer Corporation redeemed at maturity the notes with a nominal volume of US$200 million issued in September 1995.

SUBORDINATED BONDS

In April 2015, Bayer AG issued a subordinated hybrid bond with a volume of €1,300 million, a final maturity of 60 years and a coupon of 2.375%, to be reset every five years starting in 2022 based on the five-year swap rate. Bayer has the option to redeem the bond for the first time in October 2022. The issue is structured to receive equity credit of 50% from Moody's and Standard & Poor's.

In July 2014, Bayer AG issued two subordinated hybrid bonds with a total nominal volume of €3,250 million. The first tranche of €1,750 million has a maturity of 61 years and a coupon of 3.0%. Bayer has an early redemption option at par for the first time in 2020. The second tranche of €1,500 million has a maturity of 60 years and a coupon of 3.75%. On this tranche, Bayer has an early redemption option at par for the first time in 2024. From 2020 and 2024, respectively, the coupons will be reset every five years based on the five-year swap rate. Moody's and Standard & Poor's treat 50% of these two bonds as equity. They therefore have a more limited effect on the Group's rating-relevant debt indicators than conventional borrowings.

In July 2015, Bayer AG utilized its right to early redeem the 100-year subordinated hybrid bond with a nominal volume of €1,300 million issued in July 2005.

Bayer AG guarantees all the bonds issued by subsidiaries.

LEASE LIABILITIES

Lease payments totaling €646 million (2014: €603 million), including €172 million (2014: €162 million) in interest, are to be made under finance leases to the respective lessors in future years.

The liabilities under finance leases mature as follows:

(Table 4.82)

Lease Liabilities

€ million	Dec. 31, 2014			€ million	Dec. 31, 2015		
Maturity	Lease payments	Interest component	Liabilities under finance leases	Maturity	Lease payments	Interest component	Liabilities under finance leases
2015	76	23	53	2016	86	27	59
2016	70	21	49	2017	76	23	53
2017	63	19	44	2018	68	20	48
2018	53	16	37	2019	60	18	42
2019	47	14	33	2020	60	15	45
2020 or later	294	69	225	2021 or later	296	69	227
Total	**603**	**162**	**441**	**Total**	**646**	**172**	**474**

OTHER FINANCIAL LIABILITIES

The other financial liabilities as of December 31, 2015, included commercial paper of €308 million (2014: €1,433 million).

OTHER INFORMATION

As of December 31, 2015, the Group had credit facilities at its disposal totaling €9.0 billion (2014: €7.3 billion), of which €2.8 billion (2014: €3.8 billion) was used and €6.2 billion (2014: €3.5 billion) was unused and thus available for borrowing on an unsecured basis. Of the unused credit facilities, an amount of €2.7 billion pertains to Covestro.

Further information on the accounting for liabilities from derivatives is given in NOTE (30).

28. Trade accounts payable

Trade accounts payable comprised €5,937 million (2014: €5,357 million) due within one year and €8 million (2014: €6 million) due after one year.

29. Other liabilities

Other liabilities comprised:

(Table 4.83)

Other Liabilities

	Dec. 31, 2014		Dec. 31, 2015	
€ million	Total	Of which current	Total	Of which current
Other tax liabilities	477	433	435	428
Deferred income	1,136	207	1,148	204
Liabilities to employees	196	185	217	210
Liabilities for social expenses	154	140	174	165
Accrued interest on liabilities	201	192	189	180
Miscellaneous liabilities	713	632	436	347
Total	**2,877**	**1,789**	**2,599**	**1,534**

Deferred income included an upfront payment, originally amounting to US$1 billion, in connection with the strategic pharmaceutical collaboration agreed between Bayer and Merck & Co., Inc., United States, in the field of soluble guanylate cyclase (sGC) modulation. The deferred income is being amortized over a period of 13.5 years as the obligations are satisfied. The remaining amount deferred at the end of 2015 was €719 million (2014: €778 million). The amount amortized in 2015 was €59 million (2014: €15 million).

The deferred income included €62 million (2014: €70 million) in grants and subsidies received from governments, of which €7 million (2014: €8 million) was reversed and recognized in profit or loss.

The miscellaneous liabilities included €125 million (2014: €204 million) from derivatives.

30. Financial instruments

The system used by the Bayer Group to manage credit risks, liquidity risks and the various types of market risks (interest-rate, currency and other price risks), together with its objectives, methods and procedures, is outlined in the Risk Report, which forms part of the Combined Management Report.

30.1 Financial instruments by category

The following table shows the carrying amounts and fair values of financial assets and liabilities for each financial instrument category and a reconciliation to the corresponding line item in the statements of financial position. Since the line items “Other receivables,” “Trade accounts payable” and “Other liabilities” contain both financial instruments and nonfinancial assets or liabilities (such as other tax receivables or advance payments for services to be received in the future), the reconciliation is shown in the column headed “Nonfinancial assets / liabilities.”

Carrying Amounts and Fair Values of Financial Instruments (Table 4.84)

	Dec. 31, 2014						Dec. 31, 2015					
	Carried at amortized cost	Carried at fair value (Fair Value for information[1])			Non-financial assetsliabilities		Carried at amortized cost	Carried at fair value (Fair Value for information[1])			Non-financial assets/liabilities	
€ million	Carrying amount	Based on quoted prices in active markets (Level 1) Carrying amount	Based on observable market data (Level 2) Carrying amount	Based on unobservable inputs (Level 3) Carrying amount	Carrying amount	Carrying amount in the statement of financial position	Carrying amount	Based on quoted prices in active markets (Level 1) Carrying amount	Based on observable market data (Level 2) Carrying amount	Based on unobservable inputs (Level 3) Carrying amount	Carrying amount	Carrying amount in the statement of financial position
Trade accounts receivable	9,097					9,097	9,933					9,933
Loans and receivables	9,097					9,097	9,933					9,933
Other financial assets	276	325	450	779		1,830	185	363	509	791		1,848
Loans and receivables	178		(170)	(19)		178	72		(64)	(18)		72
Available-for-sale financial assets	29	325		745		1,099	40	363		774		1,177
Held-to-maturity financial assets	69		(70)			69	73		(74)			73
Derivatives that qualify for hedge accounting			189			189			125			125
Derivatives that do not qualify for hedge accounting			261	34		295			384	17		401
Other receivables	620			58	1,257	1,935	506			59	1,882	2,447
Loans and receivables	620		(620)			620	506		(506)			506
Available-for-sale financial assets				58		58				59		59
Nonfinancial assets					1,257	1,257					1,882	1,882
Cash and cash equivalents	1,853					1,853	1,859					1,859
Loans and receivables	1,853		(1,853)			1,853	1,859		(1,859)			1,859
Total financial assets	**11,846**	**325**	**450**	**837**		**13,458**	**12,483**	**363**	**509**	**850**		**14,205**
of which loans and receivables	11,748					11,748	12,370					12,370
of which available-for-sale financial assets	29	325		803		1,157	40	363		833		1,236
Financial liabilities	21,216		644			21,860	19,169		765			19,934
Carried at amortized cost	21,216	(15,129)	(6,628)			21,216	19,169	(15,440)	(4,121)			19,169
Derivatives that qualify for hedge accounting			284			284			470			470
Derivatives that do not qualify for hedge accounting			360			360			295			295
Trade accounts payable	5,113				250	5,363	5,680				265	5,945
Carried at amortized cost	5,113					5,113	5,680					5,680
Nonfinancial liabilities					250	250					265	265
Other liabilities	790		176	59	1,852	2,877	606		117	45	1,831	2,599
Carried at amortized cost	790		(790)			790	606		(606)			606
Carried at fair value (nonderivative)				31		31				37		37
Derivatives that qualify for hedge accounting			156			156			93			93
Derivatives that do not qualify for hedge accounting			20	28		48			24	8		32
Nonfinancial liabilities					1,852	1,852					1,831	1,831
Total financial liabilities	**27,119**		**820**	**59**		**27,998**	**25,455**		**882**	**45**		**26,382**
of which carried at amortized cost	27,119					27,119	25,455					25,455
of which derivatives that qualify for hedge accounting			440			440			563			563
of which derivatives that do not qualify for hedge accounting			380	28		408			319	8		327

2014 figures restated

[1] The exemption provisions under IFRS 7.29a were applied for information on specific fair values.

The loans and receivables reflected in other financial assets and the liabilities measured at amortized cost also include receivables and liabilities under finance leases in which Bayer is the lessor or lessee and which are therefore measured in accordance with IAS 17.

Because of the short maturities of most trade accounts receivable and payable, other receivables and liabilities, and cash and cash equivalents, their carrying amounts at the closing date did not significantly differ from the fair values.

The fair values of loans and receivables, held-to-maturity financial investments and of financial liabilities carried at amortized cost that are given for information are the present values of the respective future cash flows. The present values were determined by discounting the cash flows at a closing-date interest rate, taking into account the term of the assets or liabilities and the creditworthiness of the counterparty. Where a market price was available, however, this was deemed to be the fair value.

The fair values of available-for-sale financial assets correspond to quoted prices in active markets (Level 1) or are the present values of the respective future cash flows, determined on the basis of unobservable inputs (Level 3).

The fair values of derivatives for which no publicly quoted prices existed in active markets (Level 1) were determined using valuation techniques based on observable market data as of the end of the reporting period (Level 2). In applying valuation techniques, credit value adjustments were determined to allow for the contracting party's credit risk.

Currency and commodity forward contracts were measured individually at their forward rates or forward prices on the closing date. These depend on spot rates or prices, including time spreads. The fair values of interest-rate hedging instruments and cross-currency interest-rate swaps were determined by discounting future cash flows over the remaining terms of the instruments at market rates of interest, taking into account any foreign currency translation as of the closing date.

Fair values measured using unobservable inputs are categorized within Level 3 of the fair value hierarchy. This applies to certain available-for-sale debt or equity instruments, in some cases to the fair values of embedded derivatives, and to obligations for contingent consideration in business combinations. Credit risk is frequently the principal unobservable input used to determine the fair values of debt instruments classified as available-for-sale financial assets by the discounted cash flow method. Here we refer to credit spreads of comparable issuers. A significant increase in credit risk could result in a lower fair value, whereas a significant decrease could result in a higher fair value. However, a 10% relative change in the credit spread would not materially affect fair value.

Embedded derivatives are separated from their respective host contracts. Such host contracts are generally sales or purchase agreements relating to the operational business. The embedded derivatives cause the cash flows from the contracts to vary with exchange-rate or price fluctuations. The internal measurement of embedded derivatives is mainly performed using the discounted cash flow method, which is based on unobservable inputs. These included planned sales and purchase volumes, and prices derived from market data. Regular monitoring is carried out based on these fair values as part of quarterly reporting.

The changes in the amount of financial assets and liabilities recognized at fair value based on unobservable inputs (Level 3) for each financial instrument category were as follows:

(Table 4.85)

Changes in the Amount of Financial Assets and Liabilities Recognized at Fair Value Based on Unobservable Inputs

	2014				2015			
€ million	Available-for-sale financial assets	Derivatives (net)	Liabilities measured at fair value (non-derivative)	Total	Available-for-sale financial assets	Derivatives (net)	Liabilities measured at fair value (non-derivative)	Total
Carrying amounts of net assets / (net liabilities), Jan. 1	**824**	**(7)**	**–**	**817**	**803**	**6**	**(31)**	**778**
Gains (losses) recognized in profit or loss	10	(8)	–	2	22	(12)	(3)	7
of which related to assets / liabilities recognized in the statements of financial position	10	(8)	–	2	22	(17)	(3)	2
Gains (losses) recognized outside profit or loss	–	–	–	–	19	–	–	19
Additions of assets / (liabilities)	–	–	(31)	(31)	11	–	(4)	7
Settlements of (assets) / liabilities	(31)	21	–	(10)	(22)	9	1	(12)
Transfers (IFRS 5)	–	–	–	–	–	6	–	6
Carrying amounts of net assets/(net liabilities), Dec. 31	**803**	**6**	**(31)**	**778**	**833**	**9**	**(37)**	**805**

2014 figures restated

The changes recognized in profit or loss were included in other operating income / expenses, interest income or exchange gains / losses.

Income, expense, gains and losses on financial instruments can be assigned to the following categories:

(Table 4.86)

Income, Expense, Gains and Losses on Financial Instruments

					2015	
€ million	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Total
Interest income	55	1	22	25	86	189
Interest expense	–	–	–	(25)	(703)	(728)
Income/expenses from affiliated companies	–	–	3	–	–	3
Changes in fair value	–	–	–	147	–	147
Impairment losses	(93)	–	(1)	–	–	(94)
Impairment loss reversals	32	–	–	–	–	32
Exchange gains / losses	450	–	–	(235)	(679)	(464)
Gains / losses from retirements	–	–	31	–	–	31
Other financial income/expenses	(1)	–	13	–	(12)	–
Net result	**443**	**1**	**68**	**(88)**	**(1,308)**	**(884)**

(Table 4.87)

Income, Expense, Gains and Losses on Financial Instruments (Previous Year)

						2014
€ million	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Total
Interest income	88	1	11	54	122	276
Interest expense	–	–	–	(75)	(550)	(625)
Income / expenses from affiliated companies	–	–	1	–	–	1
Changes in fair value	–	–	–	32	–	32
Impairment losses	(87)	–	–	–	–	(87)
Impairment loss reversals	24	–	2	–	–	26
Exchange gains / losses	590	–	–	(245)	(552)	(207)
Gains / losses from retirements	–	–	–	–	–	–
Other financial income/expenses	–	–	–	–	(44)	(44)
Net result	**615**	**1**	**14**	**(234)**	**(1,024)**	**(628)**

2014 figures restated

The interest expense of €703 million (2014: €550 million) from nonderivative financial liabilities also included the income and expense from interest-rate swaps that qualified for hedge accounting. Interest income from financial assets not measured at fair value through profit or loss amounted to €73 million (2014: €54 million). Interest income from interest-rate derivatives that qualified for hedge accounting was €86 million (2014: €122 million). The changes in fair values of financial assets held for trading related mainly to forward commodity contracts and embedded derivatives.

Derivatives that constitute financial assets and form part of a master netting arrangement but do not satisfy, or only partially satisfy, the offsetting criteria and are only enforceable in the event of breach of contract by, or insolvency of, one of the contracting parties amounted to €415 million (2014: €360 million), the related financial liabilities (derivatives) to €256 million (2014: €242 million). Derivatives classified as financial liabilities and forming part of a master netting arrangement amounted to €761 million (2014: €773 million), the related financial assets (derivatives) to €256 million (2014: €242 million).

30.2 Maturity analysis

The liquidity risks to which the Bayer Group was exposed from its financial instruments at the end of the reporting period comprised obligations for future interest and repayment installments on financial liabilities and the liquidity risk arising from derivatives, as shown in the table in NOTE (30.3).

In addition, loan commitments existed for an as yet unpaid €1,213 million (2014: €1,005 million) portion of the effective initial fund of Bayer-Pensionskasse VVaG, which may result in further payments by Bayer AG (€1,005 million) and / or Covestro AG (€208 million) in subsequent years.

(Table 4.88)

Maturity Analysis of Financial Instruments

€ million	Dec. 31, 2015 Carrying amount	Cash flows 2016 Interest and repayment	Cash flows 2017 Interest and repayment	Cash flows 2018 Interest and repayment	Cash flows 2019 Interest and repayment	Cash flows 2020 Interest and repayment	Cash flows after 2020 Interest and repayment
Financial liabilities							
Bonds and notes / promissory notes	15,547	1,475	2,334	1,704	2,282	277	9,845
Liabilities to banks	2,779	1,221	298	1,387	38	–	10
Remaining liabilities	843	440	79	69	60	61	307
Trade accounts payable	5,680	5,673	3	3	2	–	–
Other liabilities							
Accrued interest on liabilities	189	180	1	2	1	1	4
Remaining liabilities	454	420	5	2	1	1	25
Liabilities from derivatives							
Derivatives that qualify for hedge accounting	563	397	11	122	50	–	–
Derivatives that do not qualify for hedge accounting	327	312	8	1	3	1	2
Receivables from derivatives							
Derivatives that qualify for hedge accounting	125	66	26	13	2	2	1
Derivatives that do not qualify for hedge accounting	401	379	2	3	2	2	4
Loan commitments	–	1,213	–	–	–	–	–
Financial guarantees	–	14	–	–	–	–	2

€ million	Dec. 31, 2014 Carrying amount	Cash flows 2015 Interest and repayment	Cash flows 2016 Interest and repayment	Cash flows 2017 Interest and repayment	Cash flows 2018 Interest and repayment	Cash flows 2019 Interest and repayment	Cash flows after 2019 Interest and repayment
Financial liabilities							
Bonds and notes / promissory notes [1]	14,964	1,690	1,521	2,131	1,612	2,037	8,353
Liabilities to banks	3,835	1,281	475	277	1,921	65	18
Remaining liabilities	2,417	1,714	405	65	55	48	294
Trade accounts payable	5,113	5,114	6	3	1	–	–
Other liabilities							
Accrued interest on liabilities	201	192	2	1	1	1	4
Remaining liabilities	620	582	6	9	4	1	21
Liabilities from derivatives							
Derivatives that qualify for hedge accounting	440	169	131	11	109	24	–
Derivatives that do not qualify for hedge accounting	408	311	80	13	1	1	3
Receivables from derivatives							
Derivatives that qualify for hedge accounting	189	144	21	21	2	2	3
Derivatives that do not qualify for hedge accounting	295	257	2	23	2	1	14
Loan commitments	–	1,006	–	–	–	–	–
Financial guarantees	–	25	–	–	–	–	2

[1] Repayment of the €1,300 million 100-year hybrid bond is reflected at the earliest possible repayment date in 2015.

30.3 Information on derivatives

Asset and liability fair values and future cash flows are exposed to currency, interest-rate and commodity price risks. Derivatives are used to reduce this risk. In some cases they are designated as hedging instruments in a hedge accounting relationship.

CURRENCY RISKS

Foreign currency receivables and liabilities are hedged using foreign exchange derivatives without the existence of a hedge accounting relationship. A bond of Bayer AG denominated in British pounds was swapped on the issuance date into a fixed-rate euro bond by means of a cross-currency interest-rate swap, which was designated as a cash flow hedge. Certain forward exchange contracts and cross-currency interest-rate swaps used to hedge intra-Group loans are also designated as cash flow hedges.

Fluctuations in future cash flows resulting from forecasted foreign currency transactions and procurement activities are avoided partly through derivatives contracts, most of which are designated as cash flow hedges.

INTEREST-RATE RISKS

The interest-rate risks from fixed-interest borrowings are managed in part using interest-rate swaps. This applies mainly to the €750 million bond issued in 2014, which matures in 2021. Hedge accounting is applied to the respective borrowings and hedging instruments (fair-value hedge).

Losses of €26 million (2014: €47 million) were recorded on fair-value hedging instruments in 2015. Gains of €25 million (2014: €47 million) were recorded on the underlying hedged items.

COMMODITY PRICE RISKS

Hedging contracts are also used to partly reduce exposure to fluctuations in future cash outflows resulting from price changes on procurement markets.

HEDGING OF OBLIGATIONS UNDER STOCK-BASED EMPLOYEE COMPENSATION PROGRAMS

A portion of the obligations to make variable payments to employees under stock-based compensation programs (Aspire) is hedged against share price fluctuations using derivatives contracts that are settled in cash at maturity. These derivatives are designated as cash flow hedges.

FURTHER INFORMATION ON CASH FLOW HEDGES

Accumulated other comprehensive income from cash flow hedges in 2015 decreased by €203 million (2014: €102 million) due to changes in the fair values of derivatives net of tax. Losses of €304 million (2014: gains of €46 million) from fair-value changes – originally recognized in accumulated other comprehensive income – of derivatives designated as cash flow hedges were reclassified to profit or loss. The respective pro-rated deferred tax income of €88 million (2014: deferred tax expense of €13 million) was likewise reclassified to profit or loss.

No material ineffective portions of hedges required recognition in profit or loss in 2015 or 2014.

The income and expense from cash flow hedges recognized in accumulated other comprehensive income mainly comprised gains of €91 million (2014: €115 million) and losses of €90 million (2014: €156 million) from the hedging of forecasted transactions in foreign currencies. Of these gains and losses, gains of €79 million (2014: €81 million) and losses of €84 million (2014: €152 million) will be reclassifiable to profit or loss within one year and gains of €12 million (2014: €34 million) and losses of €6 million (2014: €4 million) in subsequent years.

The fair values of existing contracts in the major categories at the end of the reporting period are indicated in the following table together with the included volumes of cash flow hedges.

(Table 4.89)

Fair Values of Derivatives

	Dec. 31, 2014			Dec. 31, 2015		
€ million	Notional amount [1]	Positive fair value	Negative fair value	Notional amount[1]	Positive fair value	Negative fair value
Currency hedging of recorded transactions	**14,023**	**176**	**(618)**	**22,275**	**337**	**(753)**
Forward exchange contracts	11,754	176	(334)	19,896	336	(283)
of which cash flow hedges	–	–	–	–	–	–
Cross-currency interest-rate swaps	2,269	–	(284)	2,379	1	(470)
of which cash flow hedges	2,269	–	(284)	2,362	–	(470)
Currency hedging of forecasted transactions	**3,743**	**117**	**(159)**	**4,082**	**99**	**(100)**
Forward exchange contracts	3,230	83	(151)	3,627	86	(99)
of which cash flow hedges	3,158	82	(150)	3,255	78	(90)
Currency options	513	34	(8)	455	13	(1)
of which cash flow hedges	430	33	(6)	368	13	(1)
Interest-rate hedging of recorded transactions	**2,771**	**83**	**(24)**	**200**	**13**	**–**
Interest-rate swaps	2,771	83	(24)	200	13	–
of which fair value hedges	1,665	62	–	200	13	–
Commodity price hedging	**27**	**3**	**(2)**	**91**	**14**	**(12)**
Forward commodity contracts	5	1	–	86	12	(10)
Commodity option contracts	22	2	(2)	5	2	(2)
Hedging of stock-based employee compensation programs	**14**	**12**	**–**	**80**	**21**	**(2)**
Share price options	14	12	–	30	21	–
of which cash flow hedges	14	12	–	30	21	–
Share price forwards	–	–	–	50	–	(2)
of which cash flow hedges	–	–	–	50	–	(2)
Total	**20,578**	**391**	**(803)**	**26,728**	**484**	**(867)**
of which current derivatives	17,092	329	(455)	25,022	435	(692)
for currency hedging	14,494	251	(429)	24,931	420	(680)
for interest-rate hedging[2]	2,571	75	(24)	–	1	–
for commodity hedging	27	3	(2)	91	14	(12)
for hedging of stock-based employee compensation programs	–	–	–	–	–	–

[1] The notional amount is reported as gross volume, which also contains economically closed hedges.
[2] The portion of the fair value of long-term interest-rate swaps that relates to current interest payments was classified as current.

31. Contingent liabilities and other financial commitments

CONTINGENT LIABILITIES

The following warranty contracts, guarantees and other contingent liabilities existed at the end of the reporting period:

(Table 4.90)

Contingent Liabilities

€ million	Dec. 31, 2014	Dec. 31, 2015
Warranties	95	99
Guarantees	144	123
Other contingent liabilities	486	562
Total	**725**	**784**

2014 figures restated

The guarantees mainly comprise a declaration issued by Bayer AG to the trustees of the U.K. pension plans guaranteeing the pension obligations of Bayer Public Limited Company and Bayer CropScience Limited. Under the declaration, Bayer AG – in addition to the two companies – undertakes to make further payments into the plans upon receipt of a payment request from the trustees. The net liability with respect to these defined benefit plans as of December 31, 2015, amounted to €123 million (2014: €144 million).

OTHER FINANCIAL COMMITMENTS

The other financial commitments were as follows:

(Table 4.91)

Other Financial Commitments

€ million	Dec. 31, 2014	Dec. 31, 2015
Operating leases	671	891
Orders already placed under purchase agreements	476	690
Capital contribution commitments	48	391
Unpaid portion of the effective initial fund	1,005	1,213
Potential payment obligations under R&D collaboration agreements	2,427	2,887
Revenue-based milestone payment commitments	2,169	2,241
Total	**6,796**	**8,313**

2014 figures restated

The nondiscounted future minimum lease payments relating to operating leases totaled €891 million (2014: €671 million). The maturities of the respective payment obligations were as follows:

(Table 4.92)

Operating Leases

Maturing in	Dec. 31, 2014	Maturing in	Dec. 31, 2015
	€ million		€ million
2015	174	2016	195
2016	125	2017	155
2017	98	2018	110
2018	70	2019	94
2019	59	2020	79
2020 or later	145	2021 or later	258
Total	**671**	**Total**	**891**

Financial commitments resulting from orders already placed under purchase agreements related to planned or ongoing capital expenditure projects totaled €690 million (2014: €476 million).

On December 19, 2015, Bayer entered into an agreement to create a joint venture with CRISPR THERAPEUTICS AG, Basel, Switzerland. As of December 31, 2015, Bayer had capital contribution obligations of US$370 million in this connection to CRISPR THERAPEUTICS AG and the joint venture yet to be established. These obligations mature on December 31, 2020, at the latest.

The Bayer Group has entered into cooperation agreements with third parties under which it has agreed to fund various research and development projects or has assumed other payment obligations based on the achievement of certain milestones or other specific conditions. If all of these payments have to be made, their maturity distribution as of December 31, 2015, was expected to be as set forth in the following table. The amounts shown represent the maximum payments to be made, and it is unlikely that they will all fall due. Since the achievement of the conditions for payment is highly uncertain, both the amounts and the dates of the actual payments may vary considerably from those stated in the table.

(Table 4.93)

Potential Payment Obligations Under R&D Collaboration Agreements

Maturing in	Dec. 31, 2014	Maturing in	Dec. 31, 2015
	€ million		€ million
2015	155	2016	262
2016	198	2017	229
2017	164	2018	96
2018	130	2019	240
2019	203	2020	78
2020 or later	1,577	2021 or later	1,982
Total	**2,427**	**Total**	**2,887**

In addition to the above commitments, there were also revenue-based milestone payment commitments totaling €2,241 million (2014: €2,169 million), of which €2,237 million (2014: €2,157 million) was not expected to fall due until 2021 (2014: 2020) or later. These commitments are also highly uncertain.

32. Legal risks

As a global company with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks, particularly in the areas of product liability, competition and antitrust law, patent disputes, tax assessments and environmental matters. The outcome of any current or future proceedings cannot normally be predicted. It is therefore possible that legal or regulatory judgments or future settlements could give rise to expenses that are not covered, or not fully covered, by insurers' compensation payments and could significantly affect our revenues and earnings.

Legal proceedings currently considered to involve material risks are outlined below. The legal proceedings referred to do not represent an exhaustive list.

PRODUCT-RELATED LITIGATION

Yasmin™ / YAZ™: As of January 25, 2016, the number of claimants in the pending lawsuits and claims in the United States totaled about 2,300 (excluding claims already settled). Claimants allege that users have suffered personal injuries, some of them fatal, from the use of Bayer's drospirenone-containing oral contraceptive products such as Yasmin™ and/or YAZ™ or from the use of Ocella™ and/or Gianvi™, generic versions of Yasmin™ and YAZ™, respectively, marketed by Barr Laboratories, Inc. in the United States. Claimants seek compensatory and punitive damages, claiming, in particular, that Bayer knew or should have known of the alleged risks and should be held liable for having failed to disclose them or adequately warn users. All cases pending in U.S. federal courts have been consolidated in a multidistrict litigation proceeding for common pre-trial management.

A few State Attorney Generals in the United States are investigating an alleged off-label promotion of Yasmin™ and YAZ™ as well as an alleged failure to warn about an alleged increased risk of developing blood clots in violation of consumer protection statutes. One Attorney General has filed an action against Bayer.

As of January 25, 2016, 13 lawsuits seeking class action certification had been served upon Bayer in Canada. In one of these lawsuits a class has been certified. Two motions for certification of a class action are pending in Israel.

As of January 25, 2016, Bayer had reached agreements, without admission of liability, to settle approximately 10,300 claims for venous clot injuries (deep vein thrombosis or pulmonary embolism) for a total amount of about US$2.04 billion and approximately 7,200 claims for gallbladder injuries for a total amount of about US$21.5 million in

the United States. Bayer will continue to consider the option of settling venous clot injury claims after a case-specific analysis of medical records. At present, about 300 such claims are under review.

In August 2015, Bayer reached an agreement to settle, without admission of liability, lawsuits and claims in which plaintiffs allege an arterial thromboembolic injury (primarily strokes and heart attacks) for a total maximum aggregate amount of US$56.9 million. Bayer may withdraw from the settlement if fewer than 97.5% of those who are eligible, and/or fewer than 96% of those who are eligible and allege death or catastrophic injuries, choose to participate. As of January 25, 2016, about 1,200 of the 2,300 above-mentioned claimants alleged arterial thromboembolic injuries.

In August 2015, the U.S. multidistrict and state coordinating courts overseeing the litigation issued case management orders governing all cases before them (regardless of alleged injury), imposing much stricter threshold requirements for litigating the remaining unsettled cases and for filing of new cases. Failing compliance with these requirements, such cases will be dismissed.

Additional lawsuits are anticipated. Bayer believes that it has meritorious defenses and will continue to defend itself vigorously against all claims that are not considered for settlement. Bayer has taken appropriate accounting measures for anticipated defense costs and for agreed and anticipated future settlements based on the information currently available and based on the number of pending and estimated future claims alleging venous clot injuries.

Mirena™: As of January 25, 2016, lawsuits from approximately 3,500 users of Mirena™, a levonorgestrel-releasing intrauterine system providing long-term contraception, had been served upon Bayer in the United States (excluding lawsuits no longer pending). Most of the cases pending in U.S. federal courts have been consolidated in a multidistrict litigation proceeding for common pre-trial management. Additional lawsuits are anticipated. Plaintiffs allege personal injuries resulting from the use of Mirena™, including perforation of the uterus, ectopic pregnancy, or idiopathic intracranial hypertension, and seek compensatory and punitive damages. Plaintiffs claim, inter alia, that Mirena™ is defective and that Bayer knew or should have known of the risks associated with it and failed to adequately warn its users. As of January 25, 2016, five lawsuits relating to Mirena™ seeking class action certification had been served upon Bayer in Canada. Bayer believes it has meritorious defenses and intends to defend itself vigorously. Based on the information currently available, Bayer has taken appropriate accounting measures for anticipated defense costs.

Xarelto™: As of January 25, 2016, in the United States, lawsuits from approximately 4,300 recipients of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Xarelto™, including cerebral, gastrointestinal or other bleeding and death, and seek compensatory and punitive damages. They claim, amongst other things, that Xarelto™ is defective and that Bayer knew or should have known of the risks associated with the use of Xarelto™ and failed to adequately warn its users. Additional lawsuits are anticipated. Cases pending in U.S. federal courts have been consolidated in a multidistrict litigation for common pre-trial management. As of January 25, 2016, eight lawsuits relating to Xarelto™ seeking class action certification had been served upon Bayer in Canada. Bayer believes it has meritorious defenses and intends to defend itself vigorously. Based on the information currently available, Bayer has taken appropriate accounting measures for anticipated defense costs.

In connection with the above proceedings concerning Yasmin™/YAZ™, Mirena™ and Xarelto™, Bayer is insured against product liability risks to the extent customary in the industry. However, the accounting measures taken with regard to the Yasmin™/YAZ™ claims exceed the available insurance coverage.

COMPETITION LAW PROCEEDINGS

Phillips' Colon Health / Department of Justice: In 2014, the United States Department of Justice, representing the United States Federal Trade Commission (FTC), filed a motion in a New Jersey federal court contending that Bayer did not have the requisite support for claims made with respect to Phillips' Colon Health probiotics. The motion sought to hold Bayer in contempt of a prior consent order that required Bayer to have competent and reliable scientific evidence to substantiate dietary supplement claims. In September 2015, the New Jersey federal court ruled that the United States failed to satisfy its burden of proving that Bayer failed to possess competent and reliable scientific evidence. Thus, the court found that Bayer did not violate the consent order. The decision is final.

PATENT DISPUTES

Beyaz™/Safyral™: Beyaz™ and Safyral™ are Bayer's oral contraceptives containing folate. In September 2015, a U.S. federal court ruled in favor of Bayer regarding both the validity of its patent and the infringement thereof by Watson Laboratories, Inc. Watson had filed Abbreviated New Drug Applications with a Paragraph IV certification ("ANDA IV")

seeking approval of generic versions of both Beyaz™ and Safyral™ in the United States. Watson appealed the decision. In May and October 2015, Bayer filed two suits against Lupin Ltd. and Lupin Pharmaceuticals, Inc. (together "Lupin") in U.S. federal court for infringement of the same patent. In April and September 2015, Bayer had received two notices of an ANDA IV by Lupin seeking approval to market generic versions of Safyral™ and Beyaz™ in the United States.

Betaferon™ / Betaseron™: In 2010, Bayer filed a complaint against Biogen Idec MA Inc. in U.S. federal court seeking a declaration by the court that a patent issued to Biogen in 2009 is invalid and not infringed by Bayer's production and distribution of Betaseron™, Bayer's drug product for the treatment of multiple sclerosis. Biogen is alleging patent infringement by Bayer through Bayer's production and distribution of Betaseron™ and Extavia™ and has sued Bayer accordingly. Bayer manufactures Betaseron™ and distributes the product in the United States. Extavia™ is also a drug product for the treatment of multiple sclerosis; it is manufactured by Bayer, but distributed in the United States by Novartis Pharmaceuticals Corporation, another defendant in the lawsuit.

Finacea™: In July 2015, a U.S. federal court found that Bayer's patent relating to Finacea™ topical gel is valid and infringed by Glenmark Generics Ltd. Glenmark had filed an ANDA IV seeking approval of a generic version of Finacea™ in the United States, and Glenmark appealed the US federal court decision.

Damoctocog alfa pegol (BAY 94-9027, long-acting rFVIII): In 2013, Bayer filed a lawsuit against Nektar Therapeutics in the district court of Munich, Germany. In this proceeding, Bayer claims rights to certain European patent applications based on a past collaboration between Bayer and Nektar in the field of hemophilia. The European patent applications with the title "Polymer-factor VIII moiety conjugates" are part of a patent family registered in the name of Nektar comprising further patent applications and patents in other countries including the United States. However, Bayer believes that the patent family does not include any valid patent claim relevant for Bayer's drug candidate BAY 94-9027 for the treatment of hemophilia A.

Nexavar™: In January and December 2015, Bayer filed patent infringement lawsuits in a U.S. federal court against Mylan Pharmaceuticals Inc. and Mylan Inc. (together "Mylan"). In December 2014 and in November 2015, Bayer had received notices of ANDA IV applications pursuant to which Mylan seeks approval of a generic version of Bayer´s cancer drug Nexavar™ in the United States.

Staxyn™: Staxyn™ is a Bayer product for erectile dysfunction treatment. It is an orodispersible (orally disintegrating) formulation of Levitra™. Both drug products contain the same active ingredient, which is protected in the United States by two patents expiring in 2018. In 2012, Bayer received notice of an ANDA IV application pursuant to which Watson seeks approval to market a generic version of Bayer's erectile dysfunction treatment Staxyn™ prior to patent expiration in the United States. Bayer filed a patent infringement suit in a U.S. federal court against Watson Laboratories, Inc. In April 2015, the court ruled that both of Bayer's compound patents are valid and infringed. Watson may appeal.

Xarelto™: In October 2015, Bayer and Janssen Pharmaceuticals, Inc. filed a patent infringement suit in a U.S. federal court against Aurobindo Pharma Limited, Aurobindo Pharma USA, Inc. (together "Aurobindo"), Breckenridge Pharmaceutical Inc. ("Breckenridge"), Micro Labs Ltd., Micro Labs USA Inc. (together "Micro Labs"), Mylan Pharmaceuticals Inc., Mylan Inc. (together "Mylan"), Prinston Pharmaceutical Inc. ("Prinston"), Sigmapharm Laboratories, LLC ("Sigmapharm"), Torrent Pharmaceuticals, Limited and Torrent Pharma Inc. (together "Torrent"). In September 2015, Bayer had received notices of an ANDA IV application by Aurobindo, Breckenridge, Micro Labs, Mylan, Prinston, Sigmapharm and Torrent, each seeking approval to market a generic version of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, in the United States. In January 2016, Bayer received another notice of such an ANDA IV application by InvaGen Pharmaceuticals, Inc. ("InvaGen"). In February 2016, Bayer and Janssen Pharmaceuticals, Inc. filed a patent infringement suit against InvaGen in the same U.S. federal court.

Bayer believes it has meritorious defenses in the above patent disputes and intends to defend itself vigorously.

FURTHER LEGAL PROCEEDINGS

Trasylol™/Avelox™: A qui tam complaint relating to marketing practices for Trasylol™ (aprotinin) and Avelox™ (moxifloxacin) filed by a former Bayer employee is pending in the United States District Court in New Jersey. The U.S. government has declined to intervene at the present time.

Newark Bay Environmental Matters: In the United States, Bayer is one of numerous parties involved in a series of claims brought by federal and state environmental protection agencies. The claims arise from operations by entities which

historically were conducted near Newark Bay or surrounding bodies of water, or which allegedly discharged hazardous waste into these waterways or onto nearby land. Bayer and the other potentially responsible parties are being asked to remediate and contribute to the payment of past and future remediation or restoration costs and damages.

In the Lower Passaic River matter, a group of more than sixty companies including Bayer is investigating contaminated sediments in the riverbed under the supervision of the United States Environmental Protection Agency (EPA) and other governmental authorities. Future remediation will involve some form of dredging, the nature and scope of which are not yet defined, and potentially other tasks. The cost of the investigation and the remediation work may be substantial if the final remedy involves extensive dredging and disposal of impacted sediments. In the Newark Bay matter, an unaffiliated party is currently conducting an investigation of sediments in Newark Bay under EPA supervision. The investigation is in a preliminary stage. Bayer has contributed to certain investigation costs in the past and may incur costs for future investigation and remediation activities in Newark Bay.

Bayer has also been notified by governmental authorities acting as natural resource trustees that it may have liability for natural resource damages arising from the contamination of the Lower Passaic River, Newark Bay and surrounding water bodies. Bayer is currently unable to determine the extent of its liability.

Asbestos: A further risk may arise from asbestos litigation in the United States. In many cases, the plaintiffs allege that Bayer and co-defendants employed third parties on their sites in past decades without providing them with sufficient warnings or protection against the known dangers of asbestos. Additionally, a Bayer affiliate in the United States is the legal successor to companies that sold asbestos products until 1976. Union Carbide has agreed to indemnify Bayer for this liability. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

TAX PROCEEDINGS

Stamp taxes in Greece: In 2014, a Greek administrative court of first instance dismissed Bayer's lawsuit against the assessment of stamp taxes and contingent penalties in the total amount of approximately €23 million on certain intra-Group loans to a Greek subsidiary. Bayer is convinced that the decision is wrong and has appealed. In two additional court proceeding of first instance before the same court, Bayer has filed lawsuits against the assessment of stamp taxes and contingent penalties in an amount of approximately €90 million and a further amount of approximately €16 million. Bayer believes it has meritorious arguments to support its legal position and intends to defend itself vigorously.

Notes to the Statements of Cash Flows

The statement of cash flows shows how cash inflows and outflows during the fiscal year affected the cash and cash equivalents of the Bayer Group. Cash flows are classified by operating, investing and financing activities in accordance with IAS 7 (Statement of Cash Flows). Effects of changes in the scope of consolidation are stated separately.

Of the cash and cash equivalents, an amount of €17 million (2014: €72 million) had limited availability due to foreign exchange restrictions. Past experience has shown such restrictions to be of short duration. The above amount included €3 million (2014: €64 million) of exchange-restricted cash in Venezuela. The conversion of cash from Venezuelan bolivars (VEF) into U.S. dollars is subject to a government approval process.

The cash flows reported by consolidated companies outside the eurozone are translated at average monthly exchange rates, with the exception of cash and cash equivalents, which are translated at closing rates. The "Change in cash and cash equivalents due to exchange rate movements" is reported in a separate line item.

33. Net cash provided by (used in) operating activities

The gross cash flow from continuing operations, amounting in 2015 to €6,999 million (2014: €6,707 million), is the cash surplus from operating activities before any changes in working capital. The cash flows by segment are shown in NOTE (1).

The net operating cash flow (total) of €6,890 million (2014: €5,810 million) also takes into account the changes in working capital and other noncash transactions.

An income-tax-related net cash outflow of €1,699 million (2014: €1,835 million) is included in the net cash flow for 2015. The changes in income tax liabilities, income tax provisions and claims for reimbursement of income taxes are shown in the line item "Changes in other working capital, other noncash items."

The transfers of bonds with a total value of €300 million (2014: €250 million) to pension funds were noncash transactions and therefore did not result in an operating cash outflow.

34. Net cash provided by (used in) investing activities

The net cash outflow for investing activities in 2015 amounted to €2,762 million (2014: €15,539 million).

Additions to property, plant and equipment and intangible assets in 2015 resulted in a cash outflow of €2,517 million (2014: €2,371 million). Cash inflows from sales of property, plant and equipment and intangible assets amounted to €193 million (2014: €143 million).

The cash outflows of €176 million (2014: €13,545 million) for acquisitions primarily related to the acquisition of SeedWorks India Pvt. Ltd., Hyderabad, India, and further payments in connection with the acquisition of the consumer care business of Merck & Co., Inc., United States. The prior-year figure mainly comprised the acquisitions of the consumer care business of Merck & Co., Inc., United States, and Algeta ASA, Norway. Further details of acquisitions and divestitures are given in NOTES (6.2) and (6.3), respectively.

The net cash outflow for noncurrent and current financial assets amounted to €370 million (2014: €177 million).

The transfers of bonds with a total value of €300 million (2014: €250 million) to pension funds were noncash transactions and therefore did not result in an investing cash inflow.

35. Net cash provided by (used in) financing activities

In 2015 there was a net cash outflow of €3,974 million (2014: inflow of €9,736 million) for financing activities. Net loan repayments amounted to €2,929 million (2014: net borrowings of €11,838 million).

Cash outflows for dividend payments amounted to €1,869 million (2014: €1,739 million). Net interest payments – including payments for and receipts from interest-rate swaps – rose to €652 million (2014: €362 million). The proceeds from the stock market flotation of Covestro AG amounted to €1,490 million.

Other Information

36. Audit fees

The following fees for the services of the worldwide network of PricewaterhouseCoopers (PwC), including PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft (PwC AG WPG), were recognized as expenses:

(Table 4.94)

Audit Fees

	PwC		of which PwC AG WPG	
€ million	2014	2015	2014	2015
Financial statements auditing	12	17	4	7
Audit-related services and other audit work	4	9	3	9
Tax consultancy	2	3	–	–
Other services	6	7	–	5
Total	**24**	**36**	**7**	**21**

The fees for the auditing of financial statements mainly comprised those for the audits of the consolidated financial statements of the Bayer Group and the financial statements of Bayer AG and its subsidiaries. The increase in fees for financial statements auditing and for audit-related services and other audit work mainly resulted from the carve-out and stock market flotation of Covestro.

The Independent Auditor's Report on the consolidated financial statements for fiscal 2015 was signed by Dr. Peter Bartels and Eckhard Sprinkmeier. Dr. Peter Bartels signed the Independent Auditor's Report for the first time for the year ended December 31, 2012, and Eckhard Sprinkmeier for the year ended December 31, 2014. PwC has served as the auditor of Bayer's consolidated financial statements since the merger of Price Waterhouse Deutschland and Coopers & Lybrand Deutsche Revision in 1998. The predecessor firm of Coopers & Lybrand Deutsche Revision had already audited Bayer's consolidated financial statements for some years prior to that date.

37. Related parties

Related parties as defined in IAS 24 (Related Party Disclosures) are those legal entities and natural persons that are able to exert influence on Bayer AG and its subsidiaries or over which Bayer AG or its subsidiaries exercise control or joint control or have a significant influence. They include, in particular, nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, and post-employment benefit plans, as well as the corporate officers of Bayer AG whose compensation is reported in NOTE (38) and in the Compensation Report, which forms part of the Combined Management Report.

Transactions with nonconsolidated subsidiaries, joint ventures and associates included in the consolidated financial statements at cost of acquisition or using the equity method, and post-employment benefit plans are carried out on an arm's-length basis.

The following table shows the volume of transactions with related parties included in the consolidated financial statements of the Bayer Group at amortized cost or using the equity method, and with post-employment benefit plans:

(Table 4.95)

Related Parties

	2014				2015			
€ million	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities
Nonconsolidated subsidiaries	21	4	8	18	21	4	11	22
Joint ventures	29	–	4	–	25	–	4	1
Associates	33	758	5	5	36	645	–	4
Post-employment benefit plans	**–**	**–**	**803**	**64**	**–**	**–**	**822**	**68**

Goods and services in the amount of €609 million (2014: €737 million) were purchased from the associate PO JV, LP, Wilmington, United States, mainly in the course of day-to-day business operations.

Intercompany profits and losses for companies accounted for in the consolidated financial statements using the equity method were immaterial in 2015 and 2014.

Bayer AG has undertaken to provide jouissance right capital (Genussrechtskapital) in the form of an interest-bearing loan with a nominal volume of €150 million (2014: €150 million) for Bayer-Pensionskasse VVaG. The entire amount remained drawn as of December 31, 2015. The carrying amount as of December 31, 2015, was €153 million (2014: €150 million). Loan capital was first provided to Bayer-Pensionskasse VVaG in 2008 for its effective initial fund. This capital had a nominal volume of €595 million as of December 31, 2015 (2014: €595 million). The carrying amount as of December 31, 2015, was €610 million (2014: €595 million). The outstanding receivables, comprised of different tranches, are each subject to a five-year interest-rate adjustment mechanism. Net interest income of €22 million was recognized for 2015 (2014: €10 million).

No impairment losses were recognized on receivables from related parties in 2015 or 2014.

38. Total compensation of the Board of Management and the Supervisory Board, advances and loans

The compensation of the Board of Management comprises short-term payments, stock-based payments and post-employment benefits.

The following table shows the individual components of the Board of Management's compensation according to IFRS:

(Table 4.96)

Board of Management Compensation according to IFRS		
€ thousand	**2014**	**2015**
Fixed annual compensation	4,118	4,455
Fringe benefits	443	207
Total short-term non-performance-related compensation	**4,561**	**4,662**
Short-term performance-related cash compensation	5,051	5,983
Total short-term compensation	**9,612**	**10,645**
Stock-based compensation (virtual Bayer shares) earned in the respective year	5,058	5,983
Change in value of existing entitlements to stock-based compensation (virtual Bayer shares)	1,559	556
Stock-based compensation (Aspire) earned in the respective year	3,602	2,330
Change in value of existing entitlements to stock-based compensation (Aspire)	687	272
Total stock-based compensation (long-term incentive)	**10,906**	**9,141**
Service cost for pension entitlements earned in the respective year	1,716	2,891
Total long-term compensation	**12,622**	**12,032**
Severance indemnity in connection with the termination of a service contract	–	1,131
Aggregate compensation (IFRS)	**22,234**	**23,808**

In addition to the above compensation, actuarial gains of €2,309 thousand (2014: losses of €11,311 thousand) incurred in connection with pension obligations to the currently serving members of the Board of Management were recognized outside profit or loss. These changes mainly resulted from the slight increase (2014: sharp decline) in the level of interest rates.

Further details are provided in the Compensation Report, which forms part of the Combined Management Report.

In addition to the provisions of €5,983 thousand (2014: €4,771 thousand) for the short-term variable cash compensation, an amount of €18,663 thousand (2014: €17,775 thousand) was recognized in the statement of financial position for future payments of stock-based compensation based on virtual shares to the members of the Board of Management serving as of December 31, 2015.

An amount of €7,110 thousand (2014: €7,155 thousand) was recognized in the statement of financial position for future payments of stock-based compensation based on the Aspire program to the members of the Board of Management serving as of December 31, 2015.

The present value of the defined benefit pension obligation for the members of the Board of Management serving as of December 31, 2015, was €33,491 thousand (2014: €32,248 thousand).

Pension payments to former members of the Board of Management and their surviving dependents amounted to €13,416 thousand (2014: €13,457 thousand). The defined benefit obligation for former members of the Board of Management and their surviving dependents amounted to €172,767 thousand (2014: €187,759 thousand).

The compensation of the Supervisory Board amounted to €3,291 thousand (2014: €3,286 thousand).

In addition to their compensation as members of the Supervisory Board, those employee representatives who are employees of Bayer Group companies receive compensation unrelated to their service on the Supervisory Board. The total amount of such compensation in 2015 was €741 thousand (2014: €737 thousand).

Pension obligations for employee representatives on the Supervisory Board amounted to €3,756 thousand (2014: €3,623 thousand).

There were no advances or loans to members of the Board of Management or the Supervisory Board outstanding as of December 31, 2015, nor at any time during 2015 or 2014.

39. Events after the end of the reporting period

DIABETES CARE BUSINESS

Implementation of the agreement concerning the sale of the Diabetes Care business to Panasonic Healthcare Holdings Co, Ltd., Tokyo, Japan, began on January 4, 2016, and thus after the closing date for the financial statements. A payment of €0.9 billion was made in January 2016 in connection with the sale. Bayer has entered into further significant obligations, which are to be met over the next two years.

REDEMPTION OF FINANCIAL LIABILITIES

On January 25, 2016, Bayer AG redeemed at maturity a bond with a nominal volume of €500 million issued under the multi-currency European Medium Term Notes program. In addition, commercial paper and promissory notes in a total amount of €383 million were repaid in January and February, 2016, respectively.

Leverkusen, February 16, 2016

Bayer Aktiengesellschaft

The Board of Management

The following auditor's report (Bestätigungsvermerk) has been issued in accordance with Section 322 German Commercial Code (Handelsgesetzbuch) on the consolidated financial statements and combined management report (zusammengefasster Lagebericht) of Bayer Aktiengesellschaft as of and for the fiscal year ended December 31, 2015. The combined management report is neither included nor incorporated by reference in this Prospectus.

Independent Auditor's Report

Report of the independent auditor of the consolidated financial statements

To Bayer Aktiengesellschaft, Leverkusen

The following Independent Auditor's Report was issued for the complete set of consolidated financial statements and the combined management report of Bayer Aktiengesellschaft, Leverkusen, and its subsidiaries. For reasons of clarity, the notes to the consolidated financial statements, to which this Independent Auditor's Report also refers, are not included in this print version of the Annual Report. The consolidated financial statements including the notes thereto are published in German and English in the electronic version of the German Federal Gazette and will also be included in an augmented German print version of the Annual Report to be available at the Annual Stockholders' Meeting of Bayer AG on April 29, 2016.

REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

We have audited the accompanying consolidated financial statements of Bayer Aktiengesellschaft and its subsidiaries, which comprise the consolidated income statement and statement of comprehensive income, the consolidated statement of financial position, the consolidated statement of cash flows, the consolidated statement of changes in equity and the notes to the consolidated financial statements for the business year from January 1, 2015 to December 31, 2015.

Board of Management's Responsibility for the Consolidated Financial Statements

The Board of Management of Bayer Aktiengesellschaft is responsible for the preparation of these consolidated financial statements. This responsibility includes that these consolidated financial statements are prepared in accordance with International Financial Reporting Standards, as adopted by the E.U., and the additional requirements of German commercial law pursuant to § (Article) 315a Abs. (paragraph) 1 HGB ("Handelsgesetzbuch": German Commercial Code) and that these consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The Board of Management is also responsible for the internal controls as the Board of Management determines are necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW) and additionally observed the International Standards on Auditing (ISA). Accordingly, we are required to comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing audit procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The selection of audit procedures depends on the auditor's professional judgment. This includes the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In assessing those risks, the auditor considers the internal control system relevant to the entity's preparation of consolidated financial statements that give a true and fair view. The aim of this is to plan and perform audit procedures that are appropriate in the given circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Board of Management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Audit Opinion

According to § 322 Abs. 3 Satz (sentence) 1 HGB, we state that our audit of the consolidated financial statements has not led to any reservations.

In our opinion based on the findings of our audit, the consolidated financial statements comply, in all material respects, with IFRSs, as adopted by the E.U., and the additional requirements of German commercial law pursuant to § 315a Abs. 1 HGB and give a true and fair view of the net assets and financial position of the Group as at December 31, 2015 as well as the results of operations for the business year then ended, in accordance with these requirements..

REPORT ON THE COMBINED MANAGEMENT REPORT

We have audited the accompanying Group management report of Bayer Aktiengesellschaft for the business year from January 1, 2015 to December 31, 2015, which is combined with the management report of the company. The Board of Management of Bayer Aktiengesellschaft is responsible for the preparation of the combined management report in accordance with the requirements of German commercial law applicable pursuant to § 315a Abs. 1 HGB. We conducted our audit in accordance with § 317 Abs. 2 HGB and German generally accepted standards for the audit of the combined management report promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW). Accordingly, we are required to plan and perform the audit of the combined management report to obtain reasonable assurance about whether the combined management report is consistent with the consolidated financial statements and the audit findings, as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

According to § 322 Abs. 3 Satz 1 HGB, we state that our audit of the combined management report has not led to any reservations.

In our opinion based on the findings of our audit of the consolidated financial statements and combined management report, the combined management report is consistent with the consolidated financial statements, as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Essen, February 17, 2016

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Dr. Peter Bartels	Eckhard Sprinkmeier
Wirtschaftsprüfer	Wirtschaftsprüfer

Audited Unconsolidated Financial Statements of Bayer AG as of and for the Year Ended December 31, 2017 (HGB)

Income Statements

€ million	Note	2016	2017
Net sales	1	**390**	**14,730**
Cost of goods sold		(353)	(7,914)
Gross profit		**37**	**6,816**
Selling expenses		(39)	(3,898)
Research and development expenses		(46)	(2,186)
General administration expenses		(666)	(908)
Other operating income	2	48	85
Other operating expenses	3	(227)	(102)
Operating income		**(893)**	**(193)**
Income from investments in affiliated companies – net	4	4,647	5,794
Interest income / expense – net	5	54	(369)
Other financial income / expense – net	6	163	(354)
Nonoperating income		**4,864**	**5,071**
Income taxes	7	(371)	(335)
Income after taxes / net income		**3,600**	**4,543**
Allocation to other retained earnings		(1,367)	(1,643)
Distributable profit		**2,233**	**2,900**

Statements of Financial Position

€ million	Note	Dec. 31, 2016	Dec. 31, 2017
ASSETS			
Noncurrent assets			
Intangible assets	13	29	123
Property, plant and equipment	14	29	29
Investments	15	49,112	47,071
		49,170	**47,223**
Current assets			
Inventories	16	3	2,109
Receivables and other assets			
Trade accounts receivable	17	77	2,002
Receivables from subsidiaries	18	4,092	2,585
Other assets	19	410	571
	20	**4,579**	**5,158**
Marketable securities	21	305	25
Cash and cash equivalents	22	2,423	4,247
		7,310	**11,539**
Deferred charges	**23**	**226**	**178**
Surplus from offsetting	**24**	**140**	**152**
		56,846	**59,092**
EQUITY AND LIABILITIES			
Equity	25		
Capital stock		2,117	2,117
Capital reserves		6,176	6,176
Other retained earnings		6,039	7,682
Distributable profit		2,233	2,900
		16,565	**18,875**
Provisions			
Provisions for pensions	26	897	735
Other provisions	27	1,008	1,466
		1,905	**2,201**
Other liabilities			
Bonds and promissory notes	28	6,612	6,862
Liabilities to banks		61	756
Down payments received on orders		2	2
Trade accounts payable	29	86	1,750
Payables to subsidiaries	30	31,197	28,078
Miscellaneous liabilities	31	418	458
	32	**38,376**	**37,906**
Deferred charges	**33**	**–**	**110**
		56,846	**59,092**

Change in Corporate Structure

As part of Bayer's reorganization effective January 1, 2016, the previous organizational structure comprising a strategic management holding company and operating subgroups was replaced by an integrated structure. Organizationally, Bayer has been managed through three divisions and one business unit since then. The management of two of these divisions – Pharmaceuticals and Crop Science – lies with Bayer AG.

Also in 2016, Bayer HealthCare AG, Germany, and Bayer Technology Services GmbH, Germany, previously wholly owned subsidiaries of Bayer AG, were merged into Bayer AG. Bayer HealthCare AG, Germany, had primarily performed holding company functions for the health care business. These functions were pooled with those of Bayer AG. The functions of Bayer Technology Services GmbH, Germany, became the "Engineering and Technology" unit of Bayer AG.

Effective January 1, 2017, the operational business of the Pharmaceuticals and Crop Science divisions was transferred to Bayer AG. For this purpose, business lease agreements were concluded with Bayer Pharma AG, Germany, and Bayer CropScience AG, Germany, which had previously managed the divisions' business. Under these agreements, these companies leased their entire business operations to Bayer AG and also transferred operational management to Bayer AG. The agreements were initially concluded for a term of one calendar year, and will each be extended by successive periods of one year unless written notice of termination effective as of the end of the preceding year is given six months in advance by either party. In connection with the business lease agreements, inventories totaling €2.3 billion were sold to Bayer AG and around 14,500 employment contracts were transferred to Bayer AG pursuant to Section 613a of the German Civil Code (BGB). Investments in subsidiaries and affiliates remained with the two lessor companies and do not form part of the business lease agreements. This measure completed the reorganization of the company.

The following tables illustrate the impact of the business lease agreements on Bayer AG's annual financial statements:

Income Statements

	2016	2017		
	Bayer AG			Bayer AG
€ million	Corporate	Corporate	Pharmaceuticals and Crop Science Divisions	Total
Net sales	**390**	**140**	**14,590**	**14,730**
Cost of goods sold	(353)	(360)	(7,554)	(7,914)
Gross profit	**37**	**(220)**	**7,036**	**6,816**
Other operating income and expenses	(930)	(1,284)	(5,725)	(7,009)
Operating income	**(893)**	**(1,504)**	**1,311**	**(193)**
Nonoperating income	**4,864**	**5,280**	**(209)**	**5,071**
Income taxes	(371)	(334)	(1)	(335)
Income after taxes/net income	**3,600**	**3,442**	**1,101**	**4,543**

Statements of Financial Position

	Dec. 31, 2016	Dec. 31, 2017		
	Bayer AG			Bayer AG
€ million	Corporate	Corporate	Pharmaceutical and Crop Science Divisions	Total
Noncurrent assets	49,170	47,127	96	47,223
Current assets/other assets	7,676	7,962	3,907	11,869
Equity	16,565	18,491	384	18,875
Provisions	1,905	402	1,799	2,201
Other liabilities/deferred income	38,376	36,196	1,820	38,016
Total assets	56,846	55,089	4,003	**59,092**

Accounting Policies

The financial statements of Bayer AG, Leverkusen, Germany (which is entered in the commercial register of the Local Court of Cologne, Germany, HRB 48248), are prepared in accordance with the German Commercial Code (HGB), the Stock Corporation Act (AktG) and the German Energy Industry Act (EnWG).

At its site in Berlin, Germany, which is leased from Bayer Pharma AG, Germany, Bayer AG supplies electricity and gas to companies outside the Bayer Group. Under Section 3, No. 18 of the EnWG, it is therefore classified as an energy utility as defined therein. Further, as an energy utility Bayer AG is connected to the vertically integrated energy utility Currenta GmbH & Co. OHG, Germany. Consequently, Bayer AG is also classified as a vertically integrated energy utility pursuant to Section 3 No. 38 EnWG.

The "of which" information on accrued interest relating to subsidiaries previously presented in other assets and miscellaneous liabilities is now recognized in receivables from subsidiaries and payables to subsidiaries. To enhance comparability, the previous year's figures have been restated accordingly.

Certain items in the income statement and statement of financial position are combined for the sake of clarity; they are explained in the Notes. Likewise for reasons of clarity, "of which" information required for certain items in the financial statements is presented in the Notes only. Research and development expenses are shown separately in view of their special importance in the chemical and pharmaceutical industry. Financial income and expenses whose disclosure is not covered by a mandatory item are reported under other financial income or expenses.

The income statement has been drawn up using the cost-of-sales method.

A declaration of compliance with the German Corporate Governance Code has been issued pursuant to Section 161 of the German Stock Corporation Act (AktG) and made permanently available to stockholders on the internet as part of the Declaration on Corporate Governance pursuant to Section 289f of the German Commercial Code (HGB). It can be downloaded from http://www.bayer.com/en/corporate-governance.aspx.

As the parent company, Bayer AG prepares the consolidated financial statements for both the largest and the smallest scope of consolidation. As in the previous year, the management report of Bayer AG has been combined with the management report of the Bayer Group pursuant to Section 315, Paragraph 3 of the German Commercial Code (HGB) in conjunction with Section 298, Paragraph 2 HGB.

Recognition and Valuation Principles

Intangible assets that have been acquired are recognized at cost and amortized on a straight-line basis (pro rata temporis) over their estimated useful lives on an individual basis. Self-generated intangible assets are not capitalized.

Property, plant and equipment is carried at the cost of acquisition or construction less depreciation of assets that are subject to wear and tear in line with their individual useful lives. The straight-line method of depreciation is normally used. Movable assets that were already recognized as of December 31, 2007, are depreciated by the declining balance method at the maximum depreciation rates permitted for tax purposes, switching to the straight-line method as soon as this leads to higher annual depreciation.

Depreciation of the individual categories of property, plant and equipment, and amortization of the individual categories of intangible assets are based on the following useful lives:

Useful Life of Intangible Assets and Property, Plant and Equipment

Software	3 to 4 years
Product registrations	max. 10 years
Other concessions, industrial property rights, similar rights and assets, and licenses thereunder	max. 20 years
Commercial buildings	25 to 40 years
Infrastructure facilities	12 to 20 years
Plant facilities	12 to 20 years
Plant and equipment	8 to 20 years
Laboratory and research equipment	3 to 5 years
Factory and office equipment	6 to 12 years
Communication technology	3 to 10 years
Vehicles (purchased until June 30, 2014)	5 years
Vehicles (purchased from July 1, 2014)	6 years
Computer equipment	3 to 4 years

Assets that can be utilized separately and are subject to depletion are depreciated in full in the year of acquisition if their cost of acquisition or construction does not exceed €410.

Write-downs are made for any declines in value that go beyond the depletion reflected in depreciation or amortization and are expected to be permanent. If the reasons for a write-down no longer apply, a write-up is made, provided that this does not cause the carrying amount to exceed the cost of acquisition or construction less depreciation or amortization.

The cost of construction of self-constructed property, plant and equipment comprises the direct cost of materials, direct manufacturing expenses, appropriate allocations of material and manufacturing overheads, and an appropriate share of the depreciation of assets used in construction.

Investments in subsidiaries and affiliated companies are carried at cost, less write-downs for any decline in value that is expected to be permanent. Where the reasons for write-downs made in previous years no longer apply or only partially apply, the respective items are written back accordingly, provided that the write-back does not cause the carrying amount to exceed the cost of acquisition. Interests in subsidiaries and affiliated companies that were acquired through exchange deals are measured at the carrying amount of the shares submitted. The predecessor accounting approach is applied for mergers of interests in subsidiaries or affiliates.

Loans receivable that are interest-free or bear low rates of interest are carried at present value; other loans receivable are carried at nominal value. The loans also include jouissance right capital (Genussrechtskapital) granted to Bayer Pensionskasse VVaG, Germany, and the latter's drawings on a retroactive contribution to its effective initial fund made available by Bayer AG.

Inventories are valued as follows: raw materials, supplies and goods purchased for resale at the average cost of acquisition less write-downs, and finished goods at the average cost of production. This comprises the direct cost of materials, direct manufacturing expenses, and appropriate allocations of material and manufacturing overheads, including manufacturing-related depletion of noncurrent assets. Write-downs are recognized if the fair value is below the carrying amount.

Receivables and other assets are stated at nominal value, less any necessary write-downs. The amounts of such write-downs reflect the probability of default. Non-interest-bearing or low-interest receivables that are due in more than one year are recognized at their discounted value.

Marketable securities are shown at the lower of cost or market rates as of the closing date.

Cash, bank deposits and checks held in euros are recognized at their nominal value; such assets held in foreign currencies are translated at the spot rate on the closing date of the financial statements.

The deferred charges on the statement of financial position contain expenditures prior to the closing date that will give rise to expense in a defined subsequent period. Also included are the differences between the issue and settlement amount for bonds issued by Bayer AG that will be amortized over the maturity of the bonds.

The amounts required to meet credit balances on employees' long-term worktime accounts and certain pension obligations are invested indirectly via intermediate investment vehicles through a Belgian investment company operating as a SICAV (Société d'investissement à capital variable). They are invested in basically liquid international fixed-income bonds, shares, real estate and alternative investments. The assets are administered on behalf of Bayer AG by Bayer Pension Trust e. V. (BPT), Germany. In order to fulfill post-employment benefit obligations, BPT also directly holds shares in Covestro AG, Germany. All investments are protected from other creditors in the event that the employer files for insolvency. They are measured at fair value, which is derived from stock market prices and market interest rates. The trust assets held by BPT are offset against the underlying obligations. If the obligations exceed the assets, a provision is recorded. If the value of the securities exceeds the obligations, it is recorded in the statement of financial position as a surplus from offsetting. Accordingly, in the income statements, income from the trust assets is offset against the interest portion of the corresponding obligations and changes in the discount rate.

Deferred taxes are assessed for temporary differences between the amounts of assets, liabilities, deferred income and deferred charges in the accounting statements and those in the tax statements. As well as items reflected in its own statement of financial position, Bayer AG also includes those relating to subsidiaries with which it forms a fiscal entity for tax purposes and in which it holds an equity interest. In addition to temporary differences, tax loss carryforwards are taken into account. Deferred taxes are calculated on the basis of the combined income tax rate for the fiscal entity

headed by Bayer AG, which is currently 30.78%. The combined income tax rate comprises corporate income tax, trade tax and the solidarity surcharge. In the case of partnerships, however, deferred taxes relating to temporary differences in the statement of financial position are calculated using a combined income tax rate that includes only corporate income tax and the solidarity surcharge; this combined rate is currently 15.83%. Any resulting tax liability would be recognized as a deferred tax liability in the statement of financial position. In the event of a tax receivable, the corresponding option to recognize the deferred tax asset would not be used. In 2017 there was a deferred tax asset, which was accordingly not recognized in the statement of financial position.

The capital stock of Bayer AG is divided into 826,947,808 no-par registered shares, each of which has a theoretical proportionate interest in the total capital stock of €2,116,986,388.48.

Provisions for pensions are computed using the projected unit credit method on the basis of biometric probability using the Heubeck 2005 G reference tables. Expected future salary and pension increases are taken into account. We assume annual salary increases of 2.75% (2016: 2.75%) and annual pension increases of 1.70% (2016: 1.50%). Through 2016, when stating the pension trend, we rounded figures up or down to the nearest quarter of a percent. However, to improve accuracy, rounding is now to the nearest tenth of a percent. For pension entitlements granted since January 1, 2000, an annual pension increase of 1.00% is generally accounted for as this has been promised to the employees. The discount rate used for pension provisions as at December 31, 2017, was 3.68% (December 31, 2016: 4.01%), which is the average market interest rate for the past ten years for instruments with an assumed remaining maturity of 15 years, as published by the Deutsche Bundesbank for December 2017.

Other provisions are established to cover all foreseeable risks and uncertain liabilities based on reasonable estimates of the future settlement amounts of such commitments. Future price and cost increases are taken into account where there are sufficient objective indications that such increases will most probably occur. Provisions maturing in more than one year are discounted to present value using the average market interest rate for the past seven years, based on their remaining maturities. For longer-term personnel-related provisions, such as provisions for long-service anniversaries, a discount rate of 2.80% (2016: 3.24%) is used for an assumed period of 15 years until utilization. Shorter-term personnel-related provisions, such as those for obligations under early retirement arrangements, are discounted using a rate that corresponds to their maturity, which in 2017 was three years. The discount rate was 1.43% (2016: 1.81%). These are the rates published by the Deutsche Bundesbank for December 2017.

Liabilities are recognized at the settlement amount as of the closing date. Noncurrent liabilities containing an interest component are discounted using the average market interest rate in the past seven years applicable to their maturity.

Foreign currency receivables and liabilities, forward exchange contracts and other currency derivatives are recognized using the mark-to-market method. For this purpose, foreign currency receivables and payables are measured at spot rates, while the corresponding currency derivatives entered into for hedging purposes are valued at the market forward rates on the closing date. Unrealized gains and losses are then offset in each currency using the net hedge presentation method. Provisions are set up for any net unrealizable losses; net unrealizable gains are only recognized if they relate to receivables and liabilities with a remaining maturity of up to one year.

The deferred income on the statement of financial position contains payments received prior to the closing date that will give rise to income in a specific future period. This includes license payments, the majority of which will be amortized over the estimated useful life of the asset, starting when marketing approval is obtained for the respective product.

Contingent liabilities arising from sureties and debt guarantees are shown at the amounts equivalent to the loans or commitments actually outstanding on the closing date.

Notes to the Income Statements

1. Sales

Sales increased by €14,340 million compared with 2016. This reflects the fact that Bayer Pharma AG, Germany, and Bayer CropScience AG, Germany, leased their business operations in their entirety to Bayer AG under business lease agreements effective January 1, 2017, and also transferred operational management to this company as of the same date.

Sales by business unit

€ million	2016	2017
Pharma	–	8,478
Crop Science	–	6,111
Corporate Center	390	141
	390	**14,730**

Sales by region

€ million	2016	2017
Germany	348	1,146
Other Europe	14	5,067
North America	16	3,425
Asia / Pacific	9	2,929
Latin America / Middle East / Africa	3	2,163
	390	**14,730**

2. Other operating income

Other operating income comprised:

Other Operating Income

€ million	2016	2017
Gains from the disposal of fixed assets	36	18
Reversals of unutilized provisions	8	16
Government grants for research and development services	1	11
Amortization of deferred income due to early termination of a supply contract	–	7
Valuation gains from the hedging of the stock-based compensation program Aspire 2.0	–	13
Miscellaneous operating income	3	20
	48	**85**

Gains from the disposal of fixed assets included €10 million relating to a patent swap with FMC Corporation, U.S.A., €5 million relating to a patent swap with Sumitomo Chemicals Co. Ltd., Japan, and €3 million from the disposal of other assets. The gains reported in the previous year included €28 million relating to the intra-Group sale of information technology to Bayer Business Services GmbH, Germany, and €8 million from the sale of a patent to Chemetics Inc., Canada.

The miscellaneous operating income included €9 million from the reimbursement of maternity benefits, €2 million from the repayment of lapsed dividend claims, and compensation of €1 million from insurers.

3. Other operating expenses

Other operating expenses comprised:

Other Operating Expenses

€ million	2016	2017
Project costs related to the carve-out and stock market flotation of Covestro	12	–
Additions to provisions for impending losses	198	–
Write-downs of receivables	2	37
Donations	2	11
Miscellaneous operating expenses	13	54
	227	**102**

The miscellaneous operating expenses included property taxes, compensation payments, prepayment penalties and accrued expenses.

The expense recognized in the previous year for the addition to provisions for impending losses resulted from the first-time recognition of impending losses relating to out-licensing and supply agreements that were transferred to Bayer AG under the business lease agreements with Bayer Pharma AG, Germany, and Bayer CropScience AG, Germany, in effect since January 1, 2017. Due to the one-time nature of this expense, it was recognized in other operating expenses. In line with the general rules, any future additions to provisions will be recognized in the functional cost items.

4. Income from investments in affiliated companies – net

Income from Investments in Affiiated Companies – Net

€ million	2016	2017
Dividends and similar income from subsidiaries	329	819
Income from profit and loss transfer agreements with subsidiaries	4,264	2,485
Expenses from profit and loss transfer agreements with subsidiaries	(76)	(240)
Gains from the sale of investments in affiliated companies	130	2,730
	4,647	**5,794**

Details of the income and expenses from investments in affiliated companies are given in the Combined Management Report of Bayer AG and the Bayer Group.

The gains of €2,730 million from the sale of investments in affiliated companies comprised €2,720 million from the sale of 61.7 million shares in Covestro AG and the transfer of a further 8 million shares to Bayer Pension Trust e. V., Germany, €6 million from the repurchase of shares in Bayer CropScience Ltd., India, and €4 million from the sale of the shares in Ehrfeld Mikrotechnik BTS GmbH, Germany. The gains reported in the previous year comprised €50 million from the intra-Group sale of shares in Bayer Technology Services (Shanghai) Co. Ltd., China, €79 million from the transfer of 10 million shares in Covestro AG to Bayer Pension Trust e. V., Germany, and €1 million from the merger of Bayer HealthCare AG, Germany.

5. Interest income / expense – net

Interest Income / Expense – Net

€ million	2016	2017
Income from other securities and loans included in investments	21	17
Other interest and similar income	145	172
• of which from subsidiaries	81	90
Interest and similar expenses	(415)	(728)
• of which to subsidiaries	(134)	(336)
Interest income portion of pension and other noncurrent personnel-related provisions (net)	303	170
	54	**(369)**

Details of the net interest position are given in the Combined Management Report of Bayer AG and the Bayer Group.

Income relating to the interest portion of pension and other noncurrent personnel-related provisions comprised the net amount from the unwinding of discount on the present value of the defined benefit obligation after offsetting income from the assets held by Bayer Pension Trust e. V. (BPT), Germany, and the impact of the change in the discount rate.

The assets held by BPT serve the sole purpose of meeting pension obligations and the obligations arising from credit balances on employees' long-term worktime accounts. The Trust's assets are protected from other creditors.

Income from investment of these assets was offset against the interest portion of the corresponding provisions as follows:

Netting of the Interest Portion of Pension and Personnel-Related Provisions with Income from Plan Assets

€ million	2016	2017
Interest portion of pension and other noncurrent personnel-related provisions and from changes in the discount rate (gross)	(84)	(342)
Income from assets held by Bayer Pension Trust e. V.	387	512
	303	**170**

6. Other financial income / expense – net

Other Financial Income / Expense – Net

€ million	2016	2017
Changes in provisions for pensions and other noncurrent personnel-related provisions (excluding interest portion)	56	(41)
Allocation to pension provisions assigned to subsidiaries	4	115
Expenses from currency translation		
– Realized exchange losses	(2,233)	(2,001)
– Unrealized expenses from valuation	(278)	(430)
Income from currency translation		
– Realized exchange gains	2,689	2,182
– Unrealized income from valuation	1	37
Commitment fees for credit facilities	(56)	**(215)**
Miscellaneous financial expenses	(33)	**(13)**
Miscellaneous financial income	13	**12**
	163	**(354)**

The interest portion of allocations to pension and other noncurrent personnel-related provisions is included in interest expense. Other financial income and expense contains further changes in pension provisions, not related to the interest portion, pertaining to former employees of Bayer AG who retired before the hive-down of the business areas and service areas (effective date: July 1, 2002) or who left the company before then and have vested pension rights. Changes of this kind occur in the event of changes in actuarial valuation parameters.

The expenses for allocations to the above provisions for employees who retired or left the company before July 1, 2002, are generally reimbursed by the subsidiaries on a prorated basis under the respective carve-out agreements.

The miscellaneous financial expenses included bank charges of €2 million (2016: €1 million), fees of €5 million for the placement of a bond, a €5 million compensation payment to Monsanto, and the derecognition of a receivable of €1 million relating to guarantee fees for Bayer (China) Ltd., China. In 2016, a pre-payment penalty of €31 million was incurred for early repayment of an intra-Group loan. Miscellaneous financial income included €10 million (2016: €11 million) from guarantee fees.

7. Income taxes

The tax expense reflected here comprises amounts paid or owed for corporate income tax, trade tax and the solidarity surcharge, and income taxes paid outside Germany.

As permitted by the option in Section 274, Paragraph 1, Sentence 2 of the German Commercial Code (HGB), the €877 million excess of deferred tax assets over deferred tax liabilities at year end was not recognized.

Deferred tax assets mainly resulted from the valuation of pension obligations being higher in the accounting statements than in the tax statements. Other deferred tax assets resulted from provisions that are not tax-deductible, such as those for impending losses and pre-retirement leave, and from differences in the measurement of, for example, provisions for early retirement and service anniversaries, as well as interests in partnerships. There was also a deferred tax asset relating to an as yet unused tax loss carryforward.

Deferred tax liabilities principally arose from differences between the valuations of noncurrent assets and assets invested with Bayer Pension Trust e. V., Germany, which cover pension commitments, in the accounting statements and the valuations in the tax statements.

8. Other taxes

Where other taxes can be allocated to the cost of goods sold, selling expenses, research and development expenses or general administration expenses, they are assigned to the respective expense items. In other cases they are assigned to other operating expenses. Other taxes totaled €12 million (2016: €2 million).

9. Cost of materials

Cost of Materials

€ million	2016	2017
Expenses for raw materials, supplies and purchased goods	9	4,677
Expenses for purchased services	2	558
	11	5,235

10. Personnel expenses / employees

Personnel Expenses

€ million	2016	2017
Wages and salaries	366	1,708
Social expenses	33	215
Pension expenses	11	122
	410	2,045

The personnel expenses shown here do not contain the interest portion of personnel-related provisions, especially pension provisions, which is included in net interest expense.

The average number of employees at Bayer AG was 16,695 in 2017, subdivided as follows:

Employees

	2017	
	Female	Male
Senior executives and senior managers	1,024	2,515
Junior managers and non-managerial employees	4,890	8,266
	5,914	10,781

Part-time employees are included in this figure on a prorated basis.

11. Stock-based compensation

Bayer AG offers its employees long-term stock-based compensation programs as an additional compensation component. Different collective programs are offered to different groups of employees.

The Aspire program for members of the Board of Management, other senior executives and middle managers, which until 2015 comprised two variants (Aspire I and Aspire II) for different management levels, was redesigned effective 2016. All eligible employees are now offered a uniform version called Aspire 2.0. All Aspire programs lead to performance-related payments to employees. Each program runs for four years.

In addition, all employees of Bayer AG, regardless of position and level, are offered the BayShare program, which is set annually by the Board of Management and enables them to purchase Bayer stock at a discount.

Provisions are recorded for all obligations existing under the stock-based compensation programs at the closing date. The amount of such provisions is based on the fair value of the obligations and the proportion of the total duration of the respective program that has elapsed since its introduction. Allocations to provisions are expensed.

Aspire I

Until 2015, members of the Board of Management and other senior executives were able to participate in Aspire I. They were required to purchase a certain number of Bayer shares that was predetermined according to specific guidelines and to retain them for the full term of the program. A percentage of the executive's annual base salary – based on his or her position – was defined as a target for variable payments (Aspire target opportunity). At the end of each tranche of this program, participants receive a certain percentage of their target opportunity as a cash payment. The amount depends on the development of the Bayer share price in absolute terms and the performance of the stock relative to the Dow Jones EURO STOXX 50. This payment is capped at 300%.

The fair value of obligations under the stock-based compensation programs that are still active was calculated by the Monte Carlo simulation method using the following key parameters:

Parameters Used to Determine Fair Value

	2016	2017
Dividend yield	2.90%	2.46%
Risk-free interest rate (duration 4 years)	(0.67)%	(0.35)%
Volatility of Bayer shares	22.78%	15.49%
Volatility of the Dow Jones EURO STOXX 50	11.66%	9.27%
Correlation between the Bayer share price and the Dow Jones EURO STOXX 50	0.67	0.71

The fair value of the Aspire tranche issued in 2014, which expired at the end of 2017, was determined from the payment amount of 20% of the target opportunity, which was already known on the closing date. The payment was made at the start of fiscal 2018. The Aspire tranche issued in 2013 expired at the start of 2017 and a payout of 270% of the target opportunity was made at the start of 2017.

Aspire II

Until 2015, other senior managers were offered Aspire II, a variant of Aspire I that did not require a personal investment in Bayer shares. The amount of the award is based entirely on the absolute performance of Bayer stock. The maximum payout is 250% of each manager's Aspire target opportunity.

The fair value of the Aspire tranche issued in 2014, which expired at the end of 2017, was determined from the payment amount of 40% of the target opportunity, which was already known on the closing date. The tranche issued in 2013 achieved a payout of 220%, which was made at the start of 2017.

Aspire 2.0

Since 2016, Aspire has been offered to all eligible employees in a new, standardized format named Aspire 2.0. For the members of the Board of Management there is the additional hurdle of the performance of Bayer shares against the EURO STOXX. Aspire 2.0 is also based on a percentage of each employee's annual base salary, the percentage varying according to his or her position. This is now multiplied by the employee's STI payout factor from the global short-term incentive (STI) program to give the Aspire grant value. The STI payout factor reflects the employee's individual performance and the business performance used for the STI program. The Aspire grant value is converted into virtual Bayer shares by dividing it by the share price at the start of the program. The program's performance is based on these virtual shares. The fair value of the obligations is determined from the price of Bayer stock at year end and the dividends paid up to that time. The payment made at the end of each tranche is determined by multiplying the number of virtual shares by the relevant Bayer share price at that time and adding an amount equivalent to the dividends paid during the period of the tranche. The maximum payout for Aspire 2.0 is 250% of the target amount.

BayShare

Under the BayShare program, Bayer subsidizes eligible employees' personal investments in Bayer stock. The discount under this program is set separately each year. In both 2017 and 2016, it was 20% of the subscription amount. As in 2016, the maximum subscription amount was set at €2,500 or €5,000, depending on the employee's position. The maximum subscription amount for apprentices was €1,800. The shares acquired under this program are held in a special share deposit account and have to be retained under December 31 of the year following the year of purchase.

Bayer AG's expenses for stock-based compensation programs in 2017 totaled €36 million (2016: €14 million). This amount is reflected in personnel expenses. Provisions for these programs amounted to €63 million as of December 31, 2017 (2016: €41 million).

12. Valuation write-downs

There were no write-downs in 2017. In the previous year, write-downs of €1 million were made to reflect declines in the value of intangible assets that were expected to be permanent.

Notes to the Statements of Financial Position

13. Intangible assets

Intangible Assets

€ million	Acquired concessions, industrial property rights, similar rights and assets, and licenses thereunder	Advance payments	Total
Gross carrying amounts, Dec. 31, 2016	**66**	**7**	**73**
Additions	111	1	112
Retirements	4	–	4
Transfers	4	(4)	–
Gross carrying amounts, Dec. 31, 2017	**177**	**4**	**181**
Accumulated amortization and write-downs, Dec. 31, 2016	**44**	**–**	**44**
Amortization and write-downs 2017	14	–	14
Accumulated amortization and write-downs, Dec. 31, 2017	**58**	**–**	**58**
Net carrying amounts, Dec. 31, 2017	**119**	**4**	**123**
Net carrying amounts, Dec. 31, 2016	**22**	**7**	**29**

14. Property, plant and equipment

Property, Plant and Equipment

€ million	Land and buildings	Plant and equipment	Furniture, fixtures and other equipment	Advance payments and assets under construction	Total
Gross carrying amounts, Dec. 31, 2016	**60**	**14**	**20**	**5**	**99**
Additions	–	4	3	2	9
Retirements	–	2	–	–	2
Transfers	2	2	–	(4)	–
Gross carrying amounts, Dec. 31, 2017	**62**	**18**	**23**	**3**	**106**
Accumulated depreciation and write-downs, Dec. 31, 2016	**59**	**3**	**8**	**–**	**70**
Depreciation and write-downs 2017	–	4	3	–	7
Accumulated depreciation and write-downs, Dec. 31, 2017	**59**	**7**	**11**	**–**	**77**
Net carrying amounts, Dec. 31, 2017	**3**	**11**	**12**	**3**	**29**
Net carrying amounts, Dec. 31, 2016	**1**	**11**	**12**	**5**	**29**

15. Investments

Investments

€ million	Investments in subsidiaries	Loans to subsidiaries	Investments in other affiliated companies	Loans to other affiliated companies	Securities included in investments	Other loans	Total
Gross carrying amounts, Dec. 31, 2016	**48,290**	**108**	**28**	**2**	**51**	**753**	**49,232**
Additions	5,922	–	–	1	1	2	5,926
Retirements	7,962	4	27	–	–	2	7,995
Transfers	(1,288)	–	1,288	–	–	–	–
Gross carrying amounts, Dec. 31, 2017	**44,962**	**104**	**1,289**	**3**	**52**	**753**	**47,163**
Accumulated write-downs, Dec. 31, 2016	**82**	**10**	**27**	**–**	**–**	**1**	**120**
Write-downs 2017	12	–	–	–	–	–	12
Write-ups	–	(1)	–	–	–	–	(1)
Retirements	12	–	27	–	–	–	39
Accumulated write-downs, Dec. 31, 2017	**82**	**9**	**–**	**–**	**–**	**1**	**92**
Net carrying amounts, Dec. 31, 2017	**44,880**	**95**	**1,289**	**3**	**52**	**752**	**47,071**
Net carrying amounts, Dec. 31, 2016	**48,208**	**98**	**1**	**2**	**51**	**752**	**49,112**

The additions to, and retirements of, investments in subsidiaries each included €5,786 million in connection with the transfer of our 100% interest in Bayer US B. V., Netherlands, to Bayer World Investments B. V., Netherlands, and €33 million in relation to the merger of Bayer Innovation GmbH, Germany, into Siebte Bayer VV GmbH, Germany. The additions and retirements in connection with this merger also included write-downs of €12 million. Further additions comprised €100 million from capital contributions to subsidiaries, €95 million at Erste K-W-A Beteiligungsgesellschaft mbH, Germany, and €5 million at Bayer 04 Leverkusen Fußball GmbH, Germany. The remaining additions totaling €3 million resulted from the intra-Group acquisition of shares in Bayer Philippines, Inc., Philippines. The retirements included a further €2,074 million in connection with the retirement of 80.19 million shares in Covestro AG, Germany, 72.19 million of which were sold. Of the latter number, 13.94 million were sold to banks while retaining exposure to the economic risks and opportunities (the shares are now reflected in other assets; of these, the banks had sold on 3.5 million shares as at the closing date). A further 8 million shares were transferred to Bayer Pension Trust e. V., Germany. The retirements also included a capital repayment of €69 million to Bayer (China) Ltd., China. The reclassifications related to the remaining shares in Covestro (49.81 million shares / 24.6% interest) which are now reflected in investments in affiliated companies. Since these shares are securitized, they could also have been recognized as noncurrent assets.

Details of the subsidiary and affiliated companies of Bayer AG pursuant to Section 285, Numbers 11, 11a and 11b of the German Commercial Code are included in the annual financial statements that have been certified and submitted for publication in the German Federal Gazette (Bundesanzeiger). They are also available at www.bayer.com/owner17.

In 2008, Bayer AG established a repayable “effective initial fund” of €800 million for Bayer-Pensionskasse VVaG, Germany, which was increased to €1,600 million in 2012. €595 million of this has so far been paid to the pension fund. The capital provided for the effective initial fund is interest-bearing, but interest is only payable under certain contractually agreed conditions. Interest must be deferred if it would result in the pension fund reporting a net loss. Loans granted by the effective initial fund are contained in other loans.

16. Inventories

Inventories

€ million	Dec. 31, 2016	Dec. 31, 2017
Raw materials and supplies	1	541
Work in process	2	882
Finished goods	–	574
Goods purchased for resale	–	107
Advance payments	–	5
	3	**2,109**

17. Trade accounts receivable

Trade Accounts Receivable

€ million	Dec. 31, 2016	Dec. 31, 2017
Accounts receivable from subsidiaries	65	1,646
Accounts receivable from other customers	12	356
	77	**2,002**

18. Accounts receivable from subsidiaries

Accounts receivable from subsidiaries mainly comprised financial receivables, for example, in connection with loans or overnight funds, accrued interest, and receivables relating to profit transfers from subsidiaries that form a fiscal entity with Bayer AG.

19. Other assets

The other assets comprised:

Other Assets

€ million	2016	2017
Payroll receivables	12	14
Accrued interest	36	34
Covestro AG shares transferred for sale	–	284
Claims for tax refunds	125	105
Premiums paid to conclude options transactions	222	45
Other	15	89
	410	**571**

The other assets included €34 million (2016: €36 million) for assets that do not legally come into being until after year end. With some insignificant exceptions, these consisted entirely of accrued interest.

Accrued interest relating to subsidiaries totaling €37 million, which was reflected in other assets in the previous year, was reclassified to receivables from subsidiaries to aid comparability. Similarly, the short-term investments in commercial paper and time deposits were reclassified to marketable securities (€305 million) and cash and cash equivalents (€1,620 million), respectively.

20. Receivables and other assets maturing in more than one year

Total receivables and other assets amounting to €5,158 million (2016: €4,579 million) included €81 million (2016: €33 million) due in more than one year. Of this total, €5 million (2016: €0 million) related to trade accounts receivable, €3 million (2016: €3 million) to receivables from subsidiaries, and €73 million (2016: €30 million) to other assets.

21. Securities

The securities comprised investments in commercial paper with maturities of less than one year.

22. Cash and cash equivalents

Cash and cash equivalents included €1 million (2016: €1 million) to settle civil law compensation claims relating to antitrust violations in the fields of rubber, polyester polyols and urethanes in Canada. Bayer has placed this amount in an escrow account administered in Canada pending acceptance or judicial confirmation of the settlements offered.

23. Deferred charges

The deferred charges as of December 31, 2017, included unamortized discounts totaling €9 million pertaining to bonds issued by Bayer AG. The amount of €11 million recognized at the start of the year diminished by €2 million due to amortization. Also reflected here are unamortized discounts totaling €28 million (2016: €42 million) pertaining to the mandatory convertible bond issued by Bayer Capital Corporation B.V., Netherlands, which was passed on to Bayer AG with the same conditions. Likewise reported here are accrued charges of €75 million (2016: €157 million) for U.S. dollar credit facilities that Bayer has obtained for the planned acquisition of Monsanto.

The remaining deferred charges comprised advance payments of charges for other credit facilities, prepaid premiums for business insurance and other accrued charges.

24. Surplus from offsetting

Obligations arising from credit balances on employees' long-term worktime accounts are secured, and obligations from pension commitments are partially secured, by assets invested with Bayer Pension Trust e. V. (BPT), Germany, under multiple contractual trust arrangements (CTAs). These assets may only be used for the purpose of meeting the respective obligations and are protected from other creditors in the event that the employer becomes insolvent. They are offset against the underlying obligations. Any positive difference is capitalized as a surplus from offsetting, otherwise it is reflected in provisions. As of December 31, 2017, the offset resulted in a positive difference of €152 million (2016: €140 million), of which €32 million (2016: €5 million) comprised obligations from long-term worktime accounts and €120 million (2016: €135 million) comprised pension commitments.

Surplus from Offsetting

€ million	Dec. 31, 2016	**Dec. 31, 2017**
Settlement value of obligations relating to credit balances on employees' long-term worktime accounts	13	102
Fair value of assets invested with Bayer Pension Trust	18	134
Differences between assets and obligations relating to long-term worktime accounts (surplus from offsetting)	**5**	**32**
Acquisition cost of assets invested with Bayer Pension Trust	16	129

€ million	Dec. 31, 2016	**Dec. 31, 2017**
Settlement value of pension commitments	**389**	**451**
Fair value of assets invested with Bayer Pension Trust	524	571
Differences between assets and obligations relating to pension commitments (surplus from offsetting)	**135**	**120**
Acquisition cost of assets invested with Bayer Pension Trust	468	524

In 2017, the collateral assets principally comprised liquid international fixed-income bonds, shares, real estate and alternative investments made by a Belgium investment company operating as a SICAV (Société d'investissement à capital variable) through intermediate investment vehicles. Shares in the SICAV can be sold on any stock-exchange trading day. The collateral assets also included 18 million shares in Covestro AG, Germany, 8 million of which were transferred by Bayer AG to BPT in 2017.

The collateral assets invested through the SICAV and the shares in Covestro AG are measured at fair value. As of December 31, 2017, this was €3,770 million. Offsetting these assets totaling €705 million against the underlying obligations resulted in a positive difference, which was recorded as a surplus from offsetting; offsetting of the remaining €3,065 million against obligations was reported under provisions for pensions. Dividend payments in 2017 resulted in BPT receiving an inflow of €118 million from the SICAV and an inflow of €13.5 million from Covestro AG's dividend payments.

25. Equity

Changes in equity in 2017 were as follows:

Equity

€ million	Dec. 31, 2016	Dividend for 2016	Net income	Dec. 31, 2017
Capital stock	2,117	–	–	2,117
Capital reserve	6,176	–	–	6,176
Other retained earnings	6,039	–	1,643	7,682
Distributable profit	2,233	(2,233)	2,900	2,900
	16,565	**(2,233)**	**4,543**	**18,875**

The capital stock of Bayer AG was unchanged from the previous year and amounted to €2,116,986,388.48, divided into 826,947,808 registered shares and fully paid in. Each share confers one voting right.

Authorized capital and conditional capital

The authorized capital and conditional capital comprised:

Authorized and Conditional Capital

Capital	Resolution	Amount / Shares	Expires	Purpose
Authorized capital I	April 29, 2014	€530 million	April 28, 2019	Increase the capital stock by issuing new no- par shares against cash contributions and / or contributions in kind, the latter not to exceed €423 million
Authorized capital II	April 29, 2014	€212 million	April 28, 2019	Increase the capital stock by issuing new no-par shares against cash contributions
Conditional capital	April 29, 2014	€212 million / up to 82,694,750 shares	April 28, 2019	Increase the capital stock by granting no-par shares to the holders of bonds with warrants or convertible bonds, profit participation certificates or income bonds. The authorizations to issue such instruments are limited to a total nominal amount of €6 billion

Capital increases are effected by issuing new registered no-par shares. Stockholders must normally be granted subscription rights. However, subscription rights may be excluded under certain conditions stated in the authorization resolutions. Absent a further resolution of the Annual Stockholders' Meeting on the exclusion of stockholders' subscription rights, the Board of Management will only use the existing authorizations to increase the capital stock out of the authorized or conditional capital – while excluding stockholders' subscription rights – up to a total amount of 20% of the capital stock that existed when the respective resolutions were adopted by the Annual Stockholders' Meeting on April 29, 2014. All issuances or sales of no-par shares or of bonds with warrants or conversion rights or obligations that are effected while excluding stockholders' subscription rights also count toward this 20% limit. Details of the authorized and conditional capital are provided in the Notice of the Annual Stockholders' Meeting of April 29, 2014, and on the Bayer website.

On November 16, 2016, Bayer placed €4.0 billion in mandatory convertible notes without granting subscription rights to existing stockholders of the company. The notes, denominated in units of €100,000, were issued by Bayer Capital Corporation B.V., Netherlands, under the subordinated guarantee of Bayer AG. At maturity, the outstanding amount of the notes will be mandatorily converted into registered no-par shares of Bayer AG. The proceeds were the subject of an intra-Group transfer to Bayer AG. The mandatory convertible notes will be reported under payables to subsidiaries until they mature. The issuance of the mandatory convertible notes constitutes a utilization of conditional capital.

The authorized capital has not been utilized so far.

Information on amounts barred from distribution pursuant to Section 253, Paragraph 6 and Section 268, Paragraph 8 of the German Commercial Code (HGB)

The provisions for pensions recognized in the statement of financial position (before deduction of the corresponding assets) were calculated on the basis of the relevant average market interest rate for the past ten years. If the average for the past seven years had been used, the obligations would have been €551 million higher.

To secure pension obligations and credit balances on employees' long-term worktime accounts, funds have been transferred to Bayer Pension Trust e. V. (BPT), Germany, under several contractual trust arrangements. They may only be used for the specified purpose and are protected from other creditors in the event that the employer becomes insolvent. They are measured at fair value. Their fair value on the closing date was €3,770 million, which was €1,164 million above the acquisition costs of €2,606 million.

The difference between the pension obligations based on the average interest rate for ten and seven years and the difference between the fair value and acquisition cost of the assets held by BPT totaled €1,715 million. Since Bayer has freely available retained earnings of €7,682 million, there is no restriction on the use of the distributable profit of €2,900 million.

Notifications of direct and indirect stockholdings pursuant to Section 33, Paragraph 1 of the Securities Trading Act (WpHG)

Between the start of the fiscal year and the closing date, we received the following notifications of stockholdings in Bayer AG pursuant to Section 33, Paragraph 1 of the German Securities Trading Act (WpHG). In cases where stockholdings reached, exceeded or fell below the thresholds set out in this legislation on several occasions, only the most recent notification is mentioned:

- BlackRock, Inc., Wilmington, U.S.A., notified us that its voting rights amounted to 7.09% on November 9, 2017. 7.07% of these voting rights (58,492,306 voting rights) were attributable to this company pursuant to Section 22 WpHG (now Section 34 WpHG). 0.01% of these voting rights (69,836 voting rights) were attributable to this company as an instrument within the meaning of Section 25, Paragraph 1, No. 1 WpHG (now Section 38, Paragraph 1, No.1 WpHG) (securities loan). 0.01% of these voting rights (45,132 voting rights) were attributable to this company as an instrument within the meaning of Section 25, Paragraph 1, No. 2 WpHG (now Section 38, Paragraph 1, No. 2 WpHG) (call option or contract of difference).
- Sun Life Financial Inc., Toronto, Canada, notified us that its voting rights dropped below the 3% threshold on March 24, 2017, and amounted on that date to 0.001% (11,589 voting rights). All of these voting rights were attributable to this company pursuant to Section 22 WpHG (now Section 34 WpHG).

For further details, please see the individual voting rights notifications, which are published on our website at www.bayer.com.

26. Provisions for pensions

This item includes provisions for current and future pension entitlements.

It also includes commitments to former employees of the business areas and service areas hived down into separate legal entities in 2002 and 2003 who retired before July 1, 2002, or who left the company before this date and have vested pension rights. The respective companies reimburse Bayer AG for these expenses as a matter of course.

Obligations arising from pension commitments are partially secured by assets invested with Bayer Pension Trust e. V., Germany, under multiple contractual trust arrangements (CTAs). These assets may only be used for the purpose of meeting the respective obligations and are protected from other creditors in the event that the employer becomes insolvent. They are offset against the underlying obligations. Any positive difference is capitalized as a surplus from offsetting, otherwise it is reflected in provisions.

Further information on the CTA is given in Note 24. The investments are measured at fair value.

Provisions for Pensions

€ million	Dec. 31, 2016	Dec. 31, 2017
Settlement value of pension commitments	2,578	3,800
Fair value of assets invested with Bayer Pension Trust	1,681	3,065
Net value of pension commitments (provisions)	**(897)**	**(735)**
Acquisition cost of assets invested with Bayer Pension Trust	1,312	1,948

27. Other provisions

Other Provisions

€ million	Dec. 31, 2016	Dec. 31, 2017
Provisions for taxes	541	391
Miscellaneous provisions	467	1,075
	1,008	**1,466**

Miscellaneous provisions include amounts for incentive payments, long-service awards to employees, early retirement arrangements, vacations, compensation of the Supervisory Board, environmental protection measures, the costs of preparing and auditing the annual financial statements, and other uncertain liabilities. They also included provisions for impending losses, for example on, foreign exchange derivatives, out-licensing and sales agreements.

As of December 31, 2017, provisions of €1 million (2016: €1 million) existed for commitments arising from compensation claims relating to antitrust violations in the fields of rubber, polyester polyols and urethanes.

28. Bonds and promissory notes

In addition to promissory notes totaling €45 million (2016: €45 million), bonds with a nominal value of €6,817 million had been issued as of December 31, 2017 (2016: €6,567 million). They comprised:

Bonds

	Nominal value	Stated rate %	Effective rate %	Dec. 31, 2016 € million	Dec. 31, 2017 € million
DIP bond 2006 / 2018	GBP 250 million	5.625	5.774	369	369
DIP bond 2006 / 2018 (increase)	GBP 100 million	5.625	5.541	148	148
DIP bond 2014 / 2018[1]	EUR 750 million	1.125	1.253	750	–
DIP bond 2014 / 2021	EUR 750 million	1.875	2.086	750	750
Hybrid bond 2014 / 2074[2]	EUR 1,500 million	3.750[5]	3.811	1,500	1,500
Hybrid bond 2014 / 2075[3]	EUR 1,750 million	3.000[6]	3.093	1,750	1,750
Hybrid bond 2015 / 2075[4]	EUR 1,300 million	2.375[7]	2.517	1,300	1,300
Exchangeable bond 2017 / 2020 (convertible)	EUR 1,000 million	0.050	(1.640)	–	1,000
				6,567	**6,817**

[1] Early termination option used in 2017
[2] Redeemable at 12 months notice from 2024
[3] Redeemable at 12 months notice from 2020
[4] Redeemable at 12 months notice from 2022
[5] Fixed interest rate until 2024, thereafter floating rate based on 5-year swap rate
[6] Fixed interest rate until 2020, thereafter floating rate based on 5-year swap rate
[7] Fixed interest rate until 2022, thereafter floating rate based on 5-year swap rate plus 200.7 basis points

29. Trade accounts payable

Trade Accounts Payable

€ million	Dec. 31, 2016	Dec. 31, 2017
Payables to subsidiaries	30	648
Payables to other suppliers	56	1,102
	86	**1,750**

30. Payables to subsidiaries

The payables to subsidiaries mainly comprised financial liabilities such as loans and overnight funds made available to Bayer AG by subsidiaries, plus the respective accrued interest. They include €4 billion from the mandatory convertible notes issued by Bayer Capital Corporation B. V., Netherlands, which was the subject of an intra-Group transfer to Bayer AG.

31. Miscellaneous liabilities

The miscellaneous liabilities comprised:

Miscellaneous Liabilities

€ million	2016	2017
Accrued interest	153	134
Short-term investments with Bayer AG	57	141
Premiums received on options	163	4
Social insurance liabilities	12	2
Employees' income and church taxes	15	76
Tax liabilities to municipalities and tax offices	–	31
Other	18	70
	418	**458**

The other miscellaneous liabilities included payroll liabilities, fees for the provision of credit facilities, commitment fees for credit facilities and premiums received from the issuance of a convertible bond.

The accrued interest of €51 million relating to subsidiaries, which was included in miscellaneous liabilities in 2016, has been reclassified to payables to subsidiaries to aid comparability.

32. Further information on liabilities

The residual maturities of liabilities were as follows:

Maturity Structure of Other Liabilities

	Dec. 31, 2016		Dec. 31, 2017	
€ million	Maturing in 2017	Maturing after 2017	Maturing in 2018	Maturing after 2018
Bonds and promissory notes	–	6,612	517	6,345
Liabilities to banks	61	–	756	–
Down payments received on orders	2	–	2	–
Trade accounts payable	86	–	1,750	–
Payables to subsidiaries	26,697	4,500	23,333	4,745
Miscellaneous liabilities	412	6	404	54
	27,258	**11,118**	**26,762**	**11,144**

€5,050 million (2016: €5,050 million) of the total liabilities had a residual maturity of more than five years. Of this amount, €4,550 million (2016: €4,550 million) comprised bonds and €500 million (2016: €500 million) comprised payables to subsidiaries.

The total liabilities as of December 31, 2017, included €134 million (2016: €153 million) in liabilities that did not legally come into being until after year end. These consisted almost entirely of accrued interest amounting to €134 million (2016: €153 million).

33. Deferred income

The deferred income comprised advance payments under licenses and settlement agreements as well as payments for services to be delivered in the future.

Other Information

34. Contingent liabilities

Liabilities arising from debt guarantees and sureties totaled €9,874 million (2016: €14,125 million). They were issued in favor of subsidiaries. Based on our knowledge of their respective economic situation, all of these companies are able to meet the underlying liabilities, so the contingent liabilities are not expected to materialize.

Debt Guarantees and Sureties	Dec. 31, 2016	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2017
	Nominal amount	€ million	Nominal amount	€ million
Guarantees for Group companies				
Bayer Capital Corporation B. V., Netherlands				
– 1.250% DIP notes, maturing in 2023	EUR 500 million	500	EUR 500 million	500
– 5.625% mandatory convertible bond, maturing in 2019 at the latest	EUR 4,000 million	4,000	EUR 4,000 million	4,000
– Liabilities to banks	EUR 74 million	74	EUR 47 million	47
Bayer World Investments B. V., Netherlands				
– Floating-rate term loan, maturing in 2018	USD 1,700 million	1,613	–	–
Bayer Corporation, U. S. A.				
– 6.650% notes, maturing in 2028	USD 350 million	332	USD 350 million	292
– Commercial paper	USD 20 million	19	USD 50 million	42
– Liabilities to banks	USD 33 million	31	USD 60 million	50
Bayer US Finance LLC, U.S.A				
– Floating-rate notes, maturing in 2017	USD 400 million	379	–	–
– 1.500% notes, maturing in 2017	USD 850 million	807	–	–
– 2.375% notes, maturing in 2019	USD 2,000 million	1,898	USD 2,000 million	1,667
– 3.000% notes, maturing in 2021	USD 1,500 million	1,423	USD 1,500 million	1,251
– 3.375% notes, maturing in 2024	USD 1,750 million	1,661	USD 1,750 million	1,459
Bayer Holding Ltd., Japan				
– 1.459% DIP bond, maturing in 2017	JPY 10 billion	81	–	–
– 0.816% DIP bond, maturing in 2017	JPY 30 billion	244	–	–
– 3.575% DIP bond, maturing in 2018	JPY 15 billion	121	JPY 15 billion	111
– 0.594% DIP bond, maturing in 2019	JPY 10 billion	81	JPY 10 billion	74
– 0.230% DIP bond, maturing in 2021	–	–	JPY 10 billion	74
– 0.260% DIP bond, maturing in 2022	–	–	JPY 10 billion	74
Bayer Nordic SE, Finland				
– Floating-rate DIP bond, maturing in 2017	EUR 500 million	500	–	–
Silver Birch Trustees Ltd., U. K.				
– Pension obligations	GBP 190 million	222	GBP 89 million	100
Bayer Real Estate GmbH, Germany				
– Contractual obligations to Bayer-Pensionskasse VVaG	EUR 78 million	78	EUR 75 million	75
Currenta GmbH & Co. OHG, Germany				
– Liabilities to the Federal State of North Rhine-Westphalia	EUR 53 million	53	EUR 53 million	53
Guarantees for other Group companies		4		5
Sureties for Group companies		4		–
		14,125		**9,874**

In connection with the Contribution, Indemnification and Post-Formation Agreement between Bayer AG and Covestro AG, Germany, arrangements were made to settle possible claims for taxes. These may result in corresponding liabilities.

35. Other financial commitments

In addition to provisions, other liabilities and contingent liabilities, there were also other financial commitments.

A total commitment of €3,460 million (2016: €2,326 million) related to future leasing and rental payments. €3,391 million (2016: €2,265 million) of this amount related to rental and lease agreements with subsidiaries. The total rental and lease commitments due as follows:

Leasing and Rental Commitments

	€ million
2018	1,509
2019	183
2020	183
2021	182
2022	183
after 2022	1,220
	3,460

In 2008, the establishment of an "effective initial fund" totaling €800 million was agreed with Bayer-Pensionskasse in view of the increase in the present and future life expectancy of those insured with this pension fund. The effective initial fund entails the granting of a repayable, interest-bearing loan to Bayer-Pensionskasse as required. In 2012, it was increased by €800 million to €1,600 million. Following payment of a total of €595 million, a loan commitment of €1,005 million remained.

Financial commitments resulting from orders already placed under purchase agreements related to planned or ongoing capital expenditure projects totaled €360 million (2016: €0 million). The respective payments are to be made through 2021, with €244 million due in 2018. Additional commitments to subsidiaries amounted to €7 million. Almost all of the corresponding payments are due in 2018.

Furthermore, based on current estimates, payments of €2,630 million (2016: €2,962 million) will have to be made for license agreements and research collaborations in the coming years. The maturity spread of the total commitments comprised:

Cooperation Agreements

	€ million
2018	1,090
2019	100
2020	63
2021	42
2022	33
after 2022	1,302
	2,630

The company remains liable for pension obligations of €358 milion that were transferred to a subsidiary through a liability assumption agreement or via carve-outs. They are not expected to materialize. To our knowledge, the subsidiary in question is able to meet the underlying liabilities.

On September 14, 2016, Bayer and Monsanto signed a definitive merger agreement under which Bayer will acquire the Monsanto Company, St. Louis, Missouri, United States, for USD 128 per share. Financing of the acquisition is secured through corresponding capital measures.

36. Derivatives / micro-hedges

In the course of their business, Bayer AG and companies in the Bayer Group are exposed to foreign exchange, interest-rate and price risks, which are hedged principally by means of derivatives. Most of these are over-the-counter (OTC) instruments. Derivative financial instruments are employed on the basis of uniform guidelines and are subject to strict internal controls. Apart from a few low-value exceptions, their use is confined to the hedging of the Bayer Group's operating business and of the related investments and financing transactions. The instruments used for currency hedging are mainly forward exchange contracts, currency options and cross-currency interest-rate swaps. Interest-rate swaps and interest-rate futures are used to hedge interest rates. Share options are used to hedge fluctuations in the value of commitments to employees under stock-based compensation programs.

The main objective of using derivatives is to reduce fluctuations in earnings and cash flows associated with changes in foreign exchange rates, interest rates, share prices and market prices.

There is a risk that the value of derivatives could change as a result of fluctuations in underlying parameters such as exchange rates, interest rates, share prices or market prices. Where derivatives are designated as hedges, possible declines in their value are offset by corresponding increases in the value of the hedged contracts.

In the case of derivatives with a positive fair value, a credit or default risk arises if the counterparties cannot meet their obligations. To minimize this risk, we assign contract limits to the individual banks according to their creditworthiness.

The notional amount of financial derivatives contracts concluded with external counterparties was €27.6 billion as of December 31, 2017 (2016: €33.5 billion). Back-to-back derivatives contracts in a notional amount of €8.4 billion (2016: €13.8 billion) were concluded with Group companies. Thus the total notional amount of derivatives was €36.0 billion (2016: €47.3 billion), including those forming hedging relationships. The derivatives comprised the following:

Derivatives

	Notional amounts		Fair values		Carrying amounts	
€ million	Dec. 31, 2016	**Dec. 31, 2017**	Dec. 31, 2016	**Dec. 31, 2017**	Dec. 31, 2016	**Dec. 31, 2017**
Currency contracts						
— positive fair values	15,185	7,893	543	212		
— negative fair values	12,392	13,990	(355)	(337)		
	27,577	**21,883**	**188**	**(125)**	**(20)**	**(190)**
Currency options						
— positive fair values	9,456	106	276	11		
— negative fair values	5,250	77	(75)		–	
	14,706	**183**	**201**	**11**	**–**	**–**
Cross-currency interest-rate swaps						
— positive fair values	1,588	1,465	193	148		
— negative fair values	2,298	2,125	(311)	(276)		
	3,886	**3,590**	**(118)**	**(128)**	**–**	**–**
Interest-rate swaps						
— positive fair values	200	3,118	14	75		
— negative fair values	–	6,168	–	(81)		
	200	**9,286**	**14**	**(6)**	**–**	**(81)**
Share options						
— positive fair values	512	548	63	29		
— negative fair values	462	548	(56)	(28)		
	974	**1,096**	**7**	**1**	**(2)**	**(6)**
	47,343	**36,038**	**292**	**(247)**	**(22)**	**(277)**

Derivatives used to hedge currency risks

To hedge currency risks, Bayer AG used currency contracts (forward exchange agreements and currency options) and cross-currency interest-rate swaps.

Hedging was focused on financial exposure. To hedge the currency risk arising from receivables and liabilities at Bayer AG and Group companies, Bayer AG concluded currency contracts with a notional amount of €6.4 billion (2016: €12.8 billion) with external counterparties. They had a positive fair value of €30 million (2016: €101 million). Some of these contracts were passed on to Group companies. The notional amount of these reciprocal intra-Group transactions was €5.4 billion (2016: €6.8 billion) and they had a negative fair value of €43 million (2016: positive fair value of €87 million). Exposure in the statement of financial position related to the following:

> Currency contracts concluded to hedge underlying transactions (foreign currency receivables and liabilities) of Group companies are generally passed on to the respective Group companies through appropriate internal transactions. The effects of these internal and external transactions cancel each other out when they are closed out. Currency-based portfolio hedges were formed. The corresponding contracts are due in 2018 and were not recognized in the statement of financial position.

- Currency-based portfolio hedges were also formed with the corresponding underlying transactions for the hedging transactions that remained with Bayer AG. The contracts had a negative fair value of €8 million in total. Included in this amount were currency contracts with a negative fair value of €13 million. These were recognized in miscellaneous provisions as impending losses. Currency contracts with positive fair values of €5 million were recognized in trade accounts receivable in conjunction with Section 256a of the German Commercial Code (HGB).
- The negative fair value of contracts not included in portfolio hedges amounted to €3 million (2016: positive fair value of €178 million). Included in this amount were currency contracts with a negative fair value of €3 million (2016: €19 million). This amount was recognized in miscellaneous provisions as impending losses. The currency contracts with positive fair values of €197 million in the previous year were not recognized in the statement of financial position.
- Currency contracts were also used to hedge foreign currency loans made by Group companies to Bayer AG. The loans and currency contracts were combined to form micro-hedges. The – negative – carrying amount of the hedged loans was €1,222 million on the closing date (2016: €3,317 million). Their fair value was €14 million lower (2016: €76 million higher) at €1,208 million (2016: €3,393 million). The corresponding external currency contracts had a net negative fair value of €11 million (2016: positive fair value of €80 million). They are due in 2018 and were not recognized in the statement of financial position.

To hedge forecast foreign currency transactions at Bayer AG and Group companies that are considered highly probable, external currency contracts were concluded with a notional amount of €9.3 billion (2016: €17.5 billion) and a negative fair value of €78 million (2016: positive fair value of €103 million). They were offset by reciprocal transactions with Group companies with a notional amount of €0.9 billion (2016: €5.0 billion) and a negative fair value of €23 million (2016: positive fair value of €98 million).

- Changes in the value of the corresponding internal and external contracts included in portfolio hedges will cancel each other out when they are closed out in 2018. With the exception of option premiums paid or received of €4 million in each case (2016: €178 million), they were not reflected in the statement of financial position.
- Provisions for impending losses were established for currency contracts not included in portfolio hedges that had a negative fair value of €179 million.

Only a small amount of other currency contracts were concluded (under €0.1 billion; 2016: €0.1 billion). The negative fair value of €1 million was offset by transactions with a positive fair value of €1 million. They were not recognized in the statement of financial position.

Cross-currency interest-rate swaps with a notional amount of €0.5 billion (2016: €0.5 billion) were used to hedge foreign exchange risks from the GBP bonds issued in 2006. Including the corresponding interest accruals, they had a net negative fair value of €128 million (2016: negative fair value of €120 million). The cross-currency interest-rate swaps and bonds form a micro-hedge. The effectiveness of the cross-currency interest-rate swaps is tested prospectively using the critical term match method and retrospectively using the regression method to ensure that the values and cash flows of the transactions offset one another. As a consequence, the bonds were recognized as previously at their original acquisition cost of €517 million and the cross-currency interest-rate swaps, which are due in 2018, were not reflected in the financial statements prepared in accordance with German commercial law.

Other cross-currency interest-rate swaps with a notional amount of €1.5 billion (2016: €1.7 billion) were concluded to hedge Group loans granted by Bayer NV, Belgium. As a result of back-to-back agreements with Bayer NV with a notional value of €1.5 billion (2016: €1.5 billion), the positive and negative fair values of the various hedge relationships formed according to the maturities of the agreements canceled each other out. The other external and internal cross-currency interest-rate swaps with a total notional value of less than €0.1 billion in the previous year also canceled each other out; they were not recognized in the statement of financial position.

Derivatives used to hedge interest rate risks

Receiver swaps were used, among other things, to hedge the interest-rate risk relating to DIP bonds issued by Bayer AG. The swaps mature in the period up to 2021 in line with the maturities of the bonds. They had a notional amount of €0.2 billion (2016: €0.2 billion) and a net positive fair value of €11 million (2016: €14 million). They constituted a hedging relationship (micro-hedge) with the bonds, which were reflected in the financial statements. The effectiveness of the hedging relationship is examined prospectively and retrospectively using regression analysis. Since the cash flows relating to the hedged contract and receiver swaps cancel each other out, the receiver swaps were not reflected in the statement of financial position.

Additional interest-rate swaps with a notional amount of €9.1 billion were concluded in the form of forward-starting swaps. They had a negative fair value of €17 million. This included a negative fair value of €81 million from interest-rate swaps with negative fair values. This amount was recognized in miscellaneous provisions as impending losses. Interest-rate swaps with positive fair values of €64 million in 2017 were not recognized in the statement of financial position. The contracts have different maturities up to the year 2038.

Derivatives used to hedge price risks

Bayer AG has concluded share option contracts and customized forward trade contracts with external counterparties to hedge a portion of the obligations arising from the Aspire stock-based compensation program. These expire between 2018 and 2021. Their net fair value was €5 million on December 31, 2017. The contracts with a negative net fair value of €4 million that were passed on to Group companies form micro-hedges with the contracts concluded with external counterparties. These contracts therefore cancel each other out. The contracts remaining with Bayer AG had a fair value of €9 million and formed a micro-hedge with the primary obligations arising from the stock-based compensation program. This hedging relationship is tested prospectively using the critical term match method and retrospectively using regression analysis. The option premiums paid amounting to €41 million (2016: €59 million) and the option premiums received amounting to €31 million (2016: €55 million) were recognized in the statement of financial position. Of the contracts not reflected in the statement of financial position, €6 million (2016: €2 million) related to transactions with negative fair values. This amount was recognized in miscellaneous provisions as impending losses.

External commodity contracts were passed on to Group companies on reciprocal terms as micro-hedges. The results of the contracts that had matured by year end canceled each other out. Only a small amount of commodity contracts was purchased in 2017. No commodity contracts remained on the closing date.

Valuation methods

The fair values of financial derivatives are measured by the usual methods and based on the market data available at the measurement date. The following principles are applied:

- Forward exchange contracts are measured individually at their forward rates on the closing date. These depend on spot rates, including time spreads.
- The fair values of currency options are determined using a Black-Scholes model.
- The fair value of interest-rate swaps is determined by discounting expected future cash flows. Discounting applies market interest rates for the remaining term of these instruments. The fair values of interest-rate options are determined using a Black-Scholes model.
- The fair value of share options is determined by a Monte Carlo simulation.
- The fair value of forward commodity contracts is calculated from future price data obtained from the markets or from external data providers. Certain long-term commodity contracts for which market data are unavailable are measured with the aid of valuation models based on internal fundamental data.

37. Legal risks

As the parent of a global group of companies with a heterogeneous business portfolio, Bayer AG is exposed to numerous legal risks, particularly in the areas of product liability, competition and antitrust law, patent disputes, tax law and environmental protection. The outcome of any current or future proceedings cannot normally be predicted. It is therefore possible that legal or regulatory judgments or future settlements could give rise to expenses that are not covered, or not fully covered, by insurers' compensation payments and could significantly affect our revenues and earnings.

Legal proceedings currently considered to involve material risks are outlined below. The legal proceedings referred to do not represent an exhaustive list. The risks described are those to which Bayer AG is exposed either directly, or indirectly through subsidiaries with which it has profit and loss transfer and / or control agreements. Further legal risks existing in the Bayer Group are described in the notes to the consolidated financial statements of the Bayer Group.

Product-Related Litigation

Mirena™: As of January 30, 2018, lawsuits from approximately 2,900 users of Mirena™, a levonorgestrel-releasing intrauterine system providing long-term contraception, had been served upon Bayer in the United States (excluding

lawsuits no longer pending). Plaintiffs allege personal injuries resulting from the use of Mirena™, including perforation of the uterus, ectopic pregnancy or idiopathic intracranial hypertension, and seek compensatory and punitive damages. Plaintiffs claim, inter alia, that Mirena™ is defective and that Bayer knew or should have known of the risks associated with it and failed to adequately warn its users. Additional lawsuits are anticipated. In April 2017, most of the cases pending in U.S. federal courts in which plaintiffs allege idiopathic intracranial hypertension were consolidated in a multidistrict litigation ("MDL") proceeding for common pre-trial management. As of January 30, 2018, lawsuits from approximately 400 users of Mirena™ alleging idiopathic intracranial hypertension had been served upon Bayer in the United States. Another MDL proceeding concerning perforation cases has, in the meantime, been dismissed. The Second Circuit Court of Appeals affirmed the perforation MDL district court's summary judgment order of 2016 dismissing approximately 1,230 cases pending before that court. In August 2017, Bayer reached an agreement in principle with plaintiffs' counsel leadership for global settlement of the perforation litigation, for a total amount of US$12.2 million. As of January 30, 2018, a total of approximately 4,000 cases would be included in the settlement. The idiopathic intracranial hypertension MDL proceeding is not included in the settlement.

As of January 30, 2018, five Canadian lawsuits relating to Mirena™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Xarelto™: As of January 30, 2018, U.S. lawsuits from approximately 22,000 recipients of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Xarelto™, including cerebral, gastrointestinal or other bleeding and death, and seek compensatory and punitive damages. They claim, amongst other things, that Xarelto™ is defective and that Bayer knew or should have known of these risks associated with the use of Xarelto™ and failed to adequately warn its users. Additional lawsuits are anticipated. Cases pending in U.S. federal courts have been consolidated in an MDL for common pre-trial management. In May, June and August 2017, the first three MDL trials resulted in complete defense verdicts; plaintiffs have appealed all three verdicts. In January 2018, after the first trial to proceed in Pennsylvania state court had initially resulted in a judgment in favor of the plaintiff, the trial judge vacated the jury's verdict and granted judgment in favor of Bayer. Further Pennsylvania state court trials are currently scheduled for the first and second quarters of 2018. Bayer anticipates that additional trials will be scheduled.

As of January 30, 2018, ten Canadian lawsuits relating to Xarelto™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Essure™: As of January 30, 2018, U.S. lawsuits from approximately 16,100 users of Essure™, a medical device offering permanent birth control with a nonsurgical procedure, had been served upon Bayer. Plaintiffs allege personal injuries from the use of Essure™, including hysterectomy, perforation, pain, bleeding, weight gain, nickel sensitivity, depression and unwanted pregnancy, and seek compensatory and punitive damages. Additional lawsuits are anticipated.

As of January 30, 2018, two Canadian lawsuits relating to Essure™ seeking class action certification had been served upon Bayer. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Class actions over neonicotinoids in Canada: Proposed class actions against Bayer were filed in Quebec and Ontario (Canada) concerning crop protection products containing the active substances imidacloprid and clothianidin (neonicotinoids). Plaintiffs are honey producers, who have filed a proposed nationwide class action in Ontario and a Quebec-only class action in Quebec. Plaintiffs claim for damages and punitive damages and allege Bayer and another crop protection company were negligent in the design, development, marketing and sale of neonicotinoid pesticides. The proposed Ontario class action is in a very early procedural phase. In Quebec, the plaintiff sought authorization (certification) of a class for which a motion was heard in November 2017. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

In connection with the above-mentioned proceedings, Bayer is insured against statutory product liability claims against Bayer to the extent customary in the respective industries and has, based on the information currently available, taken appropriate accounting measures in the Bayer Group for anticipated defense costs. However, the accounting measures relating to Essure™ claims exceed the available insurance coverage.

Patent Disputes

Adempas™: In January 2018, Bayer filed patent infringement lawsuits in a U.S. federal court against Alembic Pharmaceuticals Limited, Alembic Global Holding SA, Alembic Pharmaceuticals, Inc. and INC Research, LLC (together "Alembic"), against MSN Laboratories Private Limited and MSN Pharmaceuticals Inc. (together "MSN") and

against Teva Pharmaceuticals U.S.A., Inc. and Teva Pharmaceutical Industries Ltd. (together "Teva"). In December 2017, Bayer had received notices of an Abbreviated New Drug Application with a paragraph IV certification ("ANDA IV") pursuant to which Alembic, MSN and Teva each seek approval of a generic version of Bayer's pulmonary hypertension drug Adempas™ in the United States.

Xarelto™: In 2015, Bayer and Janssen Pharmaceuticals filed a patent infringement lawsuit in a U.S. federal court against Aurobindo Pharma Limited, Aurobindo Pharma USA, Inc. (together "Aurobindo"), Breckenridge Pharmaceutical Inc. ("Breckenridge"), Micro Labs Ltd., Micro Labs USA Inc. (together "Micro Labs"), Mylan, Prinston Pharmaceutical Inc. ("Prinston"), Sigmapharm Laboratories, LLC ("Sigmapharm"), Torrent Pharmaceuticals, Limited and Torrent Pharma Inc. (together "Torrent"). Bayer had received notices of an ANDA IV application by Aurobindo, Breckenridge, Micro Labs, Mylan, Prinston, Sigmapharm and Torrent, each seeking approval to market a generic version of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, in the United States. In 2016, Bayer received another notice of such an ANDA IV application by InvaGen Pharmaceuticals, Inc. ("InvaGen"). Bayer and Janssen Pharmaceuticals filed a patent infringement lawsuit against InvaGen in the same U.S. federal court.

Bayer believes it has meritorious defenses in the above ongoing patent disputes and intends to defend itself vigorously.

38. Related parties

Related parties are legal entities or natural persons that are able to exert influence on Bayer AG or over which Bayer AG exercises control or has a significant influence.

Transactions with related parties mainly comprise rental, service and financing transactions with subsidiaries, joint ventures and other affiliated companies, and with pension plans. Such transactions are conducted on market terms (arm's length principle).

Bayer AG had undertaken to provide jouissance right capital (Genussrechtskapital) totaling €150 million for Bayer-Pensionskasse. The entire amount was drawn in both 2016 and 2017. Further, in 2008 the establishment of a repayable "effective initial fund" was agreed with Bayer-Pensionskasse. This was increased by €800 million to €1,600 million in 2012. On December 31, 2017, the amount drawn was €595 million, and thus unchanged from year end 2016.

39. Disclosures pursuant to Section 6b Paragraph 2 of the German Energy Act

There were no unusual transactions in connection with energy supply that were of material significance for the net assets and results of operations of Bayer AG and required disclosure under Section 6b Paragraph 2 of the German Energy Act (EnWG).

40. Total compensation of the Board of Management and the Supervisory Board and loans

The compensation of the Board of Management in 2017 comprised:

Total Compensation of the Board of Management

€ thousand	2016	2017
Fixed salaries	6,385	6,148
Compensation in kind and other benefits	664	266
Short-term variable cash compensation	9,063	4,890
Long-term stock-based cash compensation (Aspire)[1]	12,333	13,020
Aggregate compensation	**28,445**	**24,324**
Service cost for pension commitments[2]	2,737	2,356

[1] Fair value as of grant date

[2] Including company contribution to Bayer-Pensionskasse VVaG or Rheinische Pensionskasse

Members of the Board of Management participate in stock-based compensation programs (Aspire). These are four-year programs under which entitlements are earned in stages. The fair value of these programs at the time they are granted forms part of the overall compensation package and is shown in the above overview as "long-term stock-based cash compensation (Aspire)." The entitlements earned in 2017 under the stock-based compensation programs granted in 2017 and under those from previous years are shown separately in the table below. In addition, the changes in the value of entitlements from stock-based compensation programs earned prior to 2017 are shown separately.

Until 2015, members of the Board of Management also received 50% of their short-term variable compensation in the form of virtual Bayer shares. Payments are made after a three-year retention period and depend on the market price of Bayer shares at that time. Participants also receive an amount equal to the total dividends paid on the equivalent number of real shares during this period. Changes in the value of the virtual shares up to the payment date (including dividend claims accrued during the three-year period) are also shown in the next table.

The expense for the respective year contains the following components relating to long-term variable cash compensation based on virtual Bayer shares and long-term stock-based cash compensation (Aspire) that differ from the amounts included in aggregate compensation:

Multi-Year Variable Compensation of the Board of Management

€ thousand	2016	2017
Long-term variable cash compensation based on virtual Bayer shares		
— Change in the value of virtual shares granted in previous years	(1,275)	538
	(1,275)	**538**
Long-term stock-based cash compensation (Aspire)		
— Entitlements earned in the fiscal year	5,217	9,082
— Change in the value of entitlements earned in previous years	(923)	(641)
	4,294	**8,441**
Expense	**3,019**	**8,979**

Expenses for pension entitlements granted to the members of the Board of Management serving in 2017 amounted to €2,356 thousand (2016: €2,737 thousand). These comprised current service cost for pension commitments and company contributions to Bayer-Pensionskasse and Rheinische Pensionskasse. The interest portion of entitlements earned in prior years and actuarial gains and losses also had an impact. Including these components, the financial expense was €4,261 thousand (2016: €2,249 thousand). Provisions for pension obligations on the closing date were €22,585 thousand (2016: €18,346 thousand).

Pension payments to former members of the Board of Management and their surviving dependents in 2017 amounted to €12,758 thousand (2016: €12,800 thousand). Provisions for pensions and similar commitments to former members of the Board of Management and their surviving dependents amounting to €153,388 thousand (2016: 149,948 thousand) were reflected in the statement of financial position of Bayer AG.

The total remuneration of the Supervisory Board in 2017 was €3,703 thousand (2016: €3,479 thousand). This included attendance fees of €120 thousand (2016: €118 thousand).

There were no loans to members of the Board of Management or the Supervisory Board as of December 31, 2017, nor were any loans repaid during the year.

Details of the compensation of the Board of Management and Supervisory Board are set out in the compensation report, which forms part of the Combined Management Report of the Bayer Group and Bayer AG.

41. Proposal for the use of the distributable profit

The Board of Management and the Supervisory Board propose that, of the distributable profit of EUR 2,900 million reported in the financial statements for the fiscal year 2017, an amount of EUR 2,315 million be used to pay a dividend of EUR 2.80 per share carrying dividend rights and the remaining amount of EUR 585 million be carried forward. The stated amounts proposed for the dividend payment and for carrying forward are based on the number of shares carrying dividend rights (826,947,808) on the date on which the financial statements were prepared by the Board of Management.

As previously announced, the company plans to carry out a capital increase with subscription rights. In the event that the company has carried out the announced capital increase with subscription rights or other capital measures by the date of the Annual Stockholders' Meeting through the issue of new shares carrying dividend rights for the fiscal year 2017, and the number of shares carrying dividend rights on the date of the Annual Stockholders' Meeting is therefore higher than the number on the date on which the financial statements were prepared, the Board of Management and the Supervisory Board will make an adjusted proposal to the Annual Stockholders' Meeting for the distribution of the profit. In this case, the proposed dividend amount of EUR 2.80 per share will remain unchanged and the portion of the distributable profit proposed to be carried forward will be reduced by the amount of the dividend attributable to the newly issued shares.

In the event that the Company holds treasury shares on the date of the Annual Stockholders' Meeting and that the number of shares carrying dividend rights on the date of the Annual Stockholders' Meeting is therefore lower than the number on the date on which the financial statements were prepared, the Board of Management and the Supervisory Board will make an adjusted proposal to the Annual Stockholders' Meeting for the distribution of the profit. In this case, the proposed payment of a dividend of EUR 2.80 per share will remain unchanged, and it will be proposed that the remaining portion of the distributable profit be carried forward.

The following auditor's report (Bestätigungsvermerk) has been issued in accordance with Section 322 German Commercial Code (Handelsgesetzbuch) in German language on the German version on the annual financial statements and the combined management report (zusammengefasster Lagebericht) of Bayer Aktiengesellschaft as of and for the fiscal year ended December 31, 2017. The combined management report is neither included nor incorporated by reference in this Prospectus.

Independent Auditor's Report

To Bayer Aktiengesellschaft, Leverkusen

REPORT ON THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND THE COMBINED MANAGEMENT REPORT

Audit Opinions

We have audited the annual financial statements of Bayer Aktiengesellschaft, Leverkusen, which comprise the balance sheet as at December 31, 2017, the income statement for the business year from January 1, 2017 to December 31, 2017 as well as the notes to the annual financial statements, including the accounting and measurement methods presented therein. In addition, we have audited the combined management report of Bayer Aktiengesellschaft, Leverkusen, for the business year from January 1, 2017 to December 31, 2017. In conformity with German legal regulations we have not audited the parts of the combined management report specified in the Chapter "Other information" of our independent auditor's report with regard to their content.

In our opinion, based on our knowledge obtained during the audit

- the accompanying annual financial statements comply with the requirements of German commercial law applicable to corporations in all material respects and give a true and fair view of the net assets and financial position of the Company in accordance with German principles of proper accounting as at December 31, 2017 as well as its results of operations for the business year from January 1, 2017 to December 31, 2017 in accordance with these requirements and
- the accompanying combined management report as a whole provides a suitable view of the Company's position. In all material respects, this combined management report is consistent with the annual financial statements, complies with the German statutory requirements and suitably presents the opportunities and risks of future development. Our audit opinion on the combined management report does not extend to the content of the parts of the combined management report detailed in the Chapter "Other information" of our independent auditor's report.

Pursuant to § 322 paragraph 3 sentence 1 of the German Commercial Code, we state that our audit has not led to any reservations with respect to the propriety of the annual financial statements and the combined management report.

Basis for audit opinions

We conducted our audit of the annual financial statements and combined management report in accordance with § 317 of the German Commercial Code and the EU Audit Regulation (No. 537/2014, hereinafter "EU Audit Regulation"), and German generally accepted standards for the audit of annual financial statements promulgated by the Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer) (IDW). We have performed the audit of the annual financial statements in supplementary compliance with the International Standards on Auditing (ISA). Our responsibilities under these requirements, principles and standards are further described in the section "Auditor's responsibility for the audit of the annual financial statements and the combined management report" of our independent auditor's report. We are independent of the Company in accordance with European and German commercial law and rules of professional conduct and we have fulfilled our other ethical responsibilities applicable in Germany in accordance with these requirements. In addition, pursuant to Article 10 paragraph 2 (f) of the EU Audit Regulation, we declare that we have not provided any prohibited non-audit services pursuant to Article 5 paragraph 1 of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the annual financial statements and the combined management report.

Key audit matters in the audit of the annual financial statements

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the annual financial statements for the business year from January 1, 2017 to December 31, 2017. These matters were addressed in the context of our audit of the annual financial statements as a whole and in forming our audit opinion thereon but we do not provide a separate opinion on these matters.

In the following we present the key audit matters in our view:

1. New Bayer – Business lease agreements
2. New Bayer – Transfer of employees
3. Derivative financial instruments – Accounting treatment of valuation units and hedging transactions
4. Impairment of shares in affiliated companies

Our presentation of these key audit matters has been structured as follows:

a) Description (including reference to corresponding information within the financial statements)

b) Auditor's response

1. New Bayer – Business lease agreements

a) Following the public offering of Covestro AG in 2015, Bayer Aktiengesellschaft reorganized the group as at January 1, 2016 and replaced the previous organization of Bayer Aktiengesellschaft as a strategic management holding and operative sub-groups with an integral structure under management of Bayer Aktiengesellschaft's Board of Management. The operative business is managed through three divisions: Pharmaceuticals, Consumer Health and Crop Science, and the business unit Animal Health as well as Covestro, in which Bayer Aktiengesellschaft held a 64% shareholding interest as of December 31, 2016. Consequently, the internal reporting structure of the group was also amended. The new organization and final implementation of the new integrated structure was concluded as of January 1, 2017 by leasing the operations of Bayer Pharma AG (BPH AG) and Bayer CropScience AG (BCS AG) (collectively referred to as "lessor") to Bayer Aktiengesellschaft (referred to as "lessee"). Effective as of this date, BPH AG and BCS AG leased their operations to Bayer Aktiengesellschaft, transferred their respective inventories to the lessee and the lessee assumed the management of the operations. The leases include all assets, contracts and other legal agreements that are necessary to manage the operations of the lessor. Excluded from the leases are all investment holdings and related rights, other financial assets including silent participations and related receivables, other rights and liabilities.

   The lease payments for fiscal year 2017 were calculated by means of an expert opinion. The business lease agreements have each been concluded for the duration of one calendar year. The expiration dates each renew by one additional calendar year, unless one of the parties cancels the respective agreement in writing with a notice of six months before the close of the preceding calendar year. The accounting treatment is based on the leasing regulations under tax law.

   This matter has been classified as a key audit matter, because the contractual arrangement and the respective accounting treatment of the business lease agreements are of a complex nature. Moreover, changes in the business model have a material impact on the net assets, financial position and results of operations of Bayer Aktiengesellschaft.

   The Company's disclosures concerning the business lease agreements are presented in introductory section "Changes in Corporate Structure" of the notes to the financial statements.

b) Within the scope of our audit and with the support of our internal tax specialists, we examined if the business lease agreements between Bayer Aktiengesellschaft and BPH AG and between BCS AG, respectively, should be classified as operating leases under commercial law. In this respect, we, among others, critically analyzed and evaluated the findings of the "Expert appraisal regarding the accounting recognition of fixed assets transferred under a business lease" which was commissioned by Bayer Aktiengesellschaft. We also analyzed and assessed Bayer Aktiengesellschaft's organizational and procedural measures to determine to what extent those measures ensure the actual execution of the business lease agreements. We examined the completeness and accuracy of the necessary assets and liabilities transferred under the business lease agreements by comparing a random sample of the assets and liabilities transferred under the business lease agreements with the assets and liabilities assumed in the ERP system of Bayer Aktiengesellschaft. In addition, we evaluated the system controls and measures in the bookkeeping system of Bayer Aktiengesellschaft to ensure the appropriate accounting recognition of the business lease model in the accounting records and financial statements of Bayer Aktiengesellschaft by examining the customizing settings with the assistance of specialists from Internal Control Assurance.

2. New Bayer – Transfer of employees

a) With the effectiveness of the business lease agreements with Bayer Pharma AG (BPH AG) and Bayer CropScience AG (BCS AG) as of January 1, 2017, the employment contracts of the employees classified to the leased operations were transferred to the lessee, Bayer Aktiengesellschaft, pursuant to Sec. 613a Civil Law Code (BGB) with all rights and obligations existing on the effective date of the business lease agreements as far as the transfer of employment contracts has not been objected to. For the obligations of the transferred employees arising from the employment contracts assumed from BPH AG and BCS AG that existed until the commencement of the lease date, Bayer Aktiengesellschaft receives financial compensation in the amount of the provisions recognized for these obligations under the German Commercial Code (HGB) in the lessor's balance sheet as of December 31, 2016. In total, about 10,400 employees of BPH AG and about 4,100 employees of BCS AG transferred to Bayer Aktiengesellschaft. The pension provisions assumed amounted to EUR 0.6bn, after offsetting of plan assets also assumed by Bayer Aktiengesellschaft, and the other personnel provisions assumed totaled EUR 0.4bn. Bayer Aktiengesellschaft received settlement compensation in the amount of EUR 1.0bn from both companies.

   This matter has been classified as a key audit matter, because the recognition and measurement of the respective obligations and plan assets are based on various estimates and the financial compensation entitlement of Bayer Aktiengesellschaft derived therefrom is material to the financial statements of the Company.

   Details concerning the accounting and measurement of the obligations assumed are contained in the presentation of the accounting methods in the notes to the financial statements.

b) Within the scope of the audit, we evaluated the business lease agreements to determine which employees and respective pension provisions and other personnel provisions were transferred from BPH AG and BCS AG to Bayer Aktiengesellschaft as of January 1, 2017. Regarding the actuarial pension provisions and other personnel provisions, we examined the actuarial reports commissioned by Bayer Aktiengesellschaft to determine that all respective employees were included in the calculations therein. In this connection, we examined whether the contractually agreed parameters for the calculation of the obligations assumed for the employees transferred were completely and accurately addressed in the actuarial report. Within the scope of the audit, we critically assessed and used the findings of the actuarial report. In addition, we convinced ourselves of the expertise, competence and objectivity of the respective actuary. To examine the fair values of the plan assets transferred we obtained corresponding bank and funds confirmations as well as expert opinions, which we critically analyzed. Regarding all other personnel obligations, we traced whether these were transferred and measured at their settlement amounts pursuant to Sec. 253 (2) German Commercial Code (HGB). We traced the balance sheet derivations, journal entries for the provisions and disclosures in the notes to the financial statements on the basis of the actuarial calculations shown in the actuarial report. Additionally, we examined whether the tax effects from the different values reported in the trade balance sheet and tax balance sheet of the transferred personnel provisions and the transferred plan assets were appropriately depicted in the financial statements of Bayer Aktiengesellschaft.

3. Derivative financial instruments – Accounting treatment of valuation units and hedging transactions

a) Bayer Aktiengesellschaft concludes a number of different derivative financial instruments to hedge against currency, interest rate and commodity price risks associated with ordinary business activities with external contractual partners and group companies. Management's hedging policy is documented in corresponding internal guidelines and serves as the basis for these transactions. The use of derivative financial instruments aims to reduce the fluctuation in net earnings and cash flow arising from movements in exchange rates, interest rates, stock prices and market prices.

   The nominal volume of derivatives concluded with external contractual partners amounted to EUR 27.6bn as of December 31, 2017. Offsetting derivatives were concluded with group companies in the nominal amount of EUR 8.4bn. The fair values of the derivative financial instruments are determined according to the prevailing market valuation methods taking into account the market data (market values) available as of the valuation closing date. These amounted to net EUR -247m and accounted for at net EUR -277m as of December 31, 2017. Management assesses the effectiveness of the hedging relationship according to the critical-term-match method and according to the regression method.

   In our view, this matter was classified as a key audit matter due to the high complexity and high number of transactions as well as the comprehensive accounting and reporting requirements.

The Company's disclosures of the accounting of derivative financial instruments are contained in Section 36 of the notes to the financial statements. The risk reporting concerning the use of financial instruments is presented in the combined management report in Section 3.2.2.

b) As part of our audit and together with the support of our internal specialists from Financial Risk Solutions, we, among others, assessed the contractual and financial parameters and reviewed the accounting treatment, including the creation of valuation units for the various hedging instruments. Together with these specialists, we also assessed the Company's internal control system with regard to the derivative financial instruments, including the internal activities to monitor compliance with the hedging policy and examined the controls with regard to design, implementation and effectiveness. Furthermore, to examine the measurement of the financial instruments at fair value we traced the appropriateness of the system's implementation of the methods and recalculated the calculation methods based on market data based on a representative sample. To examine the effectiveness of the hedging relationship we analyzed the methods used and traced the appropriateness of implementation by the system. With regard to the expected cash flows and the assessment of the effectiveness of the hedging instruments, we retrospectively assessed past hedge levels.

4. Impairment of shares in affiliated companies

a) Bayer Aktiengesellschaft's financial statements reported shares in affiliated companies in the amount of EUR 44.9bn (76% of the balance sheet total) as of December 31, 2017. Bayer Aktiengesellschaft tested the recoverability of the investment's carrying values by conducting internal business valuations. A total business value is calculated by Bayer Aktiengesellschaft for all material investment holdings, which is adjusted to the net financial position. This equity value is compared to the respective carrying value of the investment. The total business values are calculated as the present value of management's expected future cash flows using the discounted cash flow model. The results from these calculations are particularly dependent on the estimate of the future cash inflows by management, the respective discount rates and growth rates used as well as the determination of the net financial position. The measurement is therefore subject to uncertainty. Even minor changes in the discount rates applied could have a material impact. Within this context and given the material significance on the net assets and results of operations of Bayer Aktiengesellschaft, this matter was considered a key audit matter within the scope of our audit.

The Company's disclosures regarding the financial assets and impairment are presented in Section 15 of the notes to the financial statements.

b) Within the scope of our audit, we have assessed whether the respective valuation models used to calculate the total business value appropriately depict the requirements of the relevant valuation standards and whether the calculations in the model have been correctly made. With regard to the valautions conducted by Bayer Aktiengesellschaft, we have convinced ourselves whether the fair values have been properly calculated using the discounted cash flow method and according to the relevant valuation standards. In this respect, we examined whether the underlying future cash inflows and the costs of capital present a proper basis as a whole. Our estimate is based, among others, on a comparison with the general and sector-specific market expectations as well as extensive explanations from management regarding the material value drivers and parameters of the budget. We also examined the parameters applied to determining the discount rates applied by a comparison to market data and reviewed the calculation both logically and mathematically.

Other information

The legal representatives are responsible for the other information. The other information comprises:

- the corporate governance statement specified in Chapter 4.1 of the combined management report pursuant to § 289f and § 315d of the German Commercial Code,
- the section "Compliance" of the corporate governance report pursuant to No. 3.10 of the German Corporate Governance Code as specified in Chapter 4.2 of the combined management report,
- all additional online information that is referenced to in the combined management report and contained in the extended online version of the Company Annual Report and
- the declaration by the legal representatives for the annual financial statements and the combined management report pursuant to § 264 paragraph 2 sentence 34 of the German Commercial Code and § 289 paragraph 1 sentence 5 of the German Commercial Code.

Our audit opinions on the annual financial statements and the combined management report do not extend to cover the other information, and accordingly we do not issue an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in doing so, to consider whether the other information

- is materially inconsistent with the annual financial statements, the combined management report or our knowledge obtained in the audit, or
- otherwise appears to be substantially misstated

If, based on the work we have performed on the other information, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the legal representatives and the Supervisory Board for the annual financial statements and the combined management report

The legal representatives are responsible for the preparation of the annual financial statements, which comply with the requirements of German commercial law applicable to corporations in all material respects, so that the annual financial statements in accordance with (German) principles of proper accounting give a true and fair view of the net assets, financial position and results of operations of the Company in accordance with these requirements. In addition, the legal representatives are responsible for the internal controls they have identified as necessary in order to enable the preparation of annual financial statements that are free from material misstatements, whether intentional or unintentional.

In preparing the annual financial statements, the legal representatives are responsible for assessing the Company's ability to continue as a going concern. Furthermore, they have the responsibility to disclose matters related to going concern, as applicable. In addition, they are responsible for using the going concern basis of accounting, unless this conflicts with legal and actual circumstances.

In addition, the legal representatives are responsible for the preparation of the combined management report, which as a whole provides a suitable view of the Company's position, is consistent with the annual financial statements in all material respects, complies with German legal regulations and suitably presents the opportunities and risks of future development. Furthermore, the legal representatives are responsible for such arrangements and measures (systems) which they have deemed necessary in order to enable the preparation of a combined management report in accordance with the German commercial law to be applied and to furnish sufficient and appropriate evidence for the statements in the combined management report.

The Supervisory Board is responsible for overseeing the Company's financial reporting process for the preparation of the annual financial statements and the combined management report.

Auditor's responsibility for the audit of the annual financial statements and the combined management report

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatements, whether due to fraud or error, and whether the combined management report as a whole provides an appropriate view of the Company's position and, in all material respects, is consistent with the findings of the audit, is in accordance with German legal regulations, and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the annual financial statements and the combined management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 of the German Commercial Code and the EU Audit Regulation and German generally accepted standards for the audit of financial statements promulgated by the Institute of Public Auditors in Germany (IDW) and in supplementary compliance with the ISA, will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual financial statements and combined management report.

As part of an audit, we exercise professional judgement and maintain professional skepticism. We also

- identify and assess the risks of material misstatements in the annual financial statements and in the combined management report, whether due to fraud or error, design and perform audit procedures responsive to those risks and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinion. The risk of not detecting a material misstatement resulting from fraud is higher than one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- obtain an understanding of internal control relevant to the audit of the annual financial statements and the arrangements and measures relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's systems.
- evaluate the appropriateness of the accounting policies used by the legal representatives and the reasonableness of accounting estimates and related disclosures made by the legal representatives.
- conclude on the appropriateness of the legal representative's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that there is a material uncertainty, we are required to draw attention in our auditor's report to the related disclosures in the annual financial statements and combined management report, or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures and whether the annual financial statements represent the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the net assets and financial position as well as the results of operations of the Company in accordance with (German) principles of proper accounting.
- evaluate the consistency of the combined management report with the annual financial statements, its legal consistency and the view provided of the Company's position.
- perform audit procedures on the forward-looking information presented by the legal representatives in the combined management report. On the basis of sufficient appropriate audit evidence, we particularly evaluate the significant assumptions underlying the forward-looking information by the legal representatives and we evaluate the correct derivation of forward-looking information from these assumptions. We do not issue an independent opinion on the forward-looking information or on the underlying assumptions. There is a significant unavoidable risk that future events will differ materially from the forward-looking information.

We communicate with those charged with governance among other matters, the planned scope and timing of the audit and significant audit findings, including any deficiencies in internal control, which we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the annual financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report on the annual financial statements unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Comment regarding the unbundling of accounting pursuant to § 6b Act on the Supply of Electricity and Gas (EnWG)

In accordance with § 6b (5) Act on the Supply of Electricity and Gas, as part of our audit of the financial statements, we have also assessed management's compliance with the accounting obligations under to § 6b (3) Act on the Supply of Electricity and Gas, which stipulate that separate accounts are to be maintained for activities described in § 6b (3) Act on the Supply of Electricity and Gas.

Compliance with the accounting obligations under § 6b (3) Act on the Supply of Electricity and Gas lies with the legal representatives of the Company.

Our responsibility is to provide an assessment based on our audit on the compliance with the accounting obligations under § 6b (3) Act on the Supply of Electricity and Gas. We conducted our audit with respect to § 6b Act on the Supply of Electricity and Gas in accordance with the German generally accepted standards for the audit of annual financial statements promulgated by the Institute of Public Auditors in Germany. Those standards require that we plan and perform the audit of compliance with the accounting obligations under § 6b Act on the Supply of Electricity and Gas such that reasonable assurance can be given about whether the valuation and allocation of accounts pursuant to § 6b (3) Act on the Supply of Electricity and Gas were appropriately made and traceable for third parties. The principle of consistency has been observed.

The audit of compliance with the accounting obligations pursuant to § 6b (3) Act on the Supply of Electricity and Gas, which stipulates that separate accounts are to be maintained for activities described in § 6b (3) Act on the Supply of Electricity and Gas, did not reveal any objections.

Other information pursuant to Article 10 of the EU Audit Regulation
We were appointed by the annual general meeting on April 28, 2017 to audit the annual financial statements. We were engaged by the Supervisory Board on June 1 / June 28, 2017. Our total uninterrupted period of engagement as auditor of the annual financial statements covers the period since the business year 2017, we have been engaged continuously as the auditor of Bayer Aktiengesellschaft, Leverkusen.

We confirm that the audit opinions contained in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (additional report to the audit committee).

We have rendered the following services, which have not been specified in the Financial Statements or in the Combined Management Report of the audited Company, in addition to the statutory audit for the audited Company or those controlled by this Company:

> Non-audit Services that in the year under review essentially accounted for the analysis of financial information of business entities, whose divestment was considered (other services).
> The audit of financial and non-financial information outside of the statutory audit (other assurance services).

RESPONSIBLE AUDITOR
The auditor responsible for the audit is Prof. Dr. Frank Beine.

Munich, February 21, 2018

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

Heiner Kompenhans	Professor Frank Beine
German Public Auditor	German Public Auditor

23. MONSANTO INFORMATION

*Selected information in this section was taken unmodified from the annual report on Form 10-K for the fiscal year ended August 31, 2017 filed by Monsanto Company with the U.S. Securities and Exchange Commission (the "**SEC**") on October 27, 2017 (the "**Monsanto 10-K**") (page 1, pages 3-13 and pages 16-110 of the Monsanto 10-K as filed) and from the quarterly report on Form 10-Q for the quarterly period ended February 28, 2018 filed by Monsanto Company with the SEC on January 5, 2018 the "**Monsanto Q1 10-Q**" (page 1 and pages 3-56 of the Monsanto Q1 10-Q as filed) and was not updated by Bayer.*

Monsanto Company's consolidated financial statements for the three-year period ended August 31, 2017 and the notes related thereto are included in "Item 8. Financial Statements and Supplementary Data" extracted from the Monsanto 10-K and set forth in the following on pages M-3-M-103. Monsanto Company's consolidated financial statements as of and for the six months ended February 28, 2018 and the notes related thereto are included in "Item 1. Financial Statements" extracted from Monsanto Q1 10-Q and set forth in the following on pages M-1-M-153.

Certain sections of the Monsanto 10-K and the Monsanto Q1 10-Q have been intentionally omitted as noted in the tables of contents for the Monsanto 10-K and the Monsanto Q1 10-Q, respectively, set forth at the beginning of sections "23.1 Excerpts From Monsanto's Annual Report on Form 10-K For the Fiscal Year Ended August 31, 2017" and "23.2 Excerpts From Monsanto's Quarterly Report on Form 10-Q for the Quarterly Period Ended February 28, 2018."

23.1 Excerpts From Monsanto's Annual Report on Form 10-K For the Fiscal Year Ended August 31, 2017

23.1 Excerpts From Monsanto's Annual Report on Form 10-K For the Fiscal Year Ended August 31, 2017

INTRODUCTION

This Annual Report on Form 10-K is a document that U.S. public companies file with the Securities and Exchange Commission ("SEC") every year. Part II of the Form 10-K contains the business information and financial statements that many companies include in the financial sections of their annual reports. The other sections of this Form 10-K include further information about our business that we believe will be of interest to investors. We hope investors will find it useful to have all of this information in a single document.

The SEC allows us to report information in the Form 10-K by "incorporating by reference" from another part of this Form 10-K, from an amendment to this Form 10-K or from our proxy statement. You will see that information is "incorporated by reference" in various parts of this Form 10-K. An amendment to this Form 10-K or our proxy statement is expected to be available on our website after it is filed with the SEC in December 2017 .

Monsanto was incorporated in Delaware on Feb. 9, 2000, as a subsidiary of Pharmacia Corporation (subsequently converted to Pharmacia LLC). Monsanto includes the operations, assets and liabilities that were previously the agricultural business of Pharmacia. Pharmacia is now a subsidiary of Pfizer Inc.

Unless otherwise indicated, "Monsanto," "the company," "we," "our" and "us" are used interchangeably to refer to Monsanto Company or to Monsanto Company and its subsidiaries, as appropriate to the context.

Unless otherwise indicated, trademarks owned or licensed by Monsanto or its subsidiaries are shown in special type. Unless otherwise indicated, references to " *Roundup* herbicides" mean *Roundup* branded herbicides, excluding all lawn-and-garden herbicides and other glyphosate-based herbicides, and references to " *Roundup* and other glyphosate-based herbicides" exclude all lawn-and-garden herbicides.

Information in this Form 10-K is current as of October 27, 2017 , unless otherwise specified.

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

In this report, and from time to time throughout the year, we share our expectations for our company's future performance. These forward-looking statements include statements about our business plans; the pending transaction with Bayer Aktiengesellschaft ("Bayer"); the potential development, regulatory approval and public acceptance of our products; our expected financial performance, including sales performance, and the anticipated effect of our strategic actions; the anticipated benefits of acquisitions; the outcome of contingencies, such as litigation; domestic or international economic, political and market conditions; and other factors that could affect our future results of operations or financial position, including, without limitation, statements under the captions "Legal Proceedings," "Overview — Executive Summary — Outlook," "Seeds and Genomics Segment," "Agricultural Productivity Segment," "Financial Condition, Liquidity, and Capital Resources" and "Outlook." Any statements we make that are not matters of current reportage or historical fact should be considered forward-looking. Such statements often include words such as "believe," "expect," "anticipate," "intend," "plan," "estimate," "will" and similar expressions. By their nature, these types of statements are uncertain and are not guarantees of our future performance.

Our forward-looking statements represent our estimates and expectations at the time that we make them. However, circumstances change constantly, often unpredictably, and investors should not place undue reliance on these statements. Many events beyond our control will determine whether our expectations will be realized. We disclaim any current intention or obligation to revise or update any forward-looking statements, or the factors that may affect their realization, whether in light of new information, future events or otherwise, and investors should not rely on us to do so. In the interests of our investors, Part I. Item 1A. Risk Factors below sets forth some of the important reasons that actual results may be materially different from those that we anticipate.

PART I

ITEM 1. BUSINESS

Monsanto Company, along with its subsidiaries, is a leading global provider of agricultural products for farmers. Our seeds, biotechnology trait products, herbicides and digital agriculture products provide farmers with solutions that help improve productivity, reduce the costs of farming and produce better foods for consumers and better feed for animals.

We manage our business in two reportable segments: Seeds and Genomics and Agricultural Productivity. We view our Seeds and Genomics segment as the driver for future growth for our company. In our Agricultural Productivity segment, global glyphosate producers have substantial capacity to supply the market, and we expect this global capacity to maintain pressure on margins.

On Sept. 14, 2016, we entered into an agreement and plan of merger (the "Merger Agreement") with Bayer Aktiengesellschaft, a German stock corporation ("Bayer"), and KWA Investment Co., a Delaware corporation and an indirect wholly owned subsidiary of Bayer ("Merger Sub"). The Merger Agreement provides, among other things and subject to the terms and conditions set forth therein, that Merger Sub will be merged with and into the company (the "Merger"), with the company continuing as the surviving corporation and as a wholly owned subsidiary of Bayer. The Merger Agreement provides that each share of common stock of the company, par value $0.01 per share (other than certain shares specified in the Merger Agreement), outstanding immediately prior to the effective time of the Merger will be automatically converted into the right to receive $128.00 in cash, without interest. The obligation of the parties to complete the Merger is subject to customary closing conditions, including, among others, (i) the approval of the adoption of the Merger Agreement by the holders of a majority of the outstanding shares of common stock of the company entitled to vote, which was obtained at a special meeting of the company's shareowners held on Dec. 13, 2016, (ii) the expiration or earlier termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, (iii) the adoption of all approvals necessary for the completion of the Merger by the European Commission under Council Regulation (EC) No. 139/2004, (iv) the receipt of certain other required foreign antitrust approvals, (v) completion of the review process by the Committee on Foreign Investment in the United States ("CFIUS"), (vi) no approvals related to CFIUS or antitrust laws having been made or obtained with the imposition of conditions that, together with Divestiture Actions (as defined in the Merger Agreement) undertaken, would reasonably be expected to have a Substantial Detriment (as defined in the Merger Agreement), (vii) no law, order or injunction having been enacted, issued, promulgated, enforced or entered after Sept. 14, 2016, by a court or other governmental entity of competent jurisdiction that is in effect that enjoins or otherwise prohibits the completion of the Merger, (viii) the accuracy of the representations and warranties contained in the Merger Agreement (subject to certain qualifications) and (ix) the performance by the parties of their respective obligations under the Merger Agreement in all material respects. Additional information about the Merger Agreement is set forth in our Current Report on Form 8-K filed with the SEC on Sept. 20, 2016.

We provide information about our business, including analyses, significant news releases and other supplemental information, on our website: www.monsanto.com. In addition, we make available through our website, free of charge, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after they have been filed with or furnished to the SEC pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. Forms 3, 4 and 5 filed with respect to our equity securities under Section 16(a) of the Exchange Act are also available on our website by the end of the business day after filing. All of these materials can be found under the "Investors" caption. Our website also includes the following corporate governance materials, under the caption "Company — Governance": our Code of Business Conduct, our Code of Ethics for Chief Executive and Senior Financial Officers, our Board of Directors' Charter and Corporate Governance Guidelines and charters of our Board committees. These materials are also available on paper. Any shareowner may request them by contacting the Office of the General Counsel, Monsanto Company, 800 N. Lindbergh Blvd., St. Louis, Missouri, 63167. Information on our website does not constitute part of this report.

A description of our business follows.

SEEDS AND GENOMICS SEGMENT

Through our Seeds and Genomics segment, we produce leading seed brands, including *DEKALB* , *Asgrow* , *Deltapine* , *Seminis* and *De Ruiter,* and we develop biotechnology traits that assist farmers in controlling insects and weeds and digital agriculture products to assist farmers in decision making. We also provide other seed companies with technology and genetic material for their seed brands. The tabular information about net sales of our seeds and

traits that appears in Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) — Seeds and Genomics Segment — is incorporated herein by reference.

Major Products	Applications	Major Brands
Germplasm	Row crop seeds: Corn hybrids and foundation seed Soybean varieties and foundation seed Cotton varieties, hybrids and foundation seed Other row crop varieties and hybrids, such as canola	*DEKALB* , *Channel* for corn *Asgrow* for soybeans *Deltapine* for cotton
	Vegetable seeds: Open field and protected-culture seed for tomato, pepper, melon, cucumber, squash, beans, broccoli, onions and lettuce, among others	*Seminis* and *De Ruiter* for vegetable seeds
Biotechnology traits (1)	Enable crops to protect themselves from borers and rootworm in corn, certain lepidopteran insects in soybeans, and leaf- and boll-feeding worms in cotton, reducing the need for applications of insecticides	*SmartStax, YieldGard, YieldGard VT Triple, VT Triple PRO* and *VT Double PRO* for corn; *Intacta RR2 PRO* for soybeans; *Bollgard* and *Bollgard II* for cotton
	Enable crops, such as corn, soybeans, cotton and canola, to be tolerant of *Roundup* branded and other glyphosate-based herbicides	*Roundup Ready* and *Roundup Ready 2 Yield* (soybeans only)
	Enable cotton and soybean crops to be tolerant of dicamba herbicides	*Roundup Ready 2 Xtend* for soybeans and *Bollgard II XtendFlex* for cotton

(1) Including stacked-trait products, which are single-seed products in which two or more traits are combined.

Distribution of Products

We have a worldwide distribution and sales and marketing organization for our seeds and traits. We sell our products under Monsanto brands and license technology and genetic material to others for sale under their own brands. Through distributors, independent retailers and dealers, agricultural cooperatives and agents, we market our *DEKALB* , *Asgrow* and *Deltapine* branded germplasm to farmers in every agricultural region of the world. In the United States, we market regional seed brands under our American Seeds, LLC and Channel Bio, LLC businesses to farmers directly, as well as through dealers, agricultural cooperatives and agents. In countries where they are approved for sale, we market and sell our trait technologies with our branded germplasm, pursuant to license agreements with our farmer customers. In Brazil, Argentina and Paraguay, we have implemented a point-of-delivery, grain-based payment system. We contract with grain handlers to collect applicable trait fees when farmers deliver grain for which trait fees have not already been paid. In addition to selling our products under our own brands, we license a broad package of germplasm and trait technologies to large and small seed companies in the United States and certain international markets. Those seed companies in turn market our trait technologies in their branded germplasm; they may also market our germplasm under their own brand name. Our vegetable seeds are predominantly marketed under either the *Seminis* or *De Ruiter* brand in more than 150 countries either directly to farmers or through distributors, independent retailers and dealers, agricultural cooperatives, plant raisers and agents.

Competition

The global market for the products of our Seeds and Genomics segment is competitive, and the competition has intensified. Both our row crops and our vegetable seed businesses compete with numerous multinational agrichemical and seed marketers globally and with hundreds of smaller companies regionally. Most of our seed competitors in row crops are also licensees of our germplasm or biotechnology traits, and a few of our vegetable seed business competitors have licensed biotech traits for sweet corn or genetic improvements through advanced breeding. In

certain countries, we also compete with government-owned seed companies. Our biotechnology traits compete as a system with other practices, including the application of agricultural chemicals, and traits developed by other companies. Genome editing technology, application of emerging data sciences capabilities, and other advancements in breeding technology may enable potentially disruptive improvements in genetic performance by competitors or new market entrants. Our weed- and insect-control systems compete with chemical and seed products produced by other agrichemical and seed marketers. Competition for the discovery of new traits based on biotechnology or genomics is likely to come from major global agrichemical companies, smaller biotechnology research companies and institutions, state-funded programs and academic institutions. Enabling technologies to enhance biotechnology trait development may also come from academic researchers and biotechnology research companies. Competitors using our technology outside of license terms and farmers who save seed from one year to the next also affect competitive conditions.

Product performance (in particular, crop vigor and yield for our row crops and quality for our vegetable seeds), customer support and service, intellectual property rights and protection, product availability and planning and price are important elements of our market success in seeds. In addition, distributor, retailer and farmer relationships are important in the United States and many other countries. The primary factors underlying the competitive success of traits are performance and commercial viability; timeliness of introduction; value compared with other practices and products; market coverage; service provided to distributors, retailers and farmers; governmental approvals; value capture; public acceptance; and environmental characteristics.

Patents, Trademarks and Licenses

In the United States and many foreign countries, we hold a broad business portfolio of patents, trademarks and licenses that provide intellectual property protection for our seeds and genomics-related products and processes. Monsanto routinely obtains patents and/or plant variety protection for its breeding technology, commercial varietal seed products and for the parents of its commercial hybrid seed products. We also routinely obtain registrations for commercial seed products in registration countries, as well as Plant Variety Protection Act Certificates in the United States and equivalent plant breeders' rights in other countries. In soybeans, while our patent coverage on the first generation *Roundup Ready* trait for soybeans has expired, most *Roundup Ready* soybeans in the U.S. are protected by utility patents covering specific varieties. In addition, most of our customers and licensees are choosing our second generation *Roundup Ready 2 Yield* trait for soybeans with patent coverage that extends into the next decade. In Brazil and Argentina, farmers are adopting our next generation *Intacta RR2 PRO* soybean that also has patent coverage extending into the next decade. Patents on our next-generation herbicide trait which confers dicamba tolerance extend into the next decade. In corn, patent coverage on our first generation *YieldGard* trait has expired; however, most farmers have already upgraded to next generation branded corn traits with patent coverage extending into the next decade. In cotton, most growers globally are already using our second generation traits with patent coverage extending into the next decade.

We broadly license technology and patents to other parties. For example, we have licensed the *Roundup Ready* trait in soybean, corn, canola and cotton seeds, the *YieldGard* traits in corn and the *Intacta RR2 PRO* and *Roundup Ready 2 Xtend* traits in soybeans to a wide range of commercial entities and in some cases academic institutions. We also hold licenses from other parties relating to certain products and processes. For example, we have obtained licenses to certain technologies that we use to produce *Roundup Ready* seeds and *SmartStax* corn. These licenses generally last for the lifetime of the applicable patents.

We own trademark registrations and file trademark applications for the names and for many of the designs used on branded products around the world. Important company trademarks include *Roundup Ready, Bollgard, YieldGard, Roundup Ready 2 Yield, Roundup Ready 2 Xtend, Intacta RR2 PRO, VT Double PRO* and *SmartStax* for traits; *Acceleron* for seed treatment products; *DEKALB* , *Asgrow* and *Deltapine* for row crop seeds; and *Seminis* and *De Ruiter* for vegetable seeds.

Raw Materials and Energy Resources

In growing locations throughout the world, we produce directly or contract with third-party growers for corn seed, soybean seed, vegetable seeds, cotton seed, canola seed and other seeds. The availability of seed and the cost of seed production depend primarily on seed yields, weather conditions, grower contract terms and commodity prices. Where practical, we seek to manage commodity price fluctuations through the use of futures contracts and other hedging instruments. Where practicable, we attempt to minimize weather risks by producing seed at multiple growing locations and under irrigated conditions. Our Seeds and Genomics segment also purchases the energy we need to process our seed; these energy purchases are managed in conjunction with our Agricultural Productivity segment.

AGRICULTURAL PRODUCTIVITY SEGMENT

Through our Agricultural Productivity segment, we manufacture *Roundup* brand herbicides and other herbicides and provide lawn-and-garden herbicide products for the residential market. The tabular information about net sales of agricultural productivity products that appears in Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) — Agricultural Productivity Segment — is incorporated by reference herein.

Major Products	Applications	Major Brands
Herbicides	Nonselective agricultural and residential lawn and garden applications for weed control	*Roundup* branded products
	Selective agricultural applications for weed control	*XtendiMax* Herbicide with *VaporGrip* Technology

Distribution of Products

We have a worldwide distribution and sales and marketing organization for our agricultural productivity products. In some world areas, we use the same distribution and sales and marketing organization for our agricultural productivity products as for our seeds and traits. In other world areas, we have separate distribution and sales and marketing organizations for our agricultural productivity products. We sell our agricultural productivity products through distributors, independent retailers and dealers and agricultural cooperatives. In some cases outside the United States, we sell such products directly to farmers. We also sell certain of the chemical intermediates of our agricultural productivity products to other major agricultural chemical producers, who then market their own branded products to farmers. Certain agricultural productivity products for lawn-and-garden use are marketed through The Scotts Miracle-Gro Company ("Scotts").

Competition

We compete with numerous major global manufacturing companies for sales of agricultural herbicides. Competition from local or regional companies may also be significant. Global glyphosate producers have substantial capacity to supply the market, and we expect this global capacity to affect margins. Launch of dicamba-tolerant crop systems and other multiple mode of action herbicide systems is expected to broaden the competitive landscape with new competitive dynamics. Our lawn-and-garden business has fewer than five significant national competitors and a larger number of regional competitors in the United States. The largest market for our lawn-and-garden herbicides is the United States.

Competitive success in agricultural productivity products depends on price, product performance, the scope of solutions offered to farmers, market coverage, product availability and planning, and the service provided to distributors, retailers and farmers. Our lawn-and-garden herbicides compete on product performance, price and the brand value associated with our trademark *Roundup* . For additional information on competition for our agricultural herbicides, see Item 7 — MD&A — Outlook — Agricultural Productivity, which is incorporated by reference herein.

Patents, Trademarks, Licenses, Franchises and Concessions

We also rely on patent protection for the Agricultural Productivity segment of our business. Patents covering glyphosate, an active ingredient in *Roundup* branded herbicides, have expired in the United States and all other countries. However, we have multiple patents on different glyphosate formulations and manufacturing processes in the United States and other countries with varying expiration dates. We have obtained licenses to chemicals used to make *Harness* herbicides and hold trademark registrations for the brands under which our chemistries are sold. The most significant trademark in this segment is *Roundup* . We own trademark registrations for numerous variations of *Roundup* such as for *Roundup WeatherMAX.*

We hold (directly or by assignment) numerous phosphate mineral leases from the U.S. government, the state of Idaho and private parties. None of these leases are material individually, but are significant in the aggregate because elemental phosphorus is a key raw material for the production of glyphosate-based herbicides. The phosphate mineral leases have varying terms. The leases obtained from the U.S. government are of indefinite duration, subject to the modification of lease terms at 20-year intervals.

Environmental Matters

Our operations are subject to environmental laws and regulations in the jurisdictions in which we operate. Some of these laws restrict the amount and type of emissions that our operations can release into the environment. Other laws, such as the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 *et seq.* (Superfund), can impose liability for the entire cost of cleanup on any former or current site owners or operators or any parties who sent waste to these sites, without regard to fault or to the lawfulness of the original disposal. These laws and regulations may be amended from time to time; they may become more stringent. We are committed to long-term environmental protection and compliance programs that reduce and monitor emissions of hazardous materials into the environment, and to the remediation of identified existing environmental concerns. Although the costs of our compliance with environmental laws and regulations cannot be predicted with certainty, such costs are not expected to have a material adverse effect on our earnings or competitive position. In addition to compliance obligations associated with our operations, under the terms of our Sept. 1, 2000, Separation Agreement with Pharmacia (the Separation Agreement), we are required to indemnify Pharmacia for certain liabilities it may have for environmental remediation or other environmental responsibilities that are primarily related to Pharmacia's former chemical and agricultural businesses. For information regarding certain environmental proceedings, see Item 3 — Legal Proceedings. See also information regarding environmental liabilities, appearing in Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies , which is incorporated herein by reference.

Raw Materials and Energy Resources

We are a significant purchaser of basic and intermediate raw materials. Typically, we purchase major raw materials and energy through long-term contracts with multiple suppliers. Certain important raw materials are supplied by a few major suppliers. We expect the markets for our raw materials to remain balanced, though pricing may be volatile given the current state of the global economy. Energy is available as required, but pricing is subject to market fluctuations. Where practical, we seek to manage commodity price fluctuations through the use of futures contracts and other hedging instruments.

Our proprietary technology is used in various global locations to produce the catalysts used in various intermediate steps in the production of glyphosate. We believe capacity is sufficient for our requirements and adequate safety stock inventory reduces the risks associated with production outages. We manufacture and purchase disodium iminodiacetic acid, a key ingredient in the production of glyphosate, and purchase chlorine from limited major suppliers. We manufacture almost all of our global supply of elemental phosphorus, a key raw material for the production of *Roundup* herbicides. We have multiple mineral rights which, subject to obtaining and maintaining appropriate mining permits, we believe will provide a long term supply of phosphate ore to meet our needs into the foreseeable future. As part of the ongoing course of operating our phosphorus production, we are required to periodically obtain permits for new mining operations.

RESEARCH AND DEVELOPMENT

Monsanto's expenses for research and development were $1,607 million in fiscal 2017 , $1,512 million in fiscal 2016 and $ 1,580 million in fiscal 2015 .

SEASONALITY AND WORKING CAPITAL; BACKLOG

For information on seasonality and working capital and backlog practices, see information in Item 7 — MD&A — Financial Condition, Liquidity and Capital Resources, which is incorporated herein by reference.

EMPLOYEE RELATIONS

As of Aug. 31, 2017 , we employed approximately 20,500 regular employees worldwide and approximately 2,800 temporary employees. The number of temporary employees varies greatly during the year because of the seasonal nature of our business. We believe that relations between Monsanto and its employees are satisfactory. For additional information on employee relations, see Item 8 — Financial Statements and Supplementary Data — Note 5 — Restructuring .

CUSTOMERS

In 2017 , our four largest U.S. distributors and their affiliates represented, in the aggregate, 24 percent of our worldwide net sales and 43 percent of our U.S. net sales. During 2017 , one major U.S. distributor and its affiliates, WinField Solutions, LLC, represented 11 percent of the worldwide net sales for our Seeds and Genomics segment and 19 percent of the U.S. net sales for our Seeds and Genomics segment.

INTERNATIONAL OPERATIONS

See Item 1A under the heading " *Our operations outside the United States are subject to special risks and restrictions, which could negatively affect our results of operations and profitability,* " and Item 8 — Financial Statements and Supplementary Data — Note 25 — Segment and Geographic Data , which are incorporated herein by reference. Approximately 44 percent of Monsanto's sales, including 41 percent of our Seeds and Genomics segment sales and 53 percent of our Agricultural Productivity segment sales, originated from our legal entities outside the United States during fiscal year 2017 .

SEGMENT AND GEOGRAPHIC DATA

For information on segment and geographic data, see Item 8 — Financial Statements and Supplementary Data — Note 25 — Segment and Geographic Data , which is incorporated by reference herein.

ITEM 1A. RISK FACTORS

Risks Related to Our Business

Competition in seeds and traits and agricultural chemicals has significantly affected, and will continue to affect, our sales.

Many companies engage in research and development of plant biotechnology and breeding and agricultural chemicals, and speed in getting a new product to market can be a significant competitive advantage. Our competitors' success could render our existing products less competitive, resulting in reduced sales compared to our expectations or past results. We expect to see increasing competition from agricultural biotechnology firms and from major agrichemical and seed companies. We also expect to face continued competition for our *Roundup* herbicides and selective herbicides product lines, which could be influenced by trade and industrial policies of foreign countries. The extent to which we can realize cash and gross profit from our business will depend on our ability to: control manufacturing and marketing costs without adversely affecting sales; predict and respond effectively to competitor products, pricing and marketing; provide marketing programs meeting the needs of our customers and of the farmers who are our end users; maintain an efficient distribution system; and develop new products and services with features attractive to our end users.

Efforts to protect our intellectual property rights and to defend claims against us can increase our costs and will not always succeed; any failures could adversely affect sales and profitability or restrict our ability to do business.

Intellectual property rights are crucial to our business, particularly our Seeds and Genomics segment. We endeavor to obtain and protect our intellectual property rights in jurisdictions in which our products are produced or used and in jurisdictions into which our products are imported. Different nations may provide limited rights and inconsistent durations of protection for our products. We may be unable to obtain protection for our intellectual property in key jurisdictions. Even if protection is obtained, competitors, farmers, or others in the chain of commerce may raise legal challenges to our rights or illegally infringe on our rights, including through means that may be difficult to prevent or detect. For example, the practice by some farmers of saving seeds from non-hybrid crops (such as soybeans, canola and cotton) containing our biotechnology traits has prevented and may continue to prevent us from realizing the full value of our intellectual property, particularly outside the United States. In addition, because of the rapid pace of technological change, and the confidentiality of patent applications in some jurisdictions, competitors may be issued patents from applications that were unknown to us prior to issuance. These patents could reduce the value of our commercial or pipeline products or, to the extent they cover key technologies on which we have unknowingly relied, require that we seek to obtain licenses or cease using the technology, no matter how valuable to our business. We cannot assure we would be able to obtain such a license on acceptable terms. The extent to which we succeed or fail in our efforts to protect our intellectual property will affect our costs, sales and other results of operations.

We are subject to extensive regulation affecting our seed biotechnology and agricultural products and our research and manufacturing processes, which affects our sales and profitability.

Regulatory and legislative requirements affect the development, manufacture and distribution of our products, including the testing and planting of seeds containing our biotechnology traits and the import of crops grown from those seeds, and non-compliance can harm our sales and profitability. Obtaining and maintaining permits for mining and production and obtaining and maintaining testing, planting and import approvals for seeds or biotechnology traits can be time-consuming and costly, with no guarantee of success. In addition, regulatory and legislative requirements may change over time which can also affect our sales and profitability. The failure to receive necessary permits or

approvals could have near- and long-term effects on our ability to produce and sell some current and future products. Planting approvals may also include significant regulatory requirements that can limit our sales. Sales of our traits can be affected in jurisdictions where planting has been approved if we have not received approval for the import of crops containing such biotechnology traits by key import markets. Sales of our traits without having approval for the import of crops containing such biotechnology traits by an import market could lead to disruption of that market, and we may face claims of potential liability. Concern about unintended but unavoidable trace amounts (sometimes called "low-level presence") of commercial biotechnology traits in conventional (non-biotechnology) seed, or in the grain or products produced from conventional or organic crops, among other things, could lead to export disruption and increased regulation or legislation, which may include: liability transfer mechanisms that may include financial protection insurance; possible restrictions or moratoria on testing, planting or use of biotechnology traits; and requirements for labeling and traceability, which requirements may cause food processors and food companies to avoid biotechnology and select non-biotechnology crop sources and can affect farmer seed purchase decisions and the sale of our products. Further, the detection of the presence of biotech traits not approved in the country of planting (sometimes called "adventitious presence") may affect seed availability or result in export disruption and compliance actions, such as crop destruction or product recalls. Legislation encouraging or discouraging the planting of specific crops can also harm our sales. In addition, concern and claims that increased use of glyphosate-based herbicides or biotechnology traits increases the potential for the development of glyphosate-resistant weeds or pests resistant to our traits could result in restrictions on the use of glyphosate-based herbicides or seeds containing our traits or otherwise reduce our sales.

The degree of public understanding and acceptance or perceived public acceptance of our biotechnology and other agricultural products can affect our sales and results of operations by affecting planting approvals, regulatory requirements and customer purchase decisions.

Although all of our products go through rigorous testing, some opponents of our technology actively raise public concern about the potential for adverse effects of our products on human or animal health, other plants and the environment. The potential for low-level or adventitious presence of commercial biotechnology traits in conventional seed, or in the grain or products produced from conventional or organic crops, is another factor that can affect general public acceptance of these traits. Public concern can affect the timing of, and whether we are able to obtain, government approvals for our products. Even after approvals are granted, public concern may lead to increased regulation or legislation or litigation against government regulators concerning prior regulatory approvals, which could affect our sales and results of operations, including by affecting planting approvals, and which may adversely affect sales of our products to farmers, including due to their concerns about available markets for the sale of crops or other products including those derived from biotechnology. In addition, opponents of agricultural biotechnology have attacked farmers' fields and facilities used by agricultural biotechnology companies, and may launch future attacks against farmers' fields and our field testing sites and research, production, or other facilities, which could affect our sales and our costs.

The successful development and commercialization of our pipeline products will be necessary for our growth.

We use advanced breeding technologies to produce hybrids and varieties with superior performance in farmers' fields, and we use biotechnology to introduce traits that enhance specific characteristics of our crops. We use advanced analytics, software tools, mobile communications and new planting and monitoring equipment to provide agronomic recommendations to growers. We also research biological products to protect farmers' crops from pests and diseases and enhance plant productivity and fertility, and we research chemical products to protect against crop pests. There are a number of reasons why new product concepts in these areas may be abandoned, including greater than anticipated development costs, technical difficulties, regulatory obstacles, competition, inability to prove the original concept, lack of demand and the need to divert focus, from time to time, to other initiatives with perceived opportunities for better returns. The processes of breeding, biotechnology trait discovery and development and trait integration are lengthy, and a very small percentage of the genes and germplasm we test is selected for commercialization. The length of time and the risk associated with the breeding and biotech pipelines are interlinked because both are required as a package for commercial success in markets where biotech traits are approved for growers. In countries where biotech traits are not approved for widespread use, our sales depend on our germplasm. Commercial success frequently depends on being the first company to the market, and many of our competitors are also making considerable investments in similar new biotechnology products, improved germplasm products, biological and chemical products and agronomic recommendation products. Consequently, if we are not able to fund extensive research and development activities and deliver new products to the markets we serve on a timely basis, our growth and operations will be harmed.

Adverse outcomes in legal proceedings could subject us to substantial damages and adversely affect our results of operations and profitability.

From time to time, we have been involved in major lawsuits concerning intellectual property, biotechnology, torts, contracts, antitrust allegations and other matters, as well as governmental inquiries and investigations. Pending and future lawsuits and governmental inquiries and investigations may have outcomes that may be significant to our results of operations in the period recognized or limit our ability to engage in our business activities. While we have insurance related to our business operations, it may not apply to or fully cover any liabilities we incur as a result of these lawsuits. In addition, pursuant to the Separation Agreement, we are required to indemnify Pharmacia for certain liabilities that are primarily related to Pharmacia's former chemical and agricultural businesses. We have recorded reserves for potential liabilities where we believe the liability to be probable and reasonably estimable. However, our actual costs may be materially different from this estimate. The degree to which we may ultimately be responsible for the particular matters reflected in the reserve is uncertain.

Our operations outside the United States are subject to special risks and restrictions, which could negatively affect our results of operations and profitability.

We engage in manufacturing, seed production, research and development and sales in many parts of the world. Although we have operations in virtually every region, our sales outside the United States in fiscal year 2017 were principally to customers in Brazil, Argentina, Canada and Mexico. Accordingly, developments in those parts of the world generally have a more significant effect on our operations than developments in other places. Our operations outside the United States are subject to special risks and restrictions, including: fluctuations in currency values and foreign-currency exchange rates; exchange control regulations; changes in local political or economic conditions; governmental pricing directives; import and trade restrictions; import or export licensing requirements and trade policy; restrictions on the ability to repatriate funds; and other potentially detrimental domestic and foreign governmental practices or policies affecting U.S. companies doing business abroad. Acts of terror or war may impair our ability to operate in particular countries or regions, and may impede the flow of goods and services between countries. Customers in weakened economies may be unable to purchase our products, or it could become more expensive for them to purchase imported products in their local currency or sell their commodity at prevailing international prices, and we may be unable to collect receivables from such customers. Further, changes in exchange rates may affect our net income, the book value of our assets outside the United States and our shareowners' equity.

We may pursue transactions that have risks and uncertainties that could adversely affect our results of operations and financial condition.

We have completed acquisitions, investments and other transactions and may pursue additional transactions. These transactions involve risks and uncertainties. We must fit them into our long-term growth strategies to generate sufficient value to justify their cost. These transactions also present other challenges, including geographical coordination, personnel integration and retention of key management personnel, systems integration and the reconciliation of corporate cultures. Those operations could divert management's attention from our business or cause a temporary interruption of or loss of momentum in our business and the loss of key personnel. These transactions may also cause us to assume liabilities, such as ongoing lawsuits, and may subject us to litigation. In addition, we may incur debt in the future to fund potential acquisitions or investments, or for other purposes. If we incur additional debt, it may increase our leverage and cost of borrowing and potentially lower our credit ratings.

Fluctuations in commodity prices can increase our costs and decrease our sales.

We contract production with multiple growers at fair value and retain the seed in inventory until it is sold. These purchases constitute a significant portion of the manufacturing costs for our seeds. Additionally, our chemical manufacturing operations use chemical intermediates and energy, which are subject to increases in price as the costs of oil and natural gas increase. Accordingly, increases in commodity prices may negatively affect our cost of goods sold or cause us to increase seed or chemical prices, which could adversely affect our sales. Where practical, we use hedging strategies and raw material supply agreements that contain terms designed to mitigate the risk of short-term changes in commodity prices. However, we are unable to avoid the risk of medium- and long-term increases. Farmers' incomes are also affected by commodity prices; as a result, fluctuations in commodity prices could have an impact on farmers' purchasing decisions and negatively affect their ability and decisions to purchase our seed and chemical products.

Compliance with quality controls and regulations affecting our manufacturing may be costly, and failure to comply may result in decreased sales, penalties and remediation obligations.

Because we use hazardous and other regulated materials in our manufacturing processes and engage in mining operations, we are subject to operational risks, including the potential for unintended environmental contamination, which could lead to potential personal injury claims, remediation expenses and penalties. Should a catastrophic event occur at any of our facilities, we could face significant reconstruction or remediation costs, penalties, third party liabilities and loss of production capacity, which could affect our sales. In addition, lapses in quality or other manufacturing controls could affect our sales and result in claims for defective products.

Our ability to match our production to the level of product demanded by farmers or our licensed customers has a significant effect on our sales, costs and growth potential.

Farmers' decisions are affected by market, economic and weather conditions that are not known in advance. Failure to provide distributors with enough inventories of our products will reduce our current sales. However, product inventory levels at our distributors may reduce sales in future periods, as those distributor inventories are worked down. In addition, inadequate liquidity of distributors could affect distributors' abilities to pay for our products and, therefore, affect our sales or our ability to collect on our receivables. Global glyphosate producers have the capacity to supply the market, but global dynamics including demand, environmental regulation compliance and raw material availability can cause fluctuations in the supply and the price of generic products. We expect the fluctuation in global production will impact the selling price and margin of *Roundup* brands and our third-party sourcing business. We depend on the availability of certain key raw materials used in our glyphosate production from single or limited major suppliers. If a major disruption in key raw materials were to occur, it could have a significant effect on our production, sales and costs.

Current levels of indebtedness, seasonal working capital needs and certain restrictions in the Merger Agreement may reduce our financial flexibility and the amount of funds available for other business purposes and may adversely affect our financial condition.

Our current level of indebtedness and related debt covenants, seasonal working capital needs and certain restrictions in the Merger Agreement could cause adverse effects, including: reducing funds available; limiting access to short- and long-term debt financing; increasing the cost of short- and long-term debt financing; weakening our short- and long-term credit ratings; and creating more restrictive financial covenants that limit financial and operating flexibility. The Merger Agreement contains certain restrictions on our ability to incur additional indebtedness and take other actions, which could also limit or increase the cost of the short- and long-term financing options available. In addition, we regularly extend credit to our customers in certain areas of the world to enable them to acquire crop production products and seeds at the beginning of their growing seasons. Due to these credit practices as well as the seasonality of our sales and costs, we may need to issue short-term debt at certain times of the year to fund cash flow requirements. Levels of short-term debt may be greater to the extent that we are unable to collect customer receivables when due.

Our results of operations and financial condition may be significantly affected by disruptions caused by weather, natural disasters, accidents and security breaches, including cybersecurity incidents.

Weather and field conditions can adversely affect the timing of crop planting, acreage planted, crop yields and commodity prices. In turn, seed production volumes, quality and cost may also be adversely affected which could impact our sales and profitability. Natural disasters or industrial accidents could also affect our facilities, or those of our major suppliers or major customers, which could affect our costs and our ability to meet supply requirements. One of our major U.S. glyphosate manufacturing facilities is located in Luling, Louisiana, which is an area subject to hurricanes. In addition, several of our key raw material and utility suppliers have production assets in the U.S. Gulf Coast region and are also susceptible to damage risk from hurricanes. Hawaii and Puerto Rico, which are also subject to hurricanes, are major seeds and traits locations for our pipeline products. Security breaches and disruptions to our information technology systems could seriously harm our operations. We utilize and critically rely upon information technology systems in all aspects of our business, including increasingly large amounts of data to support our products and advance our research and development pipeline. We have experienced cybersecurity attacks and IT system outages that have not had a material impact on our financial results, but it is not possible to predict the impact of future incidents. Failure to effectively prevent, detect and recover from the increasing number and sophistication of information security threats could result in theft, misuse, modification and destruction of information, including trade secrets and confidential business information, and cause business disruptions, delays in research and development, reputational damage, and third-party claims, which could significantly affect our results of operations and financial condition.

Risks Related to the Merger

The pendency of the Merger with Bayer could adversely affect our business, financial results and/or operations.

The pendency of the Merger could cause disruptions and create uncertainty surrounding our business. These uncertainties may impair our ability to attract, retain and motivate key personnel until the transaction is consummated, and could cause suppliers, customers and other counterparties to change existing business relationships. Changes to existing business relationships, including termination or modification, could negatively affect our revenues, earnings and cash flow, as well as the market price of our common stock.

We are also subject to restrictions on the conduct of our business prior to the consummation of the transaction as provided in the Merger Agreement, including, among other things, restrictions on our ability to acquire other businesses and assets, sell, transfer or license our assets, make investments, enter into certain contracts, repurchase or issue securities, pay dividends in excess of certain thresholds, make capital expenditures, undertake certain licenses or other transactions relating to intellectual property, amend our organizational documents and incur indebtedness. These restrictions could prevent or delay the pursuit of strategic corporate or business opportunities, result in our inability to respond effectively and/or timely to competitive pressures, industry developments, developments relating to our customers and suppliers, and future opportunities, and may as a result or otherwise have a significant negative impact on our business, results of operations and financial condition.

In addition, management and financial resources have been diverted and will continue to be diverted towards the completion of the Merger. The company has incurred, and expects to incur, significant costs, expenses and fees for professional services and other transaction costs in connection with the transaction. These costs could adversely affect the financial condition and results of operation of the company prior to the consummation of the transaction.

We may not complete the Merger with Bayer within the time frame we anticipate or at all, which could have an adverse effect on our business, financial results and/or operations.

There can be no assurance that the Merger with Bayer will occur. Completion of the Merger is subject to a number of closing conditions, including receipt of required regulatory approvals. We can provide no assurance that all required approvals will be obtained or that all closing conditions will be satisfied, and, if all required approvals are obtained and the closing conditions are satisfied, we can provide no assurance as to the terms, conditions and timing of such approvals or the timing of the completion of the Merger.

If the transaction is not consummated within the expected time frame or at all, we may be subject to a number of material risks. The price of our common stock may decline to the extent that current market prices reflect a market assumption that the Merger will be completed. In addition, some costs related to the Merger must be paid whether or not the Merger is completed, and we have incurred, and will continue to incur, significant costs, expenses and fees for professional services and other transaction costs in connection with the pending Merger, as well as the direction of management resources towards the Merger, for which we will have received little or no benefit if the closing of the Merger does not occur. Many of the expenses, fees and costs will be payable by us even if the Merger is not completed and may relate to activities that we would not have undertaken other than in connection with the Merger. We may also experience negative reactions from our shareowners and other investors, employees, suppliers, customers, distributors, licensors and licensees. If the Merger Agreement is not consummated for any reason, there can be no assurance that any other transaction acceptable to us will be offered or that our business, prospects or results of operations will not be adversely affected.

In addition, if the Merger is not completed, our Board of Directors may review and consider various alternatives available to us, including, among others, continuing as a public company with no material changes to our business or capital structure, seeking an acquisition or attempting to implement another transaction that is similar to the Merger. These alternative transactions may involve various additional risks to our business, including, among others, distraction of our management team and associated expenses as described above in connection with the pending Merger, and risks and uncertainties related to our ability to consummate any such alternative transaction and other variables which may adversely affect our operations.

ITEM 2. PROPERTIES

We and our subsidiaries own or lease manufacturing facilities, laboratories, seed production and other agricultural facilities, office space, warehouses and other land parcels in North America, South America, Europe, Asia, Australia and Africa. Our general offices, which we own, are located in St. Louis County, Missouri. These office and research facilities are principal properties.

Additional principal properties used by the Seeds and Genomics segment include seed production and conditioning plants at Boone, Grinnell and Williamsburg, Iowa; Constantine, Michigan; Enkhuizen, Netherlands; Illiopolis, Waterman and Farmer City, Illinois; Remington, Indiana; Kearney and Waco, Nebraska; Oxnard, California; Peyrehorade and Trèbes, France; Rojas, Argentina; Sinesti, Romania; Nagyigmand, Hungary; Uberlândia and Petrolina, Brazil; Thobontle, South Africa; and Hyderabad, India, and research sites at Ankeny, Iowa; Maui, Molokai and Oahu, Hawaii; and Woodland, California. We own all of these properties, except some sites in Hawaii. The Seeds and Genomics segment also uses seed foundation and production facilities, breeding facilities, and genomics and other research laboratories at various other locations worldwide.

The Agricultural Productivity segment has principal chemicals manufacturing facilities at Antwerp, Belgium; Camaçari, Brazil; Luling, Louisiana; Muscatine, Iowa; São José dos Campos, Brazil; Soda Springs, Idaho; Zárate, Argentina; and Rock Springs, Wyoming. We own all of these properties, except the one in Antwerp, Belgium, which is subject to a lease for the land underlying the facility.

We believe that our principal properties are suitable and adequate for their use. Our facilities generally have sufficient capacity for our existing needs and expected near-term growth. Expansion projects are undertaken as necessary to meet future needs. Use of these facilities may vary with seasonal, economic and other business conditions, but none of the principal properties is substantially idle. In certain instances, we have leased portions of sites not required for current operations to third parties.

ITEM 3. LEGAL PROCEEDINGS

We are involved in various legal proceedings that arise in the ordinary course of our business, as well as proceedings that we have considered to be material under SEC regulations. These include proceedings to which we are party in our own name and proceedings to which our former parent, Pharmacia LLC, or its former subsidiary, Solutia Inc., is a party but that we manage and for which we are responsible pursuant to certain indemnification agreements. Information regarding certain material proceedings and the possible effects on our business of proceedings we are defending is disclosed in Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies — under the subheading “Environmental and Litigation Liabilities — Litigation” and is incorporated by reference herein.

PART II

ITEM 6. SELECTED FINANCIAL DATA

SELECTED FINANCIAL DATA

(Dollars in millions, except per share amounts and ratios)	Year Ended Aug. 31,				
	2017 (4)	2016 (5)	2015 (6)	2014 (7)	2013
Operating Results:					
Net Sales	**$ 14,640**	$ 13,502	$ 15,001	$ 15,855	$ 14,861
Income from Operations	**3,212**	2,375	3,523	4,075	3,570
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**2,260**	1,296	2,297	2,749	2,514
Income on Discontinued Operations	**13**	17	28	13	11
Net Income Attributable to Monsanto Company	**2,260**	1,336	2,314	2,740	2,482
Basic Earnings per Share Attributable to Monsanto Company:					
Income from Continuing Operations	**$ 5.12**	$ 2.98	$ 4.79	$ 5.25	$ 4.63
Income on Discontinued Operations	**0.03**	0.04	0.06	0.03	0.02
Net Income Attributable to Monsanto Company	**5.15**	3.02	4.85	5.28	4.65
Diluted Earnings per Share Attributable to Monsanto Company:					
Income from Continuing Operations	**$ 5.06**	$ 2.95	$ 4.75	$ 5.19	$ 4.58
Income on Discontinued Operations	**0.03**	0.04	0.06	0.03	0.02
Net Income Attributable to Monsanto Company	**5.09**	2.99	4.81	5.22	4.60
Financial Position at End of Period:					
Total Assets (1)	**$ 21,333**	$ 19,736	$ 21,920	$ 21,918	$ 20,651
Working Capital (2)	**2,253**	1,428	5,448	4,563	5,741
Current Ratio (2)	**1.35:1**	1.21:1	2.05:1	1.89:1	2.32:1
Long-Term Debt (1)	**7,254**	7,453	8,429	7,465	2,048
Debt-to-Capital Ratio (3)	**56%**	67%	56%	49%	14%
Other Data:					
Dividends per Share	**$ 2.16**	$ 2.16	$ 2.01	$ 1.78	$ 1.56
Stock Price per Share:					
High	**$ 118.97**	$ 114.26	$ 126.00	$ 128.79	$ 109.33
Low	**$ 97.35**	$ 81.22	$ 89.34	$ 98.84	$ 82.70
End of Period	**$ 117.20**	$ 106.50	$ 97.65	$ 115.65	$ 97.89
Basic Shares Outstanding	**438.8**	442.7	476.9	519.3	533.7
Diluted Shares Outstanding	**443.8**	447.1	481.4	524.9	539.7

(1) Prior period balances have been updated to conform with current period presentation for the adoption of the accounting standard update "Presentation of Debt Issuance Costs" in fiscal year 2015.

(2) Working capital is total current assets less total current liabilities; current ratio represents total current assets divided by total current liabilities. The decrease in other current assets resulting from the adoption of "Balance Sheet Classification of Deferred Taxes" during the third quarter of fiscal year 2016 impacts the comparability of working capital and current ratio compared to the prior periods.

(3) Debt-to-capital ratio is the sum of short-term and long-term debt, divided by total Monsanto Company shareowners' equity, short-term and long-term debt.

(4) The following occurred in fiscal 2017:

- The company recorded $25 million of cost of goods sold expenses and a net reversal of $36 million of previously recognized restructuring charges within operating expenses related to the 2015 Restructuring Plan, with a combined corresponding income tax benefit of $1 million.
- The company recorded $33 million of selling, general and administrative expenses related to environmental and litigation matters, with a corresponding income tax benefit of $13 million.
- The company recorded $222 million of pending Bayer transaction related costs of which $37 million is recorded in other (income) expense, net and $185 million is recorded in pending Bayer transaction related costs within operating expenses, with a corresponding income tax benefit of $83 million.
- Due to losses generated in Argentina as well as uncertainties around the Argentina business, the company evaluated the recoverability of various items on the Statement of Consolidated Financial Position related to the Argentina business and determined an allowance against certain assets was necessary. This resulted in a translation gain recorded in other (income) expense, net of $43 million and a net charge against tax expense of $88 million.
- The company granted a licensee the right to certain corn licenses in Brazil which resulted in revenue of $227 million, with no corresponding income tax provision.
- The company divested its European-based silthiofam seed-treatment chemical business previously reported as part of the Agricultural Productivity segment resulting in a gain of $83 million within other (income) expense, net in the Statement of Consolidated Operations with a corresponding income tax provision of $8 million.

(5) The following occurred in fiscal 2016:
    - The company recorded $67 million of cost of goods sold expenses and $297 million of restructuring charges related to the 2015 Restructuring Plan, with a combined corresponding income tax benefit of $101 million.
    - The company recorded $270 million of selling, general and administrative expenses related to environmental and litigation settlements and a SEC settlement, with a combined corresponding income tax benefit of $103 million.
    - The company recorded a net tax charge of $252 million due to losses generated in Argentina as well as uncertainties around the Argentina business. The company evaluated the recoverability of various items on the Statement of Consolidated Financial Position related to the Argentina business and determined an allowance against certain assets was necessary, which resulted in the net charge to tax expense.
    - The company entered into agreements to license our alfalfa traits and technology to a third party, which resulted in upfront revenue of approximately $210 million accounted for as an exclusive perpetual license, with a corresponding income tax provision of $74 million.
    - The company signed definitive agreements to sell certain manufacturing assets and contribute to a newly-formed joint venture certain intellectual property, real property and tangible assets related to the company's sorghum business resulting in a gain of $157 million recorded in other (income) expense, net, with a corresponding income tax provision of $47 million.
(6) The company recorded $101 million of cost of goods sold expenses related to the 2015 Restructuring Plan, $167 million of selling, general and administrative expenses related to environmental and litigation settlements and a SEC settlement, and $393 million of restructuring expense, with a combined corresponding income tax benefit of $188 million. The company also recorded $274 million of net sales as a result of the sale of a perpetual license to intellectual property, with a corresponding income tax provision of $102 million.
(7) The company recorded $32 million of selling, general and administrative expenses related to legacy environmental settlements, with a corresponding income tax benefit of $12 million.

See Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations — for information regarding the factors that have affected or may affect the comparability of our business results.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

Background

Monsanto Company, along with its subsidiaries, is a leading global provider of agricultural products for farmers. Our seeds, biotechnology trait products, herbicides and digital agriculture products provide farmers with solutions that help improve productivity, reduce the costs of farming and produce better foods for consumers and better feed for animals.

We manage our business in two reporting segments: Seeds and Genomics and Agricultural Productivity. Through our Seeds and Genomics segment, we produce leading seed brands, including *DEKALB* , *Asgrow* , *Deltapine* , *Seminis* and *De Ruiter,* and we develop biotechnology traits that assist farmers in controlling insects and weeds and digital agriculture to assist farmers in decision making. We also provide other seed companies with genetic material and biotechnology traits for their seed brands. Through our Agricultural Productivity segment, we manufacture *Roundup* and *XtendiMax* Herbicide with *VaporGrip* Technology brand herbicides and other herbicides. Approximately 44 percent of our total company sales, including 41 percent of our Seeds and Genomics segment sales and 53 percent of our Agricultural Productivity segment sales, originated from our legal entities outside the United States during fiscal year 2017 .

In the fourth quarter of 2008, we entered into an agreement to divest the animal agricultural products business (the Dairy business). This transaction was consummated on Oct. 1, 2008, and included a 10-year earn-out with potential annual payments being earned by Monsanto if certain revenue levels are exceeded. As a result, financial data for this business has been presented as discontinued operations as outlined below. The Dairy business was previously reported as part of the Agricultural Productivity segment.

This MD&A should be read in conjunction with Monsanto's consolidated financial statements and the accompanying notes. The notes to the consolidated financial statements referred to throughout this MD&A are included in Part II — Item 8 — Financial Statements and Supplementary Data — of this Report on Form 10-K. Unless otherwise indicated, "earnings per share" and "per share" mean diluted earnings per share. Unless otherwise noted, all amounts and analyses are based on continuing operations.

Non-GAAP Financial Measures

MD&A includes financial information prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP"), as well as two other financial measures, EBIT and free cash flow, that are

considered “non-GAAP financial measures.” Generally, a non-GAAP financial measure is a numerical measure of a company’s financial performance, financial position or cash flows that exclude (or include) amounts that are included in (or excluded from) the most directly comparable measure calculated and presented in accordance with GAAP. The presentation of EBIT is intended to supplement investors’ understanding of our operating performance. The presentation of free cash flow information is intended to supplement investors’ understanding of our liquidity. Our EBIT and free cash flow measures may not be comparable to other companies’ EBIT and free cash flow measures. Furthermore, these measures are not intended to replace net income (loss) attributable to Monsanto Company, cash flows, financial position or comprehensive income (loss), as determined in accordance with GAAP.

EBIT is defined as earnings (loss) before interest and taxes. Earnings (loss) is intended to mean net income (loss) attributable to Monsanto Company as presented in the Statements of Consolidated Operations under GAAP. EBIT is an operating performance measure for our two business segments. We believe that EBIT is useful to investors and management to demonstrate the operational profitability of our segments by excluding interest and taxes, which are generally accounted for across the entire company on a consolidated basis. EBIT is also one of the measures used by Monsanto management to determine resource allocations within the company. See Item 8 — Financial Statements and Supplementary Data — Note 25 — Segment and Geographic Data — for a reconciliation of EBIT to net income attributable to Monsanto Company for fiscal years 2017 , 2016 and 2015 .

We also provide information regarding free cash flow, an important liquidity measure for Monsanto. We define free cash flow as the total of net cash provided or required by operating activities less capital expenditures. Prior to the second quarter of fiscal year 2017, we defined free cash flow as the total of net cash provided or required by operating activities and net cash provided or required by investing activities. As this definition varies from other more common definitions of free cash flow, we determined it was appropriate to redefine free cash flow to conform to one of the more typical definitions beginning with the second quarter of fiscal year 2017. The prior period calculations of free cash flow have been restated to conform to the new presentation. Free cash flow does not represent the residual cash flow available for discretionary expenditures. We believe that free cash flow is useful to investors and management as a measure of the ability of our business to generate cash. Once business needs and obligations are met, this cash can be used to reinvest in the company for future growth or to return to our shareowners through dividend payments or share repurchases. Free cash flow is also used as one of the performance measures in determining incentive compensation. See the “Financial Condition, Liquidity and Capital Resources — Cash Flow” section of MD&A for a reconciliation of free cash flow to net cash provided by operating activities and capital expenditures on the Statements of Consolidated Cash Flows.

Executive Summary

Consolidated Operating Results — Net sales increased $1,138 million , or eight percent , in fiscal year 2017 compared to fiscal year 2016 . The primary contributors to the increase were increases in soybean seed and traits, corn seed and traits, cotton seed and traits and agricultural productivity. The net sales increase in soybean seed and traits was primarily driven by increased *Intacta RR2 PRO* soybean penetration in Brazil and Argentina, increased *Roundup Ready 2 XTEND* soybean penetration in the United States, higher volumes in North America resulting from increased acres and favorable currency impacts in Brazil. The net sales increase in corn seed and traits was primarily driven by granting a licensee the right to certain corn licenses in Brazil, higher average net selling prices globally, and favorable currency impacts in Brazil. The net sales increase in cotton seed and traits was primarily driven by higher volume from increased planted acres in the United States and Australia, and share gains coupled with *Bollgard II XtendFlex* cotton penetration in the United States. The increase in agricultural productivity reflects increased volume of *Roundup* and other glyphosate-based herbicides globally, first time *XtendiMax with VaporGrip* Technology dicamba-based herbicide revenue and favorable currency impacts in Brazil. These increases were partially offset by lower average net selling price of *Roundup* and other glyphosate-based herbicides; decreased sales of other herbicides, primarily due to lower average selling prices and absence of sales from our European-based silthiofam seed-treatment chemical business (the “Latitude” business) sold during the second quarter of fiscal 2017; and a net sales decrease in all other crops seeds and traits primarily driven by the absence of revenue earned from license agreements of our alfalfa traits and technology in the third quarter of fiscal 2016.

Net income attributable to Monsanto Company in fiscal year 2017 was $5.09 per share, compared with $2.99 per share in fiscal year 2016 .

Financial Condition, Liquidity and Capital Resources — In fiscal year 2017 , working capital was $2,253 million compared with $1,428 million in fiscal year 2016 , an increase of $825 million . For a detailed discussion of the factors affecting the working capital comparison, see the “Working Capital and Financial Condition” section of the “Financial Condition, Liquidity and Capital Resources” section in this MD&A.

In fiscal year 2017 , net cash provided by operating activities was $3,226 million compared with $2,588 million in fiscal year 2016 . Net cash required by investing activities was $1,107 million in fiscal year 2017 compared with $864 million in fiscal year 2016 . Net cash required by financing activities was $1,966 million in fiscal year 2017 compared with $3,742 million in fiscal year 2016 .

In fiscal year 2017 , capital expenditures were $1,240 million compared with $923 million in fiscal year 2016 , an increase of $317 million . Free cash flow was $1,986 million in fiscal year 2017 compared with $1,665 million in fiscal year 2016 .

For a detailed discussion of the factors affecting the free cash flow comparison, see the “Cash Flow” section of the “Financial Condition, Liquidity and Capital Resources” section in this MD&A.

At Aug. 31, 2017 , our debt-to-capital ratio was 56 percent compared with 67 percent at Aug. 31, 2016 . The decrease was due to decreased commercial paper and Senior Notes at Aug. 31, 2017, compared to Aug. 31, 2016, coupled with an increase in shareowners’ equity as a result of earnings, partially offset by dividends.

During the fiscal year ended Aug. 31, 2017, we divested our Latitude business previously reported as part of the Agricultural Productivity segment for approximately $140 million in cash, subject to customary working capital adjustments. Approximately $85 million , less the carrying amount of assets sold of approximately $2 million , was recognized within other (income) expense, net in the Statement of Consolidated Operations for the fiscal year ended Aug, 31, 2017. The recognition of the remaining $55 million is contingent on silthiofam re-registration within the European Union.

Effective June 15, 2016, we signed definitive agreements to sell certain manufacturing assets and contribute to a newly-formed joint venture certain intellectual property, real property and tangible assets related to the company’s sorghum business. We received a cash payment of $110 million for the sale of certain manufacturing assets and a minority interest in the newly-formed joint venture, which combined resulted in a gain of approximately $157 million in fiscal 2016.

For a detailed discussion see the “Capital Resources and Liquidity” section of the “Financial Condition, Liquidity and Capital Resources” section of this MD&A.

Pending Merger with Bayer — On Sept. 14, 2016, we entered into an agreement and plan of merger (the “Merger Agreement”) with Bayer Aktiengesellschaft, a German stock corporation (“Bayer”), and KWA Investment Co., a Delaware corporation and an indirect wholly owned subsidiary of Bayer (“Merger Sub”). The Merger Agreement provides, among other things and subject to the terms and conditions set forth therein, that Merger Sub will be merged with and into the company (the “Merger”), with the company continuing as the surviving corporation and as a wholly owned subsidiary of Bayer. The Merger Agreement provides that each share of common stock of the company, par value $0.01 per share (other than certain shares specified in the Merger Agreement), outstanding immediately prior to the effective time of the Merger will be automatically converted into the right to receive $128.00 in cash, without interest. The obligation of the parties to complete the Merger is subject to customary closing conditions, including, among others, (i) the approval of the adoption of the Merger Agreement by the holders of a majority of the outstanding shares of common stock of the company entitled to vote, which was obtained at a special meeting of the company’s shareowners held on Dec. 13, 2016, (ii) the expiration or earlier termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, (iii) the adoption of all approvals necessary for the completion of the Merger by the European Commission under Council Regulation (EC) No. 139/2004, (iv) the receipt of certain other required foreign antitrust approvals, (v) completion of the review process by the Committee on Foreign Investment in the United States (“CFIUS”), (vi) no approvals related to CFIUS or antitrust laws having been made or obtained with the imposition of conditions that, together with Divestiture Actions (as defined in the Merger Agreement) undertaken, would reasonably be expected to have a Substantial Detriment (as defined in the Merger Agreement), (vii) no law, order or injunction having been enacted, issued, promulgated, enforced or entered after Sept. 14, 2016, by a court or other governmental entity of competent jurisdiction that is in effect that enjoins or otherwise prohibits the completion of the Merger, (viii) the accuracy of the representations and warranties contained in the Merger Agreement (subject to certain qualifications) and (ix) the performance by the parties of their respective obligations under the Merger Agreement in all material respects. Additional information about the Merger Agreement is set forth in our Current Report on Form 8-K filed with the SEC on Sept. 20, 2016.

Outlook — We plan to continue to innovate and improve our products in order to maintain market leadership and to support near-term performance. We are focused on applying innovation and technology to make our farmer customers more productive and profitable by protecting and improving yields and improving the ways they can

produce food, fiber, feed and fuel. We use the tools of modern biology and technology in an effort to make seeds easier to grow, to allow farmers to do more with fewer resources and to help produce healthier foods for consumers. Our current research and development ("R&D") strategy and commercial priorities are focused on bringing our farmer customers integrated yield solutions through our innovative platforms in plant breeding, biotechnology, chemistry, biologicals and data science. Our capabilities in biotechnology and breeding research are generating a rich product pipeline that is expected to drive long-term growth. The viability of our product pipeline depends in part on the speed of regulatory approvals globally, continued patent and legal rights to offer our products, general public acceptance of the products and the value they will deliver to the market.

Roundup herbicides remain the largest crop protection brand globally. Monsanto's crop protection business focus is to support Monsanto's *Roundup Ready* crops strategically through our weed management platform that delivers weed control offerings for farmers. We are focused on managing the costs associated with our agricultural chemistry business as that sector matures globally.

See the "Outlook" section of MD&A for a more detailed discussion of some of the opportunities and risks we have identified for our business. For additional information related to the outlook for Monsanto, see "Caution Regarding Forward-Looking Statements" above and Part I — Item 1A — Risk Factors of this Form 10-K.

New Accounting Pronouncements — See Item 8 — Financial Statements and Supplementary Data — Note 3 — New Accounting Standards — for information on recently issued accounting guidance.

RESULTS OF OPERATIONS

(Dollars in millions, except per share amounts)	Year Ended Aug. 31, 2017	2016	2015	Change 2017 vs. 2016	2016 vs. 2015
Net Sales	**$ 14,640**	$ 13,502	$ 15,001	**8 %**	(10)%
Cost of goods sold	**6,703**	6,485	6,819	**3 %**	(5)%
Gross Profit	**7,937**	7,017	8,182	**13 %**	(14)%
Operating Expenses:					
Selling, general and administrative expenses	**2,969**	2,833	2,686	**5 %**	5%
Research and development expenses	**1,607**	1,512	1,580	**6 %**	(4)%
Restructuring charges	**(36)**	297	393	**NM**	(24)%
Pending Bayer transaction related costs	**185**	—	—	**NM**	NM
Total Operating Expenses	**4,725**	4,642	4,659	**2 %**	—%
Income from Operations	**3,212**	2,375	3,523	**35 %**	(33)%
Interest expense	**452**	436	433	**4 %**	1%
Interest income	**(76)**	(74)	(105)	**3 %**	(30)%
Other (income) expense, net	**(50)**	22	34	**NM**	(35)%
Income from Continuing Operations Before Income Taxes	**2,886**	1,991	3,161	**45 %**	(37)%
Income tax provision	**626**	695	864	**(10)%**	(20)%
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**2,260**	1,296	2,297	**74 %**	(44)%
Discontinued Operations:					
Income from operations of discontinued businesses	**21**	27	45	**(22)%**	(40)%
Income tax provision	**8**	10	17	**(20)%**	(41)%
Income on Discontinued Operations	**13**	17	28	**(24)%**	(39)%
Net Income	**2,273**	1,313	2,325	**73 %**	(44)%
Less: Net income (loss) attributable to noncontrolling interest	**13**	(23)	11	**NM**	NM
Net Income Attributable to Monsanto Company	**$ 2,260**	$ 1,336	$ 2,314	**69 %**	(42)%
Diluted Earnings per Share Attributable to Monsanto Company:					
Income from continuing operations	**$ 5.06**	$ 2.95	$ 4.75	**72 %**	(38)%
Income on discontinued operations	**0.03**	0.04	0.06	**(25)%**	(33)%
Net Income Attributable to Monsanto Company	**$ 5.09**	$ 2.99	$ 4.81	**70 %**	(38)%
NM = Not Meaningful					
Effective Tax Rate	**22%**	35%	27%		
Comparison as a Percent of Net Sales:					
Cost of goods sold	**46%**	48%	45%		
Gross profit	**54%**	52%	55%		
Selling, general and administrative expenses	**20%**	21%	18%		
Research and development expenses	**11%**	11%	11%		
Total operating expenses	**32%**	34%	31%		
Income from continuing operations before income taxes	**20%**	15%	21%		
Net income attributable to Monsanto Company	**15%**	10%	15%		

Overview of Financial Performance *(2017 compared with 2016)*

The following section discusses the significant components of our results of operations that affected the comparison of fiscal year 2017 with fiscal year 2016 .

Net sales increased $1,138 million in fiscal year 2017 from fiscal year 2016 . Our Seeds and Genomics segment net sales increased $925 million , and our Agricultural Productivity segment net sales increased $213 million . The following table presents the percentage changes in fiscal year 2017 worldwide net sales by segment compared with net sales in fiscal year 2016 , including the effect that volume, price and currency had on these percentage changes:

	2017 Percentage Change in Net Sales vs. 2016			
	Volume	Price (1)(2)	Currency	Total
Seeds and Genomics Segment	2%	6%	1%	9%
Agricultural Productivity Segment	11%	(6)%	1%	6%
Total Monsanto Company	4%	3%	1%	8%

(1) Seeds and Genomics segment included the impact of the company granting a licensee the right to certain corn licenses in Brazil which resulted in revenue of $227 million during fiscal year 2017.

(2) Seeds and Genomics segment included the impact of agreements entered into in the third quarter of fiscal year 2016 to license our alfalfa traits and technology to a third party, which resulted in upfront revenue of approximately $210 million accounted for as an exclusive perpetual license to intellectual property.

Cost of goods sold increased $218 million in fiscal year 2017 from fiscal year 2016 . Our Seeds and Genomics segment cost of goods sold decreased $46 million , and our Agricultural Productivity segment cost of goods sold increased $264 million . Cost of goods sold as a percent of net sales for the total company decreased two percentage points to 46 percent. The following table represents the percentage changes in fiscal year 2017 worldwide cost of goods sold by segment compared with cost of goods sold in fiscal year 2016 , including the effect that volume, costs and currency had on these percentage changes:

	2017 Percentage Change in Cost of Goods Sold vs. 2016			
	Volume	Costs (1)	Currency	Total
Seeds and Genomics Segment	5%	(7)%	1%	(1)%
Agricultural Productivity Segment	12%	(4)%	2%	10%
Total Monsanto Company	8%	(6)%	1%	3%

(1) Seeds and Genomics segment includes $21 million and $66 million of restructuring charges related to certain asset impairment charges during fiscal years 2017 and 2016, respectively. Agricultural Productivity segment includes $4 million and $1 million of restructuring charges related to certain asset impairment charges during fiscal years 2017 and 2016, respectively. See Item 8 — Financial Statements and Supplementary Data — Note 5 — Restructuring — for further information.

Gross profit increased $920 million . Total company gross profit as a percent of net sales increased two percentage points to 54 percent in fiscal year 2017 .

For a more detailed discussion of the factors affecting the net sales, cost of goods sold and gross profit comparisons, see the “Seeds and Genomics Segment” and the “Agricultural Productivity Segment” sections.

Operating expenses increased $83 million in fiscal year 2017 from fiscal year 2016 .

Selling, general and administrative (“SG&A”) expenses increased $136 million , or five percent, primarily due to higher expense for employee incentive awards and increased commissions, marketing and other expense as a result of higher sales coupled with increased information technology expense. These increases were partially offset by decreased expense related to litigation and environmental matters primarily due to the absence of the polychlorinated biphenyls (“PCBs”) settlement of $280 million recorded in fiscal 2016 (see Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies — for further information), savings resulting from the 2015 Restructuring Plan and decreased bad debt expense.

R&D expenses increased $95 million , or six percent, primarily due to higher expense for employee incentive awards and increased spend related to The Climate Corporation. These increases were partially offset by savings resulting from the 2015 Restructuring Plan.

As a percent of net sales, SG&A expense decreased one percentage point to 20 percent of net sales, and R&D expense remained consistent at 11 percent of net sales in fiscal year 2017 compared to fiscal year 2016 .

Restructuring charges fluctuated $333 million to a net reversal of expense of $36 million in fiscal 2017 compared to $297 million of expense in fiscal 2016 due to the timing of expense recognition related to workforce reductions, changes in the related estimates and decreased asset impairments. See discussion of the 2015 Restructuring Plan in Item 8 — Financial Statements and Supplementary Data — Note 5 — Restructuring .

In fiscal 2017, costs related to the pending Merger with Bayer were $185 million .

Other (income) expense — net was $50 million of income in fiscal 2017, a $72 million change from expense of $22 million in fiscal 2016. The fluctuation was primarily due to lower foreign currency losses of approximately $102 million in fiscal 2017 compared to fiscal 2016 largely related to the Argentine peso in the prior year, a gain of approximately $83 million recorded for the sale of our Latitude business in the current year and a higher gain of approximately $38 million related to non-core asset sales in the current year compared to fiscal 2016. These items were partially offset by a loss of $37 million that was reclassified into earnings in the current year as a result of the discontinuance of an interest rate hedge and the absence of a gain recorded from the sale of sorghum manufacturing assets and contribution of sorghum intellectual property assets into a joint venture of $157 million.

Income tax provision for fiscal year 2017 was $626 million , a decrease of $69 million from fiscal year 2016 primarily as a result of an increase in foreign tax credits and higher discrete tax benefit in fiscal year 2017 , partially offset by the increase in pretax income from continuing operations. The effective tax rate decreased to 22 percent , a decrease of 13 percentage points from fiscal year 2016 . Fiscal year 2017 included several discrete tax adjustments resulting in a tax benefit of $55 million, compared to a tax expense of $149 million in fiscal year 2016 . The majority of the fiscal year 2017 benefit resulted from favorable adjustments to our tax returns filed during the year. Without the discrete items, our effective tax rate for fiscal year 2017 would have still been lower than the fiscal year 2016 rate, primarily due to foreign tax credits.

Overview of Financial Performance *(2016 compared with 2015)*

The following section discusses the significant components of our results of operations that affected the comparison of fiscal year 2016 with fiscal year 2015.

Net sales decreased $1,499 million in fiscal year 2016 from fiscal year 2015. Our Seeds and Genomics segment net sales decreased $255 million, and our Agricultural Productivity segment net sales decreased $1,244 million. The following table presents the percentage changes in fiscal year 2016 worldwide net sales by segment compared with net sales in fiscal year 2015, including the effect that volume, price and currency had on these percentage changes:

	2016 Percentage Change in Net Sales vs. 2015			
	Volume	Price (1)(2)	Currency	Total
Seeds and Genomics Segment	1%	2%	(5)%	(2)%
Agricultural Productivity Segment	(9)%	(12)%	(5)%	(26)%
Total Monsanto Company	(3)%	(2)%	(5)%	(10)%

(1) Seeds and Genomics Segment includes the impact of agreements entered into in the third quarter of fiscal year 2016 to license our alfalfa traits and technology to a third party, which resulted in upfront revenue of approximately $210 million accounted for as an exclusive perpetual license to intellectual property.

(2) Agricultural Productivity Segment includes the impact of the agreement with Scotts entered into in the third quarter of fiscal year 2015, which resulted in $274 million of upfront revenue accounted for as a perpetual license to intellectual property.

Cost of goods sold decreased $334 million in fiscal year 2016 from fiscal year 2015. Our Seeds and Genomics segment cost of goods sold decreased $52 million, and our Agricultural Productivity segment cost of goods sold decreased $282 million. Cost of goods sold as a percent of net sales for the total company increased three percentage points to 48 percent. The following table represents the percentage changes in fiscal year 2016 worldwide cost of goods sold by segment compared with cost of goods sold in fiscal year 2015, including the effect that volume, costs and currency had on these percentage changes:

	2016 Percentage Change in Cost of Goods Sold vs. 2015			
	Volume	Costs (1)	Currency	Total
Seeds and Genomics Segment	2%	2%	(5)%	(1)%
Agricultural Productivity Segment	(10)%	4%	(4)%	(10)%
Total Monsanto Company	(4)%	3%	(4)%	(5)%

(1) Seeds and Genomics Segment includes $66 million and $100 million of restructuring charges related to certain asset impairment charges for fiscal years 2016 and 2015, respectively. See Item 8 — Financial Statements and Supplementary Data — Note 5 — Restructuring — for further information.

Gross profit decreased $1,165 million. Total company gross profit as a percent of net sales decreased three percentage points to 52 percent in fiscal year 2016.

For a more detailed discussion of the factors affecting the net sales, cost of goods sold and gross profit comparison, see the "Seeds and Genomics Segment" and the "Agricultural Productivity Segment" sections.

Operating expenses decreased $17 million in fiscal year 2016 from fiscal year 2015. SG&A expenses increased $147 million, or five percent, primarily due to the PCBs settlement of $280 million (see Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies — for further information) and higher point-of-delivery expenses in South America given the increase in *Intacta RR2 PRO* . These increases were offset by costs savings resulting from the 2015 Restructuring Plan, decreased employee incentive awards, currency impact, the absence of expenses related to prior year environmental and litigation settlements and the absence of prior year expense related to the SEC settlement discussed in Item 8 — Financial Statements and Supplementary Data —Note 24 — Commitments and Contingencies . R&D expenses decreased $68 million, or four percent, primarily due to currency impacts and realized impacts from the 2015 Restructuring Plan. As a percent of net sales, SG&A expense increased three percentage points to 21 percent of net sales, and R&D expense remained consistent at 11 percent of net sales in fiscal year 2016 compared to fiscal year 2015. Restructuring charges were $297 million in fiscal year 2016 compared to $393 million in fiscal year 2015 as a result of the 2015 Restructuring Plan discussed in Item 8 — Financial Statements and Supplementary Data — Note 5 — Restructuring .

Interest income decreased $31 million in fiscal year 2016 from fiscal year 2015. The decrease is due to less cash invested in fiscal year 2016 compared to fiscal year 2015, primarily in South America.

Other (income) expense — net decreased $12 million in fiscal year 2016 compared to fiscal year 2015. The decrease was primarily the result of foreign currency losses of $181 million largely related to the Argentine peso offset by a gain recorded from the sale of sorghum manufacturing assets and contribution of sorghum intellectual property assets into a joint venture of $157 million and non-core asset sales in the United States and Europe.

Income tax provision for fiscal year 2016 was $695 million, a decrease of $169 million from fiscal year 2015 primarily as a result of the decrease in pretax income from continuing operations in fiscal year 2016, offset by higher discrete tax expense. The effective tax rate increased to 35 percent, an increase of eight percentage points from fiscal year 2015. Fiscal year 2016 included several discrete tax adjustments resulting in a tax expense of $149 million, compared to a tax benefit of $62 million in fiscal year 2015. The majority of the fiscal year 2016 expense resulted from establishing a valuation allowance on Argentina's deferred tax assets. Due to losses generated in Argentina in fiscal year 2016 as well as uncertainties around our Argentina business, we evaluated the recoverability of various items on our Statements of Consolidated Financial Position and determined a valuation allowance was necessary. This discrete tax expense was partially offset by favorable adjustments to our U.S. and ex-U.S. tax returns filed during fiscal year 2016. Without the discrete items, our effective tax rate for fiscal year 2016 would have been lower than the fiscal year 2015 rate, primarily due to foreign tax credits.

SEEDS AND GENOMICS SEGMENT

	Year Ended Aug. 31,			Change	
(Dollars in millions)	**2017**	2016	2015	**2017 vs. 2016**	2016 vs. 2015
Net Sales					
Corn seed and traits	**$ 6,270**	**$ 5,825**	$ 5,953	**8 %**	(2)%
Soybean seed and traits	**2,662**	**2,162**	2,276	**23 %**	(5)%
Cotton seed and traits	**615**	**440**	523	**40 %**	(16)%
Vegetable seeds	**815**	**801**	816	**2 %**	(2)%
All other crops seeds and traits	**551**	**760**	675	**(28)%**	13 %
Total Net Sales	**$ 10,913**	**$ 9,988**	$ 10,243	**9 %**	(2)%
Gross Profit					
Corn seed and traits	**$ 3,975**	**$ 3,450**	$ 3,557	**15 %**	(3)%
Soybean seed and traits	**1,884**	**1,399**	1,510	**35 %**	(7)%
Cotton seed and traits	**457**	**282**	408	**62 %**	(31)%
Vegetable seeds	**435**	**401**	372	**8 %**	8 %
All other crops seeds and traits	**294**	**542**	430	**(46)%**	26 %
Total Gross Profit	**$ 7,045**	$ 6,074	$ 6,277	**16 %**	(3)%
EBIT (1)	**$ 2,910**	$ 2,292	$ 2,206	**27 %**	4 %

(1) EBIT is defined as earnings (loss) before interest and taxes. Interest and taxes are recorded on a total company basis. We do not record these items at the segment level. See Item 8 — Financial Statements and Supplementary Data — Note 25 — Segment and Geographic Data — and the "Overview — Non-GAAP Financial Measures" section of MD&A for further details.

Seeds and Genomics Financial Performance for Fiscal Year 2017

Net sales for the Seeds and Genomics segment increased $925 million in fiscal year 2017 compared to fiscal year 2016. The net sales increase of $500 million in soybean seed and traits was primarily driven by increased *Intacta RR2 PRO* soybean penetration in Brazil and Argentina, increased *Roundup Ready 2 XTEND* soybean penetration in the United States, higher volumes in North America resulting from increased acres and favorable currency impacts in Brazil. The net sales increase of $445 million in corn seed and traits was primarily driven by granting a licensee the right to certain corn licenses in Brazil, higher average net selling prices globally, and favorable currency impacts in Brazil. The net sales increase of $175 million in cotton seed and traits was primarily due to higher volume from increased planted acres in the United States and Australia, and share gains coupled with *Bollgard II XtendFlex* cotton penetration in the United States. These increases were partially offset by a net sales decrease of $209 million in all other crops seeds and traits driven by the absence of license agreements of our alfalfa traits and technology in fiscal 2016, which resulted in approximately $210 million of upfront revenue accounted for as an exclusive perpetual license to intellectual property.

Cost of goods sold in the Seeds and Genomics segment primarily represents field growing, plant processing and distribution costs. Cost of goods sold decreased $46 million , or one percent , to $3,868 million in fiscal year 2017 compared to $3,914 million in fiscal year 2016 .

Gross profit increased $971 million , or 16 percent , to $7,045 million in fiscal year 2017 compared with $6,074 million in fiscal year 2016 . Gross profit as a percent of net sales for this segment increased four percentage points to 65 percent in fiscal year 2017 . The increase in gross profit was primarily due to corn seed and traits, soybean seed and traits and cotton seed and traits. Corn seed and traits gross profit increased primarily due to granting a licensee the right to certain corn licenses in Brazil, higher average net selling prices globally and higher production plans resulting in greater fixed cost absorption. Increased *Intacta RR2 PRO* soybean and *Roundup Ready 2 XTEND* soybean penetration and increased volume in soybean seed and traits as noted in the net sales discussion coupled with reduced *Roundup Ready 2 XTEND* soybean launch costs also attributed to the increase. Cotton seed and traits volume increased as noted in the sales discussion. In addition, favorable currency impacts in Brazil increased gross profit. These increases in gross profit were partially offset by the absence of a license agreement of our alfalfa traits and technology in the third quarter of fiscal 2016 within all other crops seeds and traits.

Seeds and Genomics Financial Performance for Fiscal Year 2016

Net sales for the Seeds and Genomics segment decreased $255 million in fiscal year 2016 compared to fiscal year 2015. The net sales decrease of $128 million in corn seed and traits was primarily driven by unfavorable currency impacts in Brazil, Mexico and Europe and decreased average net selling price. The decreased average net selling price was primarily due to higher discounting to counter competitive offers in the United States, partially offset by germplasm and trait mix lift in Brazil. The currency and price impacts were partially offset by higher volumes due to increased acres in North and South America. The net sales decrease of $114 million in soybean seed and traits was primarily due to unfavorable currency impacts in Brazil and lower volumes in the United States resulting in part from the delay in *Roundup Ready 2 Xtend* approvals. The net sales decreases in soybean seed and traits were partially offset by an increased average net selling price in Brazil related to increased sales of *Intacta RR2 PRO.* The net sales decrease of $83 million in cotton seed and traits was primarily due to lower average net selling price in India as a result of new government pricing policies.

The net sales decreases were partially offset by an increase of $85 million in all other crops seeds and traits primarily driven by agreements entered into in the third quarter of fiscal year 2016 related to our alfalfa traits and technology, which resulted in approximately $210 million of upfront revenue accounted for as an exclusive perpetual license to intellectual property, partially offset by lower sales volumes of canola seed in Canada as a result of market conditions.

Cost of goods sold in the Seeds and Genomics segment primarily represents field growing, plant processing and distribution costs. Cost of goods sold decreased $52 million, or one percent, to $3,914 million in fiscal year 2016 compared to $3,966 million in fiscal year 2015.

Gross profit decreased $203 million, or three percent, to $6,074 million in fiscal year 2016 compared with $6,277 million in fiscal year 2015. Gross profit as a percent of net sales for this segment remained consistent at 61 percent in fiscal year 2016.

Gross profit for cotton seed and traits decreased $126 million, or 31 percent, compared to the 16 percent decrease in net sales for cotton seed and traits primarily due to the effect on margins from the decline of the India business as a result of new government regulations coupled with higher costs in the United States. Gross profit for soybean seed and traits decreased $111 million, or seven percent, compared to the five percent decrease in net sales primarily related to increased *Roundup Ready 2 Xtend* launch costs within the United States.

The gross profit decreases are partially offset by an increase of $112 million in all other crops seeds and traits primarily driven by the perpetual alfalfa license noted in the net sales discussion.

AGRICULTURAL PRODUCTIVITY SEGMENT

	Year Ended Aug. 31,			Change	
(Dollars in millions)	**2017**	2016	2015	**2017 vs. 2016**	2016 vs. 2015
Net Sales					
Agricultural Productivity	**$ 3,727**	$ 3,514	$ 4,758	**6 %**	(26)%
Total Net Sales	**$ 3,727**	$ 3,514	$ 4,758	**6 %**	(26)%
Gross Profit					
Agricultural Productivity	**$ 892**	$ 943	$ 1,905	**(5)%**	(50)%
Total Gross Profit	**$ 892**	$ 943	$ 1,905	**(5)%**	(50)%
EBIT (1)	**$ 353**	$ 116	$ 1,294	**NM**	(91)%

(1) EBIT is defined as earnings (loss) before interest and taxes. Interest and taxes are recorded on a total company basis. We do not record these items at the segment level. See Item 8 — Financial Statements and Supplementary Data — Note 25 — Segment and Geographic Data — and the "Overview — Non-GAAP Financial Measures" section of MD&A for further details.

Agricultural Productivity Financial Performance for Fiscal Year 2017

Net sales in our Agricultural Productivity segment increased $213 million , or six percent , in fiscal year 2017 compared to fiscal year 2016 primarily due to increased volume of *Roundup* and other glyphosate-based herbicides globally, first time *XtendiMax* with *VaporGrip* Technology dicamba-based herbicide revenue and favorable currency impact in Brazil. These increases were partially offset by lower average net selling price of *Roundup* and other glyphosate-based herbicides and decreased sales of other herbicides, primarily due to lower average selling prices and absence of sales from the Latitude business sold during the second quarter of fiscal 2017.

Cost of goods sold in the Agricultural Productivity segment primarily represents material, conversion and distribution costs. Cost of goods sold increased $264 million , or ten percent , in fiscal year 2017 to $2,835 million compared to $2,571 million in fiscal year 2016 . Cost of goods sold increased as a result of higher sales volumes when compared to fiscal 2016 and currency impacts in Brazil. This is partially offset by *Roundup* and other glyphosate-based herbicides cost savings and lower dicamba-based herbicide project expenses when compared to fiscal 2016.

The net sales and cost of goods sold discussed above resulted in a $51 million decrease in gross profit in fiscal year 2017 . Gross profit as a percent of net sales for the Agricultural Productivity segment decreased three percentage points to 24 percent in fiscal year 2017 compared to fiscal year 2016 primarily due to the lower average net selling price of *Roundup* and other glyphosate-based herbicides partially offset by lower dicamba-based herbicide project expenses.

EBIT in our Agricultural Productivity segment increased $237 million in fiscal year 2017 compared to fiscal year 2016, while gross profit decreased $51 million , or five percent, as noted above. The increase in EBIT is primarily due to the absence of the PCBs settlement of $280 million included in selling, general and administrative expenses in fiscal 2016 (see Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies — for further information).

Agricultural Productivity Financial Performance for Fiscal Year 2016

Net sales in our Agricultural Productivity segment decreased $1,244 million, or 26 percent, in fiscal year 2016 primarily due to lower average net selling price of *Roundup* and other glyphosate-based herbicides due to the decline in acid prices and the absence of the Scotts license agreement that existed in the prior year. Additional drivers for the decline were lower volume in South America, the United States and our global supply business due to pressure from generic products and timing of shipments and unfavorable currency impact primarily in Brazil.

Cost of goods sold in the Agricultural Productivity segment primarily represents material, conversion and distribution costs. Cost of goods sold decreased $282 million, or ten percent, in fiscal year 2016 to $2,571 million compared to $2,853 million in fiscal year 2015. Cost of goods sold declined as a result of lower sales volumes and favorable currency impacts, offset in part by higher raw material prices and higher dicamba project expense when compared to fiscal year 2015.

The net sales and cost of goods sold discussed above resulted in a $962 million decrease in gross profit in fiscal year 2016. Gross profit as a percent of sales for the Agricultural Productivity segment decreased 13 percentage points to 27 percent in fiscal year 2016 primarily due to the absence of the Scotts license agreement that existed in the prior year, lower volumes and lower average net selling price as noted in the net sales discussion, increased costs of goods sold and currency impacts.

RESTRUCTURING

On Oct. 6, 2015, the company approved actions to realign resources to increase productivity, enhance competitiveness by delivering cost improvements and support long-term growth. On Jan. 5, 2016, the company approved additional actions which together with the Oct. 6, 2015, actions comprise the 2015 Restructuring Plan. Actions include streamlining and reprioritizing some commercial, enabling, supply chain and R&D efforts.

Cumulative pretax charges related to the 2015 Restructuring Plan are estimated to be $900 million to $965 million . Implementation of the 2015 Restructuring Plan is expected to be completed by the end of fiscal year 2018, and substantially all of the cash payments are expected to be made by the end of fiscal year 2018. These pretax charges are currently estimated to be comprised of the following categories: $325 million to $350 million in work force reductions, including severance and related benefits; $95 million to $115 million in facility closures / exit costs, including contract termination costs; $480 million to $500 million in asset impairments and write-offs related to property, plant and equipment, inventory and goodwill and other assets. These pretax charges are currently estimated to be incurred primarily by the Seeds and Genomics segment.

For the fiscal year ended Aug. 31, 2017 , a pretax net reversal of restructuring charges of $11 million was recorded within the Statement of Consolidated Operations, of which $25 million of expense and net reversal of $36 million of previously recognized expense were included in cost of goods sold and restructuring charges, respectively. The reversal of previously recognized expense was due to changes in estimates related to work force reductions. For the fiscal year ended Aug. 31, 2016 , pretax restructuring charges of $364 million were recorded within the Statement of Consolidated Operations, of which $67 million and $297 million were included in cost of goods sold and restructuring charges, respectively. For additional information on the 2015 Restructuring Plan, see Item 8 — Financial Statements and Supplementary Data — Note 5 — Restructuring .

FINANCIAL CONDITION, LIQUIDITY AND CAPITAL RESOURCES

Working Capital and Financial Condition

(Dollars in millions, except current ratio)	As of Aug. 31, 2017	2016
Cash and Cash Equivalents (1)	**$ 1,856**	$ 1,676
Trade Receivables, Net (1)	**2,161**	1,926
Inventory, Net	**3,340**	3,241
Other Current Assets (1)(2)	**1,294**	1,314
Total Current Assets	**$ 8,651**	$ 8,157
Short-Term Debt (1)	**$ 870**	$ 1,587
Accounts Payable (1)	**1,068**	1,006
Accrued Liabilities (1)(3)	**4,460**	4,136
Total Current Liabilities	**$ 6,398**	$ 6,729
Working Capital (4)	**$ 2,253**	$ 1,428
Current Ratio (4)	**1.35:1**	1.21:1

(1) Includes restrictions as a result of our variable interest entities. See Item 8 — Financial Statements and Supplementary Data — Statements of Consolidated Financial Position and Note 8 — Variable Interest Entities and Investments — for more information.

(2) Includes short-term investments, miscellaneous receivables, assets held for sale and other current assets.

(3) Includes income taxes payable, accrued compensation and benefits, accrued marketing programs, deferred revenues, grower production accruals, dividends payable, customer payable, miscellaneous short-term accruals and restructuring reserves.

(4) Working capital is total current assets less total current liabilities; current ratio represents total current assets divided by total current liabilities.

Working capital increased $825 million between Aug. 31, 2017 , and Aug. 31, 2016 , primarily because of the following factors:

- Cash and cash equivalents increased $180 million . For a more detailed discussion of the factors affecting the cash flow comparison, see the "Cash Flow" section in this section of MD&A.
- Trade receivables increased $235 million due to revenue recorded for granting a licensee the right to certain corn licenses in Brazil where the cash has not yet been collected, a change in customer contracts within cotton seeds and traits and increased Agricultural Productivity revenue.
- Inventory, net increased $99 million primarily due to a higher production of seed and traits inventory in Brazil.
- Short-term debt decreased $717 million primarily due to a decrease in outstanding commercial paper of $500 million, redemption of mandatorily redeemable shares of the Brazil VIE of $113 million and repayment of $100 million of Senior Notes.

These increases to working capital were partially offset by the following:

- Accounts payable increased $62 million primarily due to timing of payments compared to prior year.
- Accrued liabilities increased $324 million primarily due to the following fluctuations:
  - Accrued compensation and benefits increased $339 million due to current year incentive accruals.
  - Accrued marketing programs increased $268 million due to increased accruals in the United States resulting from higher revenues and increased Brazil accruals due to higher *Intacta RR2 PRO* soybean revenues.
  - Deferred revenues increased $159 million primarily related to *Intacta RR2 PRO* prepayments in Brazil for the upcoming season .

  The increases in accrued liabilities were partially offset by the following:
  - Restructuring reserves decreased $190 million as a result of payments made under the 2015 Restructuring Plan and changes in estimates related to work force reductions.
  - Miscellaneous short-term accruals decreased $264 million primarily due to payments made related to the PCB settlement of $280 million. See Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies — for further information.

Backlog : Inventories of finished goods, goods in process and raw materials and supplies are maintained to meet customer requirements and our scheduled production. As is consistent with the nature of the seed industry, we generally produce in one growing season the seed inventories we expect to sell the following season. In general, we do not manufacture our products against a backlog of firm orders; production is geared to projected demand.

Customer Financing Programs : We participate in various customer financing programs in an effort to reduce our receivables risk and to reduce our reliance on commercial paper borrowings. As of Aug. 31, 2017 , the programs had $646 million in outstanding balances, and we received $768 million of proceeds in fiscal year 2017 under these programs. Our future maximum payout under all programs, including our responsibility for our guarantees with lenders, was $100 million as of Aug. 31, 2017 . See Item 8 — Financial Statements and Supplementary Data — Note 7 — Customer Financing Programs — for further discussion of these programs.

Cash Flow

	Year Ended Aug. 31,		
(Dollars in millions)	**2017**	2016	2015
Net Cash Provided by Operating Activities	**$ 3,226**	$ 2,588	$ 3,108
Net Cash Required by Investing Activities	**(1,107)**	(864)	(1,019)
Net Cash Required by Financing Activities	**(1,966)**	(3,742)	(430)
Effect of Exchange Rate Changes on Cash and Cash Equivalents	**27**	(7)	(325)
Net Increase (Decrease) in Cash and Cash Equivalents	**$ 180**	$ (2,025)	$ 1,334

	Year Ended Aug. 31,		
(Dollars in millions)	**2017**	2016	2015
Net Cash Provided by Operating Activities	**$ 3,226**	$ 2,588	$ 3,108
Capital Expenditures	**(1,240)**	(923)	(967)
Free Cash Flow (1)	**$ 1,986**	$ 1,665	$ 2,141

(1) Free cash flow represents the total of net cash provided or required by operating activities less capital expenditures (see the "Overview — Non-GAAP Financial Measures" section in MD&A for a further discussion).

2017 compared with 2016 :

Operating: The increase in cash provided by continuing operations in fiscal year 2017 compared to fiscal year 2016 was primarily due to the following:

- A decrease in cash required for accounts receivables primarily due to the timing of collections,
- An increase in cash provided by accounts payable and other accrued liabilities due to increased taxes payable, an increase in employee incentives and an increase in market funding liabilities offset by cash payments related to the PCB settlement discussed at Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies .
- An increase in earnings from fiscal year 2016 to fiscal year 2017.

The above factors were partially offset by the following:

- An increase in cash required for inventory due to increased dicamba-based herbicide inventory build and higher production of seeds and genomics inventory, and
- A decrease in the restructuring reserves due to cash payments and changes in related estimates resulting from the 2015 Restructuring Plan.

Investing: The increase in cash required by investing activities in fiscal year 2017 compared to fiscal year 2016 was primarily due to an increase in capital expenditures partially offset by a reduction in purchases of short-term investments compared to prior year. Cash expenditures increased in fiscal 2017 compared to fiscal 2016 primarily due to construction of a dicamba-based herbicide manufacturing facility in Luling, Louisiana.

Financing: The decrease in cash required by financing activities in fiscal year 2017 compared to fiscal year 2016 was primarily due to treasury stock purchases related to the $3 billion accelerated share repurchase agreements that occurred in fiscal 2016 partially offset by more cash required for short-term and long-term debt reductions.

2016 compared with 2015 : Cash provided by operating activities decreased 17 percent , or $520 million , to $2,588 million in fiscal year 2016 compared with $3,108 million in fiscal year 2015 . The decrease was primarily driven by the following:

- An increase in trade receivables primarily due to a decrease in sales of receivables to third parties;
- Accounts payable and accrued liabilities utilized more cash in fiscal year 2016 compared to fiscal year 2015 primarily due to increased income tax payments and legal spend. This is offset by timing of accounts payable disbursements and an increase in miscellaneous short-term accruals which included the PCB settlement further discussed at Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies.
- An increase in cash payments made related to the 2015 Restructuring Plan, see Item 8 — Financial Statements and Supplementary Data — Note 5 — Restructuring — for further information; and
- A decrease in earnings from fiscal year 2015 to fiscal year 2016.

The above factors were partially offset by the following:

- A decrease in payments for inventory due to a lower production plan for corn inventory, partially offset by an inventory build in agricultural productivity;
- An increase in deferred revenue primarily resulting from *Intacta RR2 PRO* ; and
- An increase in cash related to timing of collection of value added tax receivables.

Cash required by investing activities was $864 million in fiscal year 2016 compared with $1,019 million in fiscal year 2015 . The decrease was primarily due to an increase in cash from other investments and property disposal proceeds related to the sale of sorghum manufacturing assets and non-core asset sales in the United States and Europe. A decrease in capital expenditures also provided for additional cash required by investing activities.

The amount of cash required by financing activities was $3,742 million in fiscal year 2016 compared with $430 million in fiscal year 2015 . The increase was primarily due to treasury stock purchases related to the $3 billion accelerated share repurchase agreements and an increase in debt payments, partially offset by the increase in commercial paper borrowings and a decrease in bond issues.

Capital Resources and Liquidity

(Dollars in millions, except debt-to-capital ratio)	As of Aug. 31, 2017	2016
Short-Term Debt	**$ 870**	$ 1,587
Long-Term Debt	**7,254**	7,453
Total Monsanto Company Shareowners' Equity	**6,438**	4,534
Debt-to-Capital Ratio (1)	**56%**	67%

(1) Debt-to-capital ratio is the sum of short-term and long-term debt, divided by total Monsanto Company shareowners' equity, short-term and long-term debt.

A major source of our liquidity is operating cash flows, which can be derived from net income. This cash-generating capability and access to long-term investment grade debt financing markets provides us with the financial flexibility we need to meet operating, investing and financing needs. We believe our sources of liquidity will be sufficient to sustain operations and to finance anticipated investments. To the extent that cash provided by operating activities is not sufficient to fund our cash needs, we believe short-term commercial paper borrowings can be used to finance these requirements. We had no commercial paper borrowings outstanding at Aug. 31, 2017 .

Debt and Other Credit Arrangements : In April 2016, we filed a shelf registration with the SEC ("2016 shelf registration") that allows us to issue a maximum aggregate amount of $6 billion of debt, equity and hybrid offerings. The 2016 shelf registration expires in April 2019.

We have a $3 billion credit facility agreement with a group of banks that provides a senior unsecured revolving credit facility through Mar. 27, 2020. As of Aug. 31, 2017 , we did not have any borrowings under this credit facility, and we were in compliance with all financial debt covenants.

In October 2016, we closed a $1 billion delayed draw term loan facility that matures the earlier of October 2019 or the consummation of the Merger with Bayer. Borrowings under the facility were $500 million as of Aug. 31, 2017 . Proceeds were used for general corporate purposes.

Our debt-to-capital ratio decreased to 56 percent at Aug. 31, 2017 , compared with 67 percent at Aug. 31, 2016 , as a result of the decreased commercial paper and Senior Notes at Aug. 31, 2017, compared to Aug. 31, 2016, coupled with an increase in shareowners' equity as a result of earnings, partially offset by dividends.

We held cash and cash equivalents and short-term investments of $1,864 million and $1,736 million at Aug. 31, 2017 , and Aug. 31, 2016 , respectively, of which $1,281 million and $1,629 million was held by foreign entities, respectively. Our intent is to indefinitely reinvest approximately $4.2 billion of the $4.5 billion of undistributed earnings of our foreign operations that existed as of Aug. 31, 2017. It is not practicable to estimate the income tax liability that might be incurred if such indefinitely reinvested earnings were remitted to the United States.

Dividends : In fiscal year 2017 , we declared the following dividends:

Quarter Ending	Declaration Date	Dividend	Payable Date	To Shareowners of Record as of:
Aug. 31, 2017	Aug. 10, 2017	54 cents	Oct. 27, 2017	Oct. 6, 2017
Aug. 31, 2017	Jun. 6, 2017	54 cents	Jul. 28, 2017	Jul. 7, 2017
Feb. 29, 2017	Jan. 27, 2017	54 cents	Apr. 28, 2017	Apr. 7, 2017
Feb. 29, 2017	Dec. 5, 2016	54 cents	Jan. 27, 2017	Jan. 6, 2017

We paid dividends totaling $948 million in fiscal year 2017 , $964 million in fiscal year 2016 and $938 million in fiscal year 2015.

Share Repurchases : On Oct. 9, 2015, we entered into uncollared ASR agreements with each of Citibank, N.A. and JPMorgan Chase Bank, N.A., which settled in January 2016. In accordance with the terms of the agreements, an additional 3.8 million shares were received upon final settlement in fiscal year 2016 for a total of 32.2 million shares of Monsanto common stock repurchased at an aggregate cost to us of $3.0 billion. The ASR agreements were entered into pursuant to the share repurchase authorization announced June 2014.

In June 2014, we announced a two-year repurchase authorization of up to $10 billion of the company's common stock, which expired on June 24, 2016. There were no other publicly announced plans outstanding as of Aug. 31, 2017. The Merger Agreement includes restrictions on repurchases of shares of the company's common stock by the company.

Capital Expenditures : Our capital expenditures were $1,240 million in fiscal year 2017, $923 million in fiscal year 2016 and $967 million in fiscal year 2015.

Healthcare Benefits: The short-term impact of the Healthcare Acts does not have a material impact on our consolidated financial statements. We continue to monitor the long-term impact of the Healthcare Acts, but we do not expect a material impact on our consolidated financial statements.

Pension Contributions : In addition to contributing amounts to our pension plans if required by pension plan regulations, we continue to also make discretionary contributions if we believe they are merited. Although contributions to the U.S. qualified plan were not required, we contributed $15 million in fiscal year 2017 and $60 million in fiscal year 2016. Monsanto did not make any cash contributions to its U.S. qualified plan in fiscal year 2015. For fiscal year 2018 , management expects to make $60 million in discretionary cash contributions to the U.S. qualified plan. As the level of required future contributions is unpredictable and depends heavily upon return on plan asset experience and interest rate levels, we will evaluate contributions to the plan on a regular basis in the near term.

Fiscal year 2018 pension expense will be determined using assumptions as of Aug. 31, 2017 . Our expected rate of return on assets assumption will remain consistent for fiscal year 2018 at 7.50 percent for the U.S. qualified plan. This assumption was 7.50 percent in each of fiscal years 2017 , 2016 and 2015 , respectively. To determine the rate of return, we consider the historical experience and expected future performance of the plan assets, as well as the current and expected allocation of the plan assets. The U.S. qualified pension plan's asset allocation as of Aug. 31, 2017 , was approximately 53 percent equity securities, 42 percent debt securities and five percent other investments, in line with our policy ranges. We periodically evaluate the allocation of plan assets among the different investment classes to ensure that they are within policy guidelines and ranges.

Our weighted average discount rate assumption for the 2018 pension expense is 3.73 percent for U.S. pension plans. This assumption was 3.43 percent, 4.33 percent and 4.04 percent in fiscal years 2017 , 2016 and 2015 , respectively. In determining the discount rate, we use yields on high-quality fixed-income investments that match the duration of the pension obligations. Our salary rate assumption as of Aug. 31, 2017 , had a weighted average of 3.5 percent.

Holding all other assumptions constant, a quarter-to-half a percent decrease or increase in any one of the individual assumptions noted here would not materially affect our fiscal year 2018 pretax income.

Divestitures: In October 2008, we consummated the sale of the Dairy business after receiving approval from the appropriate regulatory agencies and received $300 million in cash, and may receive additional contingent consideration. The contingent consideration is a 10-year earn-out with potential annual payments being earned by us if certain revenue levels are exceeded.

On Nov. 2, 2015, we signed a definitive agreement with Deere & Company ("Deere") to sell the Precision Planting equipment business which is included in the Seed and Genomics segment for approximately $190 million in cash, subject to customary working capital adjustments. In May 2017, we terminated our agreement with Deere to sell the Precision Planting equipment business subsequent to the U.S. Department of Justice filing a lawsuit to block Deere's acquisition of the Precision Planting equipment business. On Jul. 25, 2017, we signed a definitive agreement with AGCO Corporation to sell the Precision Planting equipment business for approximately $200 million in cash, subject to customary working capital adjustments. The sale of the business is expected to close in the first quarter of fiscal 2018 after satisfying customary closing conditions.

In fiscal 2017, we divested our Latitude business previously reported as part of the Agricultural Productivity segment for approximately $140 million in cash, subject to customary working capital adjustments. Approximately $85 million, less the carrying amount of assets sold of approximately $2 million, was recognized within other (income) expense, net in the Statement of Consolidated Operations. The recognition of the remaining $55 million is contingent on silthiofam re-registration within the European Union.

2016 Joint Venture: Effective June 15, 2016, we sold certain manufacturing assets and contributed to a newly-formed joint venture certain intellectual property, real property and tangible assets related to the company's sorghum business. The agreements created a global joint venture in sorghum breeding that will help expand the commercial and technology reach of the elite germplasm and remain focused on delivering important product offerings for sorghum growers so that they can continue to benefit from new innovations in the crop. We received a cash payment of $110 million and a minority interest in the newly-formed joint venture, which combined resulted in a gain of approximately $157 million in fiscal year 2016. The joint venture is accounted for using the equity method of accounting. See Item 8 — Financial Statements and Supplementary Data —Note 8 — Variable Interest Entities and Investments .

Contractual Obligations: We have certain obligations and commitments to make future payments under contracts. The following table sets forth our estimates of future payments under contracts as of Aug. 31, 2017 . See Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies — for a further description of our contractual obligations.

	Payments Due by Fiscal Year Ending Aug. 31,						
(Dollars in millions)	Total	2018	2019	2020	2021	2022	2023 and beyond
Total Debt, including Capital Lease Obligations (1)	$ 8,124	$ 870	$ 802	$ 108	$ 501	$ 253	$ 5,590
Interest Payments Relating to Long-Term Debt and Capital Lease Obligations (1)	6,027	312	289	268	267	253	4,638
Operating Lease Obligations	511	149	109	84	60	44	65
Purchase Obligations:							
Commitments to purchase inventories	3,668	1,365	484	472	383	294	670
Commitments to purchase breeding research	440	55	55	55	55	55	165
R&D alliances and joint venture obligations	145	45	34	30	19	16	1
Uncompleted additions to property	775	771	4	—	—	—	—
Other purchase obligations	25	24	1	—	—	—	—
Other Liabilities:							
Postretirement liabilities (2)	105	105	—	—	—	—	—
Unrecognized tax benefits (3)	93	—	—	—	—	—	—
Environmental liabilities	204	14	16	21	7	7	139
Total Contractual Obligations	$ 20,117	$ 3,710	$ 1,794	$ 1,038	$ 1,292	$ 922	$ 11,268

(1) For variable rate debt, interest is calculated using the applicable rates as of Aug. 31, 2017 .

(2) Includes the company's planned pension and other postretirement benefit contributions for fiscal 2018 . The actual amounts funded in fiscal 2018 may differ from the amounts listed above. Contributions in fiscal 2019 and beyond are excluded as those amounts are unknown. Refer to Item 8 — Financial Statements and Supplementary Data — Note 16 — Postretirement Benefits — Pensions — and Note 17 — Postretirement Benefits - Health Care and Other Postemployment Benefits — for more information.

(3) Unrecognized tax benefits relate to reserves for uncertain tax positions recorded under the Income Taxes topic of the Accounting Standards Codification ("ASC"). We are unable to reasonably predict the timing of tax settlements, as tax audits can involve complex issues, and the resolution of those issues may span multiple years, particularly if subject to negotiation or litigation. See Item 8 — Financial Statements and Supplementary Data — Note 12 — Income Taxes — for more information.

Off-Balance Sheet Arrangements

Under our Separation Agreement with Pharmacia, we are required to indemnify Pharmacia for certain liabilities that are primarily related to Pharmacia's former chemical and agricultural businesses. To the extent we are currently managing any such matters, we evaluate them in the course of managing our own potential liabilities and establish reserves as appropriate. However, additional matters may arise in the future, and we may manage, settle or pay judgments or damages with respect to those matters in order to mitigate contingent liability and protect Pharmacia and ourselves. See Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies and Part I — Item 3 — Legal Proceedings — for further information.

We have entered into various customer financing programs which are accounted for in accordance with the Transfers and Servicing topic of the ASC. See Item 8 — Financial Statements and Supplementary Data — Note 7 — Customer Financing Programs — for further information.

We have substantially completed making a significant expansion of our Chesterfield, Missouri, facility. In December 2013, we executed the first of a series of incentive agreements with the County of St. Louis, Missouri. Under these agreements we have transferred our Chesterfield, Missouri, facility to St. Louis County and received Industrial Revenue Bonds in the amount of up to $470 million which enables us to reduce our cost of constructing and operating the expansion by reducing certain state and local tax expenditures. We immediately leased the facility from the County of St. Louis and have an option to purchase the facility upon tendering the Industrial Revenue Bonds we received to the County. The payments due to us in relation to the Industrial Revenue Bonds and owed by us in

relation to the lease of the facilities qualify for the right of offset under the Balance Sheet topic of the ASC on our Statements of Consolidated Financial Position. As such, neither the Industrial Revenue Bonds nor the lease obligation are recorded on the Statements of Consolidated Financial Position as an asset or liability, respectively. The Chesterfield facilities and the expansion is being treated as being owned by us.

Other Information

As discussed in Item 8 — Financial Statements and Supplementary Data — Note 24 — Commitments and Contingencies and Part I — Item 3 — Legal Proceedings, we are responsible for significant environmental remediation and are involved in a number of lawsuits and claims relating to a variety of issues. Many of these lawsuits relate to intellectual property disputes. We expect that such disputes will continue to occur as the agricultural biotechnology industry evolves.

Seasonality

Our fiscal year end of August 31 synchronizes our quarterly and annual results with the natural flow of the agricultural cycle in our major markets. It provides a more complete picture of the North American and South American growing seasons in the same fiscal year. Sales by our Seeds and Genomics segment, and to a lesser extent, by our Agricultural Productivity segment, are seasonal. In fiscal year 2017 , approximately 67 percent of our Seeds and Genomics segment sales occurred in the second and third quarters. This segment's seasonality is primarily a function of the purchasing and growing patterns in North America. Agricultural Productivity segment sales were more evenly spread across our fiscal year quarters in 2017.

Net income has been the highest in the second and third quarters, which correlates with the sales of the Seeds and Genomics segment and its gross profit contribution. Sales and income may shift somewhat between quarters, depending on planting and growing conditions. Our inventory has historically been at its lowest level at the end of our fiscal year, which is consistent with the agricultural cycles in our major markets. However, at Aug 31, 2017, inventory was higher than at May 31, 2017, due to higher production of seed and traits inventory in Brazil and increased dicamba-based herbicide inventory. Additionally, our trade accounts receivable generally has been at its lowest levels in our fourth quarter, primarily because of collections received on behalf of both segments in the United States and Latin America, and the seasonality of our sales.

As is the practice in our industry, we regularly extend credit to enable our customers to acquire crop protection products and seeds at the beginning of the growing season. Because of the seasonality of our business and the need to extend credit to customers, we sometimes use commercial paper borrowings to finance working capital requirements. Our need for such financing has generally been higher in the first and third quarters of the fiscal year and lower in the second and fourth quarters of the fiscal year. Our customer financing programs are expected to continue to reduce our receivable risk and to reduce our reliance on commercial paper borrowings.

OUTLOOK

We believe we have achieved an industry-leading position in the areas in which we compete in both of our business segments. However, the outlook for each part of our businesses is quite different. In the Seeds and Genomics segment, our seeds and traits business is expected to expand via our investments in new products. In the Agricultural Productivity segment, we expect to continue to deliver new product formulations and systematic approaches that support our Seeds and Genomics segment.

We believe that our company is positioned to deliver value-added products to growers enabling us to grow our gross profit in the future. We expect to see strong cash flow in the future, and we remain committed to returning value to shareowners through vehicles such as investments that expand the business and dividends. We will remain focused on cost and cash management, both to support the progress we have made in managing our investment in working capital and to realize the full earnings potential of our businesses. We are in the process of executing our plan to reduce operational spending through fiscal year 2018. We plan to continue providing external financing opportunities for our customers as a way to manage receivables for each of our segments.

Outside of the United States, our businesses will continue to face challenges related to the risks inherent in operating in international markets. We will continue to consider, assess and address these developments and the challenges and issues they place on our businesses. We believe we have taken appropriate measures to manage our credit exposure, which has the potential to affect sales negatively in the near term. In addition, volatility in foreign currency exchange rates may negatively affect our profitability, the book value of our assets outside the United States and our shareowners' equity. We continuously monitor the potential for currency devaluation in Brazil, Argentina and Ukraine,

including changes to exchange rate mechanisms or structures, and the potential impact on future periods. Subsequent to recent currency devaluations in Argentina, we continue to monitor the economic situations and the impact of currency volatility on earnings.

On Sept. 14, 2016, we entered into the Merger Agreement with Bayer, which provides for the acquisition of the company by Bayer for a price of $128 per share in cash. Upon consummation of the Merger, we will no longer be a standalone public company. The combined business is expected to benefit from the integration of Monsanto's seeds and traits business and The Climate Corporation platform with Bayer's broad crop protection product line, which we believe will result in significant benefits for farmers.

Seeds and Genomics

Our capabilities in plant breeding and biotechnology R&D are generating a rich and balanced product pipeline that we expect will drive long-term growth. We plan to continue to invest in the areas of seeds, genomics, biotechnology, digital agriculture and biologicals and to invest in technology arrangements that have the potential to increase the efficiency and effectiveness of our R&D efforts. We believe that our seeds and traits businesses will have near-term growth opportunities through a combination of improved breeding, continued growth of stacked biotech traits and expansion in established and emerging markets.

We expect advanced breeding techniques combined with improved production practices and capital investments will continue to contribute to improved germplasm quality and yields for our seed offerings, leading to increased global demand for both our branded germplasm and our licensed germplasm. Our vegetable seeds business, which has a portfolio focused on 21 crops, continues to develop and deliver new innovative products to our customers as we continue to focus on our breeding investments and process optimization. We expect to see continued competition in seeds and genomics. We believe we will maintain a competitive advantage because of our global breeding capabilities and our multiple-channel sales approach in the United States for corn and soybean seeds.

Commercialization of second- and third-generation traits and the stacking of multiple traits in corn, soy and cotton are expected to increase penetration in approved markets, particularly as we continue to price our traits in line with the value growers have experienced from their use. We continue to experience an increase in competition in biotechnology as more competitors launch traits in the United States and internationally. Acquisitions may also present mid-to-longer term opportunities to increase penetration of our traits.

Intacta RR2 PRO technology has been fully approved by Brazil, Argentina, Paraguay, Uruguay and their key export markets, and we are currently selling that technology in Brazil, Argentina, Paraguay and Uruguay. In South America, we generally operate using a business model working with growers and grain handlers to collect technology value for soybeans either on the sale of new certified seed or through a point-of-delivery system for seeds that have been saved and replanted. The system has been operating in Brazil for many years, and nearly all of the grain handlers have enrolled in the point-of-delivery system. In Argentina, nearly all of the exporting grain handlers and key local elevators have enrolled in the point-of-delivery system. As previously announced, due to uncertainty raised by actions of the government of Argentina, and while we continue to pursue value capture in Argentina, we have placed a hold on the launch of new soybean traits in that country. We continue to pursue a long-term system that operates with integrity and predictability and will continue to evaluate our soybean business in Argentina. With regard to first generation *Roundup Ready* soybeans, we have deferred collection of royalties in Brazil until a final decision is reached by the courts on our patent term correction case. The Supreme Court of Brazil has granted certiorari of the case. We do not plan to collect on first generation *Roundup Ready* soybeans in Argentina.

Our international traits businesses, in particular, are likely to continue to face unpredictable regulatory environments that may be highly politicized. We operate in volatile, and often difficult, economic and political environments. Longer term, income is expected to grow in South America as farmers choose to plant more of our approved traits in soybeans, corn and cotton. The agricultural economy in Brazil and Argentina could be impacted by global commodity prices, particularly for corn and soybeans. We continue to maintain our strict credit policy, expand our grain-based collection system and focus on cash collection and sales, as part of a continuous effort to manage our risk in Brazil and Argentina against such volatility.

Agricultural Productivity

Our Agricultural Productivity businesses operate in markets that are competitive. Gross profit and cash flow levels will fluctuate in the future based on global business dynamics including market supply, demand and manufacturing capacity. We expect to maintain our branded prices at a slight premium over gene ric products, and we believe our

Roundup herbicide business will continue to be a sustainable source of cash and gross profit. Our crop protection business focus is to support our *Roundup Ready* crops strategically through our weed management platform that delivers weed control offerings for farmers. We continue to invest in the growth of our *Roundup Ready XTEND* crop system, which includes capital expenditures to construct a dicamba manufacturing facility in Luling, Louisiana. In addition, we expect our lawn-and-garden business will continue to be a solid contributor to our Agricultural Productivity segment.

Global glyphosate producers have the capacity to supply the market, but global dynamics including demand, environmental regulation compliance and raw material availability can cause fluctuations in supply and price of those generic products. We expect the fluctuation in global capacity will impact the selling prices and margins of *Roundup* brands and our third party sourcing opportunities.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

In preparing our financial statements, we must select and apply various accounting policies. Our most significant policies are described in Item 8 — Financial Statements and Supplementary Data — Note 2 — Significant Accounting Policies . In order to apply our accounting policies, we often need to make estimates based on judgments about future events. In making such estimates, we rely on historical experience, market and other conditions, and on assumptions that we believe to be reasonable. However, the estimation process is by its nature uncertain given that estimates depend on events over which we may not have control. If market and other conditions change from those that we anticipate, our results of operations, financial condition and changes in financial condition may be materially affected. In addition, if our assumptions change, we may need to revise our estimates, or to take other corrective actions, either of which may also have a material effect on our results of operations, financial condition or changes in financial condition. Members of our senior management have discussed the development and selection of our critical accounting estimates, and our disclosures regarding them, with the audit and finance committee of our board of directors, and do so on a regular basis.

We believe that the following estimates have a higher degree of inherent uncertainty and require our most significant judgments. In addition, had we used estimates different from any of these, our results of operations, financial condition or changes in financial condition for the current period could have been materially different from those presented.

Restructuring: We may from time to time initiate restructuring activities. Management is required to estimate the timing and amount of severance and other related benefits for workforce reduction, as well as the fair value of property, plant and equipment and goodwill and other intangible assets. Our written human resource policies are indicative of an ongoing benefit arrangement with respect to severance packages. Costs associated with severance and other related benefits for workforce reduction are recorded when we consider them probable and estimable. As of Aug. 31, 2017, and 2016, we had $44 million and $244 million, respectively, accrued related to severance and related benefit costs. The primary factors affecting our accrual for severance and related benefit costs include estimated years of service and eligible pay related to the position severed. We review long-lived assets and finite-lived intangible assets for impairment when, in management's judgment, conditions indicate a possible loss. Such an assessment involves estimating undiscounted cash flows over the remaining useful life of the assets. If the review indicates that undiscounted cash flows are less than the carrying value of the assets, the assets are considered to be impaired. If an impairment is indicated, the asset is written down to its fair value, or if fair value is not readily determinable, to an estimated fair value based on discounted cash flows. For fiscal years 2017, 2016 and 2015 for the 2015 Restructuring Plan, we have recognized $19 million, $43 million and $81 million, respectively, of impairments related to property, plant and equipment and $3 million, $39 million and $71 million, respectively, of impairments related to intangible assets.

Goodwill: The majority of our goodwill relates to our seed company acquisitions. We are required to assess at least annually whether any of our goodwill is impaired. In order to do this, we apply judgment in determining our reporting units, which represent component parts of our business. Our annual goodwill impairment assessment involves estimating the fair value of a reporting unit and comparing it with its carrying value. If the carrying value of the reporting unit exceeds its fair value, additional steps are required to calculate a potential impairment loss.

Calculating the fair value of the reporting units requires significant estimates and long-term assumptions. Changes in key assumptions about the business and its prospects, or any changes in market conditions, interest rates or other externalities, could result in an impairment charge. We estimate the fair value of our reporting units by applying discounted cash flow methodologies. A discounted cash flow analysis requires us to make various judgmental estimates and assumptions that include, but are not limited to, sales growth, gross profit margin rates and discount rates. Discount rates were evaluated by reporting segment to account for differences in inherent industry risk. Sales growth and gross profit margin assumptions were based on our long range plan.

The annual goodwill impairment tests were performed as of Mar. 1, 2017 , and 2016 , respectively. No indications of goodwill impairment existed as of either date. The results of management's Mar. 1, 2017 , goodwill impairment test indicated that all reporting units had a calculated fair value greater than ten percent in excess of its carrying value.

Income Taxes: Management regularly assesses the likelihood that deferred tax assets will be recovered from future taxable income. To the extent management believes that it is more likely than not that a deferred tax asset will not be realized, a valuation allowance is established. When a valuation allowance is established, increased or decreased, an income tax charge or benefit is included in the consolidated financial statements, and net deferred tax assets are adjusted accordingly. Changes in tax laws, statutory tax rates and estimates of our future taxable income levels could result in actual realization of the deferred tax assets being materially different from the amounts provided for in the consolidated financial statements. If the actual recovery amount of the deferred tax asset is different than anticipated, we would be required to adjust the remaining deferred tax asset and the tax provision, resulting in an adjustment to net income and shareowners' equity.

As of Aug. 31, 2017 , and Aug. 31, 2016, management has recorded deferred tax assets of $345 million and $335 million, respectively, in Brazil, the largest component of which relates to net operating loss carryforwards that have no expiration date. Management believes it is more likely than not that we will realize these deferred tax assets in Brazil.

As of Aug. 31, 2017 , and Aug. 31, 2016, management has recorded deferred tax assets of $328 million and $281 million, respectively, in Argentina primarily related to accrued royalties for which a tax benefit will be realized when paid. As a result of losses generated in Argentina in the current and prior years, management determined we were not more likely than not to utilize these deferred tax assets and established a valuation allowance against the entire balance of these deferred tax assets in Argentina.

As of Aug. 31, 2017 , and Aug. 31, 2016, management has recorded deferred tax assets related to foreign tax credits of $232 million and $97 million, respectively, in the United States that have a ten year carryforward period. Management believes it is more likely than not that we will realize these deferred tax assets in the United States.

Under the Income Taxes topic of the ASC, in order to recognize the benefit of an uncertain tax position, the taxpayer must be more likely than not of sustaining the position, and the measurement of the benefit is calculated as the largest amount that is more than 50 percent likely to be realized upon resolution of the position. Tax authorities regularly examine our tax returns in the jurisdictions in which we do business. Management regularly assesses the risk of our tax return filing positions and believes our accruals for uncertain tax positions are adequate as of Aug. 31, 2017 , and Aug. 31, 2016.

Revenue Recognition : We sell our products directly to farmers, as well as through distributors, dealers and agents. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collection is reasonably assured. Product is considered delivered once it has been shipped to the farmer, distributor or dealer, or delivered to the farmer through an agent dealer, and risk and rewards of ownership have been transferred.

We may enter into multiple-element arrangements, including those where a customer purchases technology and licenses. When elements of a multiple element arrangement do not have stand-alone value, we account for such elements as a combined unit of accounting. We allocate revenue to each unit of accounting in a multiple-element arrangement based upon the relative selling price of each deliverable. When applying the relative selling price method, we determine the selling price for each deliverable by using vendor-specific objective evidence ("VSOE") of selling price, if it exists, or third-party evidence ("TPE") of selling price. If neither VSOE nor TPE of selling price exist for a unit of accounting, we use our best estimate of selling price for that unit of accounting. When we use our best estimate to determine selling price, significant judgment is required. The significant assumptions used to estimate selling price for significant units of accounting may consist of cost, gross margin objectives or forecasted customer selling volumes. Changes in assumptions used to estimate selling price could result in a different allocation of arrangement consideration across the units of accounting within an arrangement. Revenue allocated to each unit of accounting is recognized when all revenue recognition criteria for that unit of accounting have been met. Biotechnology trait license revenue, including those within multiple element arrangements, is generally recognized over the contract period as third-party seed companies sell seed containing our traits, which can be from one year up to the related patent term. License revenue from the sale of intellectual property, including those within multiple element arrangements, is generally recognized upon commencement of the license term.

We record reductions to revenue for estimated customer sales returns and certain customer incentive programs. These reductions to revenue are made based upon reasonable and reliable estimates that are determined by historical

experience, economic trends, contractual terms, current market conditions and changes in customer demand. The primary factors affecting our accrual for estimated customer returns include estimated return rates as well as the number of units shipped that have a right of return. At least each quarter, we re-evaluate our estimates to assess the adequacy of our recorded accruals for customer returns and allowance for doubtful accounts and adjust the amounts as necessary.

Customer Incentive Programs: Customer incentive program costs are recorded in accordance with the Revenue Recognition topic of the ASC, based upon specific performance criteria met by our customers, such as purchase volumes, promptness of payment and market share increases. We also have Agricultural Productivity customer incentive programs which provide certain customers price protection consideration if standard published prices are lowered from the price the distributor was charged on the eligible products. The cost of certain customer incentive programs is recorded in net sales in the Statements of Consolidated Operations. Certain customer incentive programs require management to estimate the number of customers who will actually redeem the incentive. As actual customer incentive program expenses are not known at the time of the sale, estimates based on the best available information (such as historical experience and market research) and the specific terms and conditions of particular incentive programs are used as a basis for recording customer incentive program liabilities. If a greater than estimated proportion of customers redeem such incentives, we would be required to record additional reductions to revenue, which would have a negative impact on our results of operations and cash flow. Management analyzes and reviews the customer incentive program balances on a quarterly basis, and adjustments are recorded as appropriate.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to the effect of interest rate changes, foreign currency fluctuations and changes in commodity, equity and debt securities prices. Market risk represents the risk of a change in the value of a financial instrument, derivative or nonderivative, caused by fluctuations in interest rates, currency exchange rates and commodity, equity and debt securities prices. Monsanto handles market risk in accordance with established policies by engaging in various derivative transactions. Such transactions are not entered into for trading purposes.

See Item 8 — Financial Statements and Supplementary Data — Note 2 — Significant Accounting Policies , Note 14 — Fair Value Measurements — and Note 15 — Financial Instruments — to the consolidated financial statements for further details regarding the accounting and disclosure of our derivative instruments and hedging activities.

The sensitivity analysis discussed below presents the hypothetical change in fair value of those financial instruments held by the company as of Aug. 31, 2017 , that are sensitive to changes in interest rates, currency exchange rates and commodity and equity securities prices. Actual changes may prove to be greater or less than those hypothesized.

Changes in Interest Rates : Our interest-rate risk exposure pertains primarily to the debt portfolio. To the extent that we have cash available for investment to ensure liquidity, we will invest that cash only in short-term instruments. Most of our debt as of Aug. 31, 2017 , consisted of fixed-rate long-term obligations.

Market risk with respect to interest rates is estimated as the potential change in fair value resulting from an immediate hypothetical one percentage point parallel shift in the yield curve. The fair values of our investments and debt are based on quoted market prices or discounted future cash flows. As the carrying amounts on short-term debt and investments maturing in less than 360 days and the carrying amounts of variable-rate medium-term notes approximate their respective fair values, a one percentage point change in the interest rates would not result in a material change in the fair value of our debt and investments portfolio.

The following table illustrates the fair values of the company's long-term debt instruments at Aug. 31, 2017 , and Aug. 31, 2016 , and the fair values for each of these instruments after a hypothetical one percentage point decrease in interest rates to the rate that existed at Aug. 31, 2017 , and Aug. 31, 2016 :

(Dollars in millions)	Initial Principal Amount Issued	Fair Value (1) As of Aug. 31, 2017	Fair Value (1) As of Aug. 31, 2016	Fair Value Sensitivity As of Aug. 31, 2017	Fair Value Sensitivity As of Aug. 31, 2016
5.500% Senior Notes due 2035 issued July 2005	$ 400	$ 470	$ 472	$ 498	$ 535
5.500% Senior Notes due 2025 issued August 2005	314	366	367	372	395
5.125% Senior Notes due 2018 issued April 2008	300	306	317	307	322
5.875% Senior Notes due 2038 issued April 2008	250	304	302	321	345
2.200% Senior Notes due 2022 issued July 2012	250	247	249	254	263
3.600% Senior Notes due 2042 issued July 2012	250	230	232	252	274
1.850% Senior Notes due 2018 issued November 2013	300	300	302	303	309
4.650% Senior Notes due 2043 issued November 2013	300	319	315	340	370
1.150% Senior Notes due 2017 issued July 2014	500	—	500	—	504
2.125% Senior Notes due 2019 issued July 2014	500	503	506	508	520
2.750% Senior Notes due 2021 issued July 2014	500	511	516	521	540
3.375% Senior Notes due 2024 issued July 2014	750	774	788	804	845
4.200% Senior Notes due 2034 issued July 2014	500	517	526	559	598
4.400% Senior Notes due 2044 issued July 2014	1,000	1,034	1,042	1,130	1,232
4.700% Senior Notes due 2064 issued July 2014	750	765	723	796	881
4.300% Senior Notes due 2045 issued January 2015	365	359	351	381	414
2.850% Senior Notes due 2025 issued April 2015	300	297	301	310	325
3.950% Senior Notes due 2045 issued April 2015	500	481	488	532	581
Floating Rate Senior Notes due 2016 issued November 2013	400	—	400	—	400

(1) Does not include the fair value of other long term debt, primarily consisting of mandatorily redeemable shares of the Brazil VIE as of Aug. 31, 2017, and capital lease obligations as of Aug. 31, 2017, and 2016, which had a fair value of $127 million and $36 million at Aug. 31, 2017, and Aug. 31, 2016, respectively.

Foreign Currency Fluctuations: Monsanto transacts business in various foreign currencies other than the U.S. dollar, principally the European euro, Brazil real, Argentine peso, Canadian dollar and Mexican peso, which exposes us to movements in exchange rates which may impact revenue and expenses, assets and liabilities and cash flows. In managing foreign currency risk, we focus on reducing the volatility in consolidated cash flows and earnings caused by fluctuations in exchange rates. We may use foreign currency forward exchange contracts, foreign currency options and economic hedges to manage the net currency exposure, in accordance with established hedging policies. We may hedge recorded commercial transaction exposures, intercompany loans and forecasted transactions.

The company's significant hedged positions included the European euro, the Brazilian real, the Canadian dollar and the Australian dollar. The total notional amount of foreign currency derivative instruments designated as hedges and not designated as hedges at Aug. 31, 2017, was $ 2,586 million , representing a settlement liability of $ 6 million . All of these derivatives are hedges of anticipated transactions, translation exposure, or existing assets or liabilities, and mature within 12 months. For all derivative positions, we evaluated the effects of a ten percent shift in exchange rates between those currencies and the U.S. dollar, holding all other assumptions constant. Unfavorable currency movements of ten percent would negatively affect the fair values of the derivatives held to hedge currency exposures by $60 million. These unfavorable changes would generally have been offset by favorable changes in the values of the underlying exposures.

The company held cash and cash equivalents and short-term investments of $1,864 million at Aug. 31, 2017, of which $1,281 million was held by foreign entities. For all non-U.S. dollar denominated cash held by foreign entities, we evaluated the effects of a ten percent shift in exchange rates between those currencies and the U.S. dollar, holding all other assumptions constant. Unfavorable currency movements of ten percent would negatively affect the fair values of cash and cash equivalents and short-term investments by $128 million.

Changes in Commodity Prices : Where practical, we use futures contracts to protect the company against commodity price increases and use option contracts to limit the unfavorable effect that price changes could have on these purchases. Our futures contracts are accounted for as cash flow hedges and are mainly in the Seeds and Genomics segment. Our option contracts do not qualify for hedge accounting under the provisions specified by the Derivatives and Hedging topic of the ASC. The majority of these contracts hedge the committed or future purchases of, and the

carrying value of payables to growers for, soybean and corn inventories. In addition, we collect payments on certain customer accounts in grain and enter into forward sales contracts to mitigate the commodity price exposure. A ten percent decrease in the prices would have a negative effect on the fair value of these instruments of $35 million. We also use natural gas, diesel and ethylene swaps to manage energy input costs and raw material costs. A ten percent decrease in the price of these swaps would have a negative effect on the fair value of these instruments of $5 million.

Changes in Equity Securities Prices : We also have investments in marketable equity securities. All such investments are classified as long-term available-for-sale investments. The fair value of these investments was $ 10 million and $13 million as of Aug. 31, 2017 , and 2016, respectively. These securities are listed on a stock exchange, quoted in an over-the-counter market or measured using an independent pricing source and adjusted for expected future credit losses. If the market price of the marketable equity securities should decrease by ten percent, the fair value of the equities would decrease by $1 million. See Item 8 — Financial Statements and Supplementary Data — Note 14 — Fair Value Measurements — for further details.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Management Report

Monsanto Company's management is responsible for the fair presentation and consistency, in accordance with accounting principles generally accepted in the United States of America, of all the financial information included in this Form 10-K. Where necessary, the information reflects management's best estimates and judgments.

Management is also responsible for establishing and maintaining an effective system of internal control over financial reporting. The purpose of this system is to provide reasonable assurance that Monsanto's assets are safeguarded against material loss from unauthorized acquisition, use or disposition, that authorized transactions are properly recorded to permit the preparation of accurate financial information in accordance with generally accepted accounting principles, that records are maintained which accurately and fairly reflect the transactions and dispositions of the company, and that receipts and expenditures are being made only in accordance with authorizations of management and directors of the company. This system of internal control over financial reporting is supported by formal policies and procedures, including a Business Conduct program designed to encourage and assist employees in living up to high standards of integrity, as well as a Code of Ethics for Chief Executive and Senior Financial Officers. Management seeks to maintain the effectiveness of internal control over financial reporting by careful personnel selection and training, division of responsibilities, establishment and communication of policies, and ongoing internal reviews and audits. See Management's Annual Report on Internal Control over Financial Reporting for Management's conclusion of the effectiveness of Monsanto's internal control over financial reporting as of August 31, 2017 .

Monsanto's consolidated financial statements have been audited by Deloitte & Touche LLP, independent registered public accounting firm. Their audits were conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States), and included a test of financial controls, tests of accounting records, and such other procedures as they considered necessary in the circumstances.

The Audit and Finance Committee, composed entirely of outside directors, meets regularly with management, with the internal auditors and with the independent registered public accounting firm to review accounting, financial reporting, auditing and internal control matters. The committee has direct and private access to the registered public accounting firm and internal auditors.

/s/ Hugh Grant

Hugh Grant
Chairman and Chief Executive Officer

/s/ Pierre Courduroux

Pierre Courduroux
Senior Vice President and Chief Financial Officer

October 27, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareowners of Monsanto Company:

We have audited the accompanying statements of consolidated financial position of Monsanto Company and subsidiaries (the "Company") as of August 31, 2017 and 2016, and the related statements of consolidated operations, comprehensive income, shareowners' equity, and cash flows for each of the three years in the period ended August 31, 2017. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Monsanto Company and subsidiaries as of August 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended August 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of August 31, 2017, based on the criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated October 27, 2017 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP

St. Louis, Missouri
October 27, 2017

Statements of Consolidated Operations

(Dollars in millions, except per share amounts)	Year Ended Aug. 31, 2017	2016	2015
Net Sales	**$ 14,640**	$ 13,502	$ 15,001
Cost of goods sold	**6,703**	6,485	6,819
Gross Profit	**7,937**	7,017	8,182
Operating Expenses:			
Selling, general and administrative expenses	**2,969**	2,833	2,686
Research and development expenses	**1,607**	1,512	1,580
Restructuring charges	**(36)**	297	393
Pending Bayer transaction related costs	**185**	—	—
Total Operating Expenses	**4,725**	4,642	4,659
Income from Operations	**3,212**	2,375	3,523
Interest expense	**452**	436	433
Interest income	**(76)**	(74)	(105)
Other (income) expense, net	**(50)**	22	34
Income from Continuing Operations Before Income Taxes	**2,886**	1,991	3,161
Income tax provision	**626**	695	864
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**2,260**	1,296	2,297
Discontinued Operations:			
Income from operations of discontinued businesses	**21**	27	45
Income tax provision	**8**	10	17
Income on Discontinued Operations	**13**	17	28
Net Income	**2,273**	1,313	2,325
Less: Net income (loss) attributable to noncontrolling interest	**13**	(23)	11
Net Income Attributable to Monsanto Company	**$ 2,260**	$ 1,336	$ 2,314
Amounts Attributable to Monsanto Company:			
Income from continuing operations	**$ 2,247**	$ 1,319	$ 2,286
Income on discontinued operations	**13**	17	28
Net Income Attributable to Monsanto Company	**$ 2,260**	$ 1,336	$ 2,314
Basic Earnings per Share Attributable to Monsanto Company:			
Income from continuing operations	**$ 5.12**	$ 2.98	$ 4.79
Income on discontinued operations	**0.03**	0.04	0.06
Net Income Attributable to Monsanto Company	**$ 5.15**	$ 3.02	$ 4.85
Diluted Earnings per Share Attributable to Monsanto Company:			
Income from continuing operations	**$ 5.06**	$ 2.95	$ 4.75
Income on discontinued operations	**0.03**	0.04	0.06
Net Income Attributable to Monsanto Company	**$ 5.09**	$ 2.99	$ 4.81
Weighted Average Shares Outstanding:			
Basic	**438.8**	442.7	476.9
Diluted	**443.8**	447.1	481.4

The accompanying notes are an integral part of these consolidated financial statements.

Statements of Consolidated Comprehensive Income

(Dollars in millions)	Year Ended Aug. 31, 2017	2016	2015
Comprehensive Income Attributable to Monsanto Company			
Net Income Attributable to Monsanto Company	**$ 2,260**	$ 1,336	$ 2,314
Other Comprehensive Income (Loss), Net of Tax:			
Foreign currency translation, net of tax of $(1), $2 and $(18), respectively	**233**	35	(1,596)
Postretirement benefit plan activity, net of tax of $52, $(35) and $(39), respectively	**93**	(54)	(65)
Unrealized net losses on investment holdings, net of tax of $(1), $(1) and $0, respectively	**(2)**	(2)	—
Realized net losses (gains) on investment holdings, net of tax of $1, $1 and $(1), respectively	**2**	1	(3)
Unrealized net derivative gains (losses), net of tax of $11, $(26) and $(46), respectively	**21**	(42)	(54)
Realized net derivative losses, net of tax of $24, $44 and $23, respectively	**34**	55	31
Total Other Comprehensive Income (Loss), Net of Tax	**381**	(7)	(1,687)
Comprehensive Income Attributable to Monsanto Company	**2,641**	1,329	627
Comprehensive Income Attributable to Noncontrolling Interests			
Net Income (Loss) Attributable to Noncontrolling Interests	**13**	(23)	11
Other Comprehensive Income (Loss):			
Foreign currency translation	**1**	(1)	(4)
Total Other Comprehensive Income (Loss)	**1**	(1)	(4)
Comprehensive Income (Loss) Attributable to Noncontrolling Interests	**14**	(24)	7
Total Comprehensive Income	**$ 2,655**	$ 1,305	$ 634

The accompanying notes are an integral part of these consolidated financial statements.

Statements of Consolidated Financial Position

(Dollars in millions, except share amounts)	As of Aug. 31, 2017	2016
Assets		
Current Assets:		
Cash and cash equivalents (variable interest entity restricted - 2017: $94 and 2016: $122)	**$ 1,856**	$ 1,676
Short-term investments	**8**	60
Trade receivables, net (variable interest entity restricted - 2017: $74 and 2016: $7)	**2,161**	1,926
Miscellaneous receivables (variable interest entity restricted - 2017: $5 and 2016: $0)	**827**	755
Inventory, net	**3,340**	3,241
Assets held for sale	**199**	272
Other current assets (variable interest entity restricted - 2017: $1 and 2016: $0)	**260**	227
Total Current Assets	**8,651**	8,157
Total property, plant and equipment	**12,231**	11,116
Less accumulated depreciation	**6,301**	5,885
Property, Plant and Equipment, net	**5,930**	5,231
Goodwill	**4,088**	4,020
Other Intangible Assets, Net	**1,024**	1,125
Deferred Tax Assets (variable interest entity restricted - 2017: $11 and 2016: $0)	**564**	613
Long-Term Receivables, Net	**121**	101
Other Assets (variable interest entity restricted - 2017: $4 and 2016: $0)	**955**	489
Total Assets	**$ 21,333**	$ 19,736
Liabilities and Shareowners' Equity		
Current Liabilities:		
Short-term debt, including current portion of long-term debt (variable interest entity restricted - 2017: $0 and 2016: $113)	**$ 870**	$ 1,587
Accounts payable (variable interest entity restricted - 2017: $9 and 2016: $0)	**1,068**	1,006
Income taxes payable	**58**	41
Accrued compensation and benefits	**578**	239
Accrued marketing programs	**1,918**	1,650
Deferred revenues	**727**	568
Grower production accruals	**59**	47
Dividends payable	**237**	237
Customer payable	**106**	123
Restructuring reserves	**37**	227
Miscellaneous short-term accruals (variable interest entity restricted - 2017: $2 and 2016: $0)	**740**	1,004
Total Current Liabilities	**6,398**	6,729
Long-Term Debt (variable interest entity restricted - 2017: $104 and 2016: $0)	**7,254**	7,453
Postretirement Liabilities	**313**	371
Long-Term Deferred Revenue	**114**	35
Noncurrent Deferred Tax Liabilities	**192**	68
Long-Term Portion of Environmental and Litigation Liabilities	**218**	200
Restructuring Reserves Long Term	**9**	17
Other Liabilities	**377**	318
Shareowners' Equity:		
Common stock (authorized: 1,500,000,000 shares, par value $0.01) Issued 613,219,246 and 611,435,047 shares, respectively		
Outstanding 439,578,276 and 437,795,024 shares, respectively	**6**	6
Treasury stock 173,640,970 and 173,640,023 shares, respectively, at cost	**(15,053)**	(15,053)
Additional contributed capital	**11,840**	11,626
Retained earnings	**12,072**	10,763
Accumulated other comprehensive loss	**(2,427)**	(2,808)
Total Monsanto Company Shareowners' Equity	**6,438**	4,534
Noncontrolling Interest	**20**	11
Total Shareowners' Equity	**6,458**	4,545
Total Liabilities and Shareowners' Equity	**$ 21,333**	$ 19,736

The accompanying notes are an integral part of these consolidated financial statements.

Statements of Consolidated Cash Flows

(Dollars in millions)	Year Ended Aug. 31, 2017	2016	2015
Operating Activities:			
Net Income	**$ 2,273**	$ 1,313	$ 2,325
Adjustments to reconcile cash provided by operating activities:			
Items that did not require (provide) cash:			
Depreciation and amortization	**748**	727	716
Bad-debt expense	**69**	152	45
Stock-based compensation expense	**126**	111	111
Excess tax benefits from stock-based compensation	**—**	(16)	(44)
Deferred income taxes	**98**	97	(271)
Restructuring impairments	**46**	147	276
Equity affiliate loss, net	**15**	15	7
Net gain on sales of a business or other assets	**(163)**	(181)	(2)
Other items, net	**103**	181	118
Changes in assets and liabilities that (required) provided cash, net of acquisitions:			
Trade receivables	**(262)**	(498)	68
Inventory, net	**(74)**	181	(425)
Deferred revenues	**220**	189	32
Accounts payable and other accrued liabilities	**458**	176	235
Restructuring reserves	**(198)**	25	217
Pension contributions	**(35)**	(78)	(27)
Other items, net	**(198)**	47	(273)
Net Cash Provided by Operating Activities	**3,226**	2,588	3,108
Cash Flows Provided (Required) by Investing Activities:			
Purchases of short-term investments	**—**	(50)	(63)
Maturities of short-term investments	**50**	35	56
Capital expenditures	**(1,240)**	(923)	(967)
Acquisition of businesses, net of cash acquired	**(11)**	(2)	(8)
Purchases of long-term debt and equity securities	**—**	—	(30)
Technology and other investments	**(71)**	(69)	(48)
Other investments and property disposal proceeds	**165**	145	41
Net Cash Required by Investing Activities	**(1,107)**	(864)	(1,019)
Cash Flows (Required) Provided by Financing Activities:			
Net change in financing with less than 90-day maturities	**(695)**	676	45
Short-term debt proceeds	**72**	49	57
Short-term debt reductions	**(54)**	(272)	(36)
Long-term debt proceeds	**601**	9	1,279
Long-term debt reductions	**(1,019)**	(306)	(107)
Debt issuance costs	**(2)**	—	(12)
Treasury stock purchases	**—**	(3,001)	(835)
Stock option exercises	**103**	81	137
Excess tax benefits from stock-based compensation	**—**	16	44
Tax withholding on restricted stock and restricted stock units	**(19)**	(24)	(36)
Dividend payments	**(948)**	(964)	(938)
Payments to noncontrolling interests	**(5)**	(6)	(28)
Net Cash Required by Financing Activities	**(1,966)**	(3,742)	(430)
Effect of Exchange Rate Changes on Cash and Cash Equivalents	**27**	(7)	(325)
Net Increase (Decrease) in Cash and Cash Equivalents	**180**	(2,025)	1,334
Cash and Cash Equivalents at Beginning of Period	**1,676**	3,701	2,367
Cash and Cash Equivalents at End of Period	**$ 1,856**	$ 1,676	$ 3,701

See Note 1 — Background and Basis of Presentation — and Note 23 — Supplemental Cash Flow Information — for further details.

The accompanying notes are an integral part of these consolidated financial statements.

Statements of Consolidated Shareowners' Equity

(Dollars in millions, except per share data)	Monsanto Shareowners					Non-Controlling Interest	Total
	Common Stock	Treasury Stock	Additional Contributed Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) (1)		
Balance Aug. 31, 2014	$ 6	$(10,032)	$ 10,003	$ 9,012	$ (1,114)	$ 39	$ 7,914
Net income	—	—	—	2,314	—	11	2,325
Other comprehensive loss for fiscal 2015	—	—	—	—	(1,687)	(4)	(1,691)
Treasury stock purchases	—	(2,021)	1,200	—	—	—	(821)
Restricted stock withholding	—	—	(29)	—	—	—	(29)
Issuance of shares under employee stock plans	—	—	138	—	—	—	138
Net excess tax benefits from stock-based compensation	—	—	40	—	—	—	40
Stock-based compensation expense	—	—	112	—	—	—	112
Cash dividends of $2.01 per common share	—	—	—	(952)	—	—	(952)
Acquisition of noncontrolling interest	—	—	—	—	—	(3)	(3)
Payments to noncontrolling interest	—	—	—	—	—	(28)	(28)
Balance Aug. 31, 2015	$ 6	$(12,053)	$ 11,464	$ 10,374	$ (2,801)	$ 15	$ 7,005
Net income (loss)	—	—	—	1,336	—	(23)	1,313
Other comprehensive loss for fiscal 2016	—	—	—	—	(7)	(1)	(8)
Treasury stock purchases	—	(3,000)	(1)	—	—	—	(3,001)
Restricted stock and restricted stock unit tax withholding	—	—	(24)	—	—	—	(24)
Issuance of shares under employee stock plans	—	—	81	—	—	—	81
Net excess tax benefits from stock-based compensation	—	—	11	—	—	—	11
Stock-based compensation expense	—	—	111	—	—	—	111
Cash dividends of $2.16 per common share	—	—	—	(947)	—	—	(947)
Acquisition of noncontrolling interest	—	—	(16)	—	—	26	10
Payments to noncontrolling interest	—	—	—	—	—	(6)	(6)
Balance Aug. 31, 2016	$ 6	$(15,053)	$ 11,626	$ 10,763	$ (2,808)	$ 11	$ 4,545
Net income	**—**	**—**	**—**	**2,260**	**—**	**13**	**2,273**
Other comprehensive income for fiscal 2017	**—**	**—**	**—**	**—**	**381**	**1**	**382**
Restricted stock and restricted stock unit tax withholding	**—**	**—**	**(18)**	**—**	**—**	**—**	**(18)**
Issuance of shares under employee stock plans	**—**	**—**	**105**	**—**	**—**	**—**	**105**
Stock-based compensation expense	**—**	**—**	**127**	**—**	**—**	**—**	**127**
Cash dividends of $2.16 per common share	**—**	**—**	**—**	**(951)**	**—**	**—**	**(951)**
Payments to noncontrolling interest	**—**	**—**	**—**	**—**	**—**	**(5)**	**(5)**
Balance Aug. 31, 2017	**$ 6**	**$ (15,053)**	**$ 11,840**	**$ 12,072**	**$ (2,427)**	**$ 20**	**$ 6,458**

(1) See Note 21 — Accumulated Other Comprehensive Loss — for further details of the components of accumulated other comprehensive loss.

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1. BACKGROUND AND BASIS OF PRESENTATION

Monsanto Company, along with its subsidiaries, is a leading global provider of agricultural products for farmers. Monsanto's seeds, biotechnology trait products, herbicides and digital agriculture products provide farmers with solutions that help improve productivity, reduce the costs of farming and produce better foods for consumers and better feed for animals.

Monsanto manages its business in two reportable segments: Seeds and Genomics and Agricultural Productivity. Through the Seeds and Genomics segment, Monsanto produces leading seed brands, including *DEKALB, Asgrow* , *Deltapine, Seminis* and *De Ruiter* , and Monsanto develops biotechnology traits that assist farmers in controlling insects and weeds and digital agriculture to assist farmers in decision making. Monsanto also provides other seed companies with genetic material and biotechnology traits for their seed brands. Through the Agricultural Productivity segment, the company manufactures *Roundup* and *Harness* brand herbicides and other herbicides. See Note 25 — Segment and Geographic Data — for further details.

In the fourth quarter of 2008, the company announced plans to divest its animal agricultural products business, which focused on dairy cow productivity and was previously reported as part of the Agricultural Productivity segment. This transaction was consummated on Oct. 1, 2008, and included a 10 -year earn-out with potential annual payments being earned by Monsanto if certain revenue levels are exceeded. As a result, financial data for this business has been presented as discontinued operations.

On Nov. 2, 2015, the company signed a definitive agreement with Deere & Company ("Deere") to sell the Precision Planting equipment business which is included in the Seed and Genomics segment for approximately $190 million in cash, subject to customary working capital adjustments. In May 2017, the company terminated its agreement with Deere to sell the Precision Planting equipment business. On Jul. 25, 2017, the company signed a definitive agreement with AGCO Corporation to sell the Precision Planting equipment business for approximately $200 million in cash, subject to customary working capital adjustments. The sale of the business is expected to close in the first quarter of fiscal 2018 after satisfying customary closing conditions. As of Aug. 31, 2017, and Aug. 31, 2016, Monsanto had $156 million and $172 million of assets held for sale, respectively, and $12 million of liabilities held for sale classified within miscellaneous short-term accruals, respectively, on the Statements of Consolidated Financial Position related to this transaction. The assets were primarily classified as inventory, net; trade receivables, net; property, plant, and equipment, net; goodwill; and other intangible assets, net, and the liabilities were primarily classified as accrued marketing programs and accounts payable.

During the fiscal year ended Aug. 31, 2017, the company divested its European-based silthiofam seed-treatment chemical business previously reported as part of the Agricultural Productivity segment for approximately $140 million in cash, subject to customary working capital adjustments. Approximately $85 million , less the carrying amount of assets sold of approximately $2 million , was recognized within other (income) expense, net in the Statement of Consolidated Operations for the fiscal year ended Aug, 31, 2017. The recognition of the remaining $55 million is contingent on silthiofam re-registration within the European Union.

Unless otherwise indicated, "Monsanto" and "the company" are used interchangeably to refer to Monsanto Company or to Monsanto Company and its consolidated subsidiaries, as appropriate to the context.

NOTE 2. SIGNIFICANT ACCOUNTING POLICIES

Basis of Consolidation

The accompanying consolidated financial statements of Monsanto and its subsidiaries were prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") and include the assets, liabilities, revenues and expenses of all majority-owned subsidiaries over which the company exercises control and, when applicable, entities for which the company has a controlling financial interest or is the primary beneficiary. Intercompany accounts and transactions have been eliminated in consolidation. The company records income attributable to noncontrolling interest in the Statements of Consolidated Operations for any non-owned portion of consolidated subsidiaries. Noncontrolling interest is recorded within the equity section but separate from Monsanto's equity in the Statements of Consolidated Financial Position.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make certain estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Estimates are adjusted to reflect actual experience when necessary. Significant estimates and assumptions affect many items in the consolidated financial statements. These include allowance for doubtful trade receivables, sales returns and allowances, inventory obsolescence, income tax liabilities and assets and related valuation allowances, asset impairments, valuations of goodwill and other intangible assets, employee benefit plan assets and liabilities, value of equity-based awards, customer incentive program liabilities, restructuring reserves, self-insurance reserves, environmental reserves, deferred revenue, contingencies, litigation, incentives, the allocation of corporate costs to segments and certain cash flow projections. Significant estimates and assumptions are also used to establish the fair value and useful lives of depreciable tangible and certain intangible assets. Actual results may differ from those estimates and assumptions, and such results may affect income, financial position or cash flows.

Revenue Recognition

The company derives most of its revenue from three main sources: sales of branded conventional seed and branded seed with biotechnology traits; royalties and license revenues from licensed biotechnology traits and genetic material; and sales of agricultural chemical products. Monsanto follows the Revenue Recognition topic of the Accounting Standards Codification ("ASC").

Revenues from all seed sales are recognized when risks and rewards of ownership of the products are transferred. The company recognizes revenue on products it sells to distributors or other customers when, according to the terms of the sales agreement, delivery has occurred, performance is complete, expected returns can be reasonably estimated, and pricing is fixed or determinable. When the right of return exists in the company's seed business, sales revenues are reduced at the time of sale to reflect expected returns. In order to estimate the expected returns, management analyzes historical returns, economic trends, market conditions and changes in customer demand.

The Revenue Recognition topic of the ASC affects Monsanto's recognition of license revenues from biotechnology traits sold through third-party seed companies. The company may enter into multiple element arrangements, including those where a customer purchases technology and licenses. When elements of a multiple element arrangement do not have stand alone value, Monsanto accounts for such elements as a combined unit of accounting. The company allocates revenue to each unit of accounting in a multiple element arrangement based upon the relative selling price of each deliverable. When applying the relative selling price method, Monsanto determines the selling price for each deliverable by using vendor-specific objective evidence ("VSOE") of selling price, if it exists, or third-party evidence ("TPE") of selling price. If neither VSOE nor TPE of selling price exists for a unit of accounting, Monsanto uses its best estimate of selling price for that unit of accounting. When Monsanto uses its best estimate to determine selling price, significant judgment is required. The significant assumptions used to estimate selling price for significant units of accounting may consist of cost, gross margin objectives or forecasted customer selling volumes. Changes in assumptions used to estimate selling price could result in a different allocation of arrangement consideration across the units of accounting within an arrangement. Revenue allocated to each unit of accounting is recognized when all revenue recognition criteria for that unit of accounting have been met. Biotechnology trait license revenue, including those within multiple element arrangements, is generally recognized over the contract period as third-party seed companies sell seed containing Monsanto traits, which can be from one year up to the related patent term. License revenue from the sale of intellectual property, including those within multiple element arrangements, is generally recognized upon commencement of the license term.

Primarily in Brazil and Latin America, Monsanto has point-of-delivery collection systems for certain royalties for soybeans and cotton to record revenue when the grain containing Monsanto's technology is delivered and commercialized at the grain handlers and collectibility is reasonably assured.

Revenues for agricultural chemical products are recognized when title to the products is transferred. The company recognizes revenue on products it sells to distributors when, according to the terms of the sales agreements, delivery has occurred, performance is complete, no right of return exists unless required by law, and pricing is fixed or determinable.

There are several additional conditions for recognition of revenue including that the collection of sales proceeds must be reasonably assured based on historical experience and current market conditions and that there must be no consequential remaining performance obligations under the sale or the royalty or license agreement.

Amounts billed to customers for shipping and handling fees are included in net sales, and costs incurred by the company for the delivery of goods are classified as cost of goods sold in the Statements of Consolidated Operations.

To reduce credit exposure primarily in Latin America, Monsanto collects payments on certain customer accounts in grain. In those circumstances in Argentina when Monsanto participates in the negotiation of the forward sales contract, Monsanto records revenue and related cost of sale for the grain on a net basis. In those circumstances in Brazil when Monsanto does not participate in the negotiation of the forward sales contract and does not take physical custody of the grain or assume the associated inventory risk, Monsanto does not record revenue or the related cost of sales for the grain. Such payments in grain are negotiated at or near the time Monsanto's products are sold to the customers and are valued at the prevailing grain commodity prices. By entering into forward sales contracts with grain merchants, Monsanto mitigates the commodity price exposure from the time a contract is signed with a customer until the time a grain merchant collects the grain from the customer on Monsanto's behalf. The grain merchant converts the grain to cash for Monsanto. These forward sales contracts do not qualify for hedge accounting under the Derivatives and Hedging topic of the ASC. Accordingly, the gain or loss on these derivatives is recognized in current earnings.

Promotional, Advertising and Customer Incentive Program Costs

Promotional and advertising costs are expensed as incurred and are included in selling, general and administrative expenses in the Statements of Consolidated Operations. Advertising costs were $68 million , $64 million and $74 million in fiscal 2017 , 2016 and 2015 , respectively. Customer incentive program costs are recorded in accordance with the Revenue Recognition topic of the ASC, based on specific performance criteria met by Monsanto's customers, such as purchase volumes, promptness of payment and market share increases. In fiscal 2017 and 2016, the company had Agricultural Productivity customer incentive programs providing certain customers price protection consideration if standard published prices are lowered from the price the distributor was charged on the eligible products on or before April 30 of the respective program year. The cost of customer incentive programs is generally recorded in net sales in the Statements of Consolidated Operations. The fair value of incentive programs earned by customers for services with separate identifiable benefit is generally recorded in selling, general and administrative expenses in the Statements of Consolidated Operations. The cost of incentive programs earned by distributors determined to be agents is generally recorded in selling, general and administrative expenses in the Statements of Consolidated Operations. As actual customer incentive program expenses are not known at the time of the sale, an estimate based on the best available information (such as historical experience and market research) is used as a basis for recording customer incentive program liabilities. Management analyzes and reviews the customer incentive program balances on a quarterly basis, and adjustments are recorded as appropriate. Under certain customer incentive programs, customers may receive free product. The associated cost of this free product is recognized as cost of goods sold in the Statements of Consolidated Operations.

Research and Development Costs and Collaborative Arrangements

The company accounts for research and development ("R&D") costs in accordance with the Research and Development topic of the ASC. Under the Research and Development topic of the ASC, all R&D costs must be charged to expense as incurred. Accordingly, internal R&D costs are expensed as incurred. Third-party R&D costs are expensed when the contracted work has been performed or as milestone results are achieved. In process research and development ("IPR&D") costs acquired in a business combination are recorded on the Statements of Consolidated Financial Position as indefinite-lived intangible assets until completion or abandonment of the associated R&D efforts. The costs of purchased IPR&D that have alternative future uses are capitalized and amortized over the estimated useful life of the asset. IPR&D intangible assets are subject to annual impairment tests. The costs associated with equipment or facilities acquired or constructed for R&D activities that have alternative future uses are capitalized and depreciated on a straight-line basis over the estimated useful life of the asset. The amortization and depreciation for such capitalized assets are charged to R&D expenses. Monsanto has entered into collaborations with third parties for the R&D and commercialization of agricultural products. The company accounts for costs incurred and revenue generated under these collaborative arrangements from transactions with third parties in accordance with the Collaborative Arrangements topic of the ASC. Under the Collaborative Arrangements topic of the ASC, all costs incurred and revenue generated from transactions with third parties shall be recorded in each entity's respective income statement.

Income Taxes

Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax basis of assets and liabilities and their reported amounts. Management regularly assesses the

likelihood that deferred tax assets will be recovered from future taxable income, and to the extent management believes that it is more likely than not that a deferred tax asset will not be realized, a valuation allowance is established. When a valuation allowance is established, increased or decreased, an income tax charge or benefit is included in the consolidated financial statements, and net deferred tax assets are adjusted accordingly. The net deferred tax assets as of Aug. 31, 2017 , and Aug. 31, 2016, represent the estimated future tax benefits to be received from future reductions of taxes payable.

Under the Income Taxes topic of the ASC, in order to recognize the benefit of an uncertain tax position, the taxpayer must be more likely than not of sustaining the position, and the measurement of the benefit is calculated as the largest amount that is more than 50 percent likely to be realized upon resolution of the position. Tax authorities regularly examine the company's tax returns in the jurisdictions in which it does business. Management regularly assesses the risk of the company's tax return filing positions and believes its accruals for uncertain tax positions are adequate as of Aug. 31, 2017 , and Aug. 31, 2016 .

Cash and Cash Equivalents

All highly liquid investments (defined as investments with a maturity of three months or less when purchased) are considered cash equivalents.

Inventory Valuation and Obsolescence

Inventories are stated at the lower of cost or market value for inventory measured using last-in, first-out ("LIFO") method. Inventories are stated at the lower of cost or net realizable value for inventory measured under the first-in, first-out ("FIFO") or average cost method. An inventory reserve would permanently reduce the cost basis of inventory. Inventories are valued as follows:

Seeds and Genomics : Actual cost is used to value raw materials such as treatment chemicals and packaging, as well as goods in process. Costs for substantially all finished goods, which include the cost of carryover crops from the previous year, are valued at weighted-average actual cost. Weighted-average actual cost includes field growing and harvesting costs, plant conditioning and packaging costs and manufacturing overhead costs.

Agricultural Productivity : Actual cost is used to value raw materials and supplies. Standard cost, which approximates actual cost, is used to value finished goods and goods in process. Variances, exclusive of abnormally low volume and operating performance, are capitalized into inventory. Standard cost includes direct labor and raw materials and manufacturing overhead based on normal capacity. The cost of the Agricultural Productivity segment inventories in the United States (approximately 17 and 11 percent of total company inventory as of Aug. 31, 2017 , and Aug. 31, 2016) is determined by using the LIFO method, which generally reflects the effects of inflation or deflation on cost of goods sold sooner than other inventory cost methods. The cost of inventories outside of the United States, as well as supplies inventories in the United States, is determined by using the FIFO method; FIFO is used outside of the United States because the requirements in the countries where Monsanto maintains inventories generally do not allow the use of the LIFO method. Inventories at FIFO approximate current cost.

In accordance with the Inventory topic of the ASC, Monsanto records abnormal amounts of idle facility expense, freight, handling costs and wasted material (spoilage) as current period charges and allocates fixed production overhead to the costs of conversion based on the normal capacity of the production facilities.

Monsanto establishes allowances for obsolescence of inventory equal to the difference between the cost of inventory (if higher) and the estimated market value, based on assumptions about future demand and market conditions. The company regularly evaluates the adequacy of its inventory obsolescence reserves. If economic and market conditions are different from those anticipated, inventory obsolescence could be materially different from the amounts provided for in the company's consolidated financial statements.

Goodwill

Monsanto follows the guidance of the Business Combinations topic of the ASC in recording the goodwill arising from a business combination as the excess of purchase price and related costs over the fair value of identifiable assets acquired and liabilities assumed.

Under the Intangibles – Goodwill and Other topic of the ASC, goodwill is not amortized and is subject to annual impairment tests. A fair-value-based test is applied at the reporting unit level, which is generally at or one level below

the operating segment level. The test compares the fair value of the company's reporting units to the carrying value of those reporting units. This test requires various judgments and estimates. The fair value of goodwill is determined using an estimate of future cash flows of the reporting unit and a risk-adjusted discount rate to compute a net present value of future cash flows. An adjustment to goodwill will be recorded for any goodwill that is determined to be impaired. Impairment of goodwill is measured as the excess of the carrying amount of goodwill over the fair values of recognized assets and liabilities of the reporting unit. Goodwill is tested for impairment at least annually, or more frequently if events or circumstances indicate it might be impaired.

Other Intangible Assets

Other intangible assets consist primarily of acquired seed germplasm, intellectual property, trademarks and customer relationships. Seed germplasm is the genetic material used in new seed varieties. Germplasm is amortized on a straight-line basis over useful lives ranging from five years for completed technology germplasm to a maximum of 30 years for certain core technology germplasm. Completed technology germplasm consists of seed hybrids and varieties that are commercially available. Core technology germplasm is the collective germplasm of parental seeds and has a longer useful life as it is used to develop new seed hybrids and varieties. Acquired intellectual property includes intangible assets related to acquisitions and licenses through which Monsanto has acquired the rights to various research and discovery technologies. These encompass intangible assets such as enabling processes and data libraries necessary to support the integrated genomics and biotechnology platforms. These intangible assets have alternative future uses and are amortized over useful lives ranging from two years to 19 years . The useful lives of acquired germplasm and acquired intellectual property are determined based on consideration of several factors including the nature of the asset, its expected use, length of licensing agreement or patent and the period over which benefits are expected to be received from the use of the asset.

Monsanto has a broad portfolio of trademarks for herbicide products, traits, agricultural seeds and vegetable seeds, and patents for its traits, formulations used to make its herbicides and various manufacturing processes. The amortization period for acquired trademarks and patents ranges from three years to 30 years . Trademarks are amortized on a straight-line basis over their useful lives. The useful life of a trademark is determined based on the estimated market-life of the associated company, brand or product. Patents are amortized on a straight-line basis over the period in which the patent is legally protected, the period over which benefits are expected to be received, or the estimated market-life of the product with which the patent is associated, whichever is shorter.

In conjunction with acquisitions, Monsanto obtains access to the distribution channels and customer relationships of the acquired companies. These relationships are expected to provide economic benefits to Monsanto. The amortization period for customer relationships ranges from five years to 20 years , and amortization is recognized on a straight-line basis over these periods. The amortization period of customer relationships represents management's best estimate of the expected usage or consumption of the economic benefits of the acquired assets, which is based on the company's historical experience of customer attrition rates.

In accordance with the Property, Plant and Equipment topic of the ASC, all amortizable intangible assets are assessed for impairment whenever events indicate a possible loss. At a minimum, Monsanto assesses all amortizable intangible assets annually. Such an assessment involves estimating undiscounted cash flows over the remaining useful life of the intangible. If the review indicates that undiscounted cash flows are less than the recorded value of the intangible asset, the carrying amount of the intangible is reduced by the estimated cash-flow shortfall on a discounted basis, and a corresponding loss is charged to the Statement of Consolidated Operations.

Property, Plant and Equipment

Property, plant and equipment is recorded at cost. Additions and improvements are capitalized; these include all material, labor and engineering costs to design, install or improve the asset and interest costs on construction projects. Such costs are not depreciated until the assets are placed in service. Routine repairs and maintenance are expensed as incurred. The cost of plant and equipment is depreciated using the straight-line method over the estimated useful life of the asset — weighted-average periods of approximately 25 years for buildings, ten years for machinery and equipment and five years for software. In compliance with the Property, Plant and Equipment topic of the ASC, long-lived assets are reviewed for impairment whenever in management's judgment conditions indicate a possible loss. Such impairment tests compare estimated undiscounted cash flows to the recorded value of the asset. If an impairment is indicated, the asset is written down to its fair value or, if fair value is not readily determinable, to an estimated fair value based on discounted cash flows.

Asset Retirement Obligations and Environmental Remediation Liabilities

Monsanto follows the Asset Retirement and Environmental Obligations topic of the ASC, which addresses financial accounting for and financial reporting of a liability for an asset retirement obligation and an environmental remediation liability that results from the normal operation of a long-lived asset. Monsanto has asset retirement obligations with carrying amounts totaling $83 million and $78 million included in other liabilities on the Statements of Consolidated Financial Position as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively, primarily relating to its manufacturing facilities.

In accordance with the Asset Retirement and Environmental Obligations topic of the ASC, Monsanto accrues these costs in the period when responsibility is established and when such costs are probable and reasonably estimable based on current law and existing technology. Postclosure and remediation costs for hazardous waste sites and other waste facilities at operating locations are accrued over the estimated life of the facility, as part of its anticipated closure cost.

Litigation and Other Contingencies

Monsanto is involved from time to time in various intellectual property, biotechnology, tort, contract, antitrust, shareowner claims, environmental and other litigation, claims and legal proceedings; environmental remediation; and government investigations. Management routinely assesses the likelihood of adverse judgments or outcomes to those matters, as well as ranges of probable losses, to the extent losses are reasonably estimable. In accordance with the Contingencies topic of the ASC, accruals for such contingencies are recorded to the extent that management concludes their occurrence is probable and the financial impact, should an adverse outcome occur, is reasonably estimable. Disclosure for specific legal contingencies is provided if the likelihood of occurrence is at least reasonably possible, and the exposure is considered material to the consolidated financial statements. In making determinations of likely outcomes of litigation matters, management considers many factors. These factors include, but are not limited to, past experience, scientific and other evidence, interpretation of relevant laws or regulations and the specifics and status of each matter. If the assessment of the various factors changes, the estimates may change. That may result in the recording of an accrual or a change in a previously recorded accrual. Predicting the outcome of claims and litigation and estimating related costs and exposure involves substantial uncertainties that could cause actual costs to vary materially from estimates and accruals.

Guarantees

Monsanto is subject to various commitments under contractual and other commercial obligations. The company recognizes liabilities for contingencies and commitments under the Guarantees topic of the ASC.

Foreign Currency Translation

The financial statements for most of Monsanto's ex-U.S. operations are translated to U.S. dollars at current exchange rates. For assets and liabilities, the fiscal year-end rate is used. For revenues, expenses, gains and losses, an approximation of the average rate for the period is used. Unrealized currency adjustments in the Statements of Consolidated Financial Position are accumulated in equity as a component of accumulated other comprehensive loss. The financial statements of ex-U.S. operations in highly inflationary economies are translated at either current or historical exchange rates at the time they are deemed highly inflationary, in accordance with the Foreign Currency Matters topic of the ASC . These currency adjustments and the remeasurement of assets and liabilities of ex-U.S. operations with the U.S. dollar designated as their functional currency are included in net income. Based on the Consumer Price Index ("CPI"), Monsanto designated Venezuela as a hyperinflationary country effective June 1, 2009. The functional currency of the company's foreign entities in Argentina is the U.S. dollar.

Significant translation exposures include the Brazilian real, Mexican peso, European euro, Indian rupee, South African rand, Turkish lira and Ukrainian hryvnia. Currency restrictions are not expected to have a significant effect on Monsanto's cash flow, liquidity or capital resources.

Derivatives and Other Financial Instruments

Monsanto uses financial derivative instruments and natural hedges to limit its exposure to changes in foreign currency exchange rates, commodity prices and interest rates. Monsanto does not use financial derivative instruments for the purpose of speculating in foreign currencies, commodities or interest rates. Monsanto continually monitors its underlying market risk exposures and believes that it can modify or adapt its hedging strategies as needed.

In accordance with the Derivatives and Hedging topic of the ASC, all derivatives, whether designated for hedging relationships or not, are recognized in the Statements of Consolidated Financial Position at their fair value. At the time a derivative contract is entered into, Monsanto designates each derivative as: (1) a hedge of the fair value of a recognized asset or liability (a fair-value hedge), (2) a hedge of a forecasted transaction or of the variability of cash flows that are to be received or paid in connection with a recognized asset or liability (a cash-flow hedge), (3) a foreign-currency fair-value or cash-flow hedge (a foreign-currency hedge) or (4) a derivative that does not qualify for hedge accounting treatment.

Changes in the fair value of a derivative that is considered highly effective, and that is designated as and qualifies as a fair-value hedge, along with changes in the fair value of the hedged asset or liability that are attributable to the hedged risk, are recorded in current-period net income. Changes in the fair value of a derivative that is considered highly effective, and that is designated as and qualifies as a cash-flow hedge, to the extent that the hedge is effective, are recorded in accumulated other comprehensive loss until net income is affected by the variability from cash flows of the hedged item. Any hedge ineffectiveness is included in current-period net income. Changes in the fair value of a derivative that is considered highly effective, and that is designated as and qualifies as a foreign-currency hedge, are recorded either in current-period net income or in accumulated other comprehensive loss, depending on whether the hedging relationship satisfies the criteria for a fair-value or cash-flow hedge. Changes in the fair value of derivative instruments not designated as hedges are reported in current-period net income.

Monsanto formally and contemporaneously documents all relationships between hedging instruments and hedged items, as well as its risk-management objective and its strategy for undertaking various hedge transactions. This includes linking all derivatives that are designated as fair-value, cash-flow or foreign-currency hedges either to specific assets and liabilities on the Statements of Consolidated Financial Position, or to firm commitments or forecasted transactions. Monsanto formally assesses a hedge at its inception and on an ongoing basis thereafter to determine whether the hedging relationship between the derivative and the hedged item is still highly effective, and whether it is expected to remain highly effective in future periods, in offsetting changes in fair value or cash flows. When derivatives cease to be highly effective hedges, Monsanto discontinues hedge accounting prospectively.

NOTE 3. NEW ACCOUNTING STANDARDS

In August 2017, the Financial Accounting Standards Board ("FASB") issued accounting guidance, "Targeted Improvements to Accounting for Hedging Activities" which seeks to better align an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2018. Adoption will be applied on a modified retrospective approach to existing hedging relationships as of the date of adoption. Monsanto is required to adopt this standard in the first quarter of fiscal year 2020. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In May 2017, the FASB issued accounting guidance, "Scope of Modification Accounting" which clarifies modification accounting for share-based payment awards should not be applied if the fair value, vesting conditions, and classification of the modified award are the same before and immediately after the modification. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017. Adoption will be applied prospectively to awards modified on or after the adoption date. Accordingly, Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In February 2017, the FASB issued accounting guidance, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost" which requires the disaggregation of the service cost component from other components of net periodic benefit cost, clarifies how to present the service cost component and other components of net benefit costs in the Statements of Consolidated Operations and allows only the service cost component of net benefit costs to be eligible for capitalization. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted as of the beginning of a fiscal year for which interim or annual statements have not been issued. Adoption will be applied on a retrospective basis for the presentation of all components of net periodic benefit costs and on a prospective basis for the capitalization of the service cost component of net periodic pension cost and net periodic postretirement benefit in assets. Accordingly, Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In February 2017, the FASB issued accounting guidance, "Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sale of Nonfinancial Assets" which clarifies the scope of transactions that are accounted for in accordance with the Other Income topic of the ASC as well as when these assets would be derecognized. The Other Income topic of the ASC applies to a sale or transfer to a non-customer of nonfinancial assets or financial assets in a contract with substantially all of the fair value concentrated in nonfinancial assets. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with an early adoption of one-year permitted. This guidance is required to be adopted at the same time "Revenue from Contracts with Customers" is adopted. Entities have the option to apply the new guidance under a retrospective approach to each prior reporting period presented or a modified retrospective approach with the cumulative effect of initially applying the new guidance recognized at the date of initial application within the Statement of Consolidated Financial Position. The method of adoption elected may be different than the method of adoption for "Revenue from Contracts with Customers." Monsanto is required to adopt this standard in the first quarter of fiscal year 2019.

The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In January 2017, the FASB issued accounting guidance, "Simplifying the Test for Goodwill Impairment" which would eliminate the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge. Instead, the amount of an impairment charge would be recognized if the carrying amount of a reporting unit is greater than its fair value. This standard is effective for annual or any interim goodwill impairments tests in fiscal years beginning after Dec. 15, 2019, with early adoption permitted. Adoption will be applied on a prospective basis. Monsanto is required to adopt this standard in the first quarter of fiscal year 2021. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In January 2017, the FASB issued accounting guidance, "Clarifying the Definition of a Business" which requires an evaluation of whether substantially all fair value of the assets acquired or disposed of is concentrated in a single identifiable asset or a group of similar identifiable assets. If this threshold is met, the set of transferred assets and activities is not a business. The guidance also requires a business to include at least one substantive process. Transactions that meet the definition of a business are expected to decrease as a result of the adoption of this guidance. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted. Adoption will be applied on a prospective basis. Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In November 2016, the FASB issued accounting guidance, "Statement of Cash Flows: Restricted Cash" which requires restricted cash and restricted cash equivalents to be classified in the Statements of Cash Flows as cash and cash equivalents. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted. Adoption will be applied on a retrospective basis to all periods presented. Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In October 2016, the FASB issued accounting guidance, "Income Taxes: Intra-Entity Transfers of Assets Other than Inventory" which will require the income tax effects of intra-entity transfers of assets other than inventory to be recognized when the transfer occurs. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted as of the beginning of an annual period. Adoption will be applied on a modified retrospective basis. Monsanto is required to adopt the standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In August 2016, the FASB issued accounting guidance, "Classification of Certain Cash Receipts and Cash Payments" which clarifies the classification of the activity in the Statements of Consolidated Cash Flows and how the predominant principle should be applied when cash receipts and cash payments have more than one class of cash flows. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted. Adoption will be applied retrospectively. Monsanto is required to adopt the standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In June 2016, the FASB issued accounting guidance, "Measurement of Credit Losses on Financial Instruments" which replaces the incurred loss methodology to record credit losses with a methodology that reflects the expected credit

losses for financial assets not accounted for at fair value with gains and losses recognized through net income. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2019, with early adoption permitted for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2018. This standard will be adopted on a modified retrospective basis. Monsanto is required to adopt this standard in the first quarter of fiscal year 2021, with early adoption permitted in the first quarter of fiscal year 2020. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In March 2016, the FASB issued accounting guidance, "Improvements to Employee Share-Based Payment Accounting" which simplifies the income tax consequences, accounting for forfeitures and classification on the Statements of Consolidated Cash Flows. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2016, with early adoption permitted. Monsanto is required to adopt the standard in the first quarter of fiscal year 2018. The company elected to early adopt this standard in the fourth quarter of fiscal year 2017. See Note 19 — Stock-Based Compensation Plans for further discussion of the impact of adoption.

In February 2016, the FASB issued accounting guidance, "Leases" which will supersede the existing lease guidance and will require all leases with a term greater than 12 months to be recognized in the Statements of Financial Position and eliminate current real estate-specific lease guidance, while maintaining substantially similar classification criteria for distinguishing between finance leases and operating leases. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2018, with early adoption permitted. This standard will be adopted on a modified retrospective basis. Monsanto is required to adopt the standard in the first quarter of fiscal year 2020. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In January 2016, the FASB issued accounting guidance, "Recognition and Measurement of Financial Assets and Financial Liabilities" which would require equity investments not accounted for as an equity method investment or that result in consolidation to be recorded at their fair value with changes in fair value recognized in the Statements of Consolidated Operations. Those equity investments that do not have a readily determinable fair value may be measured at cost less impairment, if any, plus or minus changes resulting from observable price changes. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption prohibited. Monsanto is required to adopt the standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In February 2015, the FASB issued accounting guidance, "Amendments to the Consolidation Analysis" which changes the guidance with respect to the analysis that a reporting entity must perform to determine whether it should consolidate certain types of legal entities. All legal entities are subject to reevaluation under the revised consolidation model. The new guidance affects the following areas: (1) limited partnerships and similar legal entities, (2) evaluating fees paid to a decision maker or a service provider as a variable interest, (3) the effect of fee arrangements on the primary beneficiary determination, (4) the effect of related parties on the primary beneficiary determination and (5) certain investment funds. This standard is effective for fiscal years, and for interim periods within those fiscal years, beginning after Dec. 15, 2015. Accordingly, Monsanto adopted this standard in the first quarter of fiscal year 2017. The adoption of this guidance did not have an impact on the consolidated financial statements or related disclosures.

In May 2014, the FASB issued accounting guidance, "Revenue from Contracts with Customers" which has been further clarified and amended. The core principle of the new standard is for companies to recognize revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration (that is, payment) to which the company expects to be entitled in exchange for those goods or services. The new standard also will result in enhanced disclosures about revenue, provide guidance for transactions that were not previously addressed comprehensively (for example, service revenue and contract modifications) and clarify guidance for multiple-element arrangements. Entities have the option to apply the new guidance under a retrospective approach to each prior reporting period presented or a modified retrospective approach with the cumulative effect of initially applying the new guidance recognized at the date of initial application within the Statement of Consolidated Financial Position. In August 2015, the FASB amended the guidance to allow for the deferral of the effective date of this standard. The standard is effective for fiscal years, and interim periods within those years, beginning after Dec. 15, 2017. Accordingly, Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. One-year early adoption is permitted. The initial analysis identifying areas that will be impacted by the new guidance is substantially complete, and the company is currently analyzing the potential impacts to the consolidated financial statements and related disclosures. The company believes the most significant impact relates to its accounting for biotechnology trait license revenue with fixed payments. Specifically, under the new standard, revenue for biotechnology trait licenses

with fixed payments are expected to be recognized upon commencement of the license term rather than over the contract period. Due to complexities of certain biotechnology trait license agreements, the actual revenue recognition treatment under the standard will be dependent upon contract-specific terms and may vary in some instances from recognition upon commencement of the license term. Upon adoption, the company may recognize a cumulative material adjustment to increase retained earnings, reflecting license revenue for which the contract period has not yet finished. The company does not expect the adoption of this standard to have an impact on the cash flows related to these license agreements. Revenue from seed sales, agricultural chemical products and biotechnology trait licenses recognized as third-party seed companies sell seed is expected to remain substantially unchanged. The company anticipates utilizing the modified retrospective method for adopting the standard.

NOTE 4. COLLABORATIVE ARRANGEMENTS

In the normal course of business, Monsanto enters into collaborative arrangements for the research, development, manufacture and/or commercialization of agricultural products. Collaborative arrangements are contractual agreements with third parties that involve a joint operating activity, such as R&D and commercialization of a collaboration product, where both Monsanto and the third party are active participants in the activities of the collaboration and are exposed to significant risks and rewards of the collaboration. These collaborations generally include cost sharing and profit sharing. Monsanto's collaboration agreements are performed with no guarantee of either technological or commercial success.

Monsanto has entered into various multi-year research, development, manufacturing and commercialization collaborations related to various activities including plant biotechnology and microbial solutions. Under these collaborations, Monsanto and the third parties participate in the R&D and/or manufacturing activities, and Monsanto generally has the primary responsibility for the commercialization of the collaboration products. The collaborations are accounted for in accordance with the Collaborative Arrangements topic of the ASC .

NOTE 5. RESTRUCTURING

Restructuring charges were recorded in the Statements of Consolidated Operations as follows:

	Year Ended Aug. 31,		
(Dollars in millions)	**2017**	2016	2015
Cost of Goods Sold (1)	**$ (25)**	$ (67)	$ (100)
Restructuring Charges (2)	**36**	(297)	(393)
Income from Continuing Operations Before Income Taxes	**$ 11**	$ (364)	$ (493)
Income Tax Provision	**1**	101	155
Net Income	**$ 12**	$ (263)	$ (338)

(1) The $25 million of restructuring charges in cost of goods sold for the fiscal year ended Aug. 31, 2017, is split by segment as follows: $4 million in Agricultural Productivity and $21 million in Seeds and Genomics. The $67 million of restructuring charges in cost of goods sold for the fiscal year ended Aug. 31, 2016, is split by segment as follows: $1 million in Agricultural Productivity and $66 million in Seeds and Genomics. The $100 million of restructuring charges in cost of goods sold is recorded to the Seeds and Genomics segment for the fiscal year ended Aug. 31, 2015.

(2) The net reversal of previously recognized expense of $36 million for the fiscal year ended Aug. 31, 2017, is split by segment as follows: $3 million in Agricultural Productivity and $33 million in Seeds and Genomics. The $297 million of restructuring charges for the fiscal year ended Aug. 31, 2016, is split by segment as follows: $36 million in Agricultural Productivity and $261 million in Seeds and Genomics. The $393 million of restructuring charges for the fiscal year ended Aug. 31, 2015, is split by segment as follows: $13 million in Agricultural Productivity and $380 million in Seeds and Genomics.

On Oct. 6, 2015, the company approved actions to realign resources to increase productivity, enhance competitiveness by delivering cost improvements and support long-term growth. On Jan. 5, 2016, the company approved additional actions which together with the Oct. 6, 2015, actions comprise the 2015 Restructuring Plan. Actions include streamlining and reprioritizing some commercial, enabling, supply chain and research and development efforts.

Cumulative pretax charges related to the 2015 Restructuring Plan are estimated to be $900 million to $965 million . Implementation of the 2015 Restructuring Plan is expected to be completed by the end of fiscal year 2018, and substantially all of the cash payments are expected to be made by the end of fiscal year 2018. These pretax charges are currently estimated to be comprised of the following categories: $325 million to $350 million in work force reductions, including severance and related benefits; $95 million to $115 million in facility closures / exit costs, including contract termination costs; $480 million to $500 million in asset impairments and write-offs related to property, plant and equipment, inventory and goodwill and other assets. These pretax charges are currently estimated to be incurred primarily by the Seeds and Genomics segment.

The following tables display the net reversal of previously recognized expense of $11 million , pretax charges of $364 million and $493 million incurred by segment under the 2015 Restructuring Plan for the fiscal years ended Aug. 31, 2017 , Aug. 31, 2016, and Aug. 31, 2015, respectively, as well as the cumulative pretax charges of $846 million under the 2015 Restructuring Plan.

	Year Ended Aug. 31, 2017			Year Ended Aug. 31, 2016			Year Ended Aug. 31, 2015		
(Dollars in millions)	**Seeds and Genomics**	**Agricultural Productivity**	**Total**	Seeds and Genomics	Agricultural Productivity	Total	Seeds and Genomics	Agricultural Productivity	Total
Work Force Reductions	**$ (76)**	**$ (5)**	**$ (81)**	$ 179	$ 10	$189	$ 204	$ 13	$217
Facility Closures/Exit Costs	**19**	**5**	**24**	23	5	28	—	—	—
Asset Impairments and Write-offs:									
Property, plant and equipment	31	1	32	41	2	43	81	—	81
Inventory	11	—	11	42	—	42	51	—	51
Goodwill and other assets	**3**	**—**	**3**	42	20	62	144	—	144
Total Restructuring Charges, Net	**$ (12)**	**$ 1**	**$ (11)**	$ 327	$ 37	$364	$ 480	$ 13	$493

	Cumulative Amount through Aug. 31, 2017		
(Dollars in millions)	Seeds and Genomics	Agricultural Productivity	Total
Work Force Reductions	$ 307	$ 18	$ 325
Facility Closures/Exit Costs	42	10	52
Asset Impairments and Write-offs:			
Property, plant and equipment	153	3	156
Inventory	104	—	104
Goodwill and other assets	189	20	209
Total Restructuring Charges, Net	$ 795	$ 51	$ 846

The company's written human resource policies are indicative of an ongoing benefit arrangement with respect to severance packages. Benefits paid pursuant to an ongoing benefit arrangement are specifically excluded from the Exit or Disposal Cost Obligations topic of the ASC; therefore severance charges incurred in connection with the 2015 Restructuring Plan are accounted for when probable and estimable as required under the Compensation - Nonretirement Postemployment Benefits topic of the ASC. In addition, when the decision to commit to a restructuring plan requires a long-lived asset and finite-lived intangible asset impairment review, Monsanto evaluates such impairment issues under the Property, Plant and Equipment topic of the ASC.

The fiscal years ended Aug. 31, 2017, and Aug. 31, 2016, include the reversal of $112 million and $44 million , respectively, of previously recognized expense due to changes in estimates related to work force reductions. Monsanto did not reverse any restructuring expense in the fiscal year ended Aug. 31, 2015.

The following table summarizes the activities related to the company's 2015 Restructuring Plan.

(Dollars in millions)	Work Force Reductions (1)	Facility Closures/Exit Costs (2)	Asset Impairments	Total
Restructuring charges recognized in fourth quarter fiscal year 2015	$ 217	$ —	$ 276	$ 493
Asset impairments and write-offs	—	—	(276)	(276)
Ending Liability as of Aug. 31, 2015	$ 217	$ —	$ —	$ 217
Net restructuring charges recognized in fiscal year 2016	189	28	147	364
Cash payments	(164)	(28)	—	(192)
Asset impairments and write-offs	—	—	(147)	(147)
Foreign currency impact	2	—	—	2
Ending Liability as of Aug. 31, 2016	$ 244	$ —	$ —	$ 244
Net restructuring charges recognized in fiscal year 2017	**(81)**	**24**	**46**	**(11)**
Cash payments	**(119)**	**(22)**	**—**	**(141)**
Asset impairments and write-offs	**—**	**—**	**(46)**	**(46)**
Ending Liability as of Aug. 31, 2017	**$ 44**	**$ 2**	**$ —**	**$ 46**

(1) The restructuring liability balance included $8 million and $17 million that were recorded in long-term restructuring reserves in the Statements of Consolidated Financial Position as of Aug. 31, 2017, and Aug. 31, 2016, respectively.

(2) The restructuring liability balance included $1 million that was recorded in long-term restructuring reserves in the Statement of Consolidated Financial Position as of Aug. 31, 2017.

NOTE 6. RECEIVABLES

The following table displays a roll forward of the allowance for doubtful trade receivables for fiscal years 2015 , 2016 and 2017 .

(Dollars in millions)	
Balance Aug. 31, 2014	$ 72
Additions — charged to expense	44
Other (1)	(57)
Balance Aug. 31, 2015	$ 59
Additions — charged to expense	82
Other (1)	(47)
Balance Aug. 31, 2016	$ 94
Additions — charged to expense	**100**
Write-Offs	**(30)**
Reclassifications to long-term	**(67)**
Other (2)	**(19)**
Balance Aug. 31, 2017	**$ 78**

(1) Includes reclassifications to long-term, write-offs, recoveries and foreign currency translation adjustments.

(2) Includes recoveries and foreign currency translation adjustments.

The company has financing receivables that represent long-term customer receivable balances related to past due accounts which are not expected to be collected within the current year. The long-term customer receivables were $398 million and $260 million with corresponding allowances for credit losses on these receivables of $277 million and $228 million , as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively. These long-term customer receivable balances and the corresponding allowances are included in long-term receivables, net on the Statements of Consolidated Financial Position. For these long-term customer receivables, interest is no longer accrued when the receivable is determined to be delinquent and classified as long-term based on estimated timing of collection.

The following table displays a roll forward of the allowance for credit losses related to long-term customer receivables for fiscal years 2015 , 2016 and 2017 .

(Dollars in millions)	
Balance Aug. 31, 2014	$ 125
Incremental provision	9
Recoveries	(3)
Write-Offs	(28)
Other (1)	17
Balance Aug. 31, 2015	$ 120
Incremental provision	78
Recoveries	(2)
Write-Offs	(4)
Other (1)	36
Balance Aug. 31, 2016	$ 228
Incremental provision	**20**
Recoveries (2)	**(38)**
Write-Offs	**(2)**
Reclassifications from allowance for current receivables	**67**
Foreign currency translation adjustments	**2**
Balance Aug. 31, 2017	**$ 277**

(1) Includes reclassifications from the allowance for current receivables, write-offs and foreign currency translation adjustments.
(2) Recoveries were significantly higher in fiscal 2017 compared to fiscal 2016 and 2015, due to a one time significant recovery of previously recorded provisions related to the India cotton business.

On an ongoing basis, the company evaluates credit quality of its financing receivables utilizing aging of receivables, collection experience and write-offs, as well as evaluating existing economic conditions, to determine if an allowance is necessary.

The following table sets forth Monsanto's gross trade receivables by geographic area as of Aug. 31, 2017 , and Aug. 31, 2016 , by significant customer concentrations:

	As of Aug. 31,	
(Dollars in millions)	**2017**	2016
Argentina	**$ 312**	$ 302
Asia-Pacific	**130**	113
Brazil	**215**	234
Canada	**32**	27
Europe-Africa	**640**	550
Mexico	**121**	147
United States	**731**	574
Other	**58**	73
Gross Trade Receivables	**2,239**	2,020
Less: Allowance for Doubtful Accounts	**(78)**	(94)
Trade Receivables, Net	**$ 2,161**	$ 1,926

NOTE 7. CUSTOMER FINANCING PROGRAMS

Monsanto participates in customer financing programs as follows:

(Dollars in millions)	As of Aug. 31, 2017	2016
Transactions that Qualify for Sales Treatment		
U.S. agreement to sell trade receivables (1)		
Outstanding balance	**$ 539**	$ 511
Maximum future payout under recourse provisions	**21**	19
European and Latin American agreements to sell trade receivables (2)		
Outstanding balance	**$ 107**	$ 60
Maximum future payout under recourse provisions	**27**	35
Agreements with Lenders (3)		
Outstanding balance	**$ 92**	$ 73
Maximum future payout under the guarantee	**52**	57

The gross amounts of receivables sold under transactions that qualify for sales treatment are:

(Dollars in millions)	Gross Amounts of Receivables Sold, Year Ended Aug. 31, 2017	2016	2015
Transactions that Qualify for Sales Treatment			
U.S. agreement to sell trade receivables (1)	**$ 637**	$ 511	$ 852
European and Latin American agreements to sell trade receivables (2)	**131**	96	165

(1) Monsanto has agreements in the United States to sell trade receivables, both with and without recourse, up to a maximum outstanding balance of $1.5 billion and to service such accounts. These receivables qualify for sales treatment under the Transfers and Servicing topic of the ASC and, accordingly, the proceeds are included in net cash provided by operating activities in the Statements of Consolidated Cash Flows. The liability for the guarantees for sales with recourse is recorded at an amount that approximates fair value, based upon the company's historical collection experience and a current assessment of credit exposure.

(2) Monsanto has various agreements in European and Latin American countries to sell trade receivables, both with and without recourse. These receivables qualify for sales treatment under the Transfers and Servicing topic of the ASC and, accordingly, the proceeds are included in net cash provided by operating activities in the Statements of Consolidated Cash Flows. The liability for the guarantees for sales with recourse is recorded at an amount that approximates fair value, based on the company's historical collection experience and a current assessment of credit exposure.

(3) Monsanto has additional agreements with lenders to establish programs that provide financing for select customers in the United States, Latin America and Europe. Monsanto provides various levels of recourse through guarantees of the accounts in the event of customer default. The term of the guarantee is equivalent to the term of the customer loans. The liability for the guarantees is recorded at an amount that approximates fair value, based on the company's historical collection experience with customers that participate in the program and a current assessment of credit exposure. If performance is required under the guarantee, Monsanto may retain amounts that are subsequently collected from customers.

In addition to the arrangements in the above table, Monsanto also participates in a financing program in Brazil that allows Monsanto to transfer up to 350 million Brazilian reais (approximately $111 million as of Aug. 31, 2017) for select customers in Brazil to a revolving financing program. Under the arrangement, a recourse provision requires Monsanto to cover the first credit losses within the program up to the amount of the company's investment. Credit losses above Monsanto's investment would be covered by senior interests in the entity by a reduction in the fair value of their mandatorily redeemable shares. The company evaluated its relationship with the entity under the guidance within the Consolidation topic of the ASC, and as a result, the entity has been consolidated. For further information on this topic, see Note 8 — Variable Interest Entities and Investments .

There were no significant recourse or non-recourse liabilities for all programs as of Aug. 31, 2017 , and Aug. 31, 2016. There were no significant delinquent loans for all programs as of Aug. 31, 2017 , and Aug. 31, 2016 .

NOTE 8. VARIABLE INTEREST ENTITIES AND INVESTMENTS

Variable Interest Entities

On Oct. 19, 2016, Monsanto exited a financing program in Brazil that was recorded as a consolidated variable interest entity ("VIE"). On Nov. 4, 2016, Monsanto entered into a new financing program in Brazil that is recorded as a

consolidated VIE. For the most part, the new and previous arrangements of the Brazil VIE consist of a revolving financing program that is funded by investments from the company and other third parties, primarily investment funds, and has been established to service Monsanto's customer receivables. Under the new arrangement, third parties, primarily investment funds, hold senior interests of 85 percent , and Monsanto holds the remaining 15 percent interest in the entity as of Aug. 31, 2017 . Under the previous arrangement, as of Aug. 31, 2016 , third parties, primarily investment funds, held senior interest of 89 percent , and Monsanto held the remaining 11 percent interest. Under the new arrangement, the senior interests held by third parties are mandatorily redeemable shares and are included in long-term debt in the Statement of Consolidated Financial Position as of as of Aug. 31, 2017 and were included in short-term debt in the Statement of Consolidated Financial Position as of Aug. 31, 2016 .

Under the new arrangement, Monsanto is required to maintain an investment in the Brazil VIE of at least 11.1 percent and could be required to provide additional contributions to the Brazil VIE. Monsanto currently has no unfunded commitments to the Brazil VIE. Creditors have no recourse against Monsanto in the event of default by the Brazil VIE. The company's financial or other support provided to the Brazil VIE is limited to its investment. Even though Monsanto holds a subordinate interest in the Brazil VIE, the Brazil VIE was established to service transactions involving the company, and the company determines the receivables that are included in the revolving financing program. Therefore, the determination is that Monsanto has the power to direct the activities most significant to the economic performance of the Brazil VIE. As a result, the company is the primary beneficiary of the Brazil VIE, and the Brazil VIE has been consolidated in Monsanto's consolidated financial statements. The assets of the Brazil VIE may only be used to settle the obligations of the respective entity. Third-party investors in the Brazil VIE do not have recourse to the general assets of Monsanto. See Note 7 — Customer Financing Programs and Note 14 — Fair Value Measurements — for additional information.

Monsanto has entered into an agreement with a third party to establish an entity to focus on research and development ("R&D") related to agricultural fungicides for agricultural applications. This entity is recorded as a consolidated VIE of Monsanto. Under the arrangement, Monsanto holds a call option to acquire the majority of the equity interests in the R&D VIE from the third-party owner. Monsanto funds the operations of the R&D VIE in return for additional equity interests or to retain the call option. The funding is provided in separate research phases if research milestones are met. The R&D VIE was established to perform agricultural-based R&D activities for the benefit of Monsanto, and Monsanto provides all funding of the R&D VIE's activities. Further, Monsanto has the power to direct the activities most significant to the R&D VIE. As a result, Monsanto is the primary beneficiary of the R&D VIE, and the R&D VIE is consolidated in Monsanto's consolidated financial statements. The third-party owner of the R&D VIE do not have recourse to the general assets of Monsanto beyond Monsanto's maximum exposure to loss at any given time relating to the R&D VIE.

Monsanto has an agreement with a related party to establish an entity to focus on research, development and commercialization of insect resistant hybrid cotton in India. This entity is recorded as a consolidated VIE of Monsanto. Under the arrangement, Monsanto performs substantially all of the VIE's activities, which are reimbursed by the VIE. Further, since this entity was formed with a Monsanto related party, it was determined that Monsanto is most closely associated with the VIE. As a result, Monsanto is the primary beneficiary of the VIE, and the VIE is consolidated in Monsanto's consolidated financial statements. The related-party owner of the VIE does not have recourse to the general assets of Monsanto beyond Monsanto's maximum exposure to loss at any given time relating to the VIE, unless Monsanto is required to indemnify the related-party owner as a result of a third-party claim for injury to a person or damage to property caused by Monsanto's activities as it relates to the VIE.

Monsanto enters into agreements with agents and dealers to distribute certain branded seed in the United States. Monsanto offers financing to agents and dealers that constitutes a variable interest as it exposes Monsanto to variability of the agent or dealer. Certain agents and dealers with these financing arrangements have been determined to be VIEs. Monsanto does not consolidate the agents or dealers as Monsanto is not the primary beneficiary, and any exposure to loss is limited to the amount of financing provided to the agent or dealer. The amount of Monsanto's exposure varies based on the seasonality of the business and is not material as of Aug. 31, 2017 , and Aug. 31, 2016 .

Monsanto enters into agreements with distributors and dealers to distribute certain branded seed in the United States. Monsanto offers distributors and dealers the right of return that exposes Monsanto to variability and constitutes a variable interest in certain distributors and dealers. Certain distributors and dealers with these arrangements have been determined to be VIEs. Monsanto does not consolidate the distributors and dealers with these arrangements as Monsanto is not the primary beneficiary, and any exposure to loss is limited to the amount of the variable interest in the entity. The amount of Monsanto's exposure varies based on the seasonality of the business and is not material as of Aug. 31, 2017, and Aug. 31, 2016.

In July 2017, Monsanto entered into an agreement with a third party to establish an entity to focus on the sale of industrial, ornamental, and turf non-selective agricultural herbicides. Monsanto has provided an uncustomary indemnification to the third party that provides Monsanto the option under specified conditions to dissolve the entity, terminate all commercial agreements of the entity or receive all interest in the entity. Monsanto has determined the entity to be a VIE. Monsanto does not consolidate the entity as Monsanto is not the primary beneficiary. The amount of Monsanto's exposure to loss related to the uncustomary indemnification is limited to approximately $29 million as of Aug. 31, 2017. Additionally, Monsanto has provided an indemnification to the third party and newly formed legal entity related to specified product claims. The amount of Monsanto's exposure varies based upon the third party and newly formed legal entity's losses related to such product claims and is not material as of Aug. 31, 2017.

Equity Method and Cost Basis Investments

Monsanto has equity method and cost basis investments recorded in other assets in the Statements of Consolidated Financial Position. Due to the nature of the cost basis investments, the fair market value is not readily determinable. These investments are reviewed for impairment indicators on a quarterly basis.

Effective June 15, 2016, the company signed agreements to sell certain manufacturing assets and contribute to a newly-formed joint venture certain intellectual property, real property and tangible assets related to the company's sorghum business. These agreements created a global joint venture in sorghum breeding that expanded the commercial and technology reach of the elite germplasm and remain focused on delivering important product offerings for sorghum growers so that they can continue to benefit from new innovations in the crop. Monsanto has a 40 percent membership interest, and Remington Holding, LLC has the remaining 60 percent membership interest of Innovative Seed Solutions, LLC (the "Joint Venture"). Monsanto sources sorghum products derived from the Joint Venture and offers these products through certain branded dealer networks globally. Monsanto received a cash payment of approximately $110 million and minority interest in the newly-formed Joint Venture, which combined resulted in a gain of $157 million in the fourth quarter of fiscal year 2016 recorded in other (income) expense, net in the Statements of Consolidated Operations.

For such investments that were accounted for under the equity method and cost basis included in other assets in the Statements of Consolidated Financial Position, the amounts are summarized in the following table:

	As of Aug. 31,	
(Dollars in millions)	**2017**	2016
Equity Method Investments	**$ 166**	$ 152
Cost Basis Investments	**116**	94
Total	**$ 282**	$ 246

NOTE 9. INVENTORY

Components of inventory are:

	As of Aug. 31,	
(Dollars in millions)	**2017**	2016
Finished Goods	**$ 1,477**	$ 1,404
Goods In Process	**1,446**	1,489
Raw Materials and Supplies	**561**	498
Inventory at FIFO Cost	**3,484**	3,391
Excess of FIFO over LIFO Cost	**(144)**	(150)
Total	**$ 3,340**	$ 3,241

Inventory obsolescence reserves are utilized as valuation accounts and effectively establish a new cost basis. The following table displays a roll forward of the inventory obsolescence reserve for fiscal years 2015 , 2016 and 2017 .

(Dollars in millions)		
Balance Aug. 31, 2014	$	415
Additions — charged to expense		390
Deductions and other (1)		(371)
Balance Aug. 31, 2015	$	434
Additions — charged to expense		410
Deductions and other (1)		(376)
Balance Aug. 31, 2016	$	468
Additions — charged to expense		**294**
Deductions and other (1)		**(281)**
Balance Aug. 31, 2017	**$**	**481**

(1) Deductions and other includes disposals and foreign currency translation adjustments.

As part of Monsanto's 2015 Restructuring Plan, inventory impairment charges of $11 million , $42 million and $51 million were recorded in fiscal year 2017 , 2016 and 2015, respectively. See Note 5 — Restructuring — for additional information.

NOTE 10. PROPERTY, PLANT AND EQUIPMENT

Components of property, plant and equipment are as follows:

	As of Aug. 31,	
(Dollars in millions)	**2017**	2016
Land and Improvements	**$ 677**	$ 645
Buildings and Improvements	**2,358**	2,225
Machinery and Equipment	**6,210**	5,871
Computer Software	**1,166**	1,008
Construction In Progress and Other	**1,820**	1,367
Total Property, Plant and Equipment	**12,231**	11,116
Less: Accumulated Depreciation	**6,301**	5,885
Property, Plant and Equipment, Net	**$ 5,930**	$ 5,231

Gross assets acquired under capital leases of $20 million and $39 million are included primarily in machinery and equipment as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively. See Note 13 — Debt and Other Credit Arrangements — and Note 24 — Commitments and Contingencies — for related capital lease obligations.

As part of Monsanto's 2015 Restructuring Plan, asset impairment charges of $32 million and $43 million were recorded in fiscal years 2017 and 2016, respectively. These impairment charges primarily were related to machinery and equipment. See Note 5 — Restructuring — for additional information.

NOTE 11. GOODWILL AND OTHER INTANGIBLE ASSETS

The fiscal year 2017 and 2016 annual goodwill impairment tests were performed as of Mar. 1, 2017, and 2016, respectively, and no indications of goodwill impairment existed as of either date. Goodwill is tested for impairment at least annually, or more frequently if events or circumstances indicate a potential impairment. As of Aug. 31, 2017 , Monsanto considered potential triggering events or circumstances impacting goodwill and determined there was no impairment. As of fiscal year 2017 , accumulated goodwill impairment charges since the adoption of FASB Statement No. 142, *Goodwill and Other Intangible Assets* (codified in ASC 350) in 2002 were $2 billion . The company has not had an impairment charge since the adoption of ASC 350.

Changes in the net carrying amount of goodwill for fiscal years 2016 and 2017 , by segment, are as follows:

(Dollars in millions)	Seeds and Genomics	Agricultural Productivity	Total
Balance Aug. 31, 2015	$ 4,004	$ 57	$ 4,061
Reclass to assets held for sale	(41)	—	(41)
Effect of foreign currency translation and other adjustments	4	(4)	—
Balance Aug. 31, 2016	$ 3,967	$ 53	$ 4,020
Effect of foreign currency translation and other adjustments	**72**	**(4)**	**68**
Balance Aug. 31, 2017	**$ 4,039**	**$ 49**	**$ 4,088**

In fiscal year 2017 , goodwill primarily increased due to foreign currency translation and finalization of the goodwill allocation related to the sale of the Precision Planting equipment business. In fiscal year 2016 , goodwill decreased due to the reclass to assets held for sale for the Precision Planting equipment business. See Note 1 — Background and Basis of Presentation — for further information.

Information regarding the company's other intangible assets is as follows:

	As of Aug. 31, 2017			As of Aug. 31, 2016		
(Dollars in millions)	Carrying Amount	Accumulated Amortization	Net	Carrying Amount	Accumulated Amortization	Net
Acquired Germplasm	**$ 1,077**	**$ (814)**	**$ 263**	$ 1,070	$ (778)	$ 292
Acquired Intellectual Property	**1,079**	**(671)**	**408**	1,042	(593)	449
Trademarks	**335**	**(165)**	**170**	334	(152)	182
Customer Relationships	**291**	**(228)**	**63**	301	(223)	78
Other	**68**	**(40)**	**28**	65	(33)	32
Total Other Intangible Assets, Finite Lives	**$ 2,850**	**$ (1,918)**	**$ 932**	$ 2,812	$ (1,779)	$ 1,033
In Process Research & Development, Indefinite Lives	**92**	**—**	**92**	92	—	92
Total Other Intangible Assets	**$ 2,942**	**$ (1,918)**	**$ 1,024**	$ 2,904	$ (1,779)	$ 1,125

The decrease from Aug. 31, 2016 , to Aug. 31, 2017 , in total other intangible assets, net is primarily related to amortization expense and intangible impairments. See Note 14 — Fair Value Measurements and Note 5 — Restructuring — for further information on the intangible impairments.

Total amortization expense of total other intangible assets was $144 million in fiscal year 2017 , $116 million in fiscal year 2016 and $143 million in fiscal year 2015 .

The estimated intangible asset amortization expense for each of the five succeeding fiscal years is as follows:

(Dollars in millions)	Amount
2018	$ 121
2019	107
2020	105
2021	105
2022	101

NOTE 12. INCOME TAXES

The components of income from continuing operations before income taxes are:

	Year Ended Aug. 31,		
(Dollars in millions)	**2017**	2016	2015
United States	**$ 1,720**	$ 1,457	$ 2,092
Outside United States	**1,166**	534	1,069
Total	**$ 2,886**	$ 1,991	$ 3,161

The components of income tax provision from continuing operations are:

(Dollars in millions)	Year Ended Aug. 31, 2017	2016	2015
Current:			
U.S. federal	**$ 236**	$ 393	$ 675
U.S. state	**25**	43	69
Outside United States	**319**	231	408
Total Current	**$ 580**	$ 667	$ 1,152
Deferred:			
U.S. federal	**81**	(109)	(91)
U.S. state	**4**	(7)	(2)
Outside United States	**(39)**	144	(195)
Total Deferred	**46**	28	(288)
Total	**$ 626**	$ 695	$ 864

Factors causing Monsanto's income tax provision from continuing operations to differ from the U.S. federal statutory rate are:

(Dollars in millions)	Year Ended Aug. 31, 2017	2016	2015
U.S. Federal Statutory Rate	**$ 1,010**	$ 697	$ 1,106
U.S. Domestic Manufacturing Deduction	**(41)**	(64)	(87)
U.S. R&D Tax Credit	**(34)**	(34)	(30)
U.S. State Income Taxes	**27**	28	39
Lower Taxes on Foreign Operations	**(409)**	(243)	(209)
Valuation Allowances	**93**	308	13
Adjustment for Unrecognized Tax Benefits	**—**	(6)	(4)
Other	**(20)**	9	36
Income Tax Provision	**$ 626**	$ 695	$ 864

Deferred income tax balances are related to:

(Dollars in millions)	As of Aug. 31, 2017	2016
Net Operating Loss and Other Carryforwards	**$ 608**	$ 438
Employee Fringe Benefits	**311**	331
Royalties	**220**	189
Restructuring and Impairment Reserves	**127**	155
Inventories	**93**	91
Allowance for Doubtful Accounts	**85**	77
Environmental and Litigation Reserves	**82**	70
Other	**318**	407
Valuation Allowance	**(394)**	(346)
Total Deferred Tax Assets	**$ 1,450**	$ 1,412
Property, Plant and Equipment	**667**	533
Intangibles	**411**	334
Total Deferred Tax Liabilities	**1,078**	867
Net Deferred Tax Assets	**$ 372**	$ 545

Management regularly assesses the likelihood that deferred tax assets will be recovered from future taxable income. To the extent management believes it is more likely than not that a deferred tax asset will not be realized, a valuation allowance is established.

As of Aug. 31, 2017 , and Aug. 31, 2016 , Monsanto had available approximately $587 million and $696 million , respectively, of net operating loss carryforwards ("NOLs"), most of which relates to Brazilian operations where NOLs have no expiration date. Management believes it is more likely than not that the company will realize these deferred tax assets in Brazil.

As of Aug. 31, 2017 , and Aug. 31, 2016 , Monsanto had approximately $328 million and $281 million, respectively, of deferred tax assets in Argentina, primarily related to accrued royalties for which a tax benefit will be realized when paid. As a result of losses generated in Argentina in the current and prior years, the company determined it was not more likely than not to utilize these deferred tax assets and established a valuation allowance against the entire balance of these deferred tax assets in Argentina.

As of Aug. 31, 2017 , and Aug. 31, 2016 , Monsanto had approximately $232 million and $97 million , respectively, of deferred tax assets in the United States related to foreign tax credits that have a ten year carryforward period that expires from 2025 to 2027. Management believes it is more likely than not that the company will realize these deferred tax assets in the United States.

Income taxes and remittance taxes have not been recorded on approximately $4.2 billion of undistributed earnings of foreign operations of Monsanto because Monsanto intends to reinvest those earnings indefinitely. It is not practicable to estimate the income tax liability that might be incurred if such earnings were remitted to the United States.

Monsanto operates in various countries throughout the world and, as a result, files income tax returns in numerous jurisdictions. These tax returns are subject to examination by various federal, state and local tax authorities. Due to the nature of the examinations, it may take several years before they are completed. Management regularly assesses the risk of the company's tax return filing positions for all open years. For Monsanto's major tax jurisdictions, the tax years that remain subject to examination are shown below:

Jurisdiction	
U.S. Federal	2014-2017
U.S. State	2000-2017
Argentina	2001-2017
Brazil	2007-2017

As of Aug. 31, 2017 , Monsanto had total unrecognized tax benefits of $120 million , of which $100 million would favorably impact the effective tax rate if recognized. As of Aug. 31, 2016 , Monsanto had total unrecognized tax benefits of $123 million , of which $90 million would favorably impact the effective tax rate if recognized.

Accrued interest and penalties included in other liabilities in the Statements of Consolidated Financial Position were $34 million and $24 million as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively. Monsanto recognizes accrued interest and penalties related to unrecognized tax benefits as a component of income tax provision within the Statements of Consolidated Operations. For the year ended Aug. 31, 2017 , the company recognized $1 million of income tax expense for interest and penalties. For the year ended Aug. 31, 2016 , the company recognized less than $1 million of income tax benefit for interest and penalties. For the year ending Aug. 31, 2015 , the company recognized $6 million of income tax benefit for interest and penalties.

A reconciliation of the beginning and ending balance of unrecognized tax benefits is as follows:

(Dollars in millions)	**2017**	2016
Balance Sept. 1	**$ 123**	$ 135
Increases for prior year tax positions	**35**	17
Decreases for prior year tax positions	**(33)**	(11)
Increases for current year tax positions	**9**	8
Settlements	**(2)**	(1)
Lapse of statute of limitations	**(11)**	(23)
Foreign currency translation	**(1)**	(2)
Balance Aug. 31	**$ 120**	$ 123

If the company's assessment of unrecognized tax benefits is not representative of actual outcomes, the company's consolidated financial statements could be significantly impacted in the period of settlement or when the statute of limitations expires. Management estimates it is reasonably possible that the total amount of unrecognized tax benefits could decrease by as much as $50 million within the next 12 months, primarily as a result of the resolution of audits currently in progress in several jurisdictions involving issues common to large multinational corporations and the lapsing of the statute of limitations in multiple jurisdictions.

NOTE 13. DEBT AND OTHER CREDIT ARRANGEMENTS

Monsanto has a $3 billion credit facility agreement that provides a senior unsecured revolving credit facility through Mar. 27, 2020. This facility was initiated to be used for general corporate purposes, which may include working capital

requirements, acquisitions, capital expenditures, refinancing and support of commercial paper borrowings. The agreement also provides for euro, pounds sterling and yen-denominated loans, and for letters of credit and swingline borrowings, and allows Monsanto to designate certain subsidiaries to borrow with a company guarantee. Covenants under this credit facility restrict maximum borrowings. There are no compensating balance requirements, but the facility is subject to various fees, which are based on the company's credit ratings. As of Aug. 31, 2017 , Monsanto was in compliance with all financial debt covenants, and there were no outstanding borrowings under this credit facility.

In April 2016, Monsanto filed a shelf registration with the SEC ("2016 shelf registration") that allows the company to issue a maximum aggregate amount of $6 billion of debt, equity and hybrid offerings. The 2016 shelf registration expires in April 2019.

Under the terms of the Merger Agreement, Monsanto is subject to certain restrictions on its ability to incur additional indebtedness.

Short-Term Debt

	As of Aug. 31,	
(Dollars in millions)	**2017**	2016
Current Portion of Long-Term Debt	**$ 806**	$ 902
Mandatorily Redeemable Shares of Brazil VIE	**—**	113
Notes Payable to Banks	**64**	72
Commercial Paper	**—**	500
Total Short-Term Debt	**$ 870**	$ 1,587

The fair value of total short-term debt was $877 million and $1,589 million as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively. The weighted average interest rate on notes payable to banks and commercial paper was three percent and two percent as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively.

As of Aug. 31, 2017 , the company did not have any commercial paper borrowings outstanding, but it had short-term borrowings to support ex-U.S. operations throughout the year, which had weighted-average interest rates as indicated above. As of Aug. 31, 2016 , the company had commercial paper borrowings outstanding of $500 million .

In October 2016, Monsanto entered into a $1 billion delayed draw term loan facility that matures the earlier of October 2019 or the consummation of the Merger with Bayer. Borrowings under the facility were $500 million as of Aug. 31, 2017 , and were included in current portion of long-term debt. Proceeds were used for general corporate purposes.

Long-Term Debt

	As of Aug. 31,	
(Dollars in millions)	**2017**	2016
5.125% Senior Notes, Due 2018 (1)	**$ —**	$ 299
1.850% Senior Notes, Due 2018 (1)	**299**	299
2.125% Senior Notes, Due 2019 (1)	**498**	498
2.750% Senior Notes, Due 2021 (1)	**497**	496
2.200% Senior Notes, Due 2022 (1)	**249**	249
3.375% Senior Notes, Due 2024 (1)	**745**	744
2.850% Senior Notes, Due 2025 (1)	**297**	297
5.500% Senior Notes, Due 2025 (1)	**292**	289
4.200% Senior Notes, Due 2034 (1)	**493**	492
5.500% Senior Notes, Due 2035 (1)	**393**	393
5.875% Senior Notes, Due 2038 (1)	**246**	246
3.600% Senior Notes, Due 2042 (1)	**248**	247
4.650% Senior Notes, Due 2043 (1)	**297**	297
4.400% Senior Notes, Due 2044 (1)	**983**	982
4.300% Senior Notes, Due 2045 (1)	**361**	361
3.950% Senior Notes, Due 2045 (1)	**494**	493
4.700% Senior Notes, Due 2064 (1)	**735**	735
Mandatorily Redeemable Shares of Brazil VIE	**104**	—
Other (including Capital Leases)	**23**	36
Total Long-Term Debt	**$ 7,254**	$ 7,453

(1) Amounts are net of unamortized discounts and debt issuance costs.

The fair value of total long-term debt was $7,603 million and $7,834 million as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively. The interest rate on the mandatorily redeemable shares of the Brazil VIE is a variable rate. See Note 14 — Fair Value Measurements — for additional information regarding mandatorily redeemable shares of the Brazil VIE.

In April 2015, Monsanto issued $300 million of 2.85% Senior Notes due in 2025 and $500 million of 3.95% Senior Notes due in 2045. In January 2015, Monsanto issued $365 million of 4.30% Senior Notes due in 2045. The net proceeds from the issuances were used for general corporate purposes, which may have included share repurchases and capital expenditures.

The information regarding interest expense below reflects Monsanto's interest expense on debt, mandatorily redeemable shares, customer financing and the amortization of debt issuance costs and interest rate swaps:

	Year Ended Aug. 31,		
(Dollars in millions)	**2017**	2016	2015
Interest Cost Incurred	**$ 496**	$ 468	$ 460
Less: Capitalized on Construction	**44**	32	27
Interest Expense	**$ 452**	$ 436	$ 433

NOTE 14. FAIR VALUE MEASUREMENTS

Monsanto determines the fair market value of its financial assets and liabilities based on quoted market prices, estimates from brokers and other appropriate valuation techniques. The company uses the fair value hierarchy established in the Fair Value Measurements and Disclosures topic of the ASC, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The hierarchy contains three levels as follows, with Level 3 representing the lowest level of input.

Level 1 — Values based on unadjusted quoted market prices in active markets that are accessible at the measurement date for identical assets and liabilities.

Level 2 — Values based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, discounted cash flow models, or other model-based valuation techniques adjusted, as necessary, for credit risk.

Level 3 — Values generated from model-based techniques that use significant assumptions not observable in the market. These unobservable assumptions would reflect our own estimates of assumptions that market participants would use in pricing the asset or liability. Valuation techniques could include use of option pricing models, discounted cash flow models and similar techniques.

The following tables set forth by level Monsanto's assets and liabilities disclosed at fair value on a recurring basis as of Aug. 31, 2017 , and Aug. 31, 2016 . As required by the Fair Value Measurements and Disclosures topic of the ASC, assets and liabilities are classified in their entirety based on the lowest level of input that is a significant component of the fair value measurement. Monsanto's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the classification of fair value assets and liabilities within the fair value hierarchy levels.

	Fair Value Measurements at Aug. 31, 2017, Using			
(Dollars in millions)	Level 1	Level 2	Level 3	Net Balance
Assets at Fair Value:				
Cash equivalents	$ 1,034	$ —	$ —	$ 1,034
Short-term investments	8	—	—	8
Equity securities	10	—	—	10
Derivative assets related to:				
Foreign currency	—	10	—	10
Commodity contracts	3	7	—	10
Total Assets at Fair Value	$ 1,055	$ 17	$ —	$ 1,072
Liabilities at Fair Value:				
Short-term debt instruments (1)	—	877	—	877
Long-term debt instruments (1)	—	7,499	104	7,603
Derivative liabilities related to:				
Foreign currency	—	16	—	16
Commodity contracts	7	6	—	13
Total Liabilities at Fair Value	$ 7	$ 8,398	$ 104	$ 8,509

(1) Debt instruments, excluding mandatorily redeemable shares, are not recorded at fair value on a recurring basis; however, they are measured at fair value for disclosure purposes, as required by the Fair Value Measurements and Disclosures topic of the ASC.

	Fair Value Measurements at Aug. 31, 2016, Using			
(Dollars in millions)	Level 1	Level 2	Level 3	Net Balance
Assets at Fair Value:				
Cash equivalents	$ 1,081	$ —	$ —	$ 1,081
Short-term investments	60	—	—	60
Equity securities	13	—	—	13
Derivative assets related to:				
Foreign currency	—	10	—	10
Commodity contracts	9	9	—	18
Total Assets at Fair Value	$ 1,163	$ 19	$ —	$ 1,182
Liabilities at Fair Value:				
Short-term debt instruments (1)	$ —	$ 1,476	$ 113	$ 1,589
Long-term debt instruments (1)	—	7,834	—	7,834
Derivative liabilities related to:				
Foreign currency	—	15	—	15
Commodity contracts	32	20	—	52
Interest rate contracts	—	41	—	41
Total Liabilities at Fair Value	$ 32	$ 9,386	$ 113	$ 9,531

(1) Debt instruments, excluding mandatorily redeemable shares, are not recorded at fair value on a recurring basis; however, they are measured at fair value for disclosure purposes, as required by the Fair Value Measurements and Disclosures topic of the ASC.

The company's derivative contracts are measured at fair value, including forward commodity purchase and sale contracts, exchange-traded commodity futures and option contracts and over-the-counter ("OTC") instruments related primarily to agricultural commodities, energy and raw materials, interest rates and foreign currencies. Exchange-traded futures and options contracts are valued based on unadjusted quoted prices in active markets and are classified as Level 1. Fair value for forward commodity purchase and sale contracts is estimated based on exchange-quoted prices adjusted for differences in local markets. These differences are generally determined using inputs from broker or dealer quotations or market transactions in either the listed or OTC markets and are classified as Level 2. Interest rate contracts consist of interest rate swaps measured using broker or dealer quoted prices. When observable inputs are available for substantially the full term of the contract, it is classified as Level 2. Based on historical experience with the company's suppliers and customers, the company's own credit risk and knowledge of

current market conditions, the company does not view nonperformance risk to be a significant input to the fair value for the majority of its forward commodity purchase and sale contracts. The effective portions of changes in the fair value of derivatives designated as cash flow hedges are recognized in the Statements of Consolidated Financial Position as a component of accumulated other comprehensive loss until the hedged items are recorded in earnings or it is probable the hedged transaction will no longer occur. Changes in the fair value of derivatives are recognized in the Statements of Consolidated Operations as a component of net sales, cost of goods sold and other (income) expense, net.

The company's short-term investments may consist of cash which is contractually restricted as to withdrawal or usage. The company's equity securities consist of publicly traded equity investments. Publicly traded equity investments are valued using quoted market prices and are classified as Level 1. Contractually restricted cash may be held in an interest bearing account measured using prevailing interest rates and is classified as Level 1. Short-term debt instruments are classified as Level 2. The company's long-term debt securities are classified as Level 2 and valued using broker or dealer quoted prices with a maturity greater than one year.

Short-term debt instruments may consist of commercial paper, current portion of long-term debt, borrowings under the delayed draw term loan facility and notes payable to banks. Commercial paper, notes payables to banks and borrowings under the delayed draw term loan facility are recorded at amortized cost in the Statements of Consolidated Financial Position, which approximates fair value. Current portion of long-term debt is measured at fair value for disclosure purposes and determined based on current market yields for Monsanto's debt traded in the secondary market.

Long-term debt was measured at fair value for disclosure purposes and determined based on current market yields for Monsanto's debt traded in the secondary market (Level 2 measurement). Long-term debt includes mandatorily redeemable shares as of Aug. 31, 2017 . Mandatorily redeemable shares are recorded in the Statements of Consolidated Financial Position at fair value, which represents the amount of cash the consolidated variable interest entity would pay if settlement occurred as of the respective reporting date. Fair value of the mandatorily redeemable shares of the variable interest entity is calculated using observable and unobservable inputs from an interest rate market in Brazil and stated contractual terms (a Level 3 measurement). See Note 13 — Debt and Other Credit Arrangements — for additional disclosures. Accretion expense is included in the Statements of Consolidated Operations as interest expense.

For the periods ended Aug. 31, 2017 , and Aug. 31, 2016 , the company had no transfers between Level 1, Level 2 and Level 3. Monsanto does not have any assets with fair value determined using Level 3 inputs for the years ended Aug. 31, 2017 , and Aug. 31, 2016 . The following table summarizes the change in fair value of the Level 3 short-term debt instruments for the year ended Aug. 31, 2017 .

(Dollars in millions)		
Balance Aug. 31, 2016 (1)	$	113
Redemption of mandatorily redeemable shares		**(103)**
Accretion expense		**2**
Payments		**(7)**
Effect of foreign currency translation adjustments		**(5)**
Balance Aug. 31, 2017	**$**	**—**

(1) Includes 350,000 mandatorily redeemable shares outstanding with a par value of 1,000 Brazilian reais (approximately $309) as of Aug. 31, 2016 .

The following table summarizes the change in fair value of the Level 3 long-term debt instruments for the year ended Aug. 31, 2017 .

(Dollars in millions)		
Balance Aug. 31, 2016	$	—
Issuance of mandatorily redeemable shares		**93**
Accretion expense		**9**
Payments		**(5)**
Effect of foreign currency translation adjustments		**7**
Balance Aug. 31, 2017 (1)	**$**	**104**

(1) Includes 315,000 mandatorily redeemable shares outstanding with a par value of 1,000 Brazilian reais (approximately $318) as of Aug. 31, 2017 .

There were no significant measurements of liabilities to their implied fair value on a nonrecurring basis during fiscal years 2017 , 2016 and 2015 .

Significant measurements during fiscal years 2017, 2016 and 2015 of assets to their implied fair value on a nonrecurring basis were as follows:

Property, Plant and Equipment Net: In fiscal year 2017, property, plant and equipment within the Seeds and Genomics segment with a net book value of $32 million was written down to its implied fair value estimate of $13 million , resulting in an impairment charge of $19 million , with $6 million included in cost of goods sold and $13 million included in restructuring charges in the Statement of Consolidated Operations. The implied fair value calculations were performed using a discounted cash flow model (a Level 3 measurement). See Note 5 — Restructuring — for additional disclosures.

In fiscal year 2016, property, plant and equipment within the Seeds and Genomics segment with a net book value of $67 million was written down to its implied fair value estimate of $26 million , resulting in an impairment charge of $41 million , with $16 million included in cost of goods sold and $25 million included in restructuring charges in the Statement of Consolidated Operations. The implied fair value calculations were performed using a discounted cash flow model (a Level 3 measurement). See Note 5 — Restructuring — for additional disclosures.

In fiscal year 2015, property, plant and equipment within the Seeds and Genomics segment with a net book value of $131 million was written down to its initial fair value estimate of $50 million , resulting in an impairment charge of $81 million , with $49 million included in cost of goods sold and $32 million included in restructuring charges in the Statement of Consolidated Operations. The initial fair value calculations were performed using a discounted cash flow model (a Level 3 measurement). See Note 5 — Restructuring — for additional disclosures.

Other Intangible Assets, Net: In fiscal year 2016, other intangible assets within the Seeds and Genomics segment with a net book value of $19 million were written down to their implied fair value of less than $1 million , resulting in an impairment charge of $19 million , with $19 million included in restructuring charges in the Statement of Consolidated Operations. The implied fair value calculations were performed using a discounted cash flow model (a Level 3 measurement). See Note 5 — Restructuring — for additional disclosures.

In fiscal year 2016, other intangible assets within the Agricultural Productivity segment with a net book value of $20 million were written down to their implied fair value of less than $1 million , resulting in an impairment charge of $20 million , with $20 million included in restructuring charges in the Statement of Consolidated Operations. The implied fair value calculations were performed using a discounted cash flow model (a Level 3 measurement). See Note 5 — Restructuring — for additional disclosures.

In fiscal year 2015, other intangible assets within the Seeds and Genomics segment with a net book value of $71 million were written down to their implied fair value of less than $1 million , resulting in an impairment charge of $71 million , with $71 million included in restructuring charges in the Statement of Consolidated Operations. The implied fair value calculations were performed using a discounted cash flow model (a Level 3 measurement). See Note 5 — Restructuring — for additional disclosures.

The recorded amounts of cash, trade receivables, miscellaneous receivables, third-party guarantees, accounts payable, grower production accruals, accrued marketing programs and miscellaneous short-term accruals approximate their fair values as of Aug. 31, 2017 , and Aug. 31, 2016 .

Management is ultimately responsible for all fair values presented in the company's consolidated financial statements. The company performs analysis and review of the information and prices received from third parties to ensure that the prices represent a reasonable estimate of fair value. This process involves quantitative and qualitative analysis. As a result of the analysis, if the company determines there is a more appropriate fair value based upon the available market data, the price received from the third party is adjusted accordingly.

NOTE 15. FINANCIAL INSTRUMENTS

Cash Flow Hedges

The company uses foreign currency options and foreign currency forward contracts as hedges of anticipated sales or purchases denominated in foreign currencies. The company enters into these contracts to protect itself against the risk that the eventual net cash flows will be adversely affected by changes in exchange rates.

Monsanto's commodity price risk management strategy is to use derivative instruments to minimize significant unanticipated earnings fluctuations that may arise from volatility in commodity prices. Price fluctuations in commodities, mainly in corn and soybeans, can cause the actual prices paid to production growers for corn and soybean seeds to differ from anticipated cash outlays. Monsanto generally uses commodity futures and options contracts to manage these risks. Monsanto's energy and raw material risk management strategy is to use derivative instruments to minimize significant unanticipated manufacturing cost fluctuations that may arise from volatility in natural gas, diesel and ethylene prices.

Monsanto's interest rate risk management strategy is to use derivative instruments, such as forward-starting interest rate swaps and option contracts, to minimize significant unanticipated earnings fluctuations that may arise from volatility in interest rates of the company's borrowings and to manage the interest rate sensitivity of its debt.

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of accumulated other comprehensive loss and reclassified into earnings in the period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings.

The maximum term over which the company is hedging exposures to the variability of cash flow (for all forecasted transactions) is 12 months for foreign currency hedges and 27 months for commodity hedges. During the next 12 months, a pretax net loss of approximately $26 million is expected to be reclassified from accumulated other comprehensive loss into earnings. A pretax loss of $37 million was reclassified into other (income) expense, net as a result of the discontinuance of an interest rate hedge during fiscal year 2017, because it was probable the original forecasted transaction would not occur by the end of the originally specified time period. A pretax loss of less than $1 million was reclassified into cost of goods sold in the Statement of Consolidated Operations during fiscal year 2017 as a result of the discontinuance of foreign currency cash flow hedges because it was probable the original forecasted transactions would not occur by the end of the originally specified time period. A pretax loss of less than $1 million and a pretax loss of $2 million during fiscal years 2016 and 2015, respectively, was reclassified into cost of goods sold in the Statements of Consolidated Operations as a result of the discontinuance of cash flow hedges because it was probable that the original forecasted transaction would not occur by the end of the originally specified time period.

Fair Value Hedges

The company uses commodity futures, forwards and options contracts as fair value hedges to manage the value of its soybean inventory and other assets. For derivative instruments that are designated and qualify as fair value hedges, both the gain or loss on the derivative and the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current earnings. No fair value hedges were discontinued during fiscal years 2017 , 2016 or 2015 .

Derivatives Not Designated as Hedging Instruments

The company uses foreign currency contracts to hedge the effects of fluctuations in exchange rates on foreign currency denominated third-party and intercompany receivables and payables. Both the gain or loss on the derivative and the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current earnings.

The company uses commodity option contracts to hedge anticipated cash payments to growers in Mexico, which can fluctuate with changes in commodity prices. Because these option contracts do not meet the provisions specified by the Derivatives and Hedging topic of the ASC, they do not qualify for hedge accounting treatment. Accordingly, the gain or loss on these derivatives is recognized in current earnings.

To reduce credit exposure in Latin America, Monsanto collects payments on certain customer accounts in grain. Such payments in grain are negotiated at or near the time Monsanto's products are sold to the customers and are valued at the prevailing grain commodity prices. By entering into forward sales contracts related to grain, Monsanto mitigates the commodity price exposure from the time a contract is signed with a customer until the time a grain merchant collects the grain from the customer on Monsanto's behalf. The forward sales contracts do not qualify for hedge accounting treatment under the Derivatives and Hedging topic of the ASC. Accordingly, the gain or loss on these derivatives is recognized in current earnings.

Monsanto uses interest rate contracts to minimize the variability of forecasted cash flows arising from the company's consolidated VIE in Brazil. The interest rate contracts do not qualify for hedge accounting treatment under the

Derivatives and Hedging Topic of the ASC. Accordingly, the gain or loss on these derivatives is recognized in current earnings.

Financial instruments are neither held nor issued by the company for trading purposes.

The notional amounts of the company's derivative instruments outstanding as of Aug. 31, 2017 , and Aug. 31, 2016 , are as follows:

	As of Aug. 31,	
(Dollars in millions)	**2017**	2016
Derivatives Designated as Hedges:		
Foreign exchange contracts	**$ 453**	$ 388
Commodity contracts	**430**	484
Interest rate contracts	**—**	150
Total Derivatives Designated as Hedges	**$ 883**	$ 1,022
Derivatives Not Designated as Hedges:		
Foreign exchange contracts	**$ 2,133**	$ 1,096
Commodity contracts	**189**	223
Interest rate contracts	**21**	116
Total Derivatives Not Designated as Hedges	**$ 2,343**	$ 1,435

The net presentation of the company's derivative instruments outstanding is as follows:

	As of Aug. 31, 2017						
(in millions)	Gross Amounts Recognized	Gross Amounts Offset in the Statement of Consolidated Financial Position	Net Amounts Included in the Statement of Consolidated Financial Position	Collateral Pledged	Net Amounts Reported in the Statement of Consolidated Financial Position	Other Items Included in the Statement of Consolidated Financial Position	Statement of Consolidated Financial Position Balance
Asset Derivatives:							
Other current assets							
Derivatives designated as hedges:							
Commodity contracts (1)	$ 2	$ (7)	$ (5)	$ 5	$ —		
Derivatives not designated as hedges:							
Commodity contracts	6	—	6	—	6		
Foreign exchange contracts	10	—	10	—	10		
Total other current assets	18	(7)	11	5	16	$ 244	$ 260
Other assets							
Derivatives designated as hedges:							
Commodity contracts	1	—	1	—	1		
Total other assets	1	—	1	—	1	954	955
Miscellaneous short-term accruals							
Derivatives designated as hedges:							
Commodity contracts (1)	1	(1)	—	—	—		
Total miscellaneous short-term accruals	1	(1)	—	—	—		
Total Asset Derivatives	$ 20	$ (8)	$ 12	$ 5	$ 17		
Liability Derivatives:							
Other current assets							
Derivatives designated as hedges:							
Commodity contracts (1)	$ 7	$ (7)	$ —	$ —	$ —		
Total other current assets	7	(7)	—	—	—		
Miscellaneous short-term accruals							
Derivatives designated as hedges:							
Commodity contracts (1)	3	(1)	2	—	2		
Foreign currency contracts	14	—	14	—	14		
Derivatives not designated as hedges:							
Commodity contracts	3	—	3	—	3		
Foreign exchange contracts	2	—	2	—	2		
Total miscellaneous short-term accruals	22	(1)	21	—	21	$ 719	$ 740
Total Liability Derivatives	$ 29	$ (8)	$ 21	$ —	$ 21		

(1) As allowed by the Derivatives and Hedging topic of the ASC, commodity derivative assets and liabilities have been offset by collateral subject to an enforceable master netting arrangement or similar arrangement. Therefore, these commodity contracts that are in an asset or liability position are included in asset accounts within the Statements of Consolidated Financial Position.

(in millions)	As of Aug. 31, 2016						
	Gross Amounts Recognized	Gross Amounts Offset in the Statement of Consolidated Financial Position	Net Amounts Included in the Statement of Consolidated Financial Position	Collateral Pledged	Net Amounts Reported in the Statement of Consolidated Financial Position	Other Items Included in the Statement of Consolidated Financial Position	Statement of Consolidated Financial Position Balance
Asset Derivatives:							
Other current assets							
Derivatives designated as hedges:							
Commodity contracts (1)	$ 9	$ (29)	$ (20)	$ 20	$ —		
Foreign exchange contracts	4	—	4	—	4		
Derivatives not designated as hedges:							
Commodity contracts (1)	9	(6)	3	—	3		
Foreign exchange contracts	6	—	6	—	6		
Total other current assets	28	(35)	(7)	20	13	$ 214	$ 227
Other assets							
Derivatives designated as hedges:							
Commodity contracts (1)	—	(4)	(4)	4	—		
Total other assets	—	(4)	(4)	4	—	489	489
Total Asset Derivatives	$ 28	$ (39)	$ (11)	$ 24	$ 13		
Liability Derivatives:							
Other current assets							
Derivatives designated as hedges:							
Commodity contracts (1)	$ 29	$ (29)	$ —	$ —	$ —		
Derivatives not designated as hedges:							
Commodity contracts (1)	6	(6)	—	—	—		
Total other current assets	35	(35)	—	—	—		
Other assets							
Derivatives designated as hedges:							
Commodity contracts (1)	4	(4)	—	—	—		
Total other assets	4	(4)	—	—	—		
Miscellaneous short-term accruals							
Derivatives designated as hedges:							
Commodity contracts	11	—	11	—	11		
Foreign currency contracts	8	—	8	—	8		
Interest rate contracts	41	—	41	—	41		
Derivatives not designated as hedges:							
Foreign exchange contracts	7	—	7	—	7		
Total miscellaneous short-term accruals	67	—	67	—	67	$ 937	$ 1,004
Other liabilities							
Derivatives designated as hedges:							
Commodity contracts	2	—	2	—	2		
Total other liabilities	2	—	2	—	2	316	318
Total Liability Derivatives	$ 108	$ (39)	$ 69	$ —	$ 69		

(1) As allowed by the Derivatives and Hedging topic of the ASC, commodity derivative assets and liabilities have been offset by collateral subject to an enforceable master netting arrangement or similar arrangement. Therefore, these commodity contracts that are in an asset or liability position are included in asset accounts within the Statements of Consolidated Financial Position.

The gains and losses on the company's derivative instruments are as follows:

	Amount of Gain (Loss) Recognized in AOCL (1) (Effective Portion)			Amount of Gain (Loss) Recognized in Income (2)(3)			
	Year Ended Aug. 31,			Year Ended Aug. 31,			
(Dollars in millions)	**2017**	2016	2015	**2017**	2016	2015	Income Statement Classification
Derivatives Designated as Hedges:							
Fair value hedges:							
Commodity contracts (3)				**$ 13**	$ 7	$ —	Cost of goods sold
Cash flow hedges:							
Foreign exchange contracts	**$ 3**	$ (17)	$ 51	**7**	8	31	Net sales
Foreign exchange contracts	**4**	3	26	**7**	21	9	Cost of goods sold
Commodity contracts	**22**	(12)	(92)	**(20)**	(113)	(81)	Cost of goods sold
Interest rate contracts	**—**	—	—	**(37)**	—	—	Other (income) expense, net
Interest rate contracts (3)	**3**	(42)	(85)	**(15)**	(15)	(13)	Interest expense
Total Derivatives Designated as Hedges	**32**	(68)	(100)	**(45)**	(92)	(54)	
Derivatives Not Designated as Hedges:							
Foreign exchange contracts (4)				**14**	(36)	(73)	Other (income) expense, net
Commodity contracts				**—**	4	(3)	Net sales
Commodity contracts				**(1)**	1	—	Cost of goods sold
Total Derivatives Not Designated as Hedges				**13**	(31)	(76)	
Total Derivatives	**$ 32**	$ (68)	$ (100)	**$ (32)**	$ (123)	$ (130)	

(1) Accumulated Other Comprehensive Loss ("AOCL")

(2) For derivatives designated as cash flow hedges under the Derivatives and Hedging topic of the ASC, this represents the effective portion of the gain (loss) reclassified from AOCL into income during the period.

(3) The gain or loss on derivatives designated as hedges from ineffectiveness included in current earnings is not significant during fiscal 2017 , 2016 or 2015 . No gains or losses were excluded from the assessment of hedge effectiveness during fiscal 2017 , 2016 or 2015 .

(4) Gain or loss on foreign exchange contracts not designated as hedges was offset by a foreign currency transaction loss of $82 million , a loss of $178 million and a gain of $42 million during fiscal 2017 , 2016 and 2015 , respectively.

Most of the company's outstanding foreign currency derivatives are covered by International Swap and Derivatives Association ("ISDA") Master Agreements with the counterparties. There are no requirements to post collateral under these agreements; however, should Monsanto's credit rating fall below a specified rating immediately following the merger of the company with another entity, the counterparty may require all outstanding derivatives under the ISDA Master Agreement to be settled immediately at current market value, which equals carrying value. Foreign currency derivatives that are not covered by ISDA Master Agreements do not have credit-risk-related contingent provisions. Most of Monsanto's outstanding commodity derivatives are listed commodity futures, and the company is required by the relevant commodity exchange to post collateral each day to cover the change in the fair value of these futures in the case of an unrealized loss position. Non-exchange-traded commodity derivatives and interest rate contracts may be covered by the aforementioned ISDA Master Agreements and would be subject to the same credit-risk-related contingent provisions. The aggregate fair value of all derivative instruments under ISDA Master Agreements that are in a liability position was $19 million as of Aug. 31, 2017 , and $63 million as of Aug. 31, 2016 , which is the amount that would be required for settlement if the credit-risk-related contingent provisions underlying these agreements were triggered.

Credit Risk Management

Monsanto invests excess cash in deposits with major banks or money market funds throughout the world in high-quality short-term debt instruments. Such investments are made only in instruments issued or enhanced by high-quality institutions. As of Aug. 31, 2017 , and Aug. 31, 2016 , the company had no financial instruments that represented a significant concentration of credit risk. Limited amounts are invested in any single institution to minimize risk. The company has not incurred any credit risk losses related to those investments.

The company sells a broad range of agricultural products to a diverse group of customers throughout the world. In the United States, the company makes substantial sales to relatively few large wholesale customers. The company's business is highly seasonal and is subject to weather conditions that affect commodity prices and seed yields. Credit limits, ongoing credit evaluation and account monitoring procedures are used to minimize the risk of loss. Collateral is secured when it is deemed appropriate by the company.

Monsanto regularly evaluates its business practices to minimize its credit risk and periodically engages multiple banks in the United States, Latin America and Europe in the development of customer financing options that involve direct bank financing of customer purchases. For further information on these programs, see Note 7 — Customer Financing Programs .

NOTE 16. POSTRETIREMENT BENEFITS - PENSIONS

Monsanto maintains noncontributory pension plans for the benefit of its U.S. employees. Effective Jul. 8, 2012, the U.S. pension plans were closed to new entrants; there were no significant changes to the U.S. pension plans for eligible employees hired prior to that date. Pension benefits are based on an employee's years of service and compensation level. Funded pension plans in the United States and outside the United States were funded in accordance with the company's long-range projections of the plans' financial condition. These projections took into account benefits earned and expected to be earned, anticipated returns on pension plan assets, and income tax and other regulations.

Components of Net Periodic Benefit Cost

The information that follows relates to Monsanto's pension plans. The components of pension cost for these plans were:

	Year Ended Aug. 31, 2017			Year Ended Aug. 31, 2016			Year Ended Aug. 31, 2015		
(Dollars in millions)	**U.S.**	**Outside the U.S.**	**Total**	U.S.	Outside the U.S.	Total	U.S.	Outside the U.S.	Total
Service Cost for Benefits Earned during the Year	**$ 61**	**$ 12**	**$ 73**	$ 61	$ 12	$ 73	$ 64	$ 12	$ 76
Interest Cost on Benefit Obligation	**82**	**5**	**87**	93	7	100	88	7	95
Assumed Return on Plan Assets (1)	**(170)**	**(9)**	**(179)**	(150)	(9)	(159)	(151)	(8)	(159)
Amortization of Unrecognized Net Loss	**47**	**4**	**51**	46	6	52	50	6	56
Restructuring Charges	**—**	**2**	**2**	—	2	2	—	2	2
Other Adjustments	**—**	**1**	**1**	—	2	2	—	—	—
Total Net Periodic Benefit Cost	**$ 20**	**$ 15**	**$ 35**	$ 50	$ 20	$ 70	$ 51	$ 19	$ 70

(1) Generally the calculated value of assets reflects non-liability matching gains/(losses) over a four to five year period.

The other changes in plan assets and benefit obligations recognized in accumulated other comprehensive loss for the year ended Aug. 31, 2017 , were:

(Dollars in millions)	**U.S.**	**Outside the U.S.**	**Total**
Current Year Actuarial Gain	**$ (55)**	**$ (16)**	**$ (71)**
Recognition of Actuarial Loss (1)(2)	**(47)**	**(6)**	**(53)**
Total Recognized in Accumulated Other Comprehensive Loss	**$ (102)**	**$ (22)**	**$ (124)**

(1) The U.S. Plans' actuarial gains/(losses) are amortized over a nine to 16 year period which represents the average future working lifetime for active participants.

(2) Plans outside the U.S. generally amortize actuarial gains/(losses) over a five to 21 year period which represents the average future working lifetime for active participants.

The following assumptions, calculated on a weighted-average basis, were used to determine pension costs for the principal plans in which Monsanto employees participated:

	Year Ended Aug. 31, 2017		Year Ended Aug. 31, 2016		Year Ended Aug. 31, 2015	
	U.S.	**Outside the U.S.**	U.S.	Outside the U.S.	U.S.	Outside the U.S.
Discount Rate	**3.43%**	**1.93%**	4.33%	2.66%	4.04%	3.01%
Assumed Long-Term Rate of Return on Assets	**7.50%**	**5.32%**	7.50%	5.60%	7.50%	6.20%
Annual Rate of Salary Increase (for plans that base benefits on final compensation level)	**4.00%**	**3.60%**	4.00%	3.76%	4.00%	3.92%

Obligations and Funded Status

Monsanto uses a measurement date of August 31 for its pension plans. The funded status of the pension plans as of Aug. 31, 2017 , and Aug. 31, 2016 , was as follows:

	U.S.		Outside the U.S.		Total	
	Year Ended Aug. 31,		Year Ended Aug. 31,		Year Ended Aug. 31,	
(Dollars in millions)	**2017**	2016	**2017**	2016	**2017**	2016
Change in Benefit Obligation:						
Benefit obligation at beginning of period	**$ 2,427**	$ 2,190	**$ 272**	$ 250	**$ 2,699**	$ 2,440
Service cost	**61**	61	**12**	12	**73**	73
Interest cost	**82**	93	**5**	7	**87**	100
Plan participants' contributions	**—**	—	**2**	2	**2**	2
Actuarial (gain)/loss	**(21)**	203	**(12)**	20	**(33)**	223
Benefits paid	**(148)**	(137)	**(12)**	(13)	**(160)**	(150)
Plan amendments	**—**	—	**—**	(6)	**—**	(6)
Settlements / curtailments	**—**	—	**(21)**	(12)	**(21)**	(12)
Special/Contractual Term Benefits	**—**	—	**1**	—	**1**	—
Currency impact	**—**	—	**13**	(1)	**13**	(1)
Other	**—**	17	**—**	13	**—**	30
Benefit Obligation at End of Period	**$ 2,401**	$ 2,427	**$ 260**	$ 272	**$ 2,661**	$ 2,699
Change in Plan Assets:						
Fair value of plan assets at beginning of period	**$ 2,324**	$ 2,142	**$ 182**	$ 170	**$ 2,506**	$ 2,312
Actual return on plan assets	**205**	253	**9**	8	**214**	261
Employer contributions (1)	**23**	66	**11**	12	**34**	78
Plan participants' contributions	**—**	—	**2**	2	**2**	2
Settlements	**—**	—	**(16)**	(8)	**(16)**	(8)
Benefits paid (1)	**(148)**	(137)	**(12)**	(13)	**(160)**	(150)
Currency impact	**—**	—	**9**	—	**9**	—
Other	**—**	—	**—**	11	**—**	11
Plan Assets at End of Period	**$ 2,404**	$ 2,324	**$ 185**	$ 182	**$ 2,589**	$ 2,506
Net Liability/(Asset) Recognized	**$ (3)**	$ 103	**$ 75**	$ 91	**$ 72**	$ 194

(1) Employer contributions and benefits paid include $14 million and $13 million paid from employer assets for unfunded plans in fiscal years 2017 and 2016, respectively.

Weighted-average assumptions used to determine benefit obligations as of Aug. 31, 2017 , and Aug. 31, 2016 , were as follows:

	U.S.		Outside the U.S.	
	Year Ended Aug. 31,		Year Ended Aug. 31,	
	2017	2016	**2017**	2016
Discount Rate	**3.73%**	3.43%	**2.56%**	1.93%
Rate of Compensation Increase	**3.50%**	4.00%	**3.77%**	3.60%

The U.S. accumulated benefit obligation ("ABO") was $2.3 billion and $2.4 billion as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively. The ABO for plans outside of the United States was $204 million and $214 million as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively.

The projected benefit obligation ("PBO") and the fair value of the plan assets for pension plans with PBOs in excess of plan assets as of Aug. 31, 2017 , and Aug. 31, 2016 , were as follows:

	U.S.		Outside the U.S.		Total	
	As of Aug. 31,		As of Aug. 31,		As of Aug. 31,	
(Dollars in millions)	**2017**	2016	**2017**	2016	**2017**	2016
PBO	**$ 90**	$ 2,426	**$ 128**	$ 250	**$ 218**	$ 2,676
Fair Value of Plan Assets with PBOs in Excess of Plan Assets	**—**	2,324	**53**	158	**53**	2,482

The PBO, ABO and the fair value of the plan assets for pension plans with ABOs in excess of plan assets as of Aug. 31, 2017 , and Aug. 31, 2016 , were as follows:

	U.S.		Outside the U.S.		Total	
	As of Aug. 31,		As of Aug. 31,		As of Aug. 31,	
(Dollars in millions)	**2017**	2016	**2017**	2016	**2017**	2016
PBO	**$ 90**	$ 96	**$ 111**	$ 130	**$ 201**	$ 226
ABO	**86**	91	**93**	108	**179**	199
Fair Value of Plan Assets with ABOs in Excess of Plan Assets	**—**	—	**37**	46	**37**	46

As of Aug. 31, 2017 , and Aug. 31, 2016 , amounts recognized in the Statements of Consolidated Financial Position were included in the following financial position accounts:

Net Amount Recognized

	U.S.		Outside the U.S.		Total	
	As of Aug. 31,		As of Aug. 31,		As of Aug. 31,	
(Dollars in millions)	**2017**	2016	**2017**	2016	**2017**	2016
Other Assets	**$ (93)**	$ —	**$ (8)**	$ (8)	**$ (101)**	$ (8)
Miscellaneous Short-Term Accruals	**9**	9	**5**	5	**14**	14
Postretirement Liabilities	**81**	94	**78**	94	**159**	188
Net (Asset)/Liability Recognized	**$ (3)**	$ 103	**$ 75**	$ 91	**$ 72**	$ 194

The following table provides a summary of the pretax components of the amount recognized in accumulated other comprehensive loss:

	U.S.		Outside the U.S.		Total	
	As of Aug. 31,		As of Aug. 31,		As of Aug. 31,	
(Dollars in millions)	**2017**	2016	**2017**	2016	**2017**	2016
Net Prior Service Credit	**$ —**	$ —	**$ (5)**	$ (6)	**$ (5)**	$ (6)
Net Loss	**380**	482	**38**	61	**418**	543
Total	**$ 380**	$ 482	**$ 33**	$ 55	**$ 413**	$ 537

The estimated net loss for the defined benefit pension plans that will be amortized from accumulated other comprehensive loss into net periodic benefit cost over the next fiscal year is $43 million .

Plan Assets

U.S. Plan: The asset allocations for Monsanto's U.S. qualified pension plan as of Aug. 31, 2017 , and Aug. 31, 2016 , and the target allocation range for fiscal year 2018 , by asset category, are as follows.

	Target Allocation Range (1)	Percentage of Plan Assets	
		As of Aug. 31,	
Asset Category	2018	**2017**	2016
Public Equity Securities	44-54%	**48.7%**	48.3%
Private Equity Investments	2-8%	**4.5%**	4.5%
Debt Securities	34-48%	**42.0%**	42.4%
Real Estate	2-8%	**4.8%**	4.8%
Total		**100.0%**	100.0%

(1) The target allocation range may change as the funded status of the plan increases/decreases.

The expected long-term rate of return on these plan assets was 7.5 percent in fiscal years 2017 , 2016 and 2015 . The expected long-term rate of return on plan assets is based on historical and projected rates of return for current and planned asset classes in the plan's investment portfolio. Assumed projected rates of return for each asset class were selected after analyzing historical experience and future expectations of the returns and volatility of the various asset classes. The overall expected rate of return for the portfolio is based on the target asset allocation for each asset class and adjusted for historical and expected experience of active portfolio management results compared to benchmark returns and the effect of expenses paid from plan assets.

The general principles guiding investment of U.S. pension plan assets are embodied in the Employee Retirement Income Security Act of 1974 ("ERISA"). These principles include discharging the company's investment responsibilities for the exclusive benefit of plan participants and in accordance with the "prudent expert" standards and other ERISA rules and regulations. Investment objectives for the company's U.S. pension plan assets are to optimize the long-term return on plan assets while maintaining an acceptable level of risk, to diversify assets among asset classes and investment styles and to maintain a long-term focus.

The plan's investment fiduciaries are responsible for selecting investment managers, commissioning periodic asset/liability studies, setting asset allocation targets and monitoring asset allocation and investment performance. The company's pension investment professionals have discretion to manage assets within established asset allocation ranges approved by the plan fiduciaries.

In February 2016, an asset/liability study was completed to determine the optimal strategic asset allocation to meet the plan's projected long-term benefit obligations and desired funded status. The target asset allocation resulting from the asset/liability study is outlined in the previous table.

Plans Outside the United States: The weighted-average asset allocation for Monsanto's pension plans outside of the United States as of Aug. 31, 2017 , and Aug. 31, 2016 , and the weighted-average target allocation for fiscal year 2018 , by asset category, are as follows.

		Percentage of Plan Assets	
	Target Allocation (1)	As of Aug. 31,	
Asset Category	2018	**2017**	2016
Equity Securities	36.9%	**34.6%**	30.9%
Debt Securities	45.0%	**45.4%**	49.9%
Other	18.1%	**20.0%**	19.2%
Total	100.0%	**100.0%**	100.0%

(1) Monsanto's plans outside the United States have a wide range of target allocations, and therefore the 2018 target allocations shown above reflect a weighted-average calculation of the target allocations of each of the plans.

The weighted-average expected long-term rate of return on the plans' assets was 5.3 percent in fiscal year 2017 , 5.6 percent in fiscal year 2016 and 6.2 percent in fiscal year 2015 . Determination of the expected long-term rate of return for plans outside the United States is consistent with the U.S. methodology.

Fair Value Measurements

U.S. Plan: The fair values of Monsanto's U.S. qualified defined benefit pension plan investments as of Aug. 31, 2017 , and Aug. 31, 2016 , by asset category, are as follows:

	Fair Value Measurements at Aug. 31, 2017				
(Dollars in millions)	Level 1	Level 2	Level 3	Cash Collateral Offset (1)	Balance as of Aug. 31, 2017
Investments at Fair Value:					
Short Term Investments	$ 38	$ 37	$ —	$ —	$ 75
Debt Securities:					
U.S. Government Debt	—	281	—	—	281
U.S. State & Municipal Debt	—	17	—	—	17
Foreign Government Debt	—	11	—	—	11
U.S. Corporate Debt	—	391	—	—	391
Foreign Corporate Debt	—	61	—	—	61
U.S. Term Bank Loans	—	1	—	—	1
Common and Preferred Stock:					
Domestic Small-Capitalization	25	—	—	—	25
Domestic Large-Capitalization	308	—	—	—	308
International Developed Markets	191	2	—	—	193
International Emerging Markets	42	—	—	—	42
Private Equity Investments	—	—	111	—	111
Real Estate Investments	—	—	119	—	119
Futures	2	—	—	(2)	—
Common and Preferred Stock Sold Short	—	(66)	—	66	—
Total Assets in the Fair Value Hierarchy	$ 606	$ 735	$ 230	$ 64	$ 1,635
Collective Investment Funds Measured at Net Asset Value as a Practical Expedient					759
Collateral Held Under Securities Lending Agreement Measured at Net Asset Value as a Practical Expedient					191
Total Investments at Fair Value					$ 2,585

(1) Futures derivative assets and common and preferred stock sold short have been offset by cash collateral held by the counter party.

(Dollars in millions)	Fair Value Measurements at Aug. 31, 2016				
	Level 1	Level 2	Level 3	Cash Collateral Offset (1)	Balance as of Aug. 31, 2016
Investments at Fair Value:					
Short Term Investments	$ 28	44	$ —	$ —	$ 72
Debt Securities:					
U.S. Government Debt	—	296	—	—	296
U.S. State & Municipal Debt	—	19	—	—	19
Foreign Government Debt	—	9	—	—	9
U.S. Corporate Debt	—	386	—	—	386
Foreign Corporate Debt	—	65	—	—	65
U.S. Term Bank Loans	—	1	—	—	1
Common and Preferred Stock:					
Domestic Small-Capitalization	15	—	—	—	15
Domestic Large-Capitalization	311	—	—	—	311
International Developed Markets	167	—	—	—	167
International Emerging Markets	39	1	—	—	40
Private Equity Investments	—	—	104	—	104
Real Estate Investments	—	—	112	—	112
Futures	3	—	—	(3)	—
Common and Preferred Stock Sold Short	—	(56)	—	60	4
Total Assets in the Fair Value Hierarchy	$ 563	$ 765	$ 216	$ 57	$ 1,601
Collective Investment Funds Measured at Net Asset Value as a Practical Expedient					717
Collateral Held Under Securities Lending Agreement Measured at Net Asset Value as a Practical Expedient					166
Total Investments at Fair Value					$ 2,484

(1) Futures derivative assets and common and preferred stock sold short have been offset by cash collateral held by the counterparty.

The following table summarizes the changes in fair value of the Level 3 investments as of Aug. 31, 2016 , and Aug. 31, 2017 .

(Dollars in millions)	Private Equity Investments	Partnership Interests	Real Estate Investments	Total
Balance Aug. 31, 2015	$ 103	$ 32	$ 93	$ 228
Purchases	21	—	16	37
Sales	(22)	(32)	(6)	(60)
Realized/unrealized gains	2	—	9	11
Balance Aug. 31, 2016	$ 104	$ —	$ 112	$ 216
Net Unrealized Gains Still Held Included in Earnings (1)	$ (7)	$ (32)	$ 10	$ (29)

(Dollars in millions)	Private Equity Investments	Partnership Interests	Real Estate Investments	Total
Balance Aug. 31, 2016	$ 104	$ —	$ 112	$ 216
Purchases	**20**	**—**	**13**	**33**
Sales	**(24)**	**—**	**(13)**	**(37)**
Realized/unrealized gains	**11**	**—**	**7**	**18**
Balance Aug. 31, 2017	**$ 111**	**$ —**	**$ 119**	**$ 230**
Net Unrealized Gains Still Held Included in Earnings (1)	**$ 5**	**$ —**	**$ 4**	**$ 9**

(1) Represents the amount of total gains for the period attributable to change in unrealized gains (losses) relating to assets and liabilities classified as Level 3 that are still held as of Aug. 31, 2017 , and Aug. 31, 2016 .

The following table reconciles the investments at fair value to the plan assets as of Aug. 31, 2017 .

(Dollars in millions)	
Total Investments at Fair Value	**$ 2,585**
Liability to return collateral held under securities lending agreement	**(191)**
Non-interest bearing cash	**5**
Accrued income	**8**
Other (liabilities) and receivables	**(3)**
Plan Assets at the End of the Period	**$ 2,404**

In managing the plan assets, Monsanto reviews and manages risk associated with funded status risk, market risk, liquidity risk and operational risk. Asset allocation determined in light of the plans' liability characteristics and asset class diversification is central to the company's risk management approach and is integral to the overall investment strategy. Further mitigation of asset class risk is achieved by investment style, investment strategy and investment management firm diversification. Investment guidelines are included in all investment management agreements with investment management firms managing publicly traded equities and fixed income accounts for the plan.

Plans Outside the United States: The fair values of our defined benefit pension plan investments outside of the United States as of Aug. 31, 2017 , and Aug. 31, 2016 , by asset category, are as follows:

	Fair Value Measurements at Aug. 31, 2017			
(Dollars in millions)	**Level 1**	**Level 2**	**Level 3**	**Balance as of Aug. 31, 2017**
Short Term Investments	**$ 4**	**$ —**	**$ —**	**$ 4**
Debt Securities — Government and Corporate Debt	**—**	**83**	**—**	**83**
Common and Preferred Stock	**50**	**—**	**—**	**50**
Insurance-Backed Securities	**—**	**—**	**33**	**33**
Total Assets in the Fair Value Hierarchy	**$ 54**	**$ 83**	**$ 33**	**$ 170**
Collective Investment Funds Measured at Net Asset Value as a Practical Expedient				**15**
Total Investments at Fair Value				**$ 185**

	Fair Value Measurements at Aug. 31, 2016			
(Dollars in millions)	Level 1	Level 2	Level 3	Balance as of Aug. 31, 2016
Short Term Investments	$ 1	$ —	$ —	$ 1
Debt Securities — Government and Corporate Debt	—	79	—	79
Common and Preferred Stock	45	—	—	45
Insurance-Backed Securities	—	—	42	42
Total Assets in the Fair Value Hierarchy	$ 46	$ 79	$ 42	$ 167
Collective Investment Funds Measured at Net Asset Value as a Practical Expedient				15
Total Investments at Fair Value				$ 182

The following table summarizes the changes in fair value of the Level 3 investments as of Aug. 31, 2016 , and Aug. 31, 2017 .

(Dollars in millions)	Insurance-Backed Securities
Balance Aug. 31, 2015	$ 31
Purchases	5
Settlements	(6)
Net transfers into Level 3	12
Balance Aug. 31, 2016	$ 42
Purchases	**3**
Settlements	**(15)**
Realized/unrealized gains	**3**
Balance Aug. 31, 2017	**$ 33**

In managing the plan assets, risk associated with funded status risk, market risk, liquidity risk and operational risk is considered. The design of a plan's overall investment strategy will take into consideration one or more of the following elements: a plan's liability characteristics, diversification across asset classes, diversification within asset classes and investment management firm diversification. Investment policies consistent with the plan's overall investment strategy are established.

Valuation Methodology for Plan Assets

For assets that are measured using quoted prices in active markets, the total fair value is the published market price per unit multiplied by the number of units held without consideration of transaction costs, which have been determined to be immaterial. Assets that are measured using significant other observable inputs are primarily valued by reference to quoted prices of markets that are not active. The following methods and assumptions were used to estimate the fair value of each class of financial instrument:

Short Term Investments: The carrying value of cash represents fair value as it consists of actual currency (all in U.S. dollars) and is classified as Level 1. A portion are short-term collective investment funds, and because these commingled vehicles lack any formal listing or associated price quotes, they are classified as Level 2.

Debt securities: Debt securities consist of U.S. and foreign corporate credit, U.S. and foreign government issues (including related agency debentures and mortgages), U.S. state and municipal securities and U.S. term bank loans. U.S. treasury and U.S. government agency bonds, as well as foreign government issues, are generally priced by institutional bids, which reflect estimated values based on underlying model frameworks at various dealers and vendors. While some corporate issues are formally listed on exchanges, dealers exchange bid and ask offers to arrive at most executed transaction prices. Term bank loans are priced in a similar fashion to corporate debt securities. All foreign government and foreign corporate debt securities are denominated in U.S. dollars. All individual debt securities included in the Plan are classified as Level 2.

Common and preferred stock: The Plans' common and preferred stock consists of investments in listed U.S. and international company stock. U.S. stock is further sub-divided into small-capitalization (defined as companies with market capitalization less than $2 billion) and large capitalization (defined as companies with market capitalization greater than or equal to $2 billion). International stock is further divided into developed markets and emerging markets. All international market type classifications are consistent with the Plan's chosen international stock performance benchmark index, the MSCI All-Country World Index ex-U.S. (MSCI ACWI ex- U.S.). Most stock investments are valued using quoted prices from the various public markets. Most equity securities trade on formal exchanges, both domestic and foreign (e.g., NYSE, NASDAQ, LSE) and can be accurately described as active markets. The observable valuation inputs are unadjusted quoted prices that represent active market trades and are classified as Level 1. Some common and preferred stock holdings are not listed on established exchanges or actively traded inputs to determine their values are obtainable from public sources and are thus classified as Level 2.

Private equity investments: The Plan invests in private equity, which as an asset class is generally characterized as requiring long-term commitments where liquidity is typically limited. Therefore, private equity does not have an actively traded market with readily observable prices. Most of the Plan's private equity investments are limited partnerships structured as fund-of-funds, which also meet the criteria of commingled funds. These fund-of-funds investments are diversified globally and across typical private equity strategies including: buyouts, co-investments, secondary offerings, venture capital and special situations (e.g., distressed assets). Funds-of-funds represent a collection of underlying limited partnership funds each managed by a different general partner. Each general partner of the underlying limited partnership fund in turn selects and manages a basket of portfolio companies. As a result, each of the Plan's fund-of-funds is essentially a fund of dozens of underlying limited partnership funds and hundreds of underlying company investments. Valuations depend on a variety of proprietary model methodologies, some of which may be derived from publicly available sources. However, there are also material inputs that are not readily observable, and that require subjective assessments. Private equity holdings represent illiquid investments structured as limited partnerships, and redemption requests are not permitted. Disposition of partnership interests can only be affected through the sale of the pension trust's pro-rata ownership stake in the secondary markets, which may require approval of the funds' general partners. All private equity investments are classified as Level 3.

Real estate investments : The Plan invests primarily in U.S. real estate through indirect ownership entities, which are structured as limited partnerships or private real estate investment trusts ("REITs"). Real estate investments are generally illiquid long-term assets valued in large part using inputs not readily observable in the public markets. Each fund in which the Plan invests typically manages a geographically diversified portfolio of U.S. commercial properties within the office, residential, industrial and retail property sectors. There are no formal listed markets for either the

funds' underlying commercial properties, or for shares in any given fund (if applicable). Real estate fund holdings are appraised and valued on an ongoing basis. The trustee obtains prices either from a property management appraisal firm or investment managers' account statement. The underlying real estate holdings not only represent illiquid investments, but explicit redemptions are not permitted. Disposition of partnership interest can only be affected through the sale of the pension trust's pro-rata ownership stake in the secondary markets, which may require approval of the funds' general partners. For investments structured as private REITs, redemption requests for units held are at the discretion of fund managers. All real estate investments are classified as Level 3.

Collective investment funds: In certain instances the Plan invests in pooled or commingled funds in order to gain diversification and efficiency. Although rare, there could be instances in which liquidity is suspended or in which purchases or sales occur at a price different from the net asset value ("NAV"). The Common and Preferred Stock Funds used are predominantly commingled index funds replicating well-known stock market indexes. Each of the Common and Preferred Stock funds are comprised of common and preferred stock that trade on a regular basis in active markets. The Corporate and Government Debt Funds is comprised of fixed income assets.

Derivatives: The U.S. plan is permitted to use financial derivative instruments to hedge certain risks and for investment purposes. The plan enters into futures contracts in the normal course of its investing activities to manage market risk associated with the plan's equity and fixed income investments and to achieve overall investment portfolio objectives. The credit risk associated with these contracts is minimal as they are traded on organized exchanges and settled daily. Exchange-traded equity index and interest rate futures are measured at fair value using quoted market prices making them qualify as Level 1 investments.

The notional value of futures derivatives classified as Level 1 was $140 million and $121 million as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively.

The U.S. plan also holds listed common and preferred stock short sale positions, which involves a counter-party arrangement with a prime broker. The existence of the prime broker counter-party relationship introduces the possibility that short sale market values may need to be adjusted to reflect any counter-party risk; however, no such adjustment was required as of Aug. 31, 2017 , or Aug. 31, 2016 . Therefore, the short positions have been classified as Level 2, and their notional value was $67 million and $56 million , as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively.

Insurance-backed securities : Insurance-backed securities are contracts held with an insurance company. The Level 3 fair value of the investments is determined based upon the value of the underlying investments as determined by the insurance company.

Collateral held under securities lending agreement : The U.S. Plan participates in a securities lending program through Northern Trust. Securities loaned are fully collateralized by cash and U.S. government securities. Northern Trust pools all collateral received and invests any cash in an actively managed commingled fund, the underlying assets of which include short-term fixed income securities such as commercial paper, U.S. Treasury Bills and various forms of asset-backed securities.

U.S. Plan: The following tables summarize unfunded commitments and redemption features for investments which fair value is measured using the net asset value per share practical expedient and Level 3 assets as of Aug. 31, 2017, and 2016 respectively.

	Unfunded Commitments and Redemption Features at Aug. 31, 2017			
(Dollars in millions)	Reported Value	Unfunded Commitments	Redemption Frequency (if currently eligible)	Redemption Notice Period
Collective Investment Funds Measured at Net Asset Value as a Practical Expedient	$ 759	N/A	Daily	Daily
Collateral Held Under Securities Lending Agreement Measured at Net Asset Value as a Practical Expedient	$ 191	N/A	Daily	Daily
Private Equity Investments	$ 111	$ 35	None	N/A
Real Estate Investments	$ 119	$ 23	None, 1st bus. day of qtr, at qtr-end	N/A, 45 Days

(Dollars in Millions)	Unfunded Commitments and Redemption Features at Aug. 31, 2016			
	Reported Value	Unfunded Commitments	Redemption Frequency (if currently eligible)	Redemption Notice Period
Collective Investment Funds Measured at Net Asset Value as a Practical Expedient	$ 717	N/A	Daily	Daily
Collateral Held Under Securities Lending Agreement Measured at Net Asset Value as a Practical Expedient	$ 166	N/A	Daily	Daily
Private Equity Investments	$ 104	$ 53	None	N/A
Real Estate Investments	$ 112	$ 34	None, 1st bus. day of qtr, at qtr-end	N/A, 45 Days

Expected Cash Flows

The expected employer contributions and benefit payments are shown in the following table for the pension plans:

(Dollars in millions)	U.S.	Outside the U.S.
Employer Contributions 2018 (funded Plans)	$ 60	$ 8
Benefits Paid Directly by Employer 2018 (unfunded Plans)	9	4
Benefit Payments (1)		
2018	165	15
2019	151	13
2020	153	14
2021	155	17
2022	158	14
2023-2027	781	82

(1) Expected benefit payments include benefits paid directly by employer for unfunded plans.

The company may contribute additional amounts to the plans depending on the level of future contributions required.

NOTE 17. POSTRETIREMENT BENEFITS — HEALTH CARE AND OTHER POSTEMPLOYMENT BENEFITS

Monsanto-Sponsored Plans

Substantially all regular full-time U.S. employees hired prior to May 1, 2002, and certain employees in other countries become eligible for company-subsidized postretirement health care benefits if they reach retirement age while employed by Monsanto and have the requisite service history. Employees who retired from Monsanto prior to Jan. 1, 2003, were eligible for retiree life insurance benefits. These postretirement benefits are unfunded and are generally based on the employees' years of service or compensation levels, or both. The costs of postretirement benefits are accrued by the date the employees become eligible for the benefits.

The following information pertains to the postretirement benefit plans in which Monsanto employees and certain former employees of Pharmacia allocated to Monsanto participate, principally health care plans and life insurance plans. The cost components of these plans were:

(Dollars in millions)	Year Ended Aug. 31,		
	2017	2016	2015
Service Cost for Benefits Earned During the Period	**$ 8**	$ 7	$ 7
Interest Cost on Benefit Obligation	**6**	6	6
Amortization of Prior Service Credit	**—**	—	(1)
Amortization of Actuarial Loss/(Gain)	**5**	(4)	(4)
Restructuring Charges	**2**	—	—
Total Net Periodic Benefit Cost	**$ 21**	$ 9	$ 8

The other changes in plan assets and benefit obligations recognized in accumulated other comprehensive loss for the years ended Aug. 31, 2017 , and Aug. 31, 2016 , were:

(Dollars in millions)	Year Ended Aug. 31, 2017	2016
Actuarial (Gain)/Loss	**$ (15)**	$ 27
Amortization of Actuarial (Loss)/Gain (1)	**(7)**	4
Total Income Recognized in Accumulated Other Comprehensive Loss	**$ (22)**	$ 31

(1) For other postretirement benefits the actuarial gains/(losses) and prior service credit are amortized over a eight to 14 year period which represents the average future working lifetime for active participants.

The following assumptions, calculated on a weighted-average basis, were used to determine the postretirement costs for the U.S. plans in which Monsanto employees participated:

	Year Ended Aug. 31,		
	2017	2016	2015
Discount Rate Postretirement	**3.00%**	3.85%	3.60%
Discount Rate Postemployment	**1.75%**	2.30%	2.40%
Initial Trend Rate for Health Care Costs	**7.50%**	5.50%	6.00%
Ultimate Trend Rate for Health Care Costs	**4.50%**	5.00%	5.00%

A 7.5 percent annual rate of increase in the per capita cost of covered health care benefits was assumed for fiscal year 2017 . This assumption is consistent with the plans' recent experience and expectations of future growth. It is assumed that the rate will decrease to 7.0 percent for fiscal year 2018 and gradually decrease to 4.5 percent in 2023 and remain at that level thereafter. Assumed health care cost trend rates have an effect on the amounts reported for the health care plans. A one percentage increase or decrease would not have a material effect on the postretirement costs or benefit obligation.

Monsanto uses a measurement date of August 31 for its other postretirement benefit plans. The status of the postretirement health care, life insurance and employee disability benefit plans in which Monsanto employees participated was as follows for the periods indicated:

(Dollars in millions)	Year Ended Aug. 31, 2017	2016
Change in Benefit Obligation:		
Benefit obligation at beginning of period	**$ 189**	$ 176
Service cost	**8**	7
Interest cost	**6**	6
Actuarial (gain)/loss	**(17)**	27
Plan participant contributions	**7**	5
Benefits paid	**(35)**	(32)
Curtailment	**2**	—
Benefit Obligation at End of Period	**$ 160**	$ 189

Weighted-average assumptions used to determine benefit obligations for the U.S. plans as of Aug. 31, 2017 , and Aug. 31, 2016 , were as follows:

	Year Ended Aug. 31,	
	2017	2016
Discount Rate Postretirement	**3.25%**	3.00%
Discount Rate Postemployment	**2.15%**	1.75%
Initial Trend Rate for Health Care Costs (1)	**7.00%**	7.50%
Ultimate Trend Rate for Health Care Costs	**4.50%**	4.50%

(1) As of Aug. 31, 2017 , this rate is assumed to decrease to 4.5 percent for 2023 and remain at that level thereafter.

As of Aug. 31, 2017 , and Aug. 31, 2016 , amounts recognized in the Statements of Consolidated Financial Position were as follows:

	As of Aug. 31,	
(Dollars in millions)	**2017**	2016
Miscellaneous Short-Term Accruals	**$ 24**	$ 27
Postretirement Liabilities	**136**	162
Total Liability Recognized	**$ 160**	$ 189

The following table provides a summary of the pretax components of the amount recognized in accumulated other comprehensive loss during the period.

	Year Ended Aug. 31,	
(Dollars in millions)	**2017**	2016
Actuarial (Gain)/Loss	**$ (8)**	$ 14
Total (Income)/Loss Recognized in Accumulated Other Comprehensive	**$ (8)**	$ 14

Expected Cash Flows

Information about the expected cash flows for the other postretirement benefit plans follows:

(Dollars in millions)	Total
Benefits Paid Directly by Employer 2018	$ 24
Benefit Payments (1) 2018	24
2019	21
2020	19
2021	18
2022	16
2023-2027	62

(1) Expected benefit payments include benefits paid directly by employer for unfunded plans.

Other U.S. Sponsored Plans

Other U.S. plans are offered to certain eligible employees and are paid out of corporate assets. There is an accrual of $20 million and $22 million as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively, included in postretirement liabilities on the Statements of Consolidated Financial Position for anticipated payments to employees who have retired or terminated their employment. There is an accrual of $71 million and $65 million as of Aug. 31, 2017 , and Aug. 31, 2016 , respectively, included in other liabilities on the Statements of Consolidated Financial Position for anticipated payments to active employees upon their retirement or termination of employment.

NOTE 18. EMPLOYEE SAVINGS PLANS

Monsanto-Sponsored Plans

The U.S. tax-qualified Monsanto Savings and Investment Plan (“Monsanto SIP”) was established in June 2001 as a successor to a portion of the Pharmacia Corporation Savings and Investment Plan. The Monsanto SIP is a defined contribution profit-sharing plan with an individual account for each participant. Employees who are 18 years of age or older are generally eligible to participate in the plan. The Monsanto SIP provides for voluntary contributions, generally ranging from one to 25 percent of an employee’s eligible pay. Employee contributions are matched 80 percent by the company, up to a maximum of eight percent of eligible pay. In fiscal years 2017, 2016 and 2015, the company recognized expense of $58 million , $61 million and $59 million , respectively, for matching contributions.

Participants hired after July 8, 2012, the date the U.S. pension plan closed, may also be eligible for an age-based, company core non-elective contribution. In fiscal years 2017, 2016 and 2015, the company recognized expense of $11 million , $8 million and $6 million , respectively, for non-elective contributions.

NOTE 19. STOCK-BASED COMPENSATION PLANS

Accounting Standards Update No 2016-09 (ASU 2016-09), Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting was issued in March 2016 and early adopted by the company in the fourth quarter of fiscal 2017. Under ASU 2016-09, entities are permitted to make an accounting policy election for the impact of forfeitures on the recognition of expense for share-based payment awards. Forfeitures can be estimated or recognized when they occur. The company elected to continue to estimate its forfeiture rate, rather than recognizing forfeitures as they occur. Additionally, ASU 2016-09 addresses the presentation of excess tax benefits and employee taxes paid on the statement of cash flows. The standard requires presentation of excess tax benefits as an operating activity (combined with other income tax cash flows) on the statement of cash flows rather than as a financing activity. Monsanto adopted this change prospectively during the fourth quarter of fiscal 2017, which resulted in an increase in net cash required by financing activities and an increase in net cash provided by operating activities by an immaterial amount for the period ended Aug. 31, 2017. Accordingly, prior period amounts have not been adjusted. ASU 2016-09 also requires the presentation of amounts withheld for applicable income taxes on employee share-based awards as a financing activity on the statement of cash flows. This adoption did not have an impact on our cash flow statement as the company was already applying this approach.

ASU 2016-09 also eliminates additional paid in capital ("APIC") pools and requires excess tax benefits and tax deficiencies to be recorded in the income statement when the awards vest or are settled. This requirement is to be adopted prospectively by the company. The impact of this section of the standard was not material to any quarter or year-to-date period within fiscal year 2017 and thus the full year impact was reported in the fourth quarter of fiscal year 2017. In addition, the ASU requires that the excess tax benefit be removed from the overall calculation of diluted shares. The impact on diluted earnings per share of this adoption was also not material to any quarter or year-to-date period within fiscal year 2017.

Finally, modified retrospective adoption of ASU 2016-09 eliminates the requirement that excess tax benefits be realized (i.e. through a reduction in income taxes payable) before they are recognized. The adoption of this portion of the standard had no impact on the financial statements.

The following table shows the components of stock-based compensation in the Statements of Consolidated Operations and Statements of Consolidated Cash Flows for the comparative three years. Stock-based compensation expense recognized during the period is based on the value of the portion of share-based payment awards that are ultimately expected to vest.

	Year Ended Aug. 31,		
(Dollars in millions, except per share amounts)	**2017**	2016	2015
Cost of Goods Sold	**$ 15**	$ 14	$ 8
Selling, General and Administrative Expenses	**85**	70	80
Research and Development Expenses	**25**	28	31
Restructuring Charges	**1**	(10)	—
Total Stock-Based Compensation Expense Included in Operating Charges	**126**	102	119
Loss from Continuing Operations Before Income Taxes	**(126)**	(102)	(119)
Income Tax Benefit	**48**	38	38
Net Loss	**$ (78)**	$ (64)	$ (81)
Basic Loss per Share	**$ (0.18)**	$ (0.14)	$ (0.17)
Diluted Loss per Share	**$ (0.18)**	$ (0.14)	$ (0.17)
Excess Tax Benefits	**$ —**	$ 16	$ 44

Plan Descriptions : Share-based awards are designed to reward employees for their long-term contributions to the company and to provide incentives for them to remain with the company. Monsanto issues stock options, restricted stock, restricted stock units and deferred stock to key officers, non-employee directors and employees of Monsanto. On Jan. 24, 2012, Monsanto shareowners approved a total of 33.6 million shares to be available for grants of awards under the Monsanto Company 2005 Long-Term Incentive Plan as Amended, ("amended 2005 LTIP") after Aug. 31, 2011, (including for this purpose awards made after Aug. 31, 2011, under our prior equity plans) under which the company grants awards. This included 25.0 million new shares in addition to the 8.6 million shares remaining available for future grant as of Aug. 31, 2011. The delivery of shares pursuant to restricted stock, restricted stock units and deferred stock awards will reduce the remaining available shares by 2.7 shares per share delivered. Upon shareowner approval of the amended 2005 LTIP, no further awards may be granted under our prior equity plans, although awards granted under such plans prior to the commencement of the amended 2005 LTIP will continue to remain outstanding under their terms. As of Aug. 31, 2017, 16.2 million shares were available for grant under the amended 2005 LTIP.

For the fiscal year ended Aug. 31, 2017, the company did not grant any stock options. All unexercised stock options remain outstanding under the terms of their respective grants. The plans provide that the term of any option granted may not exceed ten years and that each option may be exercised for such period as may be specified in the terms and conditions of the grant, as approved by the People and Compensation Committee of the Board of Directors. Generally, the options vest over three years, with one-third of the total award vesting each year. Grants of restricted stock or restricted stock units generally vest at the end of a three to four year service period as specified in the terms and conditions of the grant, as approved by the People and Compensation Committee of the Board of Directors.

Under all plans discussed above, restricted stock and restricted stock units represent the right to receive a number of shares of stock dependent upon vesting requirements. Vesting is subject to the terms and conditions of the grant, which generally require the employees' continued employment during the designated service period and may also be subject to Monsanto's attainment of specified performance criteria during the designated performance period. Shares related to restricted stock and restricted stock units are released to employees upon satisfaction of all vesting requirements. Compensation expense for stock options, restricted stock, restricted stock units and deferred stock is measured at fair value on the date of grant, net of estimated forfeitures, and recognized over the vesting period of the award.

A summary of the status of Monsanto's stock options for the periods from Sept. 1, 2014, through Aug. 31, 2017, follows:

	Options	Outstanding Weighted-Average Exercise Price
Balance Outstanding Sept. 1, 2014	13,437,635	$ 72.23
Granted	1,730,040	112.94
Exercised	(2,439,135)	56.47
Forfeited/expired	(241,786)	75.56
Balance Outstanding Aug. 31, 2015	12,486,754	80.88
Granted	2,264,950	91.39
Exercised	(1,502,763)	97.51
Forfeited/expired	(359,487)	92.65
Balance Outstanding Aug. 31, 2016	12,889,454	85.56
Exercised	**(1,373,065)**	**111.47**
Forfeited/expired	**(139,934)**	**97.50**
Balance Outstanding Aug. 31, 2017	**11,376,455**	**$ 86.50**

At Aug. 31, 2017, 9,662,903 stock options were exercisable. The weighted-average remaining contractual life of these stock options was four years, and the weighted-average exercise price was $84.64 per share. The aggregate intrinsic value of these stock options was $307 million at Aug. 31, 2017.

At Aug. 31, 2017, 11,244,290 stock options were vested or expected to vest. The weighted-average remaining contractual life of these stock options was five years, and the weighted-average exercise price was $86.37 per share. The aggregate intrinsic value of these stock options was $347 million at Aug. 31, 2017.

The weighted-average grant-date fair value of stock options granted during fiscal years 2017, 2016 and 2015 was $0 , $20.64 and $24.38 , respectively, per share. The total pretax intrinsic value of options exercised during the fiscal years ended 2017, 2016 and 2015 was $48 million , $66 million and $150 million , respectively. Pretax unrecognized compensation expense for stock options, net of estimated forfeitures, was $11 million as of Aug. 31, 2017, and will be recognized as expense over a weighted-average remaining vesting period of 0.9 years.

A summary of the status of Monsanto's restricted stock, restricted stock units and directors' deferred stock compensation plans for fiscal year 2017 follows in the tables below:

	Restricted Stock	Weighted-Average Grant Date Fair Values	Restricted Stock Units	Weighted-Average Grant Date Fair Values
Nonvested as of Aug. 31, 2016	7,507	$ 96.58	1,688,918	$ 98.56
Granted	**3,179**	**106.84**	**1,491,151**	**101.81**
Vested	**(5,135)**	**111.93**	**(590,336)**	**102.41**
Forfeitures	**—**	**—**	**(161,573)**	**99.95**
Nonvested as of Aug. 31, 2017	**5,551**	**$ 88.26**	**2,428,160**	**$ 99.53**

Pre-tax unrecognized compensation expense, net of estimated forfeitures as applicable (dollars in millions)	**$ —**	**$ 105**
Remaining weighted-average period of expense recognition/requisite service periods (in years)	**1.4**	**1.3**

(Dollars in millions, except per share amounts)	Weighted-average grant-date fair value during fiscal year			Total fair value of equity vested during fiscal year		
	2017	2016	2015	**2017**	2016	2015
Restricted stock	**$ 106.84**	$ 91.29	$ 115.65	**$ 1**	$ 1	$ —
Restricted stock units	**$ 101.81**	$ 87.85	$ 108.42	**$ 60**	$ 66	$ 52

Valuation and Expense Information under the Compensation — Stock Compensation topic of the ASC: Monsanto estimates the value of employee stock options on the date of grant using a lattice-binomial model. A lattice-binomial model requires the use of extensive actual employee exercise behavior data and a number of complex assumptions including volatility, risk-free interest rate and expected dividends. Expected volatilities used in the model are based on implied volatilities from traded options on Monsanto's stock and historical volatility of Monsanto's stock price. The expected life represents the weighted-average period the stock options are expected to remain outstanding and is a derived output of the model. The lattice-binomial model incorporates exercise and post-vesting forfeiture assumptions based on an analysis of historical data. The following assumptions are used to calculate the estimated value of employee stock options:

Assumptions	Lattice-binomial	
	2016	2015
Expected Dividend Yield	1.9%	1.7%
Expected Volatility	23-35%	20-35%
Weighted-Average Volatility	27.5%	25.9%
Risk-Free Interest Rates	1.40-2.05%	1.56-2.11%
Weighted-Average Risk-Free Interest Rate	1.78%	1.99%
Expected Option Life (in years)	7	7

Monsanto estimates the value of restricted stock units using the fair value on the date of grant. When dividends are not paid on outstanding restricted stock units, the award is valued by reducing the grant-date price by the present value of the dividends expected to be paid, discounted at the appropriate risk-free interest rate.

NOTE 20. CAPITAL STOCK

Monsanto is authorized to issue 1.5 billion shares of common stock, $0.01 par value, and 20 million shares of undesignated preferred stock, $0.01 par value. The board of directors has the authority, without action by the shareowners, to designate and issue preferred stock in one or more series and to designate the rights, preferences and privileges of each series, which may be greater than the rights of the company's common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of holders of common stock until the board of directors determines the specific rights of the holders of preferred stock.

The authorization of undesignated preferred stock makes it possible for Monsanto's board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of the company. These and other provisions may deter hostile takeovers or delay attempts to change management control.

There were no shares of preferred stock outstanding as of Aug. 31, 2017, or Aug. 31, 2016. As of Aug. 31, 2017, and Aug. 31, 2016, 439.6 million and 437.8 million shares of common stock were outstanding, respectively.

On Oct. 9, 2015, Monsanto entered into uncollared accelerated share repurchase ("ASR") agreements with each of Citibank, N.A. and JPMorgan Chase Bank, N.A. The ASR agreements were completed and settled in accordance with the terms of the agreements in fiscal year 2016. Under the ASR agreements, the company purchased approximately 32.2 million of Monsanto common stock for an aggregate price of $3.0 billion , which was accounted for as an increase to treasury stock. The ASR agreements were entered into pursuant to the share repurchase authorization announced in June 2014.

In June 2014, the company announced a share repurchase authorization for up to $10 billion of the company's common stock over a two -year period. Repurchases under the authorization commenced on July 1, 2014. For the year ended Aug. 31, 2016, 32.2 million shares were received under this authorization all of which were delivered upon settlement of the Oct. 9, 2015 ASR agreements for $3 billion . The share repurchase authorization expired on June 24, 2016.

NOTE 21. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table sets forth the after-tax components of accumulated other comprehensive loss and changes thereto:

(Dollars in millions)	Foreign Currency Translation Adjustments	Net Unrealized Gain on Available for Sale Securities	Cash Flow Hedges	Postretirement Benefit Items	Total Accumulated Other Comprehensive Loss
Balance as of Aug. 31, 2015	$ (2,327)	$ 2	$ (190)	$ (286)	$ (2,801)
Other comprehensive income (loss) before reclassifications	35	(2)	(42)	(83)	(92)
Amounts reclassified from accumulated other comprehensive loss	—	1	55	29	85
Net current-period other comprehensive income (loss)	35	(1)	13	(54)	(7)
Balance as of Aug. 31, 2016	(2,292)	1	(177)	(340)	(2,808)
Other comprehensive income (loss) before reclassifications	**233**	**(2)**	**21**	**55**	**307**
Amounts reclassified from accumulated other comprehensive loss	**—**	**2**	**34**	**38**	**74**
Net current-period other comprehensive income	**233**	**—**	**55**	**93**	**381**
Balance as of Aug. 31, 2017	**$ (2,059)**	**$ 1**	**$ (122)**	**$ (247)**	**$ (2,427)**

The following table provides additional information regarding items reclassified out of accumulated other comprehensive loss into earnings during the twelve months ended Aug. 31, 2017 , and Aug. 31, 2016.

(Dollars in millions)	Amount Reclassified from Accumulated Other Comprehensive Loss Year Ended Aug. 31,		Affected Line Item in the Statement of Consolidated Operations
	2017	2016	
Available for Sale Securities:			
Loss on Sale of Security	**$ 3**	$ 2	Other (income) expense, net
	3	2	Total before income taxes
	(1)	(1)	Income tax provision
	$ 2	$ 1	Net of tax
Cash Flow Hedges:			
Foreign Exchange Contracts	**$ (7)**	$ (8)	Net sales
Foreign Exchange Contracts	**(7)**	(21)	Cost of goods sold
Commodity Contracts	**20**	113	Cost of goods sold
Interest Rate Contracts	**37**	—	Other (income) expense, net
Interest Rate Contracts	**15**	15	Interest expense
	58	99	Total before income taxes
	(24)	(44)	Income tax provision
	$ 34	$ 55	Net of tax
Postretirement Benefit Items:			
Amortization of Unrecognized Net Loss	**$ 19**	$ 16	Inventory / Cost of goods sold (1)
Amortization of Unrecognized Net Loss	**37**	31	Selling, general and administrative expenses
Amortization of Unrecognized Net Loss	**4**	—	Restructuring charges
	60	47	Total before income taxes
	(22)	(18)	Income tax provision
	$ 38	$ 29	Net of tax
Total Reclassifications For The Period	**$ 74**	$ 85	Net of tax

(1) The amortization of unrecognized net loss is recorded to net periodic benefit cost, which is allocated to selling, general and administrative expenses and to inventory, which is recognized through cost of goods sold. The company recorded $19 million and $16 million of net periodic benefit cost to inventory, of which approximately $19 million and $16 million was recognized in cost of goods sold during of the twelve months ended Aug. 31, 2017 , and Aug. 31, 2016 , respectively. See Note 16 — Postretirement Benefits - Pensions — and Note 17 — Postretirement Benefits - Health Care and Other Postemployment Benefits — for additional information.

NOTE 22. EARNINGS PER SHARE

Basic earnings per share ("EPS") was computed using the weighted-average number of common shares outstanding during the periods shown in the table below. The diluted EPS computation takes into account the effect of dilutive potential common shares, as shown in the table below. Potential common shares consist of stock options, restricted stock, restricted stock units and directors' deferred shares calculated using the treasury stock method and are excluded if their effect is antidilutive. Of those antidilutive options, certain stock options were excluded from the computations of dilutive potential common shares as its exercise prices were greater than the average market price of common shares for the period.

	Year Ended Aug. 31,		
(In millions)	**2017**	2016	2015
Weighted-Average Number of Common Shares	**438.8**	442.7	476.9
Dilutive Potential Common Shares	**5.0**	4.4	4.5
Antidilutive Potential Common Shares	**2.0**	5.4	1.7

NOTE 23. SUPPLEMENTAL CASH FLOW INFORMATION

Cash payments for interest and taxes during fiscal years 2017 , 2016 and 2015 , were as follows:

	Year Ended Aug. 31,		
(Dollars in millions)	**2017**	2016	2015
Interest	**$ 417**	$ 387	$ 343
Taxes	**543**	841	992

During fiscal years 2017 , 2016 and 2015 , the company recorded the following noncash investing and financing transactions:

- During fiscal years 2017 , 2016 and 2015 , the company recognized noncash transactions related to restructuring. See Note 5 — Restructuring .
- In the fourth quarter of fiscal 2017 , 2016 and 2015 , the board of directors declared a dividend payable in the first quarter of fiscal 2018, 2017 and 2016, respectively. As of Aug. 31, 2017 , Aug. 31, 2016 , and Aug. 31, 2015 , a dividend payable of $237 million , $237 million and $254 million , respectively, was recorded.
- During fiscal years 2017 , 2016 and 2015 , the company recognized noncash capital expenditures of $290 million , $210 million and $225 million , respectively, in accounts payable in the Statements of Consolidated Financial Position.
- During fiscal years 2017 , 2016 and 2015 , the company recognized noncash transactions related to stock-based compensation. See Note 19 — Stock-Based Compensation Plans — for further discussion of stock-based compensation.

NOTE 24. COMMITMENTS AND CONTINGENCIES

Contractual obligations: The following table sets forth the company's estimates of future payments under contracts as of Aug. 31, 2017 .

		Payments Due by Fiscal Year Ending Aug. 31,					
(Dollars in millions)	Total	2018	2019	2020	2021	2022	2023 and beyond
Total Debt, including Capital Lease Obligations	$ 8,124	$ 870	$ 802	$ 108	$ 501	$253	$ 5,590
Interest Payments Relating to Long-Term Debt and Capital Lease Obligations (1)	6,027	312	289	268	267	253	4,638
Operating Lease Obligations	511	149	109	84	60	44	65
Purchase Obligations:							
Commitments to purchase inventories	3,668	1,365	484	472	383	294	670
Commitments to purchase breeding research	440	55	55	55	55	55	165
R&D alliances and joint venture obligations	145	45	34	30	19	16	1
Uncompleted additions to property	775	771	4	—	—	—	—
Other purchase obligations	25	24	1	—	—	—	—
Other Liabilities:							
Postretirement liabilities (2)	105	105	—	—	—	—	—
Unrecognized tax benefits (3)	93	—	—	—	—	—	—
Environmental liabilities	204	14	16	21	7	7	139
Total Contractual Obligations	$20,117	$3,710	$1,794	$1,038	$1,292	$922	$11,268

(1) For variable rate debt, interest is calculated using the applicable rates as of Aug. 31, 2017 .

(2) Includes the company's planned pension and other postretirement benefit contributions for fiscal 2018 . The actual amounts funded in fiscal 2018 may differ from the amounts listed above. Contributions in fiscal 2019 and beyond are excluded as those amounts are unknown. Refer to Note 16 — Postretirement Benefits - Pensions — and Note 17 — Postretirement Benefits - Health Care and Other Postemployment Benefits — for more information.

(3) Unrecognized tax benefits relate to reserves for uncertain tax positions recorded under the Income Taxes topic of the ASC. The company is unable to reasonably predict the timing of tax settlements, as tax audits can involve complex issues, and the resolution of those issues may span multiple years, particularly if subject to negotiation or litigation. See Note 12 — Income Taxes — for more information.

Leases: The company routinely leases buildings for use as administrative offices or warehousing, land for research facilities, company aircraft, railcars, motor vehicles and equipment. Assets held under capital leases are included in

property, plant and equipment. Certain operating leases contain renewal options that may be exercised at Monsanto's discretion. The expected lease term is considered in the decision as to whether a lease should be recorded as capital or operating.

Certain operating leases contain escalation provisions for an annual inflation adjustment factor, and some are based on the CPI published by the Bureau of Labor Statistics. Additionally, certain leases require Monsanto to pay for property taxes, insurance, maintenance and other operating expenses called rent adjustments, which are subject to change over the life of the lease. These adjustments were not determinable at the time the lease agreements were executed. Therefore, Monsanto recognizes the expenses for rent and rent adjustments when they become known and payable, which is more representative of the time pattern in which the company derives the related benefit in accordance with the Leases topic of the ASC.

Other lease agreements provide for base rent adjustments contingent upon future changes in Monsanto's use of the leased space. At the inception of these leases, Monsanto does not have the right to control more than the percentage defined in the lease agreement of the leased property. Therefore, as the company's use of the leased space increases, the company recognizes rent expense for the additional leased property during the period during which the company has the right to control the use of additional property in accordance with the Leases topic of the ASC.

Rent expense was $262 million for fiscal year 2017 , $256 million for fiscal year 2016 and $273 million for fiscal year 2015 .

Guarantees: Monsanto may provide and has provided guarantees on behalf of its consolidated subsidiaries for obligations incurred in the normal course of business. Because these are guarantees of obligations of consolidated subsidiaries, Monsanto's consolidated financial position is not affected by the issuance of these guarantees.

Monsanto warrants the performance of certain products through standard product warranties. In addition, Monsanto provides extensive marketing programs to increase sales and enhance customer satisfaction. These programs may include performance warranty features and indemnification for risks not related to performance, both of which are provided to qualifying customers on a contractual basis. The cost of payments for claims based on performance warranties has been, and is expected to continue to be, insignificant. It is not possible to predict the maximum potential amount of future payments for indemnification for losses not related to the performance of Monsanto's products (for example, replanting due to extreme weather conditions), because it is not possible to predict whether the specified contingencies will occur and if so, to what extent.

In various circumstances, Monsanto has agreed to indemnify or reimburse other parties for various losses or expenses. For example, like many other companies, Monsanto has agreed to indemnify its officers and directors for liabilities incurred by reason of their position with Monsanto. Contracts for the sale or purchase of a business or line of business may require indemnification for various events, including certain events that arose before the sale, or tax liabilities that arise before, after or in connection with the sale. Certain environmental obligations are backed by performance bonds. Certain seed licensee arrangements indemnify the licensee against liability and damages, including legal defense costs, arising from any claims of patent, copyright, trademark or trade secret infringement related to Monsanto's trait technology. Germplasm licenses generally indemnify the licensee against claims related to the source or ownership of the licensed germplasm. Litigation settlement agreements may contain indemnification provisions covering future issues associated with the settled matter. Credit agreements and other financial agreements frequently require reimbursement for certain unanticipated costs resulting from changes in legal or regulatory requirements or guidelines. These agreements may also require reimbursement of withheld taxes, and additional payments that provide recipients amounts equal to the sums they would have received had no such withholding been made. Indemnities like those in this paragraph may be found in many types of agreements, including, for example, operating agreements, leases, purchase or sale agreements and other licenses. Leases may require indemnification for liabilities Monsanto's operations may potentially create for the lessor or lessee. It is not possible to predict the maximum future payments possible under these or similar provisions because it is not possible to predict whether any of these contingencies will come to pass and if so, to what extent. Historically, these types of provisions did not have a material effect on Monsanto's financial position, profitability or liquidity. Monsanto believes that if it were to incur a loss in any of these matters, it would not have a material effect on its financial position, profitability or liquidity. Based on the company's current assessment of exposure, Monsanto has recorded a liability of less than $1 million as of Aug. 31, 2017 , and Aug. 31, 2016 , related to these indemnifications.

Monsanto provides guarantees for certain customer loans in the United States, Latin America and Europe. See Note 7 — Customer Financing Programs — for additional information.

Information regarding Monsanto's indemnification obligations to Pharmacia under the Separation Agreement can be found below in the "Litigation" section of this note.

Environmental and Litigation Liabilities: Monsanto is involved in environmental remediation and legal proceedings to which Monsanto is party in its own name and proceedings to which its former parent, Pharmacia LLC ("Pharmacia") or its former subsidiary, Solutia, Inc. ("Solutia") is a party but that Monsanto manages and for which Monsanto is responsible pursuant to certain indemnification agreements. In addition, Monsanto has liabilities established for various product claims. With respect to certain of these proceedings, Monsanto has established a reserve for the estimated liabilities. For more information on Monsanto's policies regarding "Litigation and Other Contingencies," see Note 2 — Significant Accounting Policies . Portions of the liability included in a reserve for which the amount and timing of cash payments are fixed or readily determinable were discounted, using a risk-free discount rate adjusted for inflation ranging from 3.2 to 3.6 percent. The remaining portions of the liability were not subject to discounting because of uncertainties in the timing of cash outlay. The following table provides a detailed summary of the discounted and undiscounted amounts included in the reserve for environmental and litigation liabilities:

(Dollars in millions)		
Aggregate Undiscounted Amount	**$**	**119**
Discounted Portion:		
Expected payment (undiscounted) for:		
2018		**14**
2019		**16**
2020		**21**
2021		**7**
2022		**7**
Undiscounted aggregate expected payments after 2022		**139**
Aggregate Amount to be Discounted as of Aug. 31, 2017		**204**
Discount, as of Aug. 31, 2017		**(46)**
Aggregate Discounted Amount Accrued as of Aug. 31, 2017	**$**	**158**
Total Environmental and Litigation Reserve as of Aug. 31, 2017	**$**	**277**

Changes in the environmental and litigation liabilities for fiscal years 2015 , 2016 and 2017 are as follows:

(Dollars in millions)		
Balance at Aug. 31, 2014	$	291
Payments		(67)
Accretion		3
Adjustments to liabilities recognized in fiscal year 2015		129
Balance at Aug. 31, 2015	$	356
Payments		(117)
Accretion		3
Adjustments to liabilities recognized in fiscal year 2016		303
Balance at Aug. 31, 2016	$	545
Payments		**(303)**
Accretion		**2**
Adjustments to liabilities recognized in fiscal year 2017		**33**
Total Environmental and Litigation Reserve as of Aug. 31, 2017	**$**	**277**

Environmental: Included in the liability are amounts related to environmental remediation of sites associated with Pharmacia's former chemicals and agricultural businesses, with no single site representing the majority of the environmental liability. These sites are in various stages of environmental management. At some sites, work is in the early stages of assessment and investigation, while at others the cleanup remedies have been implemented and the remaining work consists of monitoring the integrity of that remedy. The extent of Monsanto's involvement at the various sites ranges from less than one percent to 100 percent of the costs currently anticipated. At some sites, Monsanto is acting under court or agency order, while at others it is acting with very minimal government involvement.

Monsanto does not currently anticipate any material loss in excess of the amount recorded for the environmental sites reflected in the liability. However, it is possible that new information about these sites for which the accrual has been established, such as results of investigations by regulatory agencies, Monsanto or other parties, could require Monsanto to reassess its potential exposure related to environmental matters. Monsanto's future remediation

expenses at these sites may be affected by a number of uncertainties. These uncertainties include, but are not limited to, the method and extent of remediation, the percentage of material attributable to Monsanto at the sites relative to that attributable to other parties and the financial capabilities of the other potentially responsible parties. Monsanto cannot reasonably estimate any additional loss and does not expect the resolution of such uncertainties, or environmental matters not reflected in the liability, to have a material adverse effect on its consolidated results of operations, financial position, cash flows or liquidity.

Litigation: The above liability includes amounts related to certain third-party litigation with respect to Monsanto's business, as well as tort litigation related to Pharmacia's former chemical business, including lawsuits involving polychlorinated biphenyls ("PCBs"), dioxins, and other chemical and premises liability litigation. Additional matters that are not reflected in the liability may arise in the future, and Monsanto may manage, settle, or pay judgments or damages with respect thereto in order to mitigate contesting potential liability. Following is a description of one of the more significant litigation matters.

The company was named in approximately 30 personal injury lawsuits filed over several years on behalf of approximately 750 persons in state courts in St. Louis, Missouri and Los Angeles, California. Plaintiffs claimed they were injured by PCBs manufactured by Pharmacia's chemical business over four decades ago and incorporated into products made, used and sometimes disposed of by others. In September 2016, the parties reached an agreement to settle these personal injury lawsuits pursuant to which the company is required to pay up to $280 million into a settlement fund, with the settlement and the final payment amount contingent upon the level of claimant participation. As of Aug. 31, 2016, $280 million was recorded in the Statement of Consolidated Financial Position within miscellaneous short-term accruals; the related expense was included in selling, general and administrative expenses in the Statement of Consolidated Operations. In November 2016 and December 2016, the first and second claimant participation levels were met, and the company paid $250 million and $25 million respectively, into the settlement fund. In February, June and September 2017, pro rata portions of the final claimant participation level were met, and payments totaling approximately $4 million were made. The company also has been named in lawsuits brought by various governmental entities claiming that Monsanto, Pharmacia and Solutia, collectively as a manufacturer of PCBs, should be responsible for a variety of damages due to PCBs in bodies of water, regardless of how PCBs came to be located there. The company believes that these novel claims are without merit and is vigorously defending the cases on legal and factual grounds.

Including litigation reflected in the liability, Monsanto is involved in various legal proceedings that arise in the ordinary course of its business or pursuant to Monsanto's indemnification obligations to Pharmacia, as well as proceedings that management has considered to be material under SEC regulations. Some of the lawsuits seek damages in very large amounts or seek to restrict the company's business activities. Monsanto believes that it has meritorious legal arguments and will continue to represent its interests vigorously in all of the proceedings that it is defending or prosecuting. Management does not anticipate the ultimate liabilities resulting from such proceedings, or the proceedings reflected in the above liability, will have a material adverse effect on Monsanto's consolidated results of operations, financial position, cash flows or liquidity.

The company is defending lawsuits in various state and federal courts, in which approximately 3,100 plaintiffs claim to have been injured by exposure to glyphosate-based products manufactured by the company. The majority of plaintiffs have brought actions in state courts in Missouri, Delaware and California, while the remainder of plaintiffs' cases were filed in many different federal courts. In October 2016, the Judicial Panel on Multi-District Litigation transferred to the Northern District of California all of the federal cases for pretrial purposes. The company believes that it has meritorious factual and legal defenses to these cases and is vigorously defending them.

Legal actions have been filed in Brazil that raise various issues challenging the right to collect certain royalties for *Roundup Ready* soybeans, such as whether Brazilian pipeline patents have the duration of their corresponding U.S. patents (2014 for *Roundup Ready* soybeans) and whether Brazil's Plant Variety Protection law affects the enforceability of patents. These issues are currently under judicial review in Brazil. Monsanto believes it has meritorious legal arguments and will continue to represent its interests vigorously in these proceedings. The current estimate of the company's reasonably possible loss contingency is not material to consolidated results of operations, financial position, cash flows or liquidity.

Off-Balance Sheet Arrangement: Monsanto has substantially completed making a significant expansion of the Chesterfield, Missouri facility. In December 2013, Monsanto executed the first of a series of incentive agreements with the County of St. Louis, Missouri. Under these agreements Monsanto has transferred the Chesterfield, Missouri facility to St. Louis County and received Industrial Revenue Bonds in the amount of up to $470 million , which enables the company to reduce the cost of constructing and operating the expansion by reducing certain state and local tax expenditures. Monsanto immediately leased the facility from the County of St. Louis and has an option to purchase

the facility upon tendering the Industrial Revenue Bonds received to the County. The payments due to the company in relation to the Industrial Revenue Bonds and owed by the company in relation to the lease of the facility qualify for the right of offset in accordance with the Balance Sheet topic of the ASC in the Statements of Consolidated Financial Position. As such, neither the Industrial Revenue Bonds nor the lease obligation are recorded in the Statements of Consolidated Financial Position as an asset or liability, respectively. The Chesterfield facility and the expansion are being treated as being owned by Monsanto.

NOTE 25. SEGMENT AND GEOGRAPHIC DATA

Monsanto conducts its worldwide operations through global businesses, which are aggregated into reportable segments based on similarity of products, production processes, customers, distribution methods and economic characteristics. The operating segments are aggregated into two reportable segments: Seeds and Genomics and Agricultural Productivity.

The Seeds and Genomics segment consists of the global seeds and related traits businesses, biotechnology platforms and digital agriculture. Within the Seeds and Genomics segment, Monsanto's significant operating segments are corn seed and traits, soybean seed and traits, cotton seed and traits, vegetable seeds and all other crops seeds and traits. The Agricultural Productivity reportable segment consists of the Agricultural Productivity operating segment. EBIT is defined as earnings (loss) before interest and taxes and is an operating performance measure for the two reportable segments. EBIT is useful to management in demonstrating the operational profitability of the segments by excluding interest and taxes, which are generally accounted for across the entire company on a consolidated basis. Sales between segments were not significant. Certain SG&A expenses are allocated between segments based on the segment's relative contribution to total Monsanto operations. Allocation percentages remain consistent for fiscal years 2015 , 2016 and 2017 .

Data for the Seeds and Genomics and Agricultural Productivity reportable segments, as well as for Monsanto's significant operating segments, is presented in the table that follows:

(Dollars in millions)	Year Ended Aug. 31, 2017	2016	2015
Net Sales (1)			
Corn seed and traits	**$ 6,270**	$ 5,825	$ 5,953
Soybean seed and traits	**2,662**	2,162	2,276
Cotton seed and traits	**615**	440	523
Vegetable seeds	**815**	801	816
All other crops seeds and traits	**551**	760	675
Total Seeds and Genomics	**$ 10,913**	$ 9,988	$ 10,243
Agricultural productivity	**3,727**	3,514	4,758
Total Agricultural Productivity	**$ 3,727**	$ 3,514	$ 4,758
Total	**$ 14,640**	$ 13,502	$ 15,001
Gross Profit			
Corn seed and traits	**$ 3,975**	$ 3,450	$ 3,557
Soybean seed and traits	**1,884**	1,399	1,510
Cotton seed and traits	**457**	282	408
Vegetable seeds	**435**	401	372
All other crops seeds and traits	**294**	542	430
Total Seeds and Genomics	**$ 7,045**	$ 6,074	$ 6,277
Agricultural productivity	**892**	943	1,905
Total Agricultural Productivity	**$ 892**	$ 943	$ 1,905
Total	**$ 7,937**	$ 7,017	$ 8,182
EBIT (2)(3)(4)			
Seeds and genomics	**$ 2,910**	$ 2,292	$ 2,206
Agricultural productivity	**353**	116	1,294
Total	**$ 3,263**	$ 2,408	$ 3,500
Depreciation and Amortization Expense			
Seeds and genomics	**$ 585**	$ 593	$ 586
Agricultural productivity	**163**	134	130
Total	**$ 748**	$ 727	$ 716
Equity Affiliate Loss (Income) (5)			
Seeds and genomics	**$ 18**	$ 13	$ 13
Agricultural productivity	**(1)**	(1)	—
Total	**$ 17**	$ 12	$ 13
Total Assets			
Seeds and genomics	**$ 16,768**	$ 15,772	$ 17,330
Agricultural productivity	**4,565**	3,964	4,590
Total	**$ 21,333**	$ 19,736	$ 21,920
Property, Plant and Equipment Purchases			
Seeds and genomics	**$ 757**	$ 727	$ 762
Agricultural productivity	**483**	196	205
Total	**$ 1,240**	$ 923	$ 967
Investment in Equity Affiliates			
Seeds and genomics	**$ 137**	$ 152	$ 114
Agricultural productivity	**29**	—	—
Total	**$ 166**	$ 152	$ 114

(1) Represents net sales from continuing operations

(2) EBIT is defined as earnings (loss) before interest and taxes; see the following table for reconciliation. Earnings (loss) is intended to mean net income (loss) attributable to Monsanto Company as presented in the Statements of Consolidated Operations under GAAP. EBIT is an operating performance measure for the two reportable segments.

(3) Agricultural Productivity EBIT includes income of $21 million , $27 million and $45 million from discontinued operations for fiscal 2017, 2016 and 2015, respectively.

(4) For the twelve months ended Aug. 31, 2017 , 2016 and 2015 , Seeds and Genomics EBIT includes losses from operations of noncontrolling interest of $19 million, income from operations of noncontrolling interest of $30 million and losses from operations of noncontrolling interest of $32 million , respectively. For the twelve months ended Aug. 31, 2017 , 2016 and 2015 , Agricultural Productivity EBIT includes losses from operations of noncontrolling interest of $1 million , $2 million and $2 million , respectively.

(5) Equity affiliate loss (income) is included in other (income) expense, net in the Statements of Consolidated Operations.

A reconciliation of EBIT to net income for each period follows:

(Dollars in millions)	Year Ended Aug. 31, 2017	2016	2015
EBIT (1)	**$ 3,263**	$ 2,408	$ 3,500
Interest Expense — Net	**376**	362	328
Income Tax Provision (2)	**627**	710	858
Net Income Attributable to Monsanto Company	**$ 2,260**	$ 1,336	$ 2,314

(1) Includes the income from operations of discontinued businesses and the income (loss) from operations of noncontrolling interests.

(2) Includes the income tax provision on discontinued operations and the income tax expense (benefit) of noncontrolling interest.

Net sales and long-lived assets are attributed to the geographic areas of the relevant Monsanto legal entities. For example, a sale from the United States to a customer in Brazil is reported as a U.S. export sale.

	Net Sales to Unaffiliated Customers			Long-Lived Assets	
	Year Ended Aug. 31,			As of Aug. 31,	
(Dollars in millions)	**2017**	2016	2015	**2017**	2016
United States	**$ 8,235**	$ 8,008	$ 8,612	**$ 8,547**	$ 7,779
Europe-Africa	**1,841**	1,536	1,834	**1,591**	1,321
Brazil	**1,782**	1,437	1,725	**746**	665
Argentina	**969**	856	871	**352**	345
Asia-Pacific	**552**	483	686	**258**	277
Canada	**734**	619	601	**97**	87
Mexico	**415**	436	537	**140**	138
Other	**112**	127	135	**387**	354
Total	**$ 14,640**	$ 13,502	$ 15,001	**$ 12,118**	$ 10,966

NOTE 26. QUARTERLY DATA (UNAUDITED)

The following tables include financial data for the fiscal year quarters in 2017 and 2016 which have been adjusted for discontinued operations.

(Dollars in millions, except per share amounts)

2017	1st (2)(3) Quarter	2nd (4)(5) Quarter	3rd (6)(7) Quarter	4th (8)(9) Quarter	Total
Net Sales	**$ 2,650**	**$ 5,074**	**$ 4,230**	**$ 2,686**	**$ 14,640**
Gross Profit	**1,259**	**2,952**	**2,386**	**1,340**	**7,937**
Income from Continuing Operations Attributable to Monsanto Company	**19**	**1,365**	**843**	**20**	**2,247**
Income on Discontinued Operations	**10**	**3**	**—**	**—**	**13**
Net Income	**35**	**1,366**	**847**	**25**	**2,273**
Net Income Attributable to Monsanto Company	**$ 29**	**$ 1,368**	**$ 843**	**$ 20**	**$ 2,260**
Basic Earnings per Share Attributable to Monsanto Company: (1)					
Income from continuing operations	**$ 0.05**	**$ 3.11**	**$ 1.92**	**$ 0.05**	**$ 5.12**
Income on discontinued operations	**0.02**	**0.01**	**—**	**—**	**0.03**
Net Income Attributable to Monsanto Company	**$ 0.07**	**$ 3.12**	**$ 1.92**	**$ 0.05**	**$ 5.15**
Diluted Earnings per Share Attributable to Monsanto Company: (1)					
Income from continuing operations	**$ 0.05**	**$ 3.08**	**$ 1.90**	**$ 0.05**	**$ 5.06**
Income on discontinued operations	**0.02**	**0.01**	**—**	**—**	**0.03**
Net Income Attributable to Monsanto Company	**$ 0.07**	**$ 3.09**	**$ 1.90**	**$ 0.05**	**$ 5.09**
2016					
Net Sales	$2,219	$4,532	$4,189	$2,562	$13,502
Gross Profit	901	2,598	2,380	1,138	7,017
(Loss) Income from Continuing Operations Attributable to Monsanto Company	(265)	1,060	717	(193)	1,319
Income on Discontinued Operations	12	3	—	2	17
Net (Loss) Income	(257)	1,060	715	(205)	1,313
Net (Loss) Income Attributable to Monsanto Company	$ (253)	$1,063	$ 717	$ (191)	$ 1,336
Basic (Loss) Earnings per Share Attributable to Monsanto Company: (1)					
(Loss) Income from continuing operations	$ (0.58)	$ 2.42	$ 1.64	$ (0.44)	$ 2.98
Income on discontinued operations	0.02	—	—	—	0.04
Net (Loss) Income Attributable to Monsanto Company	$ (0.56)	$ 2.42	$ 1.64	$ (0.44)	$ 3.02
Diluted (Loss) Earnings per Share Attributable to Monsanto Company: (1)					
(Loss) Income from continuing operations	$ (0.58)	$ 2.40	$ 1.63	$ (0.44)	$ 2.95
Income on discontinued operations	0.02	0.01	—	—	0.04
Net (Loss) Income Attributable to Monsanto Company	$ (0.56)	$ 2.41	$ 1.63	$ (0.44)	$ 2.99

(1) Because Monsanto reported a loss from continuing operations in the first quarter and fourth quarter fiscal 2016 , generally accepted accounting principles require diluted loss per share to be calculated using weighted-average common shares outstanding, excluding common stock equivalents. As a result, the quarterly earnings (loss) per share may not total to the full-year amount.

(2) In the first quarter of fiscal 2017 , the company recorded $1 million of cost of goods sold expenses related to the 2015 Restructuring Plan, $8 million of selling, general and administrative expenses related to environmental and litigation matters, $130 million in charges for pending Bayer transaction related costs with $93 million recorded in pending Bayer transaction related costs and $37 million recorded in other (income) expense, net related to pending Bayer transaction related costs and $36 million of a net reversal of expense of restructuring charges with a combined corresponding income tax benefit of $42 million . The company also recorded net charges related to Argentine-related tax matters of $10 million , which resulted from a translation gain recorded in other (income) expense, net of $18 million and net charge against tax expense of $28 million based on similar circumstances as noted below in the third quarter of fiscal 2016.

(3) In the first quarter of fiscal 2016 , the company recorded $52 million of cost of goods sold expenses related to the 2015 Restructuring Plan, $5 million of selling, general and administrative expenses related to environmental and litigation matters and $266 million of restructuring charges with a combined corresponding income tax benefit of $110 million .

(4) In the second quarter of fiscal 2017 , the company divested its European-based silthiofam seed-treatment chemical business previously reported as part of the Agricultural Productivity segment resulting in a gain of $83 million in 2017 within other (income) expense, net in the Statements of Consolidated Operations with a corresponding income tax provision of $8 million . The company also recorded $6 million of cost of goods sold expenses related to the 2015 Restructuring Plan, $9 million of selling, general and administrative expenses related to environmental and litigation matters, $27 million in charges recorded to pending Bayer transaction related costs and $23 million of restructuring charges related to the 2015 Restructuring Plan with a combined corresponding income tax benefit of $28 million . The company also recorded a charge related to Argentine-related tax matters of $7 million , which resulted from a translation loss recorded in other (income) expense, net based on similar circumstances as noted below in the third quarter of fiscal 2016.

(5) In the second quarter of fiscal 2016 , the company recorded $3 million of selling, general and administrative expenses related to environmental and litigation matters and a SEC settlement and $9 million of restructuring charges related to the 2015 Restructuring Plan with a combined corresponding income tax benefit of $4 million .

(6) In the third quarter of fiscal 2017 , the company recorded $14 million of cost of goods sold expenses related to the 2015 Restructuring Plan, $6 million of a net reversal of selling, general and administrative expenses related to environmental and litigation matters, $33 million in charges recorded to pending Bayer transaction related costs and $17 million of a net reversal of expense of restructuring charges with a combined corresponding income tax benefit of $7 million . The company also recorded a net reversal of charges related to Argentine-related tax matters of $2 million , which resulted from a translation gain recorded in other (income) expense, net of $11 million and a net charge against tax expense of $9 million based on similar circumstances as noted below in the third quarter of fiscal 2016.

(7) In the third quarter of fiscal 2016 , the company recorded $210 million of net sales as a result of agreements entered into related to the company's alfalfa traits and technology, which resulted in upfront revenue accounted for as an exclusive perpetual license to intellectual property, with a corresponding income tax provision of $74 million . The company also recorded $1 million of cost of goods sold expenses related to the 2015 Restructuring Plan, $16 million of selling, general and administrative expenses related to environmental and litigation matters and $15 million of restructuring charges with a combined corresponding income tax benefit of $13 million . The company also recorded a net tax charge of $219 million due to losses generated in Argentina in fiscal 2016 as well as uncertainties around the Argentina business. The company evaluated the recoverability of various items on the Statement of Consolidated Financial Position related to the Argentina business and determined an allowance against certain assets was necessary, which resulted in the net charge to tax expense.

(8) In the fourth quarter of fiscal 2017 , the company granted a licensee the right to certain corn licenses in Brazil which resulted in revenue of $227 million , with no corresponding income tax provision. The company also recorded $4 million of cost of goods sold expenses related to the 2015 Restructuring Plan, $22 million of selling, general and administrative expenses related to environmental and litigation matters, $32 million in charges recorded to pending Bayer transaction related costs and $ 6 million of a net reversal of expense of restructuring charges with a combined corresponding income tax benefit of $ 20 million . The company also recorded a net charge of $ 30 million , which resulted from a translation gain recorded in other (income) expense, net of $ 21 million and a net charge against tax expense of $ 51 million based on similar circumstances as noted above in the third quarter of fiscal 2016.

(9) In the fourth quarter of fiscal 2016 , the company recorded a $157 million gain in other expense, net as a result of the company signing definitive agreements to sell certain manufacturing assets and contribute to a newly-formed joint venture certain intellectual property, real property and tangible assets related to the company's sorghum business, with a corresponding income tax provision of $47 million . The company also recorded $14 million of cost of goods sold expenses related to the 2015 Restructuring Plan, $246 million of selling, general and administrative expenses related to environmental and litigation matters and a SEC settlement and $7 million of restructuring charges with a combined corresponding income tax benefit of $77 million . The company also recorded a net tax charge of $ 33 million for Argentine-related tax matters based on similar circumstances as noted above in the third quarter of fiscal 2016.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, including our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of August 31, 2017 . The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Based upon the evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of August 31, 2017 .

Management's Annual Report on Internal Control over Financial Reporting

Management of Monsanto Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Under the supervision and with the participation of our management, including the Chief Executive Officer and the Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework and criteria established in *Internal Control — Integrated Framework (2013)* , issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on our evaluation under the COSO framework, management concluded that the company maintained effective internal control over financial reporting as of August 31, 2017 .

The company's independent registered public accounting firm, Deloitte & Touche LLP, was appointed by the Audit and Finance Committee of the company's Board of Directors, and ratified by the company's shareowners. Deloitte & Touche LLP has audited and reported on the Consolidated Financial Statements of Monsanto Company and subsidiaries and the effectiveness of the company's internal control over financial reporting. The reports of the independent registered public accounting firm are contained in Item 8 and Item 9A of this Annual Report.

/s/ Hugh Grant

Hugh Grant
Chairman and Chief Executive Officer

/s/ Pierre Courduroux

Pierre Courduroux
Senior Vice President and Chief Financial Officer

October 27, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareowners of Monsanto Company:

We have audited the internal control over financial reporting of Monsanto Company and subsidiaries (the "Company") as of August 31, 2017, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of August 31, 2017, based on the criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the statement of consolidated financial position as of August 31, 2017, and the related statements of consolidated operations, comprehensive income, cash flows, and shareowners' equity for the year ended August 31, 2017 of the Company and our report dated October 27, 2017 expressed an unqualified opinion on those financial statements.

/s/ DELOITTE & TOUCHE LLP

St. Louis, Missouri
October 27, 2017

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting during the company's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

23.2 Excerpts From Monsanto's Quarterly Report on Form 10-Q for the Quarterly Period Ended February 28, 2018

23.2 Excerpts From Monsanto's Quarterly Report on Form 10-Q for the Quarterly Period Ended February 28, 2018

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

In the interests of our investors, this section of our report explains some of the important reasons that actual results may be materially different from those that we anticipate. In this report, and from time to time throughout the year, we share our expectations for our company's future performance. These forward-looking statements include statements about our business plans; the pending transaction with Bayer Aktiengesellschaft ("Bayer"); the potential development, regulatory approval, and public acceptance of our products; our expected financial performance, including sales performance, and the anticipated effect of our strategic actions; the anticipated benefits of acquisitions; the outcome of contingencies, such as litigation; domestic or international economic, political and market conditions; and other factors that could affect our future results of operations or financial position, including, without limitation, statements under the captions "Overview — Executive Summary — Outlook," "Seeds and Genomics Segment," "Agricultural Productivity Segment," "Financial Condition, Liquidity and Capital Resources," "Outlook," "Critical Accounting Policies and Estimates" and "Legal Proceedings." Any statements we make that are not matters of current reportage or historical fact should be considered forward-looking. Such statements often include words such as "believe," "expect," "anticipate," "intend," "plan," "estimate," "will," and similar expressions. By their nature, these types of statements are uncertain and are not guarantees of our future performance.

Since these statements are based on factors that involve risks and uncertainties, our company's actual performance and results may differ materially from those described or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, among others: continued competition in seeds, traits and agricultural chemicals; the company's exposure to various contingencies, including those related to intellectual property protection, regulatory compliance and the speed with which approvals are received, and public understanding and acceptance of our biotechnology and other agricultural products; the success of the company's research and development activities; the outcomes of major lawsuits; developments related to foreign currencies and economies; the impact of exploring, responding to, entering into or consummating potential acquisitions or other transactions and proposals, including risks related to the pending Merger with Bayer; fluctuations in commodity prices; compliance with regulations affecting our manufacturing; the accuracy of the company's estimates related to distribution inventory levels; the increases in and expected higher levels of indebtedness; the company's ability to fund its short-term financing needs and to obtain payment for the products that it sells; the effect of weather conditions, natural disasters, accidents, and security breaches, including cybersecurity incidents, on the agriculture business or the company's facilities; and other risks and factors described or referenced in Part II — Item 1A — Risk Factors — below and Part I — Item 1A of our Report on Form 10-K for the fiscal year ended Aug. 31, 2017 .

Our forward-looking statements represent our estimates and expectations and are based on currently available information at the time that we make those statements. However, circumstances change constantly, often unpredictably, and many events beyond our control will determine whether the expectations encompassed in our forward-looking statements will be realized. As a result, investors should not place undue reliance on these forward-looking statements. We disclaim any current intention or obligation to revise or update any forward-looking statements, or the factors that may affect their realization, whether in light of new information, future events or otherwise, and investors should not rely on us to do so.

PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

The Statements of Consolidated Operations of Monsanto Company and its consolidated subsidiaries for the three and six months ended Feb. 28, 2018 , and Feb. 28, 2017 , the Statements of Consolidated Comprehensive Income for the three and six months ended Feb. 28, 2018 , and Feb. 28, 2017 , the Statements of Consolidated Financial Position as of Feb. 28, 2018 , and Aug. 31, 2017 , the Statements of Consolidated Cash Flows for the six months ended Feb. 28, 2018 , and Feb. 28, 2017 , the Statements of Consolidated Shareowners' Equity for the six months ended Feb. 28, 2018 , and year ended Aug. 31, 2017 , and related Notes to the Consolidated Financial Statements follow. Unless otherwise indicated, "Monsanto" and the "company" are used interchangeably to refer to Monsanto Company or to Monsanto Company and its consolidated subsidiaries, as appropriate to the context. Unless otherwise indicated, "earnings per share" and "per share" mean diluted earnings per share. In the Notes to the Consolidated Financial Statements, all dollars are expressed in millions, except per share amounts. Unless otherwise indicated, trademarks owned or licensed by Monsanto or its subsidiaries are shown in special type. Unless otherwise indicated, references to " *Roundup* herbicides" mean *Roundup* branded herbicides, excluding all lawn-and-garden herbicides and other glyphosate-based herbicides, and references to " *Roundup* and other glyphosate-based herbicides" exclude all lawn-and-garden herbicides.

Statements of Consolidated Operations

Unaudited (Dollars in millions, except per share amounts)	Three Months Ended		Six Months Ended	
	Feb. 28, 2018	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017
Net Sales	**$ 5,019**	$ 5,074	**$ 7,677**	$ 7,724
Cost of goods sold	**2,053**	2,122	**3,399**	3,513
Gross Profit	**2,966**	2,952	**4,278**	4,211
Operating Expenses:				
Selling, general and administrative expenses	**652**	657	**1,316**	1,242
Research and development expenses	**394**	381	**776**	751
Restructuring charges	**(1)**	23	**3**	(13)
Pending Bayer transaction related costs	**25**	27	**45**	120
Total Operating Expenses	**1,070**	1,088	**2,140**	2,100
Income from Operations	**1,896**	1,864	**2,138**	2,111
Interest expense	**105**	102	**229**	238
Interest income	**(24)**	(18)	**(39)**	(36)
Other income, net	**(24)**	(88)	**(121)**	(45)
Income from Continuing Operations Before Income Taxes	**1,839**	1,868	**2,069**	1,954
Income tax provision	**381**	505	**441**	566
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**$ 1,458**	$ 1,363	**$ 1,628**	$ 1,388
Discontinued Operations:				
Income from operations of discontinued business	**2**	5	**4**	21
Income tax provision	**—**	2	**1**	8
Income from Discontinued Operations	**2**	3	**3**	13
Net Income	**$ 1,460**	$ 1,366	**$ 1,631**	$ 1,401
Less: Net income (loss) attributable to noncontrolling interest	**1**	(2)	**3**	4
Net Income Attributable to Monsanto Company	**$ 1,459**	$ 1,368	**$ 1,628**	$ 1,397
Amounts Attributable to Monsanto Company:				
Income from continuing operations	**$ 1,457**	$ 1,365	**$ 1,625**	$ 1,384
Income from discontinued operations	**2**	3	**3**	13
Net Income Attributable to Monsanto Company	**$ 1,459**	$ 1,368	**$ 1,628**	$ 1,397
Basic Earnings per Share Attributable to Monsanto Company:				
Income from continuing operations	**$ 3.30**	$ 3.11	**$ 3.69**	$ 3.16
Income from discontinued operations	**0.01**	0.01	**0.01**	0.03
Net Income Attributable to Monsanto Company	**$ 3.31**	$ 3.12	**$ 3.70**	$ 3.19
Diluted Earnings per Share Attributable to Monsanto Company:				
Income from continuing operations	**$ 3.27**	$ 3.08	**$ 3.64**	$ 3.13
Income from discontinued operations	**—**	0.01	**0.01**	0.03
Net Income Attributable to Monsanto Company	**$ 3.27**	$ 3.09	**$ 3.65**	$ 3.16
Weighted Average Shares Outstanding:				
Basic	**441.0**	438.7	**440.6**	438.4
Diluted	**445.5**	442.3	**445.9**	442.3
Dividends Declared per Share	**$ 1.08**	$ 1.08	**$ 1.08**	$ 1.08

The accompanying notes are an integral part of these consolidated financial statements.

Statements of Consolidated Comprehensive Income

Unaudited (Dollars in millions)	Three Months Ended		Six Months Ended	
	Feb. 28, 2018	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017
Comprehensive Income Attributable to Monsanto Company				
Net Income Attributable to Monsanto Company	**$ 1,459**	$ 1,368	**$ 1,628**	$ 1,397
Other Comprehensive Income (Loss), Net of Tax:				
Foreign currency translation, net of tax of $28, $(1), $(2) and $0, respectively	**107**	171	**25**	(98)
Postretirement benefit plan activity, net of tax of $49, $6, $53 and $12, respectively	**(39)**	13	**(33)**	23
Unrealized net losses on investment holdings, net of tax of $1, $0, $0 and $(1), respectively	**—**	(1)	**(1)**	(2)
Realized net (gains) losses on investment holdings, net of tax of $0, $1, $0 and $1, respectively	**(1)**	1	**(1)**	1
Unrealized net derivative (losses) gains, net of tax of $28, $6, $32 and $21, respectively	**(18)**	7	**(11)**	38
Realized net derivative losses, net of tax of $1, $4, $1 and $19, respectively	**1**	8	**3**	29
Total Other Comprehensive Income (Loss), Net of Tax	**50**	199	**(18)**	(9)
Comprehensive Income Attributable to Monsanto Company	**$ 1,509**	$ 1,567	**$ 1,610**	$ 1,388
Comprehensive Income (Loss) Attributable to Noncontrolling Interests				
Net Income (Loss) Attributable to Noncontrolling Interests	**1**	(2)	**3**	4
Other Comprehensive Income				
Foreign currency translation	**—**	1	**—**	—
Total Other Comprehensive Income	**—**	1	**—**	—
Comprehensive Income (Loss) Attributable to Noncontrolling Interests	**$ 1**	$ (1)	**$ 3**	$ 4
Total Comprehensive Income	**$ 1,510**	$ 1,566	**$ 1,613**	$ 1,392

The accompanying notes are an integral part of these consolidated financial statements.

Statements of Consolidated Financial Position

Unaudited (Dollars in millions, except share amounts)	As of Feb. 28, 2018	Aug. 31, 2017
Assets		
Current Assets:		
Cash and cash equivalents (variable interest entity restricted - 2018: $19 and 2017: $94)	**$ 2,409**	$ 1,856
Trade receivables, net (variable interest entity restricted - 2018: $124 and 2017: $74)	**2,520**	2,161
Miscellaneous receivables (variable interest entity restricted - 2018: $8 and 2017: $5)	**772**	827
Inventory, net	**4,015**	3,340
Assets held for sale	**30**	199
Other current assets (variable interest entity restricted - 2018: $0 and 2017: $1)	**310**	268
Total Current Assets	**10,056**	8,651
Total property, plant and equipment	**12,705**	12,231
Less accumulated depreciation	**6,596**	6,301
Property, Plant and Equipment, net	**6,109**	5,930
Goodwill	**4,100**	4,088
Other Intangible Assets, Net	**977**	1,024
Deferred Tax Assets (variable interest entity restricted - 2018: $11 and 2017: $11)	**495**	564
Long-Term Receivables, Net	**58**	121
Other Assets (variable interest entity restricted - 2018: $4 and 2017: $4)	**892**	955
Total Assets	**$ 22,687**	$ 21,333
Liabilities and Shareowners' Equity		
Current Liabilities:		
Short-term debt, including current portion of long-term debt (variable interest entity restricted - 2018: $2 and 2017: $0)	**$ 1,212**	$ 870
Accounts payable (variable interest entity restricted - 2018: $1 and 2017: $9)	**875**	1,068
Income taxes payable	**200**	58
Accrued compensation and benefits	**261**	578
Accrued marketing programs	**1,754**	1,918
Deferred revenues (variable interest entity restricted - 2018: $1 and 2017: $0)	**1,686**	727
Grower production accruals	**189**	59
Dividends payable	**239**	237
Customer payable	**13**	106
Restructuring reserves	**18**	37
Miscellaneous short-term accruals (variable interest entity restricted - 2018: $2 and 2017: $2)	**702**	740
Total Current Liabilities	**7,149**	6,398
Long-Term Debt (variable interest entity restricted - 2018: $97 and 2017: $104)	**6,635**	7,254
Postretirement Liabilities	**303**	313
Long-Term Deferred Revenue	**114**	114
Noncurrent Deferred Tax Liabilities	**139**	192
Long-Term Portion of Environmental and Litigation Liabilities	**213**	218
Other Liabilities	**368**	386
Shareowners' Equity:		
Common stock (authorized: 1,500,000,000 shares, par value $0.01) Issued 614,841,751 and 613,219,246 shares, respectively Outstanding 441,200,613 and 439,578,276 shares, respectively	**6**	6
Treasury stock 173,641,138 and 173,640,970 shares respectively, at cost	**(15,053)**	(15,053)
Additional contributed capital	**11,956**	11,840
Retained earnings	**13,290**	12,072
Accumulated other comprehensive loss	**(2,445)**	(2,427)
Total Monsanto Company Shareowners' Equity	**7,754**	6,438
Noncontrolling Interest	**12**	20
Total Shareowners' Equity	**7,766**	6,458
Total Liabilities and Shareowners' Equity	**$ 22,687**	$ 21,333

The accompanying notes are an integral part of these consolidated financial statements.

Statements of Consolidated Cash Flows

Unaudited (Dollars in millions)	Six Months Ended Feb. 28, 2018	Feb. 28, 2017
Operating Activities:		
Net Income	**$ 1,631**	$ 1,401
Adjustments to reconcile cash provided (required) by operating activities:		
Items that did not require (provide) cash:		
Depreciation and amortization	**381**	372
Bad-debt expense	**24**	49
Stock-based compensation expense	**63**	67
Excess tax benefits from stock-based compensation	**—**	(5)
Deferred income taxes	**(14)**	54
Restructuring impairments	**2**	20
Equity affiliate expense, net	**3**	3
Net gain on sale of a business or other assets	**(118)**	(83)
Other items	**35**	54
Changes in assets and liabilities that provided (required) cash, net of acquisitions:		
Trade receivables, net	**(357)**	(690)
Inventory, net	**(699)**	(416)
Deferred revenue	**973**	829
Accounts payable and other accrued liabilities	**(361)**	68
Restructuring, net	**(28)**	(111)
Pension contributions	**(11)**	(27)
Other items, net	**106**	(48)
Net Cash Provided by Operating Activities	**1,630**	1,537
Cash Flows Provided (Required) by Investing Activities:		
Maturities of short-term investments	**7**	50
Capital expenditures	**(661)**	(543)
Acquisition of businesses, net of cash acquired	**—**	(7)
Technology and other investments	**(25)**	(38)
Other investments and property disposal proceeds	**313**	100
Net Cash Required by Investing Activities	**(366)**	(438)
Cash Flows Provided (Required) by Financing Activities:		
Net change in financing with less than 90-day maturities	**39**	(140)
Short-term debt proceeds	**60**	18
Short-term debt reductions	**(14)**	(11)
Long-term debt proceeds	**—**	600
Long-term debt reductions	**(367)**	(510)
Debt issuance costs	**—**	(2)
Stock option exercises	**82**	37
Excess tax benefits from stock-based compensation	**—**	5
Tax withholding on restricted stock and restricted stock units	**(27)**	(15)
Dividend payments	**(476)**	(475)
Payments to noncontrolling interests	**(11)**	(1)
Net Cash Required by Financing Activities	**(714)**	(494)
Effect of Exchange Rate Changes on Cash and Cash Equivalents	**3**	—
Net Increase in Cash and Cash Equivalents	**553**	605
Cash and Cash Equivalents at Beginning of Period	**1,856**	1,676
Cash and Cash Equivalents at End of Period	**$ 2,409**	$ 2,281

See Note 18 — Supplemental Cash Flow Information for further details.

The accompanying notes are an integral part of these consolidated financial statements.

Statements of Consolidated Shareowners' Equity

Unaudited (Dollars in millions, except per share data)	Monsanto Shareowners					Non-Controlling Interest	Total
	Common Stock	Treasury Stock	Additional Contributed Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) (1)		
Balance as of Aug. 31, 2016	$ 6	$(15,053)	$ 11,626	$ 10,763	$ (2,808)	$ 11	$4,545
Net Income	—	—	—	2,260	—	13	2,273
Other Comprehensive Income For Fiscal 2017	—	—	—	—	381	1	382
Restricted Stock and Restricted Stock Unit Tax Withholding	—	—	(18)	—	—	—	(18)
Issuance of Shares Under Employee Stock Plans	—	—	105	—	—	—	105
Stock-based Compensation Expense	—	—	127	—	—	—	127
Cash Dividends of $2.16 per Common Share	—	—	—	(951)	—	—	(951)
Payments to Noncontrolling Interest	—	—	—	—	—	(5)	(5)
Balance as of Aug. 31, 2017	$ 6	$(15,053)	$ 11,840	$ 12,072	$ (2,427)	$ 20	$6,458
Net Income	—	—	—	**1,628**	—	**3**	**1,631**
Other Comprehensive Income for Fiscal 2018	—	—	—	—	**(18)**	—	**(18)**
Reclassification of Accumulated Other Comprehensive Loss Tax Effects (2)	—	—	—	**68**	—	—	**68**
Issuance of Shares Under Employee Stock Plans	—	—	**80**	—	—	—	**80**
Restricted Stock and Restricted Stock Unit Tax Withholding	—	—	**(27)**	—	—	—	**(27)**
Stock-based Compensation Expense	—	—	**63**	—	—	—	**63**
Cash Dividends of $1.08 per Common Share	—	—	—	**(478)**	—	—	**(478)**
Payments to Noncontrolling Interest	—	—	—	—	—	**(11)**	**(11)**
Balance as of Feb. 28, 2018	**$ 6**	**$ (15,053)**	**$ 11,956**	**$ 13,290**	**$ (2,445)**	**$ 12**	**$ 7,766**

(1) See Note 16 — Accumulated Other Comprehensive Loss — for further details of the components of accumulated other comprehensive loss.

(2) See Note 2 — New Accounting Standards — for further information.

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS – UNAUDITED

NOTE 1. BACKGROUND AND BASIS OF PRESENTATION

Monsanto Company, along with its subsidiaries, is a leading global provider of agricultural products for farmers. Monsanto's seeds, biotechnology trait products, herbicides and digital agriculture products provide farmers with solutions that help improve productivity, reduce the costs of farming and produce better food for consumers and better feed for animals.

Monsanto manages its business in two reportable segments: Seeds and Genomics and Agricultural Productivity. Through the Seeds and Genomics segment, Monsanto produces leading seed brands, including *DEKALB* , *Asgrow* , *Deltapine* , *Seminis* and *De Ruiter* , and Monsanto develops biotechnology traits that assist farmers in controlling insects and weeds and digital agriculture products, including *Climate Fieldview* to assist farmers in decision making. Monsanto also provides other seed companies with genetic material and biotechnology traits for their seed brands. Through the Agricultural Productivity segment, the company manufactures *Roundup* and *XtendiMax* Herbicide with *VaporGrip* Technology brand herbicides and other herbicides. See Note 20 — Segment Information — for further details.

In the fourth quarter of 2008, the company announced plans to divest its animal agricultural products business, which focused on dairy cow productivity and was previously reported as part of the Agricultural Productivity segment. This transaction was consummated on Oct. 1, 2008, and included a 10 -year earn-out with potential annual payments being earned by Monsanto if certain revenue levels are exceeded. As a result, financial data for this business has been presented as discontinued operations.

On Jul. 25, 2017, the company signed a definitive agreement with AGCO Corporation to sell the Precision Planting equipment business for approximately $200 million in cash. As of Aug. 31, 2017, Monsanto had $156 million of assets held for sale and $12 million of liabilities held for sale classified within miscellaneous short-term accruals on the Statement of Consolidated Financial Position related to this transaction. The assets were primarily classified as inventory, net; trade receivables, net; property, plant, and equipment, net; goodwill; and other intangible assets, net, and the liabilities were primarily classified as accrued marketing programs and accounts payable. In the first quarter of fiscal 2018, the company closed on its sale of the Precision Planting equipment business, and a gain of approximately $52 million was recognized within other income, net in the Statement of Consolidated Operations.

In addition to the aforementioned divestment, during the three and six months ended Feb. 28, 2018, the company recognized income of approximately $50 million and $83 million within other income, net in the Statements of Consolidated Operations as a result of non-core asset sales. During the three months ended Feb. 28, 2018, approximately $50 million of income was recorded in the Agricultural Productivity segment. During the six months ended Feb. 28, 2018, approximately $83 million of income was split by segment as follows: $50 million in Agricultural Productivity and $33 million in Seeds and Genomics.

In the second quarter of fiscal 2017, the company divested its European-based silthiofam seed-treatment chemical business previously reported as part of the Agricultural Productivity segment for approximately $140 million in cash. Approximately $85 million , less the carrying amount of assets sold of approximately $2 million , was recognized within other income, net in the Statements of Consolidated Operations for the three and six months ended Feb. 28, 2017. The recognition of the remaining $55 million is contingent on silthiofam re-registration within the European Union.

The company did not have any other material non-core asset sales in the three and six months ended Feb. 28, 2017, except as described above.

The accompanying consolidated financial statements have not been audited but have been prepared in conformity with accounting principles generally accepted in the United States for interim financial information and with instructions to Form 10-Q and Article 10 of Regulation S-X. In the opinion of management, these unaudited consolidated financial statements contain all necessary adjustments which are normal and recurring to present fairly the financial position, results of operations and cash flows for the interim periods reported. This Report on Form 10-Q should be read in conjunction with Monsanto's Report on Form 10-K for the fiscal year ended Aug. 31, 2017 . Financial information for the second quarter and first six months of fiscal year 2018 should not be annualized because of the seasonality of the company's business.

NOTE 2. NEW ACCOUNTING STANDARDS

In February 2018, the Financial Accounting Standards Board ("FASB") issued accounting guidance, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income" which permits entities to reclassify tax effects

stranded in accumulated other comprehensive income(loss) as a result of the Tax Cuts and Jobs Act to retained earnings. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2018, with early adoption permitted. Monsanto is required to adopt the standard in the first quarter of fiscal year 2020. The company elected to early adopt this standard in the second quarter of fiscal 2018, which coincides with the period of enactment of the Tax Cuts and Jobs Act. In the second quarter of fiscal 2018, Monsanto reclassified $68 million of income from accumulated other comprehensive loss into retained earnings due to the change in the U.S. federal corporate income tax rate. Monsanto did not have any other income tax effects of the Tax Cuts and Jobs Act on items remaining in accumulated other comprehensive loss that the company needed to reclassify into retained earnings under this adoption.

In August 2017, the FASB issued accounting guidance, "Targeted Improvements to Accounting for Hedging Activities" which seeks to better align an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2018. Adoption will be applied on a modified retrospective approach to existing hedging relationships as of the date of adoption. Monsanto is required to adopt this standard in the first quarter of fiscal year 2020. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In May 2017, the FASB issued accounting guidance, "Scope of Modification Accounting" which clarifies modification accounting for share-based payment awards should not be applied if the fair value, vesting conditions, and classification of the modified award are the same before and immediately after the modification. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017. Adoption will be applied prospectively to awards modified on or after the adoption date. Accordingly, Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In February 2017, the FASB issued accounting guidance, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost" which requires the disaggregation of the service cost component from other components of net periodic benefit cost, clarifies how to present the service cost component and other components of net benefit costs in the Statements of Consolidated Operations and allows only the service cost component of net benefit costs to be eligible for capitalization. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted as of the beginning of a fiscal year for which interim or annual statements have not been issued. Adoption will be applied on a retrospective basis for the presentation of all components of net periodic benefit costs and on a prospective basis for the capitalization of the service cost component of net periodic pension cost and net periodic postretirement benefit in assets. Accordingly, Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In February 2017, the FASB issued accounting guidance, "Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sale of Nonfinancial Assets" which clarifies the scope of transactions that are accounted for in accordance with the Other Income topic of the ASC as well as when these assets would be derecognized. The Other Income topic of the ASC applies to a sale or transfer to a non-customer of nonfinancial assets or financial assets in a contract with substantially all of the fair value concentrated in nonfinancial assets. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with an early adoption of one-year permitted. This guidance is required to be adopted at the same time "Revenue from Contracts with Customers" is adopted. Entities have the option to apply the new guidance under a retrospective approach to each prior reporting period presented or a modified retrospective approach with the cumulative effect of initially applying the new guidance recognized at the date of initial application within the Statement of Consolidated Financial Position. The method of adoption elected may be different than the method of adoption for "Revenue from Contracts with Customers." Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In January 2017, the FASB issued accounting guidance, "Simplifying the Test for Goodwill Impairment" which would eliminate the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge. Instead, the amount of an impairment charge would be recognized if the carrying amount of a reporting unit is greater than its fair value. This standard is effective for annual or any interim goodwill impairments tests in fiscal years beginning after Dec. 15, 2019, with early adoption permitted. Adoption will be applied on a prospective basis. Monsanto is required to adopt this standard in the first quarter of fiscal year 2021. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In January 2017, the FASB issued accounting guidance, "Clarifying the Definition of a Business" which requires an evaluation of whether substantially all fair value of the assets acquired or disposed of is concentrated in a single identifiable asset or a group of similar identifiable assets. If this threshold is met, the set of transferred assets and activities is not a business. The guidance also requires a business to include at least one substantive process. Transactions that meet the definition of a business are expected to decrease as a result of the adoption of this guidance. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted. Adoption will be applied on a prospective basis. Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In November 2016, the FASB issued accounting guidance, "Statement of Cash Flows: Restricted Cash" which requires restricted cash and restricted cash equivalents to be classified in the Statements of Cash Flows as cash and cash equivalents. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted. Adoption will be applied on a retrospective basis to all periods presented. Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In October 2016, the FASB issued accounting guidance, "Income Taxes: Intra-Entity Transfers of Assets Other than Inventory" which will require the income tax effects of intra-entity transfers of assets other than inventory to be recognized when the transfer occurs. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted as of the beginning of an annual period. Adoption will be applied on a modified retrospective basis. Monsanto is required to adopt the standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In August 2016, the FASB issued accounting guidance, "Classification of Certain Cash Receipts and Cash Payments" which clarifies the classification of the activity in the Statements of Consolidated Cash Flows and how the predominant principle should be applied when cash receipts and cash payments have more than one class of cash flows. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption permitted. Adoption will be applied retrospectively. Monsanto is required to adopt the standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In June 2016, the FASB issued accounting guidance, "Measurement of Credit Losses on Financial Instruments" which replaces the incurred loss methodology to record credit losses with a methodology that reflects the expected credit losses for financial assets not accounted for at fair value with gains and losses recognized through net income. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2019, with early adoption permitted for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2018. This standard will be adopted on a modified retrospective basis. Monsanto is required to adopt this standard in the first quarter of fiscal year 2021, with early adoption permitted in the first quarter of fiscal year 2020. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In February 2016, the FASB issued accounting guidance, "Leases", which has been further clarified and amended. This guidance will supersede the existing lease guidance and will require all leases with a term greater than 12 months to be recognized in the Statements of Financial Position and eliminate current real estate-specific lease guidance, while maintaining substantially similar classification criteria for distinguishing between finance leases and operating leases. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2018, with early adoption permitted. This standard will be adopted on a modified retrospective basis. Monsanto is required to adopt the standard in the first quarter of fiscal year 2020. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In January 2016, the FASB issued accounting guidance, "Recognition and Measurement of Financial Assets and Financial Liabilities" which would require equity investments not accounted for as an equity method investment or that result in consolidation to be recorded at their fair value with changes in fair value recognized in the Statements of Consolidated Operations. Those equity investments that do not have a readily determinable fair value may be measured at cost less impairment, if any, plus or minus changes resulting from observable price changes. In February 2018, the FASB issued guidance amending the previous guidance to clarify that entities must use a prospective transition approach for equity securities they elect to measure using the new measurement alternative. The

amendments also clarify other aspects of the guidance on how to apply the measurement alternative and the presentation requirements for financial liabilities measured under the fair value option. This standard, including the clarifications, is effective for fiscal years, and interim periods within those fiscal years, beginning after Dec. 15, 2017, with early adoption prohibited. Monsanto is required to adopt the standard in the first quarter of fiscal year 2019. The company is currently evaluating the impact this guidance will have on the consolidated financial statements and related disclosures.

In May 2014, the FASB issued accounting guidance, "Revenue from Contracts with Customers" which has been further clarified and amended. The core principle of the new standard is for companies to recognize revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration (that is, payment) to which the company expects to be entitled in exchange for those goods or services. The new standard also will result in enhanced disclosures about revenue, provide guidance for transactions that were not previously addressed comprehensively (for example, service revenue and contract modifications) and clarify guidance for multiple-element arrangements. Entities have the option to apply the new guidance under a retrospective approach to each prior reporting period presented or a modified retrospective approach with the cumulative effect of initially applying the new guidance recognized at the date of initial application within the Statement of Consolidated Financial Position. In August 2015, the FASB amended the guidance to allow for the deferral of the effective date of this standard. The standard is effective for fiscal years, and interim periods within those years, beginning after Dec. 15, 2017. Accordingly, Monsanto is required to adopt this standard in the first quarter of fiscal year 2019. One-year early adoption is permitted. The initial analysis identifying areas that will be impacted by the new guidance is substantially complete, and the company is currently analyzing the potential impacts to the consolidated financial statements and related disclosures. Revenue from seed sales, agricultural chemical products and biotechnology trait licenses recognized as third-party seed companies sell seed is expected to remain substantially unchanged. The company believes the most significant impact relates to its accounting for biotechnology trait license revenue with fixed payments. Specifically, under the new standard, revenue for biotechnology trait licenses with fixed payments are expected to be recognized upon commencement of the license term rather than over the contract period. Due to complexities of certain biotechnology trait license agreements, the actual revenue recognition treatment under the standard will be dependent upon contract-specific terms and may vary in some instances from recognition upon commencement of the license term. Upon adoption, the company may recognize a cumulative material adjustment to increase retained earnings, reflecting license revenue for which the contract period has not yet finished. The company does not expect the adoption of this standard to have an impact on the cash flows related to these license agreements. The company anticipates utilizing the modified retrospective method for adopting the standard.

NOTE 3. RESTRUCTURING

Restructuring charges were recorded in the Statements of Consolidated Operations as follows:

	Three Months Ended		Six Months Ended	
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017
Cost of Goods Sold (1)	**$ (4)**	$ (6)	**$ (17)**	$ (7)
Restructuring Charges (2)	**1**	(23)	**(3)**	13
Income from Continuing Operations Before Income Taxes	**$ (3)**	$ (29)	**$ (20)**	$ 6
Income Tax Provision	**15**	15	**23**	5
Net Income	**$ 12**	$ (14)	**$ 3**	$ 11

(1) For the three months ended Feb. 28, 2018 , $4 million of restructuring charges in cost of goods sold was recorded in the Agricultural Productivity segment. For the three months ended Feb. 28, 2017, $6 million of restructuring charges in cost of goods sold was split by segment as follows: $5 million in Seeds and Genomics and $1 million in Agricultural Productivity. For the six months ended Feb. 28, 2018, $17 million of restructuring charges in cost of goods sold was split by segment as follows: $10 million in Seeds and Genomics and $7 million in Agricultural Productivity. For the six months ended Feb. 28, 2017, $7 million of restructuring charges in cost of goods sold was split by segment as follows: $6 million in Seeds and Genomics and $1 million in Agricultural Productivity.

(2) For the three months ended Feb. 28, 2018 , the net reversal of previously recognized expense of $1 million was recorded in the Seeds and Genomics segment. For the three months ended Feb. 28, 2017, $23 million of restructuring charges was split by segment as follows: $22 million in Seeds and Genomics and $1 million in Agricultural Productivity. For the six months ended Feb. 28, 2018, $3 million of restructuring charges was split by segment as follows: $2 million in Seeds and Genomics and $1 million in Agricultural Productivity. For the six months ended Feb. 28, 2017, the net reversal of previously recognized expense of $13 million was split by segment as follows: $12 million in Seeds and Genomics and $1 million in Agricultural Productivity.

On Oct. 6, 2015, the company approved actions to realign resources to increase productivity, enhance competitiveness by delivering cost improvements and support long-term growth. On Jan. 5, 2016, the company

approved additional actions which, together with the Oct. 6, 2015 actions, comprise the 2015 Restructuring Plan. Actions include streamlining and reprioritizing some commercial, enabling, supply chain and research and development efforts.

Cumulative pretax charges related to the 2015 Restructuring Plan are estimated to be in the range of $890 million to $955 million . Implementation of the 2015 Restructuring Plan is expected to be completed by the end of fiscal year 2018, and substantially all of the cash payments are expected to be made by the end of fiscal year 2018. These pretax charges are currently estimated to be comprised of the following categories: $315 million to $325 million in work force reductions, including severance and related benefits; $95 million to $130 million in facility closures/exit costs, including contract termination costs; $480 million to $500 million in asset impairments and write-offs related to property, plant and equipment, inventory and goodwill and other assets. These pretax charges are currently estimated to be incurred primarily by the Seeds and Genomics segment.

The following tables summarize the activities related to the company's 2015 Restructuring Plan.

	Three months ended Feb. 28, 2018			Three months ended Feb. 28, 2017		
(Dollars in millions)	Seeds and Genomics	Agricultural Productivity	Total	Seeds and Genomics	Agricultural Productivity	Total
Work Force Reductions	**$ (6)**	**$ (1)**	**$ (7)**	$ 2	$ —	$ 2
Facility Closures/Exit Costs	**5**	**5**	**10**	8	1	9
Asset Impairments and Write-offs:						
Property, plant and equipment	**—**	**—**	**—**	18	1	19
Inventory	**—**	**—**	**—**	(1)	—	(1)
Goodwill and other assets	**—**	**—**	**—**	—	—	—
Total Restructuring Charges, Net	**$ (1)**	**$ 4**	**$ 3**	$ 27	$ 2	$ 29

	Six months ended Feb. 28, 2018			Six months ended Feb. 28, 2017			Cumulative Amount through Feb. 28, 2018		
(Dollars in millions)	Seeds and Genomics	Agricultural Productivity	Total	Seeds and Genomics	Agricultural Productivity	Total	Seeds and Genomics	Agricultural Productivity	Total
Work Force Reductions	**$ (10)**	**$ (1)**	**$ (11)**	$ (34)	$ (2)	$ (36)	$ 297	$ 17	$314
Facility Closures/Exit Costs	**20**	**9**	**29**	10	1	11	62	19	81
Asset Impairments and Write-offs:									
Property, plant and equipment	**—**	**—**	**—**	19	1	20	153	3	156
Inventory	**2**	**—**	**2**	—	—	—	106	—	106
Goodwill and other assets	**—**	**—**	**—**	(1)	—	(1)	189	20	209
Total Restructuring Charges, Net	**$ 12**	**$ 8**	**$ 20**	$ (6)	$ —	$ (6)	$ 807	$ 59	$866

The company's written human resource policies are indicative of an ongoing benefit arrangement with respect to severance packages. Benefits paid pursuant to an ongoing benefit arrangement are specifically excluded from the Exit or Disposal Cost Obligations topic of the ASC; therefore, severance charges incurred in connection with the 2015 Restructuring Plan are accounted for when probable and estimable as required under the Compensation - Nonretirement Postemployment Benefits topic of the ASC. In addition, when the decision to commit to a restructuring plan requires a long-lived asset and finite-lived intangible asset impairment review, Monsanto evaluates such impairment issues under the Property, Plant and Equipment topic of the ASC.

The three months ended Feb. 28, 2018, and Feb. 28, 2017, include the reversal of $8 million and $12 million , respectively, of previously recognized expense due to changes in estimates related to work force reductions. The six months ended Feb. 28, 2018, and Feb. 28, 2017, include the reversal of $14 million and $57 million , respectively, of previously recognized expense due to changes in estimates related to work force reductions.

The following table summarizes the activities related to the company's 2015 Restructuring Plan.

(Dollars in millions)	Work Force Reductions (1)	Facility Closures/Exit Costs (2)	Asset Impairments and Write-offs	Total
Ending Liability as of Aug. 31, 2016	$ 244	$ —	$ —	$ 244
Net restructuring charges recognized in fiscal year 2017	(81)	24	46	(11)
Cash payments	(119)	(22)	—	(141)
Asset impairments and write-offs	—	—	(46)	(46)
Ending Liability as of Aug. 31, 2017	$ 44	$ 2	$ —	$ 46
Net restructuring charges recognized in first six months of fiscal year 2018	**(11)**	**29**	**2**	**20**
Cash payments	**(17)**	**(29)**	**—**	**(46)**
Asset impairments and write-offs	**—**	**—**	**(2)**	**(2)**
Ending Liability as of Feb. 28, 2018	**$ 16**	**$ 2**	**$ —**	**$ 18**

(1) There was no long-term restructuring liability balance as of Feb. 28, 2018. The restructuring liability balance included $8 million of long-term liabilities that was recorded in other liabilities in the Statement of Consolidated Financial Position as of Aug. 31, 2017 .

(2) There was no long-term restructuring liability balance as of Feb. 28, 2018. The restructuring liability balance included $1 million of long-term liabilities that was recorded in other liabilities in the Statement of Consolidated Financial Position as of Aug. 31, 2017.

NOTE 4. CUSTOMER FINANCING PROGRAMS

Monsanto participates in customer financing programs as follows:

(Dollars in millions)	As of Feb. 28, 2018	As of Aug. 31, 2017
Transactions that Qualify for Sales Treatment		
U.S. agreement to sell trade receivables (1)		
Outstanding balance	**$ 47**	$ 539
Maximum future payout under recourse provisions	**15**	21
European and Latin American agreements to sell trade receivables (2)		
Outstanding balance	**$ 19**	$ 107
Maximum future payout under recourse provisions	**5**	27
Agreements with Lenders (3)		
Outstanding balance	**$ 96**	$ 92
Maximum future payout under the guarantee	**50**	52

The gross amounts of receivables sold under transactions that qualify for sales treatment were:

	Gross Amounts of Receivables Sold			
	Three Months Ended		Six months ended	
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017
Transactions that Qualify for Sales Treatment				
U.S. agreement to sell trade receivables (1)	**$ —**	$ —	**$ 13**	$ 115
European and Latin American agreements to sell trade receivables (2)	**7**	5	**15**	11

(1) Monsanto has agreements in the United States to sell trade receivables, both with and without recourse, up to a maximum outstanding balance of $1.4 billion and to service such accounts. These receivables qualify for sales treatment under the Transfers and Servicing topic of the ASC and, accordingly, the proceeds are included in net cash provided by operating activities in the Statements of Consolidated Cash Flows. The liability for the guarantees for sales with recourse is recorded at an amount that approximates fair value, based upon the company's historical collection experience and a current assessment of credit exposure.

(2) Monsanto has various agreements in European and Latin American countries to sell trade receivables, both with and without recourse. These receivables qualify for sales treatment under the Transfers and Servicing topic of the ASC and, accordingly, the proceeds are included in net cash provided by operating activities in the Statements of Consolidated Cash Flows. The liability for the guarantees for sales with recourse is recorded at an amount that approximates fair value, based upon the company's historical collection experience and a current assessment of credit exposure.

(3) Monsanto has additional agreements with lenders to establish programs that provide financing for select customers in the United States, Latin America and Europe. Monsanto provides various levels of recourse through guarantees of the accounts in the event of customer default. The term of the guarantee is equivalent to the term of the customer loans. The liability for the guarantees is recorded at an amount that approximates fair value, based on the company's historical collection experience with customers that participate in the program and a current assessment of credit exposure. If

performance is required under the guarantee, Monsanto may retain amounts that are subsequently collected from customers.

In addition to the arrangements in the above table, Monsanto also participates in a financing program in Brazil that allows Monsanto to transfer up to 350 million Brazilian reais (approximately $108 million as of Feb. 28, 2018) for select customers in Brazil to a revolving financing program. Under the arrangement, a recourse provision requires Monsanto to cover the first credit losses within the program up to the amount of the company's investment. Credit losses above Monsanto's investment would be covered by senior interests in the entity by a reduction in the fair value of their mandatorily redeemable shares. The company evaluated its relationship with the entity under the guidance within the Consolidation topic of the ASC, and as a result, the entity has been consolidated. For further information on this topic, see Note 5 — Variable Interest Entities and Investments .

There were no significant recourse or non-recourse liabilities for all programs as of Feb. 28, 2018 , and Aug. 31, 2017 . There were no significant delinquent loans for all programs as of Feb. 28, 2018 , and Aug. 31, 2017 .

NOTE 5. VARIABLE INTEREST ENTITIES AND INVESTMENTS

Variable Interest Entities

On Nov. 4, 2016, Monsanto entered into a financing program in Brazil that is recorded as a consolidated variable interest entity ("VIE"). For the most part, the arrangement of the Brazil VIE consists of a revolving financing program that is funded by investments from the company and other third parties, primarily investment funds, and has been established to service Monsanto's customer receivables. Under the arrangement, third parties, primarily investment funds, hold senior interests of 80 percent and 85 percent in the entity as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively, and Monsanto holds the remaining 20 percent and 15 percent , respectively. The senior interests held by third parties are mandatorily redeemable shares and are primarily included in long-term debt in the Statements of Consolidated Financial Position as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively.

Under the arrangement, Monsanto is required to maintain an investment in the Brazil VIE of at least 11.1 percent and could be required to provide additional contributions to the Brazil VIE. Monsanto currently has no unfunded commitments to the Brazil VIE. Creditors have no recourse against Monsanto in the event of default by the Brazil VIE. The company's financial or other support provided to the Brazil VIE is limited to its investment. Even though Monsanto holds a subordinate interest in the Brazil VIE, the Brazil VIE was established to service transactions involving the company, and the company determines the receivables that are included in the revolving financing program. Therefore, the determination is that Monsanto has the power to direct the activities most significant to the economic performance of the Brazil VIE. As a result, the company is the primary beneficiary of the Brazil VIE, and the Brazil VIE has been consolidated in Monsanto's consolidated financial statements. The assets of the Brazil VIE may only be used to settle the obligations of the respective entity. Third-party investors in the Brazil VIE do not have recourse to the general assets of Monsanto. See Note 4 — Customer Financing Programs and Note 12 — Fair Value Measurements — for additional information.

Monsanto has entered into an agreement with a third party to establish an entity to focus on research and development ("R&D") related to agricultural fungicides for agricultural applications. This entity is recorded as a consolidated VIE of Monsanto. Under the arrangement, Monsanto holds a call option to acquire the majority of the equity interests in the R&D VIE from the third-party owner. Monsanto funds the operations of the R&D VIE in return for additional equity interests or to retain the call option. The funding is provided in separate research phases if research milestones are met. The R&D VIE was established to perform agricultural-based R&D activities for the benefit of Monsanto, and Monsanto provides all funding of the R&D VIE's activities. Further, Monsanto has the power to direct the activities most significant to the R&D VIE. As a result, Monsanto is the primary beneficiary of the R&D VIE, and the R&D VIE is consolidated in Monsanto's consolidated financial statements. The third-party owner of the R&D VIE does not have recourse to the general assets of Monsanto beyond Monsanto's maximum exposure to loss at any given time relating to the R&D VIE.

Monsanto has an agreement with a related party to establish an entity to focus on research, development and commercialization of insect resistant hybrid cotton in India. This entity is recorded as a consolidated VIE of Monsanto. Under the arrangement, Monsanto performs substantially all of the VIE's activities, which are reimbursed by the VIE. Further, since this entity was formed with a Monsanto related party, it was determined that Monsanto is most closely associated with the VIE. As a result, Monsanto is the primary beneficiary of the VIE, and the VIE is consolidated in Monsanto's consolidated financial statements. The related-party owner of the VIE does not have recourse to the general assets of Monsanto beyond Monsanto's maximum exposure to loss at any given time relating to the VIE, unless Monsanto is required to indemnify the related-party owner as a result of a third-party claim for injury to a person or damage to property caused by Monsanto's activities as it relates to the VIE.

Monsanto enters into agreements with agents and dealers to distribute certain branded seed in the United States. Monsanto offers financing to agents and dealers that constitutes a variable interest as it exposes Monsanto to variability of the agent or dealer. Certain agents and dealers with these financing arrangements have been determined to be VIEs. Monsanto does not consolidate the agents or dealers as Monsanto is not the primary beneficiary, and any exposure to loss is limited to the amount of financing provided to the agent or dealer. The amount of Monsanto's exposure varies based on the seasonality of the business and was approximately $25 million and less than $1 million as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively.

Monsanto enters into agreements with distributors and dealers to distribute certain branded seed in the United States. Monsanto offers distributors and dealers the right of return that exposes Monsanto to variability and constitutes a variable interest in certain distributors and dealers. Certain distributors and dealers with these arrangements have been determined to be VIEs. Monsanto does not consolidate the distributors and dealers with these arrangements as Monsanto is not the primary beneficiary, and any exposure to loss is limited to the amount of the variable interest in the entity.

In fiscal 2017, Monsanto entered into an agreement with a third party to establish an entity to focus on the sale of industrial, ornamental, and turf non-selective agricultural herbicides. Monsanto has provided an uncustomary indemnification to the third party that provides Monsanto the option under specified conditions to dissolve the entity, terminate all commercial agreements of the entity or receive all interest in the entity. Monsanto has determined the entity to be a VIE. Monsanto does not consolidate the entity as Monsanto is not the primary beneficiary. The amount of Monsanto's exposure to loss related to the uncustomary indemnification is limited to approximately $29 million as of Feb. 28, 2018 , and Aug. 31, 2017. Additionally, Monsanto has provided an indemnification to the third party and newly formed legal entity related to specified product claims. The amount of Monsanto's exposure varies based upon the third party and newly formed legal entity's losses related to such product claims and is not material as of Feb. 28, 2018 , and Aug. 31, 2017.

Equity Method and Cost Basis Investments

Monsanto has equity method and cost basis investments recorded in other assets in the Statements of Consolidated Financial Position. Due to the nature of the cost basis investments, the fair market value is not readily determinable. These investments are reviewed for impairment indicators on a quarterly basis.

For such investments that were accounted for under the equity method and cost basis included in other assets in the Statements of Consolidated Financial Position, the amounts are summarized in the following table:

	As of	
(Dollars in millions)	**Feb. 28, 2018**	Aug. 31, 2017
Equity Method Investments	**$ 163**	$ 166
Cost Basis Investments	**124**	116
Total	**$ 287**	$ 282

NOTE 6. RECEIVABLES

Trade receivables in the Statements of Consolidated Financial Position are net of allowances of $89 million and $78 million as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively.

The company has long-term customer financing receivables that relate to past due accounts which are not expected to be collected within the current year. The long-term customer receivables were $338 million and $398 million with a corresponding allowance for credit losses on these receivables of $280 million and $277 million as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively. These long-term customer receivable balances and the corresponding allowance are included in long-term receivables, net in the Statements of Consolidated Financial Position. For these long-term customer receivables, interest is no longer accrued when the receivable is determined to be delinquent and classified as long-term based on estimated timing of collection.

The following table displays a roll forward of the allowance for credit losses related to long-term customer receivables.

(Dollars in millions)	
Balance as of Aug. 31, 2016	$ 228
Incremental provision	20
Recoveries	(38)
Write-offs	(2)
Reclassifications from allowance for current receivables	67
Foreign currency translation adjustments	2
Balance as of Aug. 31, 2017	$ 277
Incremental provision	**7**
Recoveries	**(1)**
Reclassifications from allowance for current receivables	**1**
Foreign currency translation adjustments	**(4)**
Balance as of Feb. 28, 2018	**$ 280**

On an ongoing basis, the company evaluates credit quality of its financing receivables utilizing aging of receivables, collection experience and write-offs, as well as evaluating existing economic conditions, to determine if an allowance is necessary.

NOTE 7. INVENTORY

Components of inventory are:

	As of	
(Dollars in millions)	**Feb. 28, 2018**	Aug. 31, 2017
Finished Goods	**$ 1,964**	$ 1,477
Goods In Process	**1,466**	1,446
Raw Materials and Supplies	**743**	561
Total	**4,173**	3,484
Adjustment of Inventories to a LIFO Basis (1)	**(158)**	(144)
Total Inventories	**$ 4,015**	$ 3,340

(1) Adjustment is for the United States Agricultural Productivity segment inventories.

NOTE 8. GOODWILL AND OTHER INTANGIBLE ASSETS

Changes in the net carrying amount of goodwill for the first six months of fiscal year 2018 , by segment, are as follows:

(Dollars in millions)	Seeds and Genomics	Agricultural Productivity	Total
Balance as of Aug. 31, 2017	$ 4,039	$ 49	$4,088
Effect of foreign currency translation and other adjustments	**12**	**—**	**12**
Balance as of Feb. 28, 2018	**$ 4,051**	**$ 49**	**$ 4,100**

There were no events or circumstances indicating that goodwill might be impaired as of Feb. 28, 2018 . The fiscal year 2018 annual goodwill impairment test will be performed as of Mar. 1, 2018.

Information regarding the company's other intangible assets is as follows:

(Dollars in millions)	As of Feb. 28, 2018 Carrying Amount	Accumulated Amortization	Net	As of Aug. 31, 2017 Carrying Amount	Accumulated Amortization	Net
Acquired Germplasm	**$ 1,080**	**$ (827)**	**$ 253**	$ 1,077	$ (814)	$ 263
Acquired Intellectual Property	**1,079**	**(700)**	**379**	1,079	(671)	408
Trademarks	**336**	**(171)**	**165**	335	(165)	170
Customer Relationships	**293**	**(237)**	**56**	291	(228)	63
Other	**75**	**(44)**	**31**	68	(40)	28
Total Other Intangible Assets, Finite Lives	**$ 2,863**	**$ (1,979)**	**$ 884**	$ 2,850	$ (1,918)	$ 932
In Process Research & Development, Indefinite Lives	**93**	**—**	**93**	92	—	92
Total Other Intangible Assets	**$ 2,956**	**$ (1,979)**	**$ 977**	$ 2,942	$ (1,918)	$ 1,024

Total amortization expense of total other intangible assets was $31 million and $28 million for the three months ended Feb. 28, 2018 , and Feb. 28, 2017 , respectively, and $54 million and $58 million for the six months ended Feb. 28, 2018 , and Feb. 28, 2017 , respectively.

The estimated intangible asset amortization expense for fiscal year 2018 through fiscal year 2022 is as follows:

(Dollars in millions)	Amount
2018	$ 111
2019	111
2020	110
2021	108
2022	103

NOTE 9. DEFERRED REVENUE

As of Feb. 28, 2018, and Aug. 31, 2017, short-term deferred revenue was $1,686 million and $727 million , respectively. These balances primarily consist of cash received related to Monsanto's prepayment programs in the United States and Brazil. These programs allow Monsanto's customers to receive a discount if they prepay by a certain date, and the short-term deferred revenue balances are consistent with the seasonality of Monsanto's business. Prepayment options are attractive to customers given the discounted pricing and the ability to utilize cash flow from the current year grain harvest to pay for the next season seed purchases. The deferred revenue balances related to these prepayment programs are considered short-term in nature and thus classified in current liabilities as the prepayments are for products to be shipped within the next 12 months.

NOTE 10. INCOME TAXES

On Dec. 22, 2017, the United States enacted tax legislation, commonly known as the Tax Cuts and Jobs Act (the "Act"). Among other provisions, the Act lowered the corporate tax rate from 35% to 21% beginning on Jan. 1, 2018, and imposed a new tax (the "Transition Tax") on certain earnings outside the United States that have previously not been subject to United States tax, which may be paid beginning in fiscal 2019 through fiscal 2026.

The Securities and Exchange Commission ("SEC") staff issued Staff Accounting Bulletin 118 ("SAB 118"), which provides guidance on accounting for the tax effects of the Act. SAB 118 provides a measurement period that should not extend beyond one year from the enactment date for companies to complete the accounting for the effects of the Act. Per SAB 118, a company must reflect the income tax effects of those aspects of the Act for which the accounting is complete. To the extent a company's accounting for certain income tax effects of the Act is incomplete but it can determine a reasonable estimate, the company must record a provisional estimate in its financial statements. The company is still in the process of evaluating the impact the Act will have on the consolidated financial statements. However, for the six months ended Feb. 28, 2018, the company has included the following provisional estimates in its income tax provision:

- The company provisionally recorded a discrete tax benefit of $165 million for the impact of remeasuring its U.S. deferred tax assets and liabilities to the 21% corporate tax rate. Since the Jan. 1, 2018, effective date of the

reduction of the corporate tax rate from 35% to 21% is during the company's fiscal year, the company must utilize a blended tax rate of 25.7% for fiscal 2018. The 21% tax rate will be applied to subsequent fiscal years. To revalue its deferred tax assets and liabilities, the company estimated the change in its deferred tax assets and liabilities that would occur in fiscal 2018 and adjusted that portion of the deferred balances to 25.7% and adjusted the remaining deferred balances to 21%. These estimates of changes in deferred tax assets and liabilities are provisional as they are all subject to refinement based on the actual change in deferred taxes during fiscal 2018.

- The company provisionally recorded a discrete tax expense of $168 million for the Transition Tax, which includes $3 million of U.S. state tax. The remaining Transition Tax can be fully offset by the company's foreign tax credits; therefore, the company does not expect a significant cash outlay for this tax. The Transition Tax segregates the untaxed foreign earnings between those that are held in cash and cash equivalents and those that are not and taxes these two subgroups at different tax rates. Further, these calculations utilize several dates to measure these components. The company is in the process of determining the earnings or cash balances as of each of the dates required by the Act, one of which is at the end of fiscal 2018. Furthermore, interpretive guidance could be forthcoming that may clarify various components of the legislation that would impact certain components of the calculation. Therefore, the estimated Transition Tax is provisional.
- The company has provisionally not recorded any discrete tax expense associated with the excess of its basis in its foreign affiliates for financial reporting over the related tax basis for potential future repatriations of its undistributed foreign earnings. Certain undistributed earnings are subject to the Transition Tax. These earnings could also be subject to additional foreign withholding and U.S. state income taxes if they are repatriated. The company is currently evaluating the potential income tax liabilities that would result from future repatriations, if any, and how the Act will affect its existing accounting position regarding the indefinite reinvestment of these undistributed foreign earnings.
- The company has provisionally not recorded any discrete tax expense associated with the Act's new global intangible low-taxed income ("GILTI") provisions. These provisions apply to the company beginning in fiscal 2019. However, the company must adopt an accounting policy to either treat taxes related to GILTI as a current-period expense when incurred or factor such amounts into the company's measurement of its deferred taxes. Because of the complexity of the new GILTI tax rules and the possibility of forthcoming interpretive guidance, the company is still evaluating these provisions and has not yet adopted an accounting policy related to the potential taxes resulting from these provisions.

Aside from the net $3 million tax expense from the above discrete tax adjustments resulting from the Act, the company recorded a net $47 million discrete tax benefit for various other adjustments, resulting in a total discrete tax benefit of $44 million for the six months ended Feb. 28, 2018.

NOTE 11. DEBT AND OTHER CREDIT ARRANGEMENTS

In April 2016, Monsanto filed a shelf registration with the SEC ("2016 shelf registration") that allows the company to issue a maximum aggregate amount of $6 billion of debt, equity and hybrid offerings. The 2016 shelf registration expires in April 2019.

Monsanto has a $3 billion credit facility agreement that provides a senior unsecured revolving credit facility through Mar. 27, 2020. As of Feb. 28, 2018 , Monsanto was in compliance with all debt covenants, and there were no outstanding borrowings under this credit facility.

Monsanto's short-term debt instruments include the current portion of long-term debt, notes payable to banks and borrowings under the delayed draw term loan facility. As of Feb. 28, 2018 , and Aug. 31, 2017 , Monsanto did not have any commercial paper outstanding. Additionally, as of Feb. 28, 2018 , and Aug. 31, 2017 , the mandatorily redeemable shares of the Brazil VIE were classified primarily as long-term debt instruments. See Note 5 — Variable Interest Entities and Investments — for additional information.

In October 2016, Monsanto entered into a $1 billion delayed draw term loan facility that matures the earlier of October 2019 or the consummation of the Merger with Bayer. Borrowings under the facility were $500 million as of Feb. 28, 2018 , and Aug. 31, 2017 . Proceeds were used for general corporate purposes.

On Jan. 29, 2018, Monsanto redeemed all $365 million of the 4.30% Notes, due Jan. 29, 2045.

The fair value of total short-term debt was $1,212 million and $877 million as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively. The fair value of the total long-term debt was $6,750 million and $7,603 million as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively. See Note 12 — Fair Value Measurements — for additional information.

NOTE 12. FAIR VALUE MEASUREMENTS

Monsanto determines the fair market value of its financial assets and liabilities based on quoted market prices, estimates from brokers and other appropriate valuation techniques. The company uses the fair value hierarchy established in the Fair Value Measurements and Disclosures topic of the ASC, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The hierarchy contains three levels as follows, with Level 3 representing the lowest level of input.

Level 1 — Values based on unadjusted quoted market prices in active markets that are accessible at the measurement date for identical assets and liabilities.

Level 2 — Values based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, discounted cash flow models, or other model-based valuation techniques adjusted, as necessary, for credit risk.

Level 3 — Values generated from model-based techniques that use significant assumptions not observable in the market. These unobservable assumptions would reflect our own estimates of assumptions that market participants would use in pricing the asset or liability. Valuation techniques could include use of option pricing models, discounted cash flow models and similar techniques.

The following tables set forth by level Monsanto's assets and liabilities disclosed at fair value on a recurring basis as of Feb. 28, 2018 , and Aug. 31, 2017 . As required by the Fair Value Measurements and Disclosures topic of the ASC, assets and liabilities are classified in their entirety based on the lowest level of input that is a significant component of the fair value measurement. Monsanto's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the classification of fair value assets and liabilities within the fair value hierarchy levels.

	Fair Value Measurements at Feb. 28, 2018, Using			
(Dollars in millions)	Level 1	Level 2	Level 3	Net Balance
Assets at Fair Value:				
Cash equivalents	$ 2,150	$ —	$ —	$ 2,150
Short-term investments	5	—	—	5
Equity securities	6	—	—	6
Derivative assets related to:				
Foreign currency contracts	—	3	—	3
Commodity contracts	18	9	—	27
Total Assets at Fair Value	$ 2,179	$ 12	$ —	$ 2,191
Liabilities at Fair Value:				
Short-term debt instruments (1)	$ —	$ 1,210	$ 2	$ 1,212
Long-term debt instruments (1)	—	6,653	97	6,750
Derivative liabilities related to:				
Foreign currency contracts	—	15	—	15
Commodity contracts	9	7	—	16
Total Liabilities at Fair Value	$ 9	$ 7,885	$ 99	$ 7,993

(1) Debt instruments, excluding mandatorily redeemable shares, are not recorded at fair value on a recurring basis; however, they are measured at fair value for disclosure purposes, as required by the Fair Value Measurements and Disclosures topic of the ASC.

(Dollars in millions)	Fair Value Measurements at Aug. 31, 2017, Using			
	Level 1	Level 2	Level 3	Net Balance
Assets at Fair Value:				
Cash equivalents	$ 1,034	$ —	$ —	$ 1,034
Short-term investments	8	—	—	8
Equity securities	10	—	—	10
Derivative assets related to:				
Foreign currency contracts	—	10	—	10
Commodity contracts	3	7	—	10
Total Assets at Fair Value	$ 1,055	$ 17	$ —	$ 1,072
Liabilities at Fair Value:				
Short-term debt instruments (1)	$ —	$ 877	$ —	$ 877
Long-term debt instruments (1)	—	7,499	104	7,603
Derivative liabilities related to:				
Foreign currency contracts	—	16	—	16
Commodity contracts	7	6	—	13
Total Liabilities at Fair Value	$ 7	$ 8,398	$ 104	$ 8,509

(1) Debt instruments, excluding mandatorily redeemable shares, are not recorded at fair value on a recurring basis; however, they are measured at fair value for disclosure purposes, as required by the Fair Value Measurements and Disclosures topic of the ASC.

The company's derivative contracts are measured at fair value, including forward commodity purchase and sale contracts, exchange-traded commodity futures and option contracts and over-the-counter ("OTC") instruments related primarily to agricultural commodities, energy and raw materials, interest rates and foreign currencies. Exchange-traded futures and options contracts are valued based on unadjusted quoted prices in active markets and are classified as Level 1. Fair value for forward commodity purchase and sale contracts is estimated based on exchange-quoted prices adjusted for differences in local markets. These differences are generally determined using inputs from broker or dealer quotations or market transactions in either the listed or OTC markets and are classified as Level 2. Interest rate contracts consist of interest rate swaps measured using broker or dealer quoted prices. When observable inputs are available for substantially the full term of the contract, it is classified as Level 2.

Based on historical experience with the company's suppliers and customers, the company's own credit risk and knowledge of current market conditions, the company does not view nonperformance risk to be a significant input to the fair value for the majority of its forward commodity purchase and sale contracts. The effective portions of changes in the fair value of derivatives designated as cash flow hedges are recognized in the Statements of Consolidated Financial Position as a component of accumulated other comprehensive loss until the hedged items are recorded in earnings or it is probable the hedged transaction will no longer occur. Changes in the fair value of derivatives are recognized in the Statements of Consolidated Operations as a component of net sales, cost of goods sold and other income, net.

The company's short-term investments consist of cash which is contractually restricted as to withdrawal or usage. The company's equity securities consist of publicly traded equity investments. Publicly traded equity investments are valued using quoted market prices and are classified as Level 1. Contractually restricted cash may be held in an interest bearing account measured using prevailing interest rates and is classified as Level 1. Short-term debt instruments are classified as Level 2. The company's long-term debt securities are classified as Level 2 and valued using broker or dealer quoted prices with a maturity greater than one year.

Short-term debt instruments may consist of commercial paper, current portion of long-term debt, borrowings under the delayed draw term loan facility, notes payable to banks and mandatorily redeemable shares. Commercial paper, notes payable to banks and borrowings under the delayed draw term loan facility are recorded at amortized cost in the Statements of Consolidated Financial Position, which approximates fair value. Current portion of long-term debt is measured at fair value for disclosure purposes and determined based on current market yields for Monsanto's debt traded in the secondary market. Mandatorily redeemable shares are recorded in the Statements of Consolidated Financial Position at fair value, which represents the amount of cash the consolidated variable interest entity would pay if settlement occurred as of the respective reporting date. Fair value of the mandatorily redeemable shares of the variable interest entity is calculated using observable and unobservable inputs from an interest rate market in Brazil and stated contractual terms (a Level 3 measurement). See Note 11 — Debt and Other Credit Arrangements — for additional disclosures.

Long-term debt was measured at fair value for disclosure purposes and determined based on current market yields for Monsanto's debt traded in the secondary market. Long-term debt includes mandatorily redeemable shares. See Note 11 — Debt and Other Credit Arrangements — for additional disclosures. Accretion expense is included in the Statements of Consolidated Operations as interest expense.

For the six months ended Feb. 28, 2018 , and Feb. 28, 2017 , the company had no transfers between Level 1, Level 2 and Level 3. Monsanto does not have any assets with fair value determined using Level 3 inputs as of Feb. 28, 2018 , and Aug. 31, 2017 . The following table summarizes the change in fair value of the Level 3 short-term debt instrument for the six months ended Feb. 28, 2018 .

(Dollars in millions)		
Balance Aug. 31, 2017	$	—
Reclass from long-term		**2**
Balance Feb. 28, 2018 (1)	**$**	**2**

(1) Includes interest on 315,000 mandatorily redeemable shares outstanding with a par value of 1,000 Brazilian reais (approximately $308) as of Feb. 28, 2018 .

The following table summarizes the change in fair value of the Level 3 long-term debt instrument for the six months ended Feb. 28, 2018 .

(Dollars in millions)		
Balance Aug. 31, 2017	$	104
Reclass to short-term		**(2)**
Accretion expense		**3**
Payments		**(5)**
Effect of foreign currency translation adjustments		**(3)**
Balance Feb. 28, 2018 (1)	**$**	**97**

(1) Includes 315,000 mandatorily redeemable shares outstanding with a par value of 1,000 Brazilian reais (approximately $308) as of Feb. 28, 2018 .

There were no significant measurements of liabilities to their implied fair value on a nonrecurring basis during the six months ended Feb. 28, 2018 , and Feb. 28, 2017 . There were no significant measurements of assets to their implied fair value on a nonrecurring basis during the six months ended Feb. 28, 2018 .

Significant measurements during the six months ended Feb. 28, 2017 , of assets to their implied fair value on a nonrecurring basis were as follows:

Property, Plant and Equipment, Net : During the three and six months ended Feb. 28, 2017, property, plant and equipment within the Seeds and Genomics segment with a net book value of $18 million was written down to its implied fair value estimate of $7 million , resulting in an impairment charge of $11 million , with $4 million included in cost of goods sold and $7 million included in restructuring charges in the Statement of Consolidated Operations. The implied fair value calculations were performed using a discounted cash flow model (a Level 3 measurement). See Note 3 — Restructuring — for additional disclosures.

The recorded amounts of cash, trade receivables, miscellaneous receivables, third-party guarantees, accounts payable, grower production accruals, accrued marketing programs and miscellaneous short-term accruals approximate their fair values as of Feb. 28, 2018 , and Aug. 31, 2017 .

Management is ultimately responsible for all fair values presented in the company's consolidated financial statements. The company performs analysis and review of the information and prices received from third parties to ensure that the prices represent a reasonable estimate of fair value. This process involves quantitative and qualitative analysis. As a result of the analysis, if the company determines there is a more appropriate fair value based upon the available market data, the price received from the third party is adjusted accordingly.

NOTE 13. FINANCIAL INSTRUMENTS

Cash Flow Hedges

The company uses foreign currency options and foreign currency forward contracts as hedges of anticipated sales or purchases denominated in foreign currencies. The company enters into these contracts to protect itself against the risk that the eventual net cash flows will be adversely affected by changes in exchange rates.

Monsanto's commodity price risk management strategy is to use derivative instruments to minimize significant unanticipated earnings fluctuations that may arise from volatility in commodity prices. Price fluctuations in commodities, mainly in corn and soybeans, can cause the actual prices paid to production growers for corn and soybean seeds to differ from anticipated cash outlays. Monsanto generally uses commodity futures and options contracts to manage these risks. Monsanto's energy and raw material risk management strategy is to use derivative instruments to minimize significant unanticipated manufacturing cost fluctuations that may arise from volatility in natural gas, diesel and ethylene prices.

Monsanto's interest rate risk management strategy is to use derivative instruments, such as forward-starting interest rate swaps and option contracts, to minimize significant unanticipated earnings fluctuations that may arise from volatility in interest rates of the company's borrowings and to manage the interest rate sensitivity of its debt.

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of accumulated other comprehensive loss and reclassified into earnings in the period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings.

The maximum term over which the company is hedging exposures to the variability of cash flow (for all forecasted transactions) is six months for foreign currency hedges and 30 months for commodity hedges. During the next 12 months, a pretax net loss of approximately $15 million is expected to be reclassified from accumulated other comprehensive loss into earnings. A pretax loss of $37 million was reclassified into other income, net as a result of the discontinuance of an interest rate hedge during the six months ended Feb. 28, 2017 , because it was probable the original forecasted transaction would not occur by the end of the originally specified time period. During the three months ended Feb. 28, 2017 , a pretax loss of less than $1 million was reclassified into cost of goods sold in the Statement of Consolidated Operations as a result of the discontinuance of foreign currency cash flow hedges because it was probable that the original forecasted transactions would not occur by the end of the originally specified time period. No cash flow hedges were discontinued during the three and six months ended Feb. 28, 2018 .

Fair Value Hedges

The company uses commodity futures, forwards and options contracts as fair value hedges to manage the value of its soybean inventory and other assets. For derivative instruments that are designated and qualify as fair value hedges, both the gain or loss on the derivative and the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current earnings. No fair value hedges were discontinued during the three and six months ended Feb. 28, 2018 , and Feb. 28, 2017 .

Derivatives Not Designated as Hedging Instruments

The company uses foreign currency contracts to hedge the effects of fluctuations in exchange rates on foreign currency denominated third-party and intercompany receivables and payables. Both the gain or loss on the derivative and the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current earnings.

The company uses commodity option contracts to hedge anticipated cash payments to growers, which can fluctuate with changes in commodity price. Because these option contracts do not meet the provisions specified by the Derivatives and Hedging topic of the ASC, they do not qualify for hedge accounting treatment. Accordingly, the gain or loss on these derivatives is recognized in current earnings.

To reduce credit exposure in Latin America, Monsanto collects payments on certain customer accounts in grain. Such payments in grain are negotiated at or near the time Monsanto's products are sold to the customers and are valued at the prevailing grain commodity prices. By entering into forward sales contracts related to grain, Monsanto mitigates the commodity price exposure from the time a contract is signed with a customer until the time a grain merchant collects the grain from the customer on Monsanto's behalf. The forward sales contracts do not qualify for hedge accounting treatment under the Derivatives and Hedging topic of the ASC. Accordingly, the gain or loss on these derivatives is recognized in current earnings.

Monsanto uses interest rate contracts to minimize the variability of forecasted cash flows arising from the company's consolidated VIE in Brazil. The interest rate contracts do not qualify for hedge accounting treatment under the Derivatives and Hedging Topic of the ASC. Accordingly, the gain or loss on these derivatives is recognized in current earnings.

Financial instruments are neither held nor issued by the company for trading purposes.

The notional amounts of the company's derivative instruments outstanding as of Feb. 28, 2018 , and Aug. 31, 2017 , are as follows:

	As of	
(Dollars in millions)	**Feb. 28, 2018**	Aug. 31, 2017
Derivatives Designated as Hedges:		
Foreign exchange contracts	**$ 299**	$ 453
Commodity contracts	**621**	430
Total Derivatives Designated as Hedges	**$ 920**	$ 883
Derivatives Not Designated as Hedges:		
Foreign exchange contracts	**$ 1,709**	$ 2,133
Commodity contracts	**161**	189
Interest rate contracts	**7**	21
Total Derivatives Not Designated as Hedges	**$ 1,877**	$ 2,343

The net presentation of the company's derivative instruments outstanding was as follows:

(Dollars in millions)	As of Feb. 28, 2018						
	Gross Amounts Recognized	Gross Amounts Offset in the Statement of Consolidated Financial Position	Net Amounts Included in the Statement of Consolidated Financial Position	Collateral Pledged	Net Amounts Reported in the Statement of Consolidated Financial Position	Other Items Included in the Statement of Consolidated Financial Position	Statement of Consolidated Financial Position Balance
Asset Derivatives:							
Other current assets							
Derivatives designated as hedges:							
Commodity contracts (1)	$ 18	$ (9)	$ 9	$ —	$ 9		
Derivatives not designated as hedges:							
Commodity contracts	8	—	8	—	8		
Foreign exchange contracts	3	—	3	—	3		
Total other current assets	29	(9)	20	—	20	$ 290	$ 310
Other assets							
Derivatives designated as hedges:							
Commodity contracts	1	—	1	—	1		
Total other assets	1	—	1	—	1	891	892
Total Asset Derivatives	$ 30	$ (9)	$ 21	$ —	$ 21		
Liability Derivatives:							
Other current assets							
Derivatives designated as hedges:							
Commodity contracts (1)	$ 9	$ (9)	$ —	$ —	$ —		
Total other current assets	9	(9)	—	—	—		
Miscellaneous short-term accruals							
Derivatives designated as hedges:							
Commodity contracts	1	—	1	—	1		
Foreign exchange contracts	6	—	6	—	6		
Derivatives not designated as hedges:							
Commodity contracts	6	—	6	—	6		
Foreign exchange contracts	9	—	9	—	9		
Total miscellaneous short-term accruals	22	—	22	—	22	$ 680	$ 702
Total Liability Derivatives	$ 31	$ (9)	$ 22	$ —	$ 22		

(1) As allowed by the Derivatives and Hedging topic of the ASC, commodity derivative assets and liabilities have been offset by collateral subject to an enforceable master netting arrangement or similar arrangement. Therefore, these commodity contracts that are in an asset or liability position are included in asset accounts within the Statements of Consolidated Financial Position.

(Dollars in millions)	As of Aug. 31, 2017						
	Gross Amounts Recognized	Gross Amounts Offset in the Statement of Consolidated Financial Position	Net Amounts Included in the Statement of Consolidated Financial Position	Collateral Pledged	Net Amounts Reported in the Statement of Consolidated Financial Position	Other Items Included in the Statement of Consolidated Financial Position	Statement of Consolidated Financial Position Balance
Asset Derivatives:							
Other current assets							
Derivatives designated as hedges:							
Commodity contracts (1)	$ 2	$ (7)	$ (5)	$ 5	$ —		
Derivatives not designated as hedges:							
Commodity contracts	6	—	6	—	6		
Foreign exchange contracts	10	—	10	—	10		
Total other current assets	18	(7)	11	5	16	$ 252	$ 268
Other assets							
Derivatives designated as hedges:							
Commodity contracts	1	—	1	—	1		
Total other assets	1	—	1	—	1	954	955
Miscellaneous short-term accruals							
Derivatives designated as hedges:							
Commodity contracts (1)	1	(1)	—	—	—		
Total miscellaneous short-term accruals	1	(1)	—	—	—		
Total Asset Derivatives	$ 20	$ (8)	$ 12	$ 5	$ 17		
Liability Derivatives:							
Other current assets							
Derivatives designated as hedges:							
Commodity contracts (1)	$ 7	$ (7)	$ —	$ —	$ —		
Total other current assets	7	(7)	—	—	—		
Miscellaneous short-term accruals							
Derivatives designated as hedges:							
Commodity contracts (1)	3	(1)	2	—	2		
Foreign currency contracts	14	—	14	—	14		
Derivatives not designated as hedges:							
Commodity contracts	3	—	3	—	3		
Foreign exchange contracts	2	—	2	—	2		
Total miscellaneous short-term accruals	22	(1)	21	—	21	$ 719	$ 740
Total Liability Derivatives	$ 29	$ (8)	$ 21	$ —	$ 21		

(1) As allowed by the Derivatives and Hedging topic of the ASC, commodity derivative assets and liabilities have been offset by collateral subject to an enforceable master netting arrangement or similar arrangement. Therefore, these commodity contracts that are in an asset or liability position are included in asset accounts within the Statements of Consolidated Financial Position.

The gains and losses on the company's derivative instruments were as follows:

(Dollars in millions)	Amount of Gain (Loss) Recognized in AOCL (1) (Effective Portion) Three Months Ended		Amount of Gain (Loss) Recognized in Income (2)(3) Three Months Ended		Statements of Consolidated Operations Classification
	Feb. 28, 2018	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017	
Derivatives Designated as Hedges:					
Fair value hedges:					
Commodity contracts			**$ (9)**	$ 3	Cost of goods sold
Cash flow hedges:					
Foreign currency contracts	**$ (2)**	$ 3	**1**	3	Net sales
Foreign currency contracts	**—**	1	**—**	1	Cost of goods sold
Commodity contracts	**12**	10	**1**	(12)	Cost of goods sold
Interest rate contracts	**—**	(1)	**(4)**	(4)	Interest expense
Total Derivatives Designated as Hedges	**10**	13	**(11)**	(9)	
Derivatives Not Designated as Hedges:					
Foreign currency contracts (4)			**(3)**	26	Other income, net
Commodity contracts			**(1)**	1	Net sales
Commodity contracts			**1**	—	Cost of goods sold
Total Derivatives Not Designated as Hedges			**(3)**	27	
Total Derivatives	**$ 10**	$ 13	**$ (14)**	$ 18	

(1) Accumulated other comprehensive loss (AOCL)

(2) For derivatives designated as cash flow hedges under the Derivatives and Hedging topic of the ASC, this represents the effective portion of the gain (loss) reclassified from AOCL into income during the period.

(3) The gain or loss on derivatives designated as hedges from ineffectiveness is not significant during the three months ended Feb. 28, 2018 , and Feb. 28, 2017 . No gains or losses were excluded from the assessment of hedge effectiveness during the three months ended Feb. 28, 2018 , and Feb. 28, 2017 .

(4) Gain or loss on foreign currency contracts not designated as hedges was offset by a foreign currency transaction loss of $41 million and $21 million during the three months ended Feb. 28, 2018 , and Feb. 28, 2017 , respectively.

(Dollars in millions)	Amount of Gain (Loss) Recognized in AOCL (1) (Effective Portion) Six Months Ended		Amount of Gain (Loss) Recognized in Income (2)(3) Six Months Ended		Statements of Consolidated Operations Classification
	Feb. 28, 2018	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017	
Derivatives Designated as Hedges:					
Fair value hedges:					
Commodity contracts			**$ (8)**	$ (10)	Cost of goods sold
Cash flow hedges:					
Foreign currency contracts	**$ 7**	$ 20	**3**	10	Net sales
Foreign currency contracts	**—**	7	**—**	2	Cost of goods sold
Commodity contracts	**14**	29	**—**	(15)	Cost of goods sold
Interest rate contracts	**—**	—	**—**	(37)	Other income, net
Interest rate contracts	**—**	3	**(7)**	(8)	Interest expense
Total Derivatives Designated as Hedges	**21**	59	**(12)**	(58)	
Derivatives Not Designated as Hedges:					
Foreign currency contracts (4)			**8**	(19)	Other income, net
Commodity contracts			**(2)**	1	Net sales
Commodity contracts			**1**	(1)	Cost of goods sold
Total Derivatives Not Designated as Hedges			**7**	(19)	
Total Derivatives	**$ 21**	$ 59	**$ (5)**	$ (77)	

(1) Accumulated other comprehensive loss (AOCL)

(2) For derivatives designated as cash flow hedges under the Derivatives and Hedging topic of the ASC, this represents the effective portion of the gain (loss) reclassified from AOCL into income during the period.

(3) The gain or loss on derivatives designated as hedges from ineffectiveness is not significant during the six months ended Feb. 28, 2018 , and Feb. 28, 2017 . No gains or losses were excluded from the assessment of hedge effectiveness during the six months ended Feb. 28, 2018 , and Feb. 28, 2017 .
(4) Gain or loss on foreign currency contracts not designated as hedges was offset by a foreign currency transaction loss of $43 million and a gain of $18 million during the six months ended Feb. 28, 2018 , and Feb. 28, 2017 , respectively.

Most of the company's outstanding foreign currency derivatives are covered by International Swap and Derivatives Association ("ISDA") Master Agreements with the counterparties. There are no requirements to post collateral under these agreements; however, should Monsanto's credit rating fall below a specified rating immediately following the merger of the company with another entity, the counterparty may require all outstanding derivatives under the ISDA Master Agreement to be settled immediately at current market value, which equals carrying value. Foreign currency derivatives that are not covered by ISDA Master Agreements do not have credit-risk-related contingent provisions. Most of Monsanto's outstanding commodity derivatives are listed commodity futures, and the company is required by the relevant commodity exchange to post collateral each day to cover the change in the fair value of these futures in the case of an unrealized loss position. Non-exchange-traded commodity derivatives and interest rate contracts may be covered by the aforementioned ISDA Master Agreements and would be subject to the same credit-risk-related contingent provisions. The aggregate fair value of all derivative instruments under ISDA Master Agreements that are in a liability position was $11 million and $19 million as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively, which is the amount that would be required for settlement if the credit-risk-related contingent provisions underlying these agreements were triggered.

Credit Risk Management

Monsanto invests excess cash in deposits with major banks or money market funds throughout the world in high-quality short-term debt instruments. Such investments are made only in instruments issued or enhanced by high-quality institutions. As of Feb. 28, 2018 , and Aug. 31, 2017 , the company had no financial instruments that represented a significant concentration of credit risk. Limited amounts are invested in any single institution to minimize risk. The company has not incurred any credit risk losses related to those investments.

The company sells a broad range of agricultural products to a diverse group of customers throughout the world. In the United States, the company makes substantial sales to relatively few large wholesale customers. The company's business is highly seasonal and is subject to weather conditions that affect commodity prices and seed yields. Credit limits, ongoing credit evaluation and account monitoring procedures are used to minimize the risk of loss. Collateral is secured when it is deemed appropriate by the company.

Monsanto regularly evaluates its business practices to minimize its credit risk and periodically engages multiple banks in the United States, Latin America and Europe in the development of customer financing options that involve direct bank financing of customer purchases. For further information on these programs, see Note 4 — Customer Financing Programs .

NOTE 14. POSTRETIREMENT BENEFITS — PENSIONS, HEALTH CARE AND OTHER

Monsanto maintains noncontributory pension plans for the benefit of its U.S. employees. Effective Jul. 8, 2012, the U.S. pension plans were closed to new entrants; there were no significant changes to these plans for eligible employees hired prior to that date. The company also provides certain postretirement health care and life insurance benefits for eligible retired employees and certain pension plan benefits outside the U.S. The company's net periodic benefit cost for pension benefits and health care and other postretirement benefits include the following components:

Pension Benefits	Three Months Ended Feb. 28, 2018			Three Months Ended Feb. 28, 2017		
(Dollars in millions)	U.S.	Outside the U.S.	Total	U.S.	Outside the U.S.	Total
Service Cost for Benefits Earned During the Period	**$ 14**	**$ 3**	**$ 17**	$ 15	$ 3	$ 18
Interest Cost on Benefit Obligation	**22**	**1**	**23**	20	1	21
Assumed Return on Plan Assets	**(43)**	**(2)**	**(45)**	(43)	(2)	(45)
Amortization of Unrecognized Net Loss	**10**	**1**	**11**	12	1	13
Restructuring Charges	**—**	**—**	**—**	—	2	2
Total Net Periodic Benefit Cost	**$ 3**	**$ 3**	**$ 6**	$ 4	$ 5	$ 9

Pension Benefits	Six Months Ended Feb. 28, 2018			Six Months Ended Feb. 28, 2017		
(Dollars in millions)	U.S.	Outside the U.S.	Total	U.S.	Outside the U.S.	Total
Service Cost for Benefits Earned During the Period	**$ 28**	**$ 6**	**$ 34**	$ 30	$ 6	$ 36
Interest Cost on Benefit Obligation	**44**	**3**	**47**	41	3	44
Assumed Return on Plan Assets	**(86)**	**(5)**	**(91)**	(85)	(4)	(89)
Amortization of Unrecognized Net Loss	**20**	**2**	**22**	24	2	26
Restructuring Charges	**—**	**—**	**—**	—	2	2
Total Net Periodic Benefit Cost	**$ 6**	**$ 6**	**$ 12**	$ 10	$ 9	$ 19

Health Care and Other Postretirement Benefits	Three Months Ended	
(Dollars in millions)	Feb. 28, 2018	Feb. 28, 2017
Service Cost for Benefits Earned During the Period	**$ 2**	$ 2
Interest Cost on Benefit Obligation	**1**	1
Amortization of Unrecognized Net (Gain)/Loss	**(1)**	2
Restructuring Charges	**—**	2
Total Net Periodic Benefit Cost	**$ 2**	$ 7

Health Care and Other Postretirement Benefits	Six Months Ended	
(Dollars in millions)	Feb. 28, 2018	Feb. 28, 2017
Service Cost for Benefits Earned During the Period	**$ 4**	$ 3
Interest Cost on Benefit Obligation	**2**	2
Amortization of Unrecognized Net (Gain)/Loss	**(2)**	3
Restructuring Charges	**—**	2
Total Net Periodic Benefit Cost	**$ 4**	$ 10

NOTE 15. STOCK-BASED COMPENSATION PLANS

The following table shows total stock-based compensation expense included in the Statements of Consolidated Operations for the three and six months ended Feb. 28, 2018 , and Feb. 28, 2017 .

	Three Months Ended		Six Months Ended	
(Dollars in millions)	Feb. 28, 2018	Feb. 28, 2017	Feb. 28, 2018	Feb. 28, 2017
Cost of Goods Sold	**$ 4**	$ 4	**$ 8**	$ 7
Selling, General and Administrative Expenses	**18**	19	**43**	45
Research and Development Expenses	**6**	7	**12**	13
Restructuring Charges	**—**	—	**—**	1
Pre-Tax Stock-Based Compensation Expense	**28**	30	**63**	66
Income Tax Benefit	**(2)**	(10)	**(18)**	(23)
Net Stock-Based Compensation Expense	**$ 26**	$ 20	**$ 45**	$ 43

NOTE 16. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table sets forth the after-tax components of accumulated other comprehensive loss and changes thereto:

(Dollars in millions)	Foreign Currency Translation Adjustments	Postretirement Benefit Items	Net Unrealized Gain (Loss) on Available-for-Sale Securities	Cash Flow Hedges	Total Accumulated Other Comprehensive (Loss) Income
Balance as of Aug. 31, 2016	$ (2,292)	$ (340)	$ 1	$ (177)	$ (2,808)
Other comprehensive income (loss) before reclassifications	233	55	(2)	21	307
Amounts reclassified from accumulated other comprehensive loss	—	38	2	34	74
Net current-period other comprehensive income	233	93	—	55	381
Balance as of Aug. 31, 2017	$ (2,059)	$ (247)	$ 1	$ (122)	$ (2,427)
Other comprehensive income (loss) before reclassifications	**25**	**(48)**	**(1)**	**(11)**	**(35)**
Amounts reclassified from accumulated other comprehensive loss (income)	**—**	**15**	**(1)**	**3**	**17**
Net current-period other comprehensive income (loss)	**25**	**(33)**	**(2)**	**(8)**	**(18)**
Balance as of Feb. 28, 2018	**$ (2,034)**	**$ (280)**	**$ (1)**	**$ (130)**	**$ (2,445)**

The following table provides additional information regarding items reclassified out of accumulated other comprehensive loss into earnings.

	Three Months Ended		Six Months Ended		
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017	Affected Line Item in the Statements of Consolidated Operations
Available for Sale Securities:					
(Gain) Loss on Equity Security	**$ (1)**	$ 2	**$ (1)**	$ 2	Other income, net
	(1)	2	**(1)**	2	Total before income taxes
	—	(1)	**—**	(1)	Income tax provision
	$ (1)	$ 1	**$ (1)**	$ 1	Net of tax
Cash Flow Hedges:					
Foreign Exchange Contracts	**$ (1)**	$ (3)	**$ (3)**	$ (10)	Net sales
Foreign Exchange Contracts	**—**	(1)	**—**	(2)	Cost of goods sold
Commodity Contracts	**(1)**	12	**—**	15	Cost of goods sold
Interest Rate Contracts	**—**	—	**—**	37	Other income, net
Interest Rate Contracts	**4**	4	**7**	8	Interest expense
	2	12	**4**	48	Total before income taxes
	(1)	(4)	**(1)**	(19)	Income tax provision
	$ 1	$ 8	**$ 3**	$ 29	Net of tax
Postretirement Benefit Items:					
Amortization of Unrecognized Net Loss	**$ 3**	$ 5	**$ 7**	$ 11	Inventory/Cost of goods sold (1)
Amortization of Unrecognized Net Loss	**7**	10	**13**	20	Selling, general and administrative expenses
Amortization of Unrecognized Net Loss	**—**	4	**—**	4	Restructuring charges
	10	19	**20**	35	Total before income taxes
	(1)	(6)	**(5)**	(12)	Income tax provision
	$ 9	$ 13	**$ 15**	$ 23	Net of tax
Total Reclassifications For The Period	**$ 9**	$ 22	**$ 17**	$ 53	Net of tax

(1) The amortization of unrecognized net loss is recorded to net periodic benefit cost, which is allocated to selling, general and administrative expenses and to inventory, which is recognized through cost of goods sold. The company recorded $3 million and $5 million of net periodic benefit cost to inventory, of which approximately $2 million and $3 million was recognized in cost of goods sold during the three months ended Feb. 28, 2018 , and Feb. 28, 2017 , respectively. The company recorded $7 million and $11 million of net periodic benefit cost to inventory, of which approximately $7 million and $10 million was recognized in cost of goods sold during the six months ended Feb. 28, 2018 , and Feb. 28, 2017 , respectively. See Note 14 — Postretirement Benefits - Pensions, Health Care and Other — for additional information.

NOTE 17. EARNINGS PER SHARE

Basic earnings per share ("EPS") was computed using the weighted-average number of common shares outstanding during the periods shown in the table below. The diluted EPS computation takes into account the effect of dilutive potential common shares when in a net income position. Potential common shares consist primarily of stock options, restricted stock units and directors' deferred shares calculated using the treasury stock method and are excluded if their effect is antidilutive. Of those antidilutive options, certain options were excluded from the computations of dilutive potential common shares as their exercise prices were greater than the average market price of the common shares for the period.

	Three Months Ended		Six Months Ended	
(Shares in millions)	**Feb. 28, 2018**	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017
Weighted-Average Number of Common Shares	**441.0**	438.7	**440.6**	438.4
Dilutive Potential Common Shares	**4.5**	3.6	**5.3**	3.9
Antidilutive Potential Common Shares	**0.1**	2.2	**0.1**	4.0

NOTE 18. SUPPLEMENTAL CASH FLOW INFORMATION

Cash payments for interest and taxes were as follows:

	Six Months Ended	
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017
Interest	**$ 235**	$ 225
Taxes	**229**	187

The company recorded the following noncash transactions:

- During the six months ended Feb. 28, 2018 , and Feb. 28, 2017 , the company recognized noncash transactions related to restructuring. See Note 3 — Restructuring .
- As of Feb. 28, 2018 , and Feb. 28, 2017 , the company recognized noncash capital expenditures of $103 million and $117 million , respectively, in accounts payable in the Statements of Consolidated Financial Position.
- During the six months ended Feb. 28, 2018 , and Feb. 28, 2017 , the company recognized noncash transactions related to stock-based compensation. See Note 15 — Stock-Based Compensation Plans .
- In the second quarter of fiscal 2018 and 2017 , the board of directors declared a dividend which is payable in the third quarter of fiscal 2018 and 2017 , respectively. As of Feb. 28, 2018 , and Feb. 28, 2017 , a dividend payable of $239 million and $237 million , respectively, was recorded.
- During the six months ended Feb. 28, 2018 , the company recognized noncash transactions of $46 million related to a capital lease.

NOTE 19. COMMITMENTS AND CONTINGENCIES

Environmental and Litigation Liabilities: Monsanto is involved in environmental remediation and legal proceedings to which Monsanto is party in its own name and proceedings to which its former parent, Pharmacia LLC ("Pharmacia"), or its former subsidiary, Solutia, Inc. ("Solutia"), is a party but that Monsanto manages and for which Monsanto is responsible pursuant to certain indemnification agreements. In addition, Monsanto has liabilities established for various product claims. With respect to certain of these proceedings, Monsanto has a liability recorded of $254 million and $277 million as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively, for the estimated contingent liabilities. Information regarding the environmental liabilities appears in Monsanto's Report on Form 10-K for the fiscal year ended Aug. 31, 2017 .

Litigation: The above liability includes amounts related to certain third-party litigation with respect to Monsanto's business, as well as tort litigation related to Pharmacia's former chemical business, including lawsuits involving

polychlorinated biphenyls ("PCBs"), dioxins, and other chemical and premises liability litigation. Additional matters that are not reflected in the liability may arise in the future, and Monsanto may manage, settle, or pay judgments or damages with respect thereto in order to mitigate contesting potential liability. Following is a description of one of the more significant litigation matters.

> As described in Monsanto's Report on Form 10-K for the fiscal year ended Aug. 31, 2017, and its Report on Form 10-Q for the quarterly period ended Nov. 30, 2017, the company was named in approximately 30 personal injury lawsuits filed over several years on behalf of approximately 750 persons in state courts in St. Louis, Missouri and Los Angeles, California. Plaintiffs claimed they were injured by PCBs manufactured by Pharmacia's chemical business over four decades ago and incorporated into products made, used and sometimes disposed of by others. In September 2016, the parties reached an agreement to settle these personal injury lawsuits pursuant to which the company is required to pay up to $280 million into a settlement fund, with the settlement and the final payment amount contingent upon the level of claimant participation. As of Aug. 31, 2016, $280 million was recorded in the Statement of Consolidated Financial Position within miscellaneous short-term accruals. Payment of the $280 million was made November 2016 through December 2017 covering all claimants.

Including litigation reflected in the liability, Monsanto is involved in various legal proceedings that arise in the ordinary course of its business or pursuant to Monsanto's indemnification obligations to Pharmacia, as well as proceedings that management has considered to be material under SEC regulations. Some of the lawsuits seek damages in very large amounts or seek to restrict the company's business activities. Monsanto believes that it has meritorious legal arguments and will continue to represent its interests vigorously in all of the proceedings that it is defending or prosecuting. Management does not anticipate the ultimate liabilities resulting from such proceedings, or the proceedings reflected in the above liability, will have a material adverse effect on Monsanto's consolidated results of operations, financial position, cash flows or liquidity.

The company has been named in lawsuits brought by various governmental entities claiming that Monsanto, Pharmacia and Solutia, collectively as a manufacturer of PCBs, should be responsible for a variety of damages due to PCBs in bodies of water, regardless of how PCBs came to be located there. The company believes that these novel claims are without merit and is vigorously defending the cases on legal and factual grounds. A reasonable estimate of the possible loss contingency can not be made.

The company is defending lawsuits in various state and federal courts, in which approximately 5,200 plaintiffs claim to have been injured by exposure to glyphosate-based products manufactured by the company. The majority of plaintiffs have brought actions in state courts in Missouri, Delaware and California, while the remainder of plaintiffs' cases were filed in many different federal courts. In October 2016, the Judicial Panel on Multi-District Litigation transferred to the Northern District of California all of the federal cases for pretrial purposes. The company believes that it has meritorious factual and legal defenses to these cases and is vigorously defending them. A reasonable estimate of the possible loss contingency can not be made.

Legal actions have been filed in Brazil that raise various issues challenging the right to collect certain royalties for *Roundup Ready* soybeans, such as whether Brazilian pipeline patents have the duration of their corresponding U.S. patents (2014 for *Roundup Ready* soybeans) and whether Brazil's Plant Variety Protection law affects the enforceability of patents. These issues are currently under judicial review in Brazil. Monsanto believes it has meritorious legal arguments and will continue to represent its interests vigorously in these proceedings. The current estimate of the company's reasonably possible loss contingency is not material to the consolidated results of operations, financial position, cash flows or liquidity.

Guarantees: Disclosures regarding the guarantees Monsanto provides for certain customer loans in the United States, Latin America and Europe can be found in Note 4 — Customer Financing Programs — of this Form 10-Q. Except as described in that note, there have been no significant changes to guarantees made by Monsanto since Aug. 31, 2017 . Disclosures regarding these guarantees made by Monsanto can be found in Note 24 — Commitments and Contingencies — of the notes to the consolidated financial statements contained in Monsanto's Report on Form 10-K for the fiscal year ended Aug. 31, 2017 .

Off-Balance Sheet Arrangement: In the first quarter of fiscal 2018, Monsanto completed a significant expansion of its Chesterfield, Missouri facility. In December 2013, Monsanto executed the first of a series of incentive agreements with the County of St. Louis, Missouri. Under these agreements Monsanto has transferred the Chesterfield, Missouri facility to St. Louis County and received Industrial Revenue Bonds in the amount of up to $470 million , which enables the company to reduce the cost of constructing and operating the expansion by reducing certain state and local tax expenditures. Monsanto immediately leased the facility from the County of St. Louis and has an option to purchase the facility upon tendering the Industrial Revenue Bonds received to the County. The payments due to the company in

relation to the Industrial Revenue Bonds and owed by the company in relation to the lease of the facility qualify for the right of offset under ASC 210, *Balance Sheet* , in the Statements of Consolidated Financial Position. As such, neither the Industrial Revenue Bonds nor the lease obligation are recorded in the Statements of Consolidated Financial Position as an asset or liability, respectively. The Chesterfield facility and the expansion are being treated as being owned by Monsanto.

NOTE 20. SEGMENT INFORMATION

Monsanto conducts its worldwide operations through global businesses, which are aggregated into reportable segments based on similarity of products, production processes, customers, distribution methods and economic characteristics. The operating segments are aggregated into two reportable segments: Seeds and Genomics and Agricultural Productivity.

The Seeds and Genomics segment consists of the global seeds and related traits businesses, biotechnology platforms and digital agriculture. Within the Seeds and Genomics segment, Monsanto's significant operating segments are corn seed and traits, soybean seed and traits, cotton seed and traits, vegetable seeds and all other crops seeds and traits. The Agricultural Productivity reportable segment consists of the Agricultural Productivity operating segment. EBIT is defined as earnings (loss) before interest and taxes and is an operating performance measure for the two reportable segments. EBIT is useful to management in demonstrating the operational profitability of the segments by excluding interest and taxes, which are generally accounted for across the entire company on a consolidated basis. Sales between segments were not significant. Certain selling, general and administrative expenses are allocated between segments based on the segment's relative contribution to total Monsanto operations. Allocation percentages remain consistent for fiscal years 2017 and 2018.

Data for the Seeds and Genomics and Agricultural Productivity reportable segments, as well as for Monsanto's significant operating segments, is presented in the table as follows:

	Three Months Ended		Six Months Ended	
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017
Net Sales (1)				
Corn seed and traits	**$ 2,721**	$ 2,902	**$ 3,508**	$ 3,851
Soybean seed and traits	**912**	862	**1,640**	1,462
Cotton seed and traits	**123**	108	**243**	224
Vegetable seeds	**198**	193	**312**	324
All other crops seeds and traits	**134**	121	**155**	173
Total Seeds and Genomics	**$ 4,088**	$ 4,186	**$ 5,858**	$ 6,034
Agricultural productivity	**931**	888	**1,819**	1,690
Total Agricultural Productivity	**$ 931**	$ 888	**$ 1,819**	$ 1,690
Total	**$ 5,019**	$ 5,074	**$ 7,677**	$ 7,724
Gross Profit				
Corn seed and traits	**$ 1,790**	$ 1,932	**$ 2,205**	$ 2,467
Soybean seed and traits	**672**	628	**1,260**	1,079
Cotton seed and traits	**101**	77	**174**	150
Vegetable seeds	**93**	99	**151**	168
All other crops seeds and traits	**81**	41	**79**	53
Total Seeds and Genomics	**$ 2,737**	$ 2,777	**$ 3,869**	$ 3,917
Agricultural productivity	**229**	175	**409**	294
Total Agricultural Productivity	**$ 229**	$ 175	**$ 409**	$ 294
Total	**$ 2,966**	$ 2,952	**$ 4,278**	$ 4,211
EBIT (2)(3)(4)				
Seeds and Genomics	**$ 1,779**	$ 1,839	**$ 2,081**	$ 2,038
Agricultural Productivity	**143**	119	**181**	132
Total	**$ 1,922**	$ 1,958	**$ 2,262**	$ 2,170
Depreciation and Amortization Expense				
Seeds and Genomics	**$ 152**	$ 142	**$ 301**	$ 285
Agricultural Productivity	**41**	41	**80**	87
Total	**$ 193**	$ 183	**$ 381**	$ 372

(1) Represents net sales from continuing operations.

(2) EBIT is defined as earnings (loss) before interest and taxes; see the following table for reconciliation. Earnings (loss) is intended to mean net income (loss) attributable to Monsanto Company as presented in the Statements of Consolidated Operations under U.S. GAAP. EBIT is an operating performance measure for the two reportable segments.

(3) Agricultural Productivity EBIT includes income from operations of discontinued businesses of $2 million and $5 million for the three months ended Feb. 28, 2018, and Feb. 28, 2017, respectively. Agricultural Productivity EBIT includes income from operations of discontinued businesses of $4 million and $21 million for the six months ended Feb. 28, 2018 , and Feb. 28, 2017 , respectively.

(4) Seeds and Genomics EBIT includes a loss from operations of noncontrolling interests of $2 million for the three months ended Feb. 28, 2017. Agricultural Productivity EBIT includes income from operations of noncontrolling interests of $1 million for the three months ended Feb. 28, 2018 , and Feb. 28, 2017. Seeds and Genomics EBIT includes income from operations of noncontrolling interests of $2 million and $6 million for the six months ended Feb. 28, 2018, and Feb. 28, 2017, respectively. Agricultural Productivity EBIT includes income from operations of noncontrolling interests of $1 million for the six months ended Feb. 28, 2018, and Feb. 28, 2017.

A reconciliation of EBIT to net income attributable to Monsanto Company for each period is as follows:

	Three Months Ended		Six Months Ended	
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017	**Feb. 28, 2018**	Feb. 28, 2017
EBIT (1)	**$ 1,922**	$ 1,958	**$ 2,262**	$ 2,170
Interest Expense — Net	**81**	84	**190**	202
Income Tax Provision (2)	**382**	506	**444**	571
Net Income Attributable to Monsanto Company	**$ 1,459**	$ 1,368	**$ 1,628**	$ 1,397

(1) Includes the income from operations of discontinued businesses and the income (loss) from operations of noncontrolling interests.

(2) Includes the income tax provision on discontinued operations and the income tax provision (benefit) of noncontrolling interests.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

Background

Monsanto Company, along with its subsidiaries, is a leading global provider of agricultural products for farmers. Our seeds, biotechnology trait products, herbicides and digital agriculture products provide farmers with solutions that help improve productivity, reduce the costs of farming and produce better food for consumers and better feed for animals.

We manage our business in two reporting segments: Seeds and Genomics and Agricultural Productivity. Through our Seeds and Genomics segment, we produce leading seed brands, including *DEKALB* , *Asgrow* , *Deltapine* , *Seminis* and *De Ruiter,* and we develop biotechnology traits that assist farmers in controlling insects and weeds and digital agriculture products, including *Climate Fieldview,* to assist farmers in decision making. We also provide other seed companies with genetic material and biotechnology traits for their seed brands. Through our Agricultural Productivity segment, we manufacture *Roundup* and *XtendiMax* Herbicide with *VaporGrip* Technology brand herbicides and other herbicides.

Management's Discussion and Analysis ("MD&A") of Financial Condition and Results of Operations should be read in conjunction with Monsanto's consolidated financial statements and the accompanying notes. This Report on Form 10-Q should also be read in conjunction with Monsanto's Report on Form 10-K for the fiscal year ended Aug. 31, 2017 . Financial information for the second quarter and the first six months of fiscal year 2018 should not be annualized because of the seasonality of our business. The notes to the consolidated financial statements referred to throughout this MD&A are included in Item 1 — Financial Statements — of this Report on Form 10-Q. Unless otherwise indicated, "Monsanto," the "company," "we," "our" and "us" are used interchangeably to refer to Monsanto Company or to Monsanto Company and its consolidated subsidiaries, as appropriate to the context. Unless otherwise indicated, "earnings per share" and "per share" mean diluted earnings per share. Unless otherwise indicated, trademarks owned or licensed by Monsanto or its subsidiaries are shown in special type. Unless otherwise noted, all amounts and analyses are based on continuing operations. Unless otherwise indicated, references to " *Roundup* herbicides" mean *Roundup* branded herbicides, excluding all lawn-and-garden herbicides and other glyphosate-based herbicides, and references to " *Roundup* and other glyphosate-based herbicides" exclude all lawn-and-garden herbicides.

Non-GAAP Financial Measures

MD&A includes financial information prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP"), as well as two other financial measures, EBIT and free cash flow, that are considered "non-GAAP financial measures." Generally, a non-GAAP financial measure is a numerical measure of a company's financial performance, financial position or cash flows that exclude (or include) amounts that are included in (or excluded from) the most directly comparable measure calculated and presented in accordance with GAAP. The presentation of EBIT is intended to supplement investors' understanding of our operating performance. The presentation of free cash flow information is intended to supplement investors' understanding of our liquidity. Our EBIT and free cash flow measures may not be comparable to other companies' EBIT and free cash flow measures. Furthermore, these measures are not intended to replace net income (loss) attributable to Monsanto Company, cash flows, financial position or comprehensive income (loss), as determined in accordance with GAAP.

EBIT is defined as earnings (loss) before interest and taxes. Earnings (loss) is intended to mean net income (loss) attributable to Monsanto Company as presented in the Statements of Consolidated Operations under GAAP. EBIT is an operating performance measure for our two business segments. We believe that EBIT is useful to investors and management to demonstrate the operational profitability of our segments by excluding interest and taxes, which are generally accounted for across the entire company on a consolidated basis. EBIT is also one of the measures used by Monsanto management to determine resource allocations within the company. See Item 1 — Financial Statements — Note 20 — Segment Information — for a reconciliation of EBIT to net income attributable to Monsanto Company for the three and six months ended Feb. 28, 2018 , and Feb. 28, 2017.

We also provide information regarding free cash flow, an important liquidity measure for Monsanto. We define free cash flow as the total of net cash provided or required by operating activities less capital expenditures. Free cash flow does not represent the residual cash flow available for discretionary expenditures. We believe that free cash flow is useful to investors and management as a measure of the ability of our business to generate cash. Once business needs and obligations are met, this cash can be used to reinvest in the company for future growth or to return to our shareowners through dividend payments or share repurchases. Free cash flow is also used as one of the performance measures in determining incentive compensation. See the "Financial Condition, Liquidity and Capital Resources — Cash Flow" section of MD&A for a reconciliation of free cash flow to net cash provided by operating activities and capital expenditures on the Statements of Consolidated Cash Flows.

Executive Summary

Consolidated Operating Results — Net sales decreased $55 million in the three month comparison. Net sales decreased $47 million in the six month comparison. The primary contributor to the decreases in both period comparisons was a decline in corn seed and traits, partially offset by increases in net sales in soybean seed and traits and agricultural productivity. The net sales decrease in corn seed and traits was driven by lower volume due to timing delays in the United States that is expected to be recovered later in fiscal 2018 coupled with decreased acres in the United States in the second quarter comparison and decreased global acres in the six-month comparison. In addition, lower average net selling prices in Brazil resulting from lower commodity prices also contributed to the decrease. The net sales increase in soybean seed and traits was primarily driven by increased *Intacta RR2 PRO* penetration in South America and improved pricing. The increase in agricultural productivity reflects higher average net selling price of *Roundup* and other glyphosate-based herbicides, partially offset by decreased volume of *Roundup* and other glyphosate-based herbicides.

For a detailed discussion of the factors affecting net sales, cost of goods sold and gross profit, see the "Seeds and Genomics Segment" and "Agricultural Productivity Segment" sections in this MD&A.

Net income attributable to Monsanto Company was $3.27 per share in the second quarter of fiscal 2018 , compared to $3.09 per share in the second quarter of fiscal 2017 . Net income attributable to Monsanto Company was $3.65 per share in the first half of fiscal 2018 , compared to $3.16 per share in the first half of fiscal 2017 .

Financial Condition, Liquidity and Capital Resources — At Feb. 28, 2018 , working capital was $2,907 million compared with $2,593 million at Feb. 28, 2017 , an increase of $314 million , and compared with $2,253 million at Aug. 31, 2017 , an increase of $654 million . For a detailed discussion of the factors affecting the working capital comparison, see the "Working Capital and Financial Condition" section of the "Financial Condition, Liquidity and Capital Resources" section in this MD&A.

In the first six months of fiscal 2018 , net cash provided by operating activities was $1,630 million compared with $1,537 million provided in the first six months of fiscal 2017 . Net cash required by investing activities was $366 million

in the first six months of fiscal 2018 compared with $438 million in the first six months of fiscal 2017 . Net cash required by financing activities was $714 million in the first six months of fiscal 2018 compared with net cash required by financing activities of $494 million in the first six months of fiscal 2017 . Free cash flow was an inflow of $969 million in the first six months of fiscal 2018 compared with an inflow of $994 million in the first six months of fiscal 2017 . For a detailed discussion of the factors affecting the free cash flow comparison, see the "Cash Flow" section of the "Financial Condition, Liquidity and Capital Resources" section in this MD&A.

At Feb. 28, 2018 , our debt-to-capital ratio was 50 percent compared with 56 percent at Aug. 31, 2017 . The six percentage point decrease from Aug. 31, 2017 , was primarily due to an increase in shareowners' equity resulting from earnings, issuance of shares under employee stock plans and the reclassification of accumulated other comprehensive loss tax effects during fiscal 2018 due to the adoption of "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income". See Item 1 — Financial Statements — Note 2 — New Accounting Standards . These increases were partially offset by the payment of dividends and a decrease in debt due to the redemption of all of the outstanding 4.30% Notes due in 2045 ("4.30% Notes").

For a detailed discussion see the "Capital Resources and Liquidity" section of the "Financial Condition, Liquidity and Capital Resources" section in this MD&A.

Pending Merger with Bayer — On Sept. 14, 2016, we entered into an agreement and plan of merger (the "Merger Agreement") with Bayer Aktiengesellschaft, a German stock corporation ("Bayer"), and KWA Investment Co., a Delaware corporation and an indirect wholly owned subsidiary of Bayer ("Merger Sub"). The Merger Agreement provides, among other things and subject to the terms and conditions set forth therein, that Merger Sub will be merged with and into the company (the "Merger"), with the company continuing as the surviving corporation and as a wholly owned subsidiary of Bayer. The Merger Agreement provides that each share of common stock of the company, par value $0.01 per share (other than certain shares specified in the Merger Agreement), outstanding immediately prior to the effective time of the Merger will be automatically converted into the right to receive $128.00 in cash, without interest. The obligation of the parties to complete the Merger is subject to customary closing conditions, including, among others, (i) the approval of the adoption of the Merger Agreement by the holders of a majority of the outstanding shares of common stock of the company entitled to vote, which was obtained at a special meeting of the company's shareowners held on Dec. 13, 2016, (ii) the expiration or earlier termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, (iii) the adoption of all approvals necessary for the completion of the Merger by the European Commission under Council Regulation (EC) No. 139/2004, (iv) the receipt of certain other required foreign antitrust approvals, (v) completion of the review process by the Committee on Foreign Investment in the United States ("CFIUS"), which has been completed, (vi) no approvals related to CFIUS or antitrust laws having been made or obtained with the imposition of conditions that, together with Divestiture Actions (as defined in the Merger Agreement) undertaken, would reasonably be expected to have a Substantial Detriment (as defined in the Merger Agreement), (vii) no law, order or injunction that is in effect that enjoins or otherwise prohibits the completion of the Merger having been enacted, issued, promulgated, enforced or entered into after Sept. 14, 2016, by a court or other governmental entity of competent jurisdiction, (viii) the accuracy of the representations and warranties contained in the Merger Agreement (subject to certain qualifications) and (ix) the performance by the parties of their respective obligations under the Merger Agreement in all material respects. Additional information about the Merger Agreement is set forth in our Current Report on Form 8-K filed with the Securities and Exchange Commission ("SEC") on Sept. 20, 2016.

Outlook — We plan to continue to innovate and improve our products in order to maintain market leadership and to support near-term performance. We are focused on applying innovation and technology to make our farmer customers more productive and profitable by protecting and improving yields and improving the ways they can produce food, fiber, feed and fuel. We use the tools of modern biology and technology in an effort to make seeds easier to grow, to allow farmers to do more with fewer resources and to help produce healthier foods for consumers. Our current research and development ("R&D") strategy and commercial priorities are focused on bringing our farmer customers integrated yield solutions through our innovative platforms in plant breeding, biotechnology, chemistry, biologicals and data science. Our capabilities in biotechnology and breeding research are generating a rich product pipeline that is expected to drive long-term growth. The viability of our product pipeline depends in part on the speed of regulatory approvals globally, continued patent and legal rights to offer our products, general public acceptance of the products and the value they will deliver to the market.

Roundup herbicides remain the largest crop protection brand globally. Monsanto's crop protection business focus is to support Monsanto's *Roundup Ready* crops strategically through our weed management platform that delivers weed control offerings for farmers. We are focused on managing the costs associated with our agricultural chemistry business as that sector matures globally.

See the "Outlook" section of MD&A for a more detailed discussion of some of the opportunities and risks we have identified for our business. For additional information related to the outlook for Monsanto, see "Caution Regarding Forward-Looking Statements" at the beginning of this Report on Form 10-Q, Part II — Item 1A — Risk Factors below and Part I — Item 1A — Risk Factors of our Report on Form 10-K for the fiscal year ended Aug. 31, 2017 .

New Accounting Pronouncements — See Item 1 — Financial Statements — Note 2 — New Accounting Standards — for a description of recently issued and adopted accounting pronouncements, including the dates of adoption and impacts on our results of operations, financial position and cash flows, as applicable.

RESULTS OF OPERATIONS

	Three Months Ended			Six Months Ended		
(Dollars in millions, except per share amounts)	**Feb. 28, 2018**	Feb. 28, 2017	Increase/ (Decrease)	**Feb. 28, 2018**	Feb. 28, 2017	Increase/ (Decrease)
Net Sales	**$5,019**	$5,074	(1)%	**$7,677**	$7,724	(1)%
Cost of goods sold	**2,053**	2,122	(3)%	**3,399**	3,513	(3)%
Gross Profit	**2,966**	2,952	—%	**4,278**	4,211	2%
Operating Expenses:						
Selling, general and administrative expenses	**652**	657	(1)%	**1,316**	1,242	6%
Research and development expenses	**394**	381	3%	**776**	751	3%
Restructuring charges	**(1)**	23	NM	**3**	(13)	NM
Pending Bayer transaction related costs	**25**	27	(7)%	**45**	120	(63)%
Total Operating Expenses	**1,070**	1,088	(2)%	**2,140**	2,100	2%
Income from Operations	**1,896**	1,864	2%	**2,138**	2,111	1%
Interest expense	**105**	102	3%	**229**	238	(4)%
Interest income	**(24)**	(18)	33%	**(39)**	(36)	8%
Other income, net	**(24)**	(88)	(73)%	**(121)**	(45)	NM
Income from Continuing Operations Before Income Taxes	**1,839**	1,868	(2)%	**2,069**	1,954	6%
Income tax provision	**381**	505	(25)%	**441**	566	(22)%
Income from Continuing Operations Including Portion Attributable to Noncontrolling Interest	**$1,458**	$1,363	7%	**$1,628**	$1,388	17%
Discontinued Operations:						
Income from operations of discontinued business	**2**	5	(60)%	**4**	21	(81)%
Income tax provision	**—**	2	NM	**1**	8	(88)%
Income from Discontinued Operations	**2**	3	(33)%	**3**	13	(77)%
Net Income	**$1,460**	$1,366	7%	**$1,631**	$1,401	16%
Less: Net income (loss) attributable to noncontrolling interest	**1**	(2)	NM	**3**	4	(25)%
Net Income Attributable to Monsanto Company	**$1,459**	$1,368	7%	**$1,628**	$1,397	17%
Diluted Earnings per Share Attributable to Monsanto Company:						
Income from continuing operations	**$ 3.27**	$ 3.08	6%	**3.64**	3.13	16%
Income from discontinued operations	**—**	0.01	NM	**0.01**	0.03	(67)%
Net Income Attributable to Monsanto Company	**$ 3.27**	$ 3.09	6%	**3.65**	3.16	16%
NM = Not Meaningful						
Effective Tax Rate	**21%**	27%		**21%**	29%	
Comparison as a Percent of Net Sales:						
Cost of goods sold	**41%**	42%		**44%**	45%	
Gross profit	**59%**	58%		**56%**	55%	
Selling, general and administrative expenses	**13%**	13%		**17%**	16%	
Research and development expenses	**8%**	8%		**10%**	10%	
Total operating expenses	**21%**	21%		**28%**	27%	
Income from continuing operations before income taxes	**37%**	37%		**27%**	25%	
Net income attributable to Monsanto Company	**29%**	27%		**21%**	18%	

Second Quarter Fiscal Year 2018

The following explanations discuss the significant components of our results of operations that affected the quarter-to-quarter comparison of our second quarter income from continuing operations:

Net sales decreased $55 million in the second quarter of fiscal 2018 from the same quarter a year ago. Our Seeds and Genomics segment net sales decreased $98 million , and our Agricultural Productivity segment net sales increased $43 million in the three-month comparison.

The following table presents the percentage increase/(decrease) in second quarter of fiscal 2018 worldwide net sales by segment compared with net sales in the prior year quarter, including the effects of volume, price and currency:

	Second Quarter 2018 Percentage Change in Net Sales vs. Second Quarter 2017			
	Volume	Price	Currency	Total
Seeds and Genomics Segment	(4)%	—%	2%	(2)%
Agricultural Productivity Segment	(7)%	10%	2%	5%
Total Monsanto Company	(5)%	2%	2%	(1)%

Cost of goods sold for the total company decreased $69 million , or three percent , in the three-month comparison. Cost of goods sold as a percent of net sales for the total company decreased one percentage point to 41 percent . Our Seeds and Genomics segment cost of goods sold as a percent of Seeds and Genomics net sales decreased one percentage point to 33 percent , and our Agricultural Productivity segment cost of goods sold as a percent of Agricultural Productivity net sales decreased five percentage points to 75 percent .

The following table represents the percentage increase/(decrease) in second quarter of fiscal 2018 worldwide cost of goods sold by segment compared with cost of goods sold in the prior year quarter, including the effects of volume, costs and currency:

	Second Quarter 2018 Percentage Change in Cost of Goods Sold vs. Second Quarter 2017			
	Volume	Costs (1)	Currency	Total
Seeds and Genomics Segment	(7)%	—%	3%	(4)%
Agricultural Productivity Segment	(8)%	5%	1%	(2)%
Total Monsanto Company	(7)%	2%	2%	(3)%

(1) There were no restructuring charges during the second quarter of fiscal 2018 included in the Seeds and Genomics segment. During the second quarter of fiscal 2017, Seeds and Genomics segment included $5 million of restructuring charges related to facility closures and exit costs from our supply chain operations and discontinued products. Agricultural Productivity segment included $4 million and $1 million of restructuring charges related to exit costs related to our manufacturing facilities during the second quarter of fiscal 2018 and 2017, respectively. See Item 1 — Financial Statements — Note 3 — Restructuring — for further information.

Gross profit increased $14 million in the three-month comparison. Gross profit as a percent of net sales for the total company increased one percentage point to 59 percent in the second quarter of fiscal 2018 . Our Seeds and Genomics segment gross profit as a percent of Seed and Genomics net sales increased one percentage point to 67 percent , and our Agricultural Productivity segment gross profit as a percent of Agricultural Productivity net sales increased five percentage points to 25 percent .

For a detailed discussion of the factors affecting net sales, cost of goods sold and gross profit comparison, see the “Seeds and Genomics Segment” and the “Agricultural Productivity Segment” sections.

Operating expenses decreased $18 million in the second quarter of fiscal 2018 compared to the prior year comparable quarter. The decrease in operating expenses is due to a decrease in restructuring charges.

In the second quarter of fiscal 2018 , selling, general and administrative expenses (“SG&A”) expenses decreased $5 million , and R&D expenses increased $13 million .

As a percent of net sales, SG&A expenses remained consistent at 13 percent , and R&D expenses remained consistent at eight percent for the second quarter of fiscal 2018 compared to the prior year quarter.

Restructuring charges fluctuated $24 million resulting in a net reversal of expense of $1 million in the second quarter of fiscal 2018 compared to expense of $23 million in the second quarter of fiscal 2017 . See discussion of the 2015 Restructuring Plan in Item 1 — Financial Statements — Note 3 — Restructuring.

In the second quarter of fiscal 2018 , costs related to the pending Bayer transaction were $25 million compared to $27 million in the second quarter of fiscal 2017 .

Other income — net was $24 million of income in the second quarter of fiscal 2018 , a $64 million decrease from income of $88 million in the second quarter of fiscal 2017 . The fluctuation was primarily due to the absence of a gain of approximately $83 million recorded on the sale of our European-based silthiofam seed-treatment chemical business (the "Latitude business") in the second quarter of fiscal 2017 partially offset by a gain of approximately $50 million related to non-core asset sales in our Agricultural Productivity segment in the second quarter of fiscal 2018.

Income tax provision was $381 million in the second quarter of fiscal 2018 , a decrease of $124 million from the prior year quarter. This decrease was primarily driven by lower tax in the United States resulting from the enactment of tax legislation, commonly known as the Tax Cuts and Jobs Act on Dec. 22, 2017, which lowered the corporate tax rate from 35 percent to 21 percent effective Jan. 1, 2018. The effective tax rate decreased to 21 percent from 27 percent in the second quarter of fiscal 2017 , primarily due to the lower corporate tax rate in the United States. We also had certain one-time effects of the Tax Cuts and Jobs Act that impacted our tax provision. We have provisionally estimated those adjustments to be a net $3 million discrete tax expense, but this estimate is subject to change during the one year measurement period prescribed by the SEC in Staff Accounting Bulletin 118 ("SAB 118"). See Item 1 — Financial Statements — Note 10 — Income Taxes — for further discussion regarding these provisional estimates.

First Half of Fiscal Year 2018

The following explanations discuss the significant components of our results of operations that affected the six-month comparison of our first half of fiscal years 2018 and 2017 income from continuing operations:

Net sales decreased $47 million , or one percent, in the first half of fiscal 2018 from the same period a year ago. Our Seeds and Genomics segment net sales decreased $176 million , and our Agricultural Productivity segment net sales increased $129 million in the six-month comparison.

The following table presents the percentage increase/(decrease) in first half of fiscal 2018 worldwide net sales by segment compared with net sales in the prior year first half, including the effects of volume, price and currency:

	First Half 2018 Percentage Change in Net Sales vs. First Half 2017			
	Volume	Price	Currency	Total
Seeds and Genomics Segment	(6)%	2%	1%	(3)%
Agricultural Productivity Segment	(2)%	8%	2%	8%
Total Monsanto Company	(5)%	3%	1%	(1)%

Cost of goods sold for the total company decreased $114 million , or three percent , in the first half of fiscal 2018 from the same period a year ago. Cost of goods sold as a percent of net sales for the total company decreased one percentage point to 44 percent . Our Seeds and Genomics segment cost of goods sold as a percent of Seeds and Genomics net sales decreased one percentage point to 34 percent , and our Agricultural Productivity segment cost of goods sold as a percent of Agricultural Productivity net sales decreased five percentage points to 78 percent .

The following table represents the percentage increase/(decrease) in first half of fiscal 2018 worldwide cost of goods sold by segment compared with cost of goods sold in the first half of prior year, including the effects of volume, costs and currency:

	First Half 2018 Percentage Change in Cost of Goods Sold vs. First Half 2017			
	Volume	Costs (1)	Currency	Total
Seeds and Genomics Segment	(8)%	—%	2%	(6)%
Agricultural Productivity Segment	(2)%	1%	2%	1%
Total Monsanto Company	(6)%	1%	2%	(3)%

(1) Seeds and Genomics segment included $10 million and $6 million of restructuring charges related to facility closures and exit costs from our supply chain operations and discontinued products during the first half of fiscal 2018 and 2017,

respectively. Agricultural Productivity segment included $7 million and $1 million of restructuring charges related to exit costs related to our manufacturing facilities during the first half of fiscal 2018 and 2017, respectively. See Item 1 — Financial Statements — Note 3 — Restructuring — for further information.

Gross profit increased $67 million in the first half of fiscal 2018 from the same period a year ago. Gross profit as a percent of net sales for the total company increased one percentage point to 56 percent in the first half of fiscal 2018 . Our Seeds and Genomics segment gross profit as a percent of Seed and Genomics net sales increased one percentage point to 66 percent , and our Agricultural Productivity segment gross profit as a percent of Agricultural Productivity net sales increased five percentage points to 22 percent .

For a detailed discussion of the factors affecting net sales, cost of goods sold and gross profit comparison, see the "Seeds and Genomics Segment" and the "Agricultural Productivity Segment" sections.

Operating expenses increased $40 million in the first half of fiscal 2018 compared to the prior year comparable period. The increase in operating expenses is due to an increase in SG&A and R&D period over period, partially offset by a decrease in pending Bayer transaction related costs.

In the first half of fiscal 2018 , SG&A expenses increased $74 million , and R&D expenses increased $25 million . SG&A increased primarily due to inflation, higher marketing, depreciation and other administration expense partially offset by transformation savings.

As a percent of net sales, SG&A expenses increased one percentage point to 17 percent , and R&D expenses remained consistent at 10 percent for the first half of fiscal 2018 compared to the same period a year ago.

Restructuring charges fluctuated $16 million resulting in an expense of $3 million in the first half of fiscal 2018 compared to a net reversal of expense of $13 million in the first half of fiscal 2017 . The six months ended Feb. 28, 2017, included the reversal of $57 million of previously recognized expense due to changes in estimates related to work force reductions. See discussion of the 2015 Restructuring Plan in Item 1 — Financial Statements — Note 3 — Restructuring .

In the first half of fiscal 2018 , costs related to the pending Bayer transaction were $45 million compared to $120 million in the first half of fiscal 2017 .

Other income — net was $121 million of income in the first half of fiscal 2018 , a $76 million increase from income of $45 million in the first half of fiscal 2017 . The fluctuation was primarily due to gains of approximately $135 million from the sale of assets, primarily the sale of the Precision Planting equipment business within the Seeds and Genomics segment and other non-core assets within both segments, and the absence of a loss of $37 million that was reclassified into earnings in fiscal 2017 as a result of the discontinuance of an interest rate hedge. These increases were partially offset by the absence of a gain of approximately $83 million recorded on the sale of our Latitude business in the first half of fiscal 2017.

Income tax provision was $441 million in the first half of fiscal 2018 , a decrease of $125 million from the prior year comparable period. This decrease was primarily driven by lower tax in the United States resulting from the enactment of tax legislation, commonly known as the Tax Cuts and Jobs Act on Dec. 22, 2017, which lowered the corporate tax rate from 35 percent to 21 percent effective Jan. 1, 2018. This reduction was partially offset by an increase in tax expense due to an increase in pretax income. The effective tax rate decreased to 21 percent from 29 percent in the first half of fiscal 2017 , primarily due to the lower corporate tax rate in the United States. We also had certain one-time effects of the Tax Cuts and Jobs Act that impacted our tax provision. We have provisionally estimated those adjustments to be a net $3 million discrete tax expense, but this estimate is subject to change during the one year measurement period prescribed by the SEC in SAB 118. See Item 1 — Financial Statements — Note 10 — Income Taxes — for further discussion regarding these provisional estimates.

SEEDS AND GENOMICS SEGMENT

(Dollars in millions)	Three Months Ended			Six Months Ended		
	Feb. 28, 2018	Feb. 28, 2017	Increase/ (Decrease)	**Feb. 28, 2018**	Feb. 28, 2017	Increase/ (Decrease)
Net Sales						
Corn seed and traits	**$ 2,721**	$ 2,902	(6)%	**3,508**	3,851	(9)%
Soybean seed and traits	**912**	862	6%	**1,640**	1,462	12%
Cotton seed and traits	**123**	108	14%	**243**	224	8%
Vegetable seeds	**198**	193	3%	**312**	324	(4)%
All other crops seeds and traits	**134**	121	11%	**155**	173	(10)%
Total Net Sales	**$ 4,088**	$ 4,186	(2)%	**5,858**	6,034	(3)%
Gross Profit						
Corn seed and traits	**$ 1,790**	$ 1,932	(7)%	**2,205**	2,467	(11)%
Soybean seed and traits	**672**	628	7%	**1,260**	1,079	17%
Cotton seed and traits	**101**	77	31%	**174**	150	16%
Vegetable seeds	**93**	99	(6)%	**151**	168	(10)%
All other crops seeds and traits	**81**	41	98%	**79**	53	49%
Total Gross Profit	**$ 2,737**	$ 2,777	(1)%	**3,869**	3,917	(1)%
EBIT (1)	**$ 1,779**	$ 1,839	(3)%	**2,081**	2,038	2%

(1) EBIT is defined as earnings (loss) before interest and taxes. Interest and taxes are recorded on a total company basis. We do not record these items at the segment level. See Item 1 — Financial Statements — Note 20 — Segment Information and the "Overview — Non-GAAP Financial Measures" section of MD&A for further details.

Seeds and Genomics Financial Performance — Second Quarter Fiscal Year 2018

Net sales for the Seeds and Genomics segment decreased $98 million in the second quarter of fiscal 2018 compared to the second quarter of fiscal 2017 . The net sales decrease of $181 million in corn seed and traits was primarily driven by lower volume due to timing delays in the United States that is expected to be recovered later in fiscal 2018 and decreased acres in the United States. In addition, lower average net selling prices in Brazil resulting from lower commodity prices also contributed to the decrease. The net sales decrease in corn seed and traits was partially offset by a net sales increase of $50 million within soybean seed and traits primarily driven by increased *Intacta RR2 PRO* penetration in South America and improved pricing.

Cost of goods sold in the Seeds and Genomics segment primarily represents field growing, plant processing and distribution costs. Cost of goods sold decreased $58 million , or four percent , to $1,351 million in the second quarter of fiscal 2018 compared to $1,409 million in the second quarter of fiscal 2017 . The decrease was primarily the result of lower sales volumes in corn seed and traits as noted in the net sales discussion.

Gross profit for the Seeds and Genomics segment decreased $40 million in the second quarter of fiscal 2018 compared to the second quarter of fiscal 2017 . The decrease in gross profit was primarily due to lower volume and lower average net selling prices in corn seeds and traits as noted in the net sales discussion. These decreases were partially offset by soybean seed and traits gross profit increasing due to increased *Intacta RR2 PRO* penetration in South America and improved pricing also noted in the net sales discussion.

Gross profit as a percent of net sales for the segment increased one percent point to 67 percent in the second quarter of fiscal 2018 compared the second quarter of fiscal 2017 .

Seeds and Genomics Financial Performance — First Half Fiscal Year 2018

Net sales for the Seeds and Genomics segment decreased $176 million in the first half of fiscal 2018 compared to the first half of fiscal 2017 . The net sales decrease of $343 million in corn seed and traits was primarily driven by lower volumes, of which a significant portion of this was in the United States and is expected to be recovered later in fiscal 2018, and decreased global acres. In addition, lower average net selling prices in Brazil resulting from lower commodity prices also contributed to the decrease. The net sales decrease in corn seed and traits was partially offset by a net sales increase of $178 million within soybean seed and traits primarily driven by increased *Intacta RR2 PRO* penetration in South America and improved pricing.

Cost of goods sold decreased $128 million , or six percent , to $1,989 million in the first half of fiscal 2018 compared to $2,117 million in the first half of fiscal 2017 . The decrease was primarily the result of lower sales volumes in corn seed and traits as noted in the net sales discussion.

Gross profit for the Seeds and Genomics segment decreased $48 million in the first half of fiscal 2018 compared to the first half of fiscal 2017 . The decrease in gross profit was primarily due to lower volume and lower average net selling prices in corn seed and traits as noted in the net sales discussion. This decrease was partially offset by soybean seed and traits gross profit increasing due to increased *Intacta RR2 PRO* penetration in South America and improved pricing also noted in the net sales discussion.

Gross profit as a percent of net sales for the segment increased one percent point to 66 percent in the first half of fiscal 2018 compared to the first half of fiscal 2017 .

AGRICULTURAL PRODUCTIVITY SEGMENT

	Three Months Ended			Six Months Ended		
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017	Increase	**Feb. 28, 2018**	Feb. 28, 2017	Increase
Net Sales						
Agricultural productivity	**$ 931**	$ 888	5%	**1,819**	1,690	8%
Total Net Sales	**$ 931**	$ 888	5%	**1,819**	1,690	8%
Gross Profit						
Agricultural productivity	**$ 229**	$ 175	31%	**409**	294	39%
Total Gross Profit	**$ 229**	$ 175	31%	**409**	294	39%
EBIT (1)	**$ 143**	$ 119	20%	**181**	132	37%

(1) EBIT is defined as earnings (loss) before interest and taxes. Interest and taxes are recorded on a total company basis. We do not record these items at the segment level. See Item 1 — Financial Statements — Note 20 — Segment Information — and the "Overview — Non-GAAP Financial Measures" section of MD&A for further details.

Agricultural Productivity Financial Performance — Second Quarter Fiscal Year 2018

Net sales in our Agricultural Productivity segment increased $43 million in the second quarter of fiscal 2018 compared to the second quarter of fiscal 2017 primarily due to higher average net selling price of *Roundup* and other glyphosate-based herbicides, partially offset by decreased volume of *Roundup* and other glyphosate-based herbicides.

Cost of goods sold in the Agricultural Productivity segment primarily represents material, conversion and distribution costs. Cost of goods sold decreased $11 million , or two percent, in the second quarter of fiscal 2018 to $702 million compared to $ 713 million in the second quarter of fiscal 2017 , primarily due to the decreased volume noted in the net sales discussion.

The net sales and cost of goods sold discussed above resulted in higher gross profit of $54 million in the second quarter of fiscal 2018 compared to the second quarter of fiscal 2017 . Gross profit as a percent of net sales for the Agricultural Productivity segment increased to 25 percent in the second quarter of fiscal 2018 compared to 20 percent in the second quarter of fiscal 2017 .

Agricultural Productivity Financial Performance — First Half Fiscal Year 2018

Net sales in our Agricultural Productivity segment increased $129 million in the first half of fiscal 2018 compared to the first half of fiscal 2017 primarily due to higher average net selling price of *Roundup* and other glyphosate-based herbicides, partially offset by decreased volume of *Roundup* and other glyphosate-based herbicides.
Cost of goods sold increased $14 million , or one percent, in the first half of fiscal 2018 to $1,410 million compared to $ 1,396 million in the first half of fiscal 2017 .

The net sales and cost of goods sold discussed above resulted in higher gross profit of $115 million in the first half of fiscal 2018 compared to the first half of fiscal 2017 . Gross profit as a percent of net sales for the Agricultural Productivity segment increased to 22 percent in the first half of fiscal 2018 compared to 17 percent in the first half of fiscal 2017 .

RESTRUCTURING

On Oct. 6, 2015, the company approved actions to realign resources to increase productivity, enhance competitiveness by delivering cost improvements and support long-term growth. On Jan. 5, 2016, the company

approved additional actions which, together with the Oct. 6, 2015 actions, comprise the 2015 Restructuring Plan. Actions include streamlining and reprioritizing some commercial, enabling, supply chain and research and development efforts.

Cumulative pretax charges related to the 2015 Restructuring Plan are estimated to be in the range of $890 million to $955 million . Implementation of the 2015 Restructuring Plan is expected to be completed by the end of fiscal year 2018, and substantially all of the cash payments are expected to be made by the end of fiscal year 2018. These pretax charges are currently estimated to be comprised of the following categories: $315 million to $325 million in work force reductions, including severance and related benefits; $95 million to $130 million in facility closures/exit costs, including contract termination costs; $480 million to $500 million in asset impairments and write-offs related to property, plant and equipment, inventory and goodwill and other assets. These pretax charges are currently estimated to be incurred primarily by the Seeds and Genomics segment.

For the six months ended Feb. 28, 2018 , pretax restructuring charges of $20 million were recorded within the Statement of Consolidated Operations, of which $17 million and $3 million were included in cost of goods sold and restructuring charges, respectively. For the six months ended Feb. 28, 2017 , a pretax net reversal of restructuring charges of $6 million was recorded within the Statement of Consolidated Operations, of which $7 million of expense and a net reversal of $13 million of previously recognized expense were included in cost of goods sold and restructuring charges, respectively. For additional information on the 2015 Restructuring Plan, see Item 1 — Financial Statements — Note 3 — Restructuring .

FINANCIAL CONDITION, LIQUIDITY AND CAPITAL RESOURCES

Working Capital and Financial Condition

	As of		
(Dollars in millions, except current ratio)	**Feb. 28, 2018**	Feb. 28, 2017	Aug. 31, 2017
Cash and Cash Equivalents (1)	**$ 2,409**	$ 2,281	$ 1,856
Trade Receivables, Net (1)	**2,520**	2,605	2,161
Inventory, Net	**4,015**	3,621	3,340
Other Current Assets (1)(2)	**1,112**	1,375	1,294
Total Current Assets	**$ 10,056**	$ 9,882	$ 8,651
Short-Term Debt, Including Current Portion of Long-Term Debt (1)	**$ 1,212**	$ 1,611	$ 870
Accounts Payable (1)	**875**	785	1,068
Accrued Liabilities (1)(3)	**5,062**	4,893	4,460
Total Current Liabilities	**$ 7,149**	$ 7,289	$ 6,398
Working Capital (4)	**$ 2,907**	$ 2,593	$ 2,253
Current Ratio (4)	**1.41:1**	1.36:1	1.35:1

(1) May include restrictions as a result of variable interest entities. See the Statements of Consolidated Financial Position and Item 1 — Financial Statements — Note 5 — Variable Interest Entities and Investments — for more information.
(2) Includes short-term investments, miscellaneous receivables, assets held for sale and other current assets.
(3) Includes income taxes payable, accrued compensation and benefits, accrued marketing programs, deferred revenues, grower production accruals, dividends payable, customer payable, restructuring reserves and miscellaneous short-term accruals.
(4) Working capital is total current assets less total current liabilities; current ratio represents total current assets divided by total current liabilities.

Feb. 28, 2018 , compared with Aug. 31, 2017 : Working capital increased $654 million , or 29 percent , between Aug. 31, 2017 , and Feb. 28, 2018 , primarily because of the following factors:

- Cash and cash equivalents increased $553 million between the respective periods primarily due to operating cash flows of $1,630 million resulting from profitability and other investments and property disposal proceeds. These increases are partially offset by capital expenditures, payments of dividends and repayment of debt, including the repayment of the 4.30% Notes.
- Trade receivables, net increased $359 million between the respective periods primarily due to the timing of revenue and collections due to the seasonality of our business.
- Inventory increased $675 million between the respective periods primarily due to increased seeds and genomics inventory, primarily in the United States, resulting from lower net sales. In addition, agricultural productivity inventory increased due to the increase of dicamba-based herbicide inventory partially offset by a reduction in glyphosate-based herbicides inventory.
- Accounts payable decreased $193 million between the respective periods primarily due to timing of payments.

These increases to working capital between Feb. 28, 2018 , and Aug. 31, 2017 , were partially offset by the following factors:

- Other current assets decreased $182 million primarily due to a decrease in assets held for sale of $169 million primarily resulting from the sale of the Precision Planting equipment business during the first quarter of fiscal 2018.
- Short-term debt, including the current portion of long-term debt, increased $342 million between the respective periods primarily due to $300 million of Senior Notes reclassified from long-term to short-term debt.
- Accrued liabilities increased $602 million between the respective periods primarily due to the following fluctuations:
  - Deferred revenues increased $959 million due to customer prepayments in the United States that occurred in the first half of fiscal 2018 partially offset by recognition of *Intacta RR2 PRO* prepayments in Brazil from fiscal 2017.
  - Grower production accruals increased $130 million primarily due to timing of payments related to the harvest season in the United States for which payments have not yet been made to growers.
  - Income taxes payable increased $142 million primarily due to the seasonality of the United States business and timing of tax payments.

The increases in accrued liabilities were partially offset by the following:

  - Accrued compensation and benefits decreased $317 million primarily due to the payment of fiscal 2017 incentive accruals partially offset by current year incentive accruals.
  - Accrued marketing programs decreased $164 million between the respective periods primarily due to the timing of payments.
  - Customer payable decreased $93 million due to customer refunds paid in the first half of fiscal 2018 in the United States.

Feb. 28, 2018 , compared with Feb. 28, 2017 : Working capital increased $314 million between Feb. 28, 2017 , and Feb. 28, 2018 , primarily because of the following factors:

- Cash and cash equivalents increased $128 million between the respective periods primarily due to cash provided by operating activities, other investments and property disposal proceeds and stock option proceeds. These increases are partially offset by payments of dividends, repayments of debt and capital expenditures.
- Inventory increased $394 million between the respective periods primarily due to lower corn net sales in the United States and Brazil resulting in higher seeds and genomics inventory. In addition, agricultural productivity inventory increased due to the increase of dicamba-based herbicide inventory partially offset by a reduction in glyphosate-based herbicides inventory.
- Short-term debt, including the current portion of long-term debt, decreased $399 million between the respective periods primarily due to commercial paper borrowings outstanding in prior year of $552 million and the repayment of $500 million of Senior Notes offset by $600 million of Senior Notes reclassed to short-term debt.

These increases to working capital between Feb. 28, 2018 , and Feb. 28, 2017 , were offset by the following factors:

- Trade receivables, net decreased $85 million between the respective periods primarily due to lower net sales in the United States and South America.
- Other current assets decreased $263 million primarily due to a decrease in assets held for sale of $259 million as assets related to the Precision Planting equipment business were sold during the first quarter of fiscal 2018 and packaging materials previously included in assets held for sale were reclassified from assets held for sale to other assets.
- Accounts payable increased $90 million between the respective periods primarily due to timing of payments.
- Accrued liabilities increased $169 million between the respective periods primarily due to the following:
  - Accrued marketing programs increased $191 million primarily due to higher market funding accruals and timing of payments in North America partially offset by reduced *Intacta RR2 PRO* market funding in South America.
  - Deferred revenue increased $279 million primarily due higher prepayments in the United States and Brazil.

The decreases in accrued liabilities were partially offset by the following:

  - Income taxes payable decreased $107 million primarily due to payments of accrued liabilities that reduced taxable income.
  - Restructuring reserves decreased $90 million as a result of payments made under the 2015 Restructuring Plan and changes in estimates related to work force reductions.

- Miscellaneous short-term accruals decreased $61 million primarily due to environmental and litigation payments during the period.

Customer Financing Programs : We participate in various customer financing programs in an effort to reduce our receivables risk and to reduce our reliance on commercial paper borrowings. As of Feb. 28, 2018 , the programs had $66 million in outstanding balances, and we received $28 million of proceeds during the first six months of fiscal 2018 under these programs. Our future maximum payout under the programs, including our responsibility for our guarantees with lenders, was $70 million as of Feb. 28, 2018 . See Item 1 — Financial Statements — Note 4 — Customer Financing Programs — for further discussion of these programs.

Cash Flow

	Six Months Ended	
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017
Net Cash Provided by Operating Activities	**$ 1,630**	$ 1,537
Net Cash Required by Investing Activities	**(366)**	(438)
Net Cash Required by Financing Activities	**(714)**	(494)
Effect of Exchange Rate Changes on Cash and Cash Equivalents	**3**	—
Net Increase in Cash and Cash Equivalents	**$ 553**	$ 605

	Six Months Ended	
(Dollars in millions)	**Feb. 28, 2018**	Feb. 28, 2017
Net Cash Provided by Operating Activities	**$ 1,630**	$ 1,537
Capital Expenditures	**(661)**	(543)
Free Cash Flow (1)	**$ 969**	$ 994

(1) Free cash flow represents the total of net cash provided or required by operating activities less capital expenditures. (See the “Overview—Non-GAAP Financial Measures” section of MD&A for a further discussion.)

Operating: The increase in cash provided by operating activities of $93 million in the first six months of fiscal 2018 compared to the first six months of fiscal 2017 was primarily due to the following:

- Increased net income compared to prior period,
- Accounts receivable providing more cash due to increased collections compared to the prior period coupled with lower accounts receivable balances due to lower net sales,
- An increase in deferred revenue due to higher prepayments,
- An increase in cash provided by other items primarily due to timing of value added tax payments and the timing of point-of-delivery activity in Brazil, and
- The absence of the cash payments related to the PCB settlement described in Item 1 — Financial Statements — Note 19 — Commitments and Contingencies .

These increases in cash provided by operating activities were partially offset by more cash required due to increased inventory levels resulting from increased seeds and genomics inventory due to lower net sales and build up of dicamba-based herbicide inventory, and more cash required for incentives, market funding, commissions, grower production accruals, trade payables and other miscellaneous accruals.

Investing: Cash required by investing activities in the first six months of fiscal 2018 decreased compared to the first six months of fiscal 2017 due to an increase in cash provided from the sale of assets, including the sale of our Precision Planting equipment business, partially offset by an increase in capital expenditures related to the construction of a dicamba-based herbicide manufacturing facility in Luling, Louisiana.

Financing: The increase in cash required by financing activities in the first six months of fiscal 2018 compared to the first six months of fiscal 2017 was primarily due to less debt proceeds in the current period as the prior period included proceeds from the delayed draw term loan. This increase in cash required by financing activities was partially offset by higher book overdrafts in fiscal 2018 and less cash required for debt payments.

Capital Resources and Liquidity

(Dollars in millions, except debt-to-capital ratio)	As of		
	Feb. 28, 2018	Feb. 28, 2017	Aug. 31, 2017
Short-Term Debt	**$ 1,212**	$ 1,611	$ 870
Long-Term Debt	**6,635**	7,560	7,254
Total Monsanto Company Shareowners' Equity	**7,754**	5,540	6,438
Debt-to-Capital Ratio (1)	**50%**	62%	56%

(1) Debt-to-Capital ratio represents short-term and long-term debt divided by total Monsanto Company shareowners' equity, short-term and long-term debt.

A major source of our liquidity is operating cash flows, which can be derived from net income. This cash-generating capability and access to long-term investment grade debt financing markets provides us with the financial flexibility we need to meet operating, investing and financing needs. We believe our sources of liquidity will be sufficient to sustain operations and to finance anticipated investments. To the extent that cash provided by operating activities is not sufficient to fund our cash needs, we believe short-term commercial paper borrowings can be used to finance these requirements. We had no commercial paper borrowings outstanding as of Feb. 28, 2018 .

Debt and Other Credit Arrangements: In April 2016, Monsanto filed a shelf registration with the SEC ("2016 shelf registration") that allows the company to issue a maximum aggregate amount of $6 billion of debt, equity and hybrid offerings. The 2016 shelf registration expires in April 2019.

We have a $3 billion credit facility agreement that provides a senior unsecured revolving credit facility through Mar. 27, 2020. As of Feb. 28, 2018 , we did not have any borrowings under this credit facility, and we were in compliance with all debt covenants.

In October 2016, we entered into a $1 billion delayed draw term loan facility that matures the earlier of October 2019 or the consummation of the Bayer merger. Borrowings under the facility were $500 million as of Feb. 28, 2018 , and Aug. 31,2017. Proceeds were used for general corporate purposes.

On Jan. 29, 2018, we redeemed all $365 million of the 4.30% Notes, due Jan. 29, 2045.

As of Feb. 28, 2018 , our debt-to-capital ratio was 50 percent compared with 56 percent at Aug. 31, 2017 , and 62 percent at Feb. 28, 2017 . The six percentage point decrease from Aug. 31, 2017 , was primarily due to an increase in shareowners' equity resulting from earnings, issuance of shares under employee stock plans and the reclassification of accumulated other comprehensive loss tax effects during fiscal 2018 due to the adoption of "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income". See Item 1 — Financial Statements — Note 2 — New Accounting Standards . These increases were partially offset by the payment of dividends and a decrease in debt due to the redemption of all of the outstanding 4.30% Notes. The 12 percentage point decrease from Feb. 28, 2017 , was primarily driven by an increase in shareowners' equity resulting from earnings partially offset by the payment of dividends and a decrease in debt outstanding at Feb. 28, 2018 , compared to Feb. 28, 2017 , primarily due to repayment of Senior Notes and decreased commercial paper.

We held cash and cash equivalents and short-term investments of $2,414 million and $1,864 million as of Feb. 28, 2018 , and Aug. 31, 2017 , respectively, of which $1,047 million and $1,281 million was held by foreign entities, respectively. As of Aug. 31, 2017 , we had approximately $4.5 billion of undistributed earnings of our foreign operations. As a result of the Tax Cuts and Jobs Act, certain undistributed earnings are subject to the one-time deemed repatriation tax and could be subject to additional foreign withholding and U.S. state income taxes if they are repatriated. We are currently evaluating the potential income tax liabilities that would result from future repatriations, if any, and how the Tax Cuts and Jobs Act will affect our existing accounting position regarding the indefinite reinvestment of undistributed foreign earnings. As of Feb. 28, 2018 , we continue to remain indefinitely reinvested on most of our undistributed foreign earnings and have provisionally not recorded any additional tax cost associated with the excess of our basis in our foreign affiliates for financial reporting over the related tax basis (including undistributed earnings) for potential future repatriations of foreign earnings. This provisional estimate is subject to change during the one year measurement period prescribed by the SEC in SAB 118. See Item 1 — Financial Statements — Note 10 — Income Taxes — for further discussion regarding this provisional estimate.

Dividends : In the first half of fiscal year 2018, we declared the following dividends:

Quarter Ending	Declaration Date	Dividend	Payment Date	To Shareowners of Record as of:
Feb. 28, 2018	Jan. 31, 2018	54 cents	Apr. 27, 2018	Apr. 6, 2018
Feb. 28, 2018	Dec. 4, 2017	54 cents	Jan. 26, 2018	Jan. 5, 2018

Pension Contributions: As of Feb. 28, 2018 , we have not made any contributions to our U.S. qualified pension plan. Based on the funded status of our plan, we are not required to make any contributions. However, we expect to contribute $60 million during fiscal 2018.

2018 Disposals: On Jul. 25, 2017, we signed a definitive agreement with AGCO Corporation to sell the Precision Planting equipment business for approximately $200 million in cash. In the first quarter of fiscal 2018, we closed on the sale of the Precision Planting equipment business, and a gain of approximately $52 million was recognized within other income, net in the Statement of Consolidated Operations.

In addition to the aforementioned divestment, during the three and six months ended Feb. 28, 2018, we recognized income of approximately $50 million and $83 million within other income, net in the Statements of Consolidated Operations as a result of non-core asset sales.

2017 Disposals: In the second quarter of fiscal 2017, we divested our Latitude business previously reported as part of the Agricultural Productivity segment for approximately $140 million in cash. Approximately $85 million , less the carrying amount of assets sold of approximately $2 million , was recognized within other income, net in the Statement of Consolidated Operations. The recognition of the remaining $55 million is contingent on silthiofam re-registration within the European Union.

Contractual Obligations : There have been no significant changes to the contractual obligations table as disclosed in our Annual Report on Form 10-K for the year ended Aug. 31, 2017 .

Off-Balance Sheet Arrangements

Under our Separation Agreement with Pharmacia, we are required to indemnify Pharmacia for certain matters, such as environmental remediation obligations and litigation. To the extent we are currently managing any such matters, we evaluate them in the course of managing our own potential liabilities and establish reserves as appropriate. However, additional matters may arise in the future, and we may manage, settle or pay judgments or damages with respect to those matters in order to mitigate contingent liability and protect Pharmacia and Monsanto. See Item 1 — Financial Statements — Note 19 — Commitments and Contingencies and Part II — Item 1 — Legal Proceedings — for further information.

We have entered into various customer financing programs which are accounted for in accordance with the *Transfers and Servicing* topic of the ASC. See Item 1 — Financial Statements — Note 4 — Customer Financing Programs — for further information.

In the first quarter of fiscal 2018, we completed a significant expansion of our Chesterfield, Missouri, facility. In December 2013, we executed the first of a series of incentive agreements with the County of St. Louis, Missouri. Under these agreements we have transferred our Chesterfield, Missouri facility to St. Louis County and received Industrial Revenue Bonds in the amount of up to $470 million, which enables us to reduce our cost of constructing and operating the expansion by reducing certain state and local tax expenditures. We immediately leased the facility from the County of St. Louis and have an option to purchase the facility upon tendering the Industrial Revenue Bonds we received to the County. The payments due to us in relation to the Industrial Revenue Bonds and owed by us in relation to the lease of the facility qualify for the right of offset under ASC 210, *Balance Sheet* , in our Statements of Consolidated Financial Position. As such, neither the Industrial Revenue Bonds nor the lease obligation are recorded in the Statements of Consolidated Financial Position as an asset or liability, respectively. The Chesterfield facility and the expansion are being treated as being owned by us.

OUTLOOK

We believe we have achieved an industry-leading position in the areas in which we compete in both of our business segments. However, the outlook for each part of our businesses is quite different. In the Seeds and Genomics segment, our seeds and traits business is expected to expand via our investments in new products. In the Agricultural Productivity segment, we expect to continue to deliver new product formulations and systematic approaches that support our Seeds and Genomics segment.

We believe that our company is positioned to deliver value-added products to growers enabling us to grow our gross profit in the future. We expect to see strong cash flow in the future, and we remain committed to returning value to shareowners through vehicles such as investments that expand the business and dividends. We will remain focused on cost and cash management, both to support the progress we have made in managing our investment in working capital and to realize the full earnings potential of our businesses. We are in the process of executing our plan to reduce operational spending through fiscal year 2018. We plan to continue providing external financing opportunities for our customers as a way to manage receivables for each of our segments.

Outside of the United States, our businesses will continue to face challenges related to the risks inherent in operating in international markets. We will continue to consider, assess and address these developments and the challenges and issues they place on our businesses. We believe we have taken appropriate measures to manage our credit exposure, which has the potential to affect sales negatively in the near term. In addition, volatility in foreign currency exchange rates may negatively affect our profitability, the book value of our assets outside the United States and our shareowners' equity. We continuously monitor the potential for currency devaluation in Brazil, Argentina and Ukraine, including changes to exchange rate mechanisms or structures, and the potential impact on future periods. Subsequent to recent currency devaluations in Argentina, we continue to monitor the economic situations and the impact of currency volatility on earnings.

On Sept. 14, 2016, we entered into the Merger Agreement with Bayer, which provides for the acquisition of the company by Bayer for a price of $128 per share in cash. Upon consummation of the Merger, we will no longer be a standalone public company. The combined business is expected to benefit from the integration of Monsanto's seeds and traits business and The Climate Corporation platform with Bayer's broad crop protection product line, which we believe will result in significant benefits for farmers.

Seeds and Genomics

Our capabilities in plant breeding and biotechnology R&D are generating a rich and balanced product pipeline that we expect will drive long-term growth. We plan to continue to invest in the areas of seeds, genomics, breeding, biotechnology, digital agriculture and biologicals and to invest in technology arrangements that have the potential to increase the efficiency and effectiveness of our R&D efforts. We believe that our seeds and traits businesses will have near-term growth opportunities through a combination of improved breeding, continued growth of stacked biotech traits and expansion in established and emerging markets.

We expect advanced breeding techniques combined with improved production practices and capital investments will continue to contribute to improved germplasm quality and yields of our seed offerings, leading to increased global demand for both our branded germplasm and our licensed germplasm. Our vegetable seeds business, which has a portfolio focused on 21 crops, continues to develop and deliver new innovative products to our customers as we continue to focus on our breeding investments and process optimization. We expect to see continued competition in seeds and genomics. We believe we will maintain a competitive advantage because of our global breeding capabilities and our multiple-channel sales approach in the United States for corn and soybean seeds.

Commercialization of second- and third-generation traits and the stacking of multiple traits in corn, soy and cotton are expected to increase penetration in approved markets, particularly as we continue to price our traits in line with the value growers have experienced from their use. We continue to experience an increase in competition in biotechnology as more competitors launch traits in the United States and internationally. Acquisitions may also present mid-to-longer term opportunities to increase penetration of our traits.

Intacta RR2 PRO technology has been fully approved by Brazil, Argentina, Paraguay, Uruguay and their key export markets, and we are currently selling that technology in Brazil, Argentina, Paraguay and Uruguay. In South America, we generally operate using a business model working with growers and grain handlers to collect technology value for soybeans either on the sale of new certified seed or through a point-of-delivery system for seeds that have been saved and replanted. The system has been operating in Brazil for many years, and nearly all of the grain handlers have enrolled in the point-of-delivery system. In Argentina, nearly all of the exporting grain handlers and key local elevators have enrolled in the point-of-delivery system. As previously announced, due to uncertainty raised by actions of the government of Argentina, and while we continue to pursue value capture in Argentina, we have placed a hold on the launch of new soybean traits in that country. We continue to pursue a long-term system that operates with integrity and predictability and will continue to evaluate our soybean business in Argentina. With regard to first generation *Roundup Ready* soybeans, we have deferred collection of royalties in Brazil until a final decision is reached by the courts on our patent term correction case. The Supreme Court of Brazil has granted certiorari of the case. We do not plan to collect on first generation *Roundup Ready* soybeans in Argentina.

Our international traits businesses, in particular, are likely to continue to face unpredictable regulatory environments that may be highly politicized. We operate in volatile, and often difficult, economic and political environments. Longer term, income is expected to grow in South America as farmers choose to plant more of our approved traits in soybeans, corn and cotton. The agricultural economy in Brazil and Argentina could be impacted by global commodity prices, particularly for corn and soybeans. We continue to maintain our strict credit policy, expand our grain-based collection systems and focus on cash collection and sales, as part of a continuous effort to manage our risk in Brazil and Argentina against such volatility.

Agricultural Productivity

Our Agricultural Productivity businesses operate in markets that are competitive. Gross profit and cash flow levels will fluctuate in the future based on global business dynamics including market supply, demand and manufacturing capacity. We expect to maintain our branded prices at a slight premium over gene ric products, and we believe our *Roundup* herbicide business will continue to be a sustainable source of cash and gross profit. Our crop protection business focus is to support our *Roundup Ready* crops strategically through our weed management platform that delivers weed control offerings for farmers. We continue to invest in the growth of our *Roundup Ready XTEND* crop system, which includes capital expenditures to construct a dicamba manufacturing facility in Luling, Louisiana. In addition, we expect our lawn-and-garden business will continue to be a solid contributor to our Agricultural Productivity segment.

Global glyphosate producers have the capacity to supply the market, but global dynamics including demand, environmental regulation compliance and raw material availability can cause fluctuations in supply and price of those generic products. We expect the fluctuation in global capacity will impact the selling prices and margins of *Roundup* brands and our third party sourcing opportunities.

Other Information

As discussed in Item 1 — Financial Statements — Note 19 — Commitments and Contingencies — and Part II — Item 1 — Legal Proceedings, Monsanto is involved in a number of lawsuits and claims relating to a variety of issues, including lawsuits that relate to intellectual property disputes. We expect that such disputes will continue to occur as the agricultural biotechnology industry evolves. Third parties, including non-governmental organizations, have challenged the validity or enforceability of patents issued to the company regarding our biotechnology products. For additional information related to the outlook for Monsanto, see “Caution Regarding Forward-Looking Statements” at the beginning of this Report on Form 10-Q, Part II — Item 1A — Risk Factors below and Part I — Item 1A — Risk Factors of our Report on Form 10-K for the fiscal year ended Aug. 31, 2017 .

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

In preparing our consolidated financial statements, we must select and apply various accounting policies. Our most significant policies are described in Part II — Item 8 — Note 2 — Significant Accounting Policies — to the consolidated financial statements contained in our Report on Form 10-K for the fiscal year ended Aug. 31, 2017 . In order to apply our accounting policies, we often need to make estimates based on judgments about future events. In making such estimates, we rely on historical experience, market and other conditions, and assumptions that we believe to be reasonable. However, the estimation process is by its nature uncertain given that estimates depend on events over which we may not have control. If market and other conditions change from those that we anticipate, our financial condition, results of operations or liquidity may be affected materially. In addition, if our assumptions change, we may need to revise our estimates or take other corrective actions, either of which may have a material effect on our financial condition, results of operations or liquidity.

The estimates that have an inherently higher degree of uncertainty and require our most significant judgments are outlined in Management’s Discussion and Analysis of Financial Condition and Results of Operations contained in our Report on Form 10-K for fiscal year ended Aug. 31, 2017 . Had we used estimates different from any of those contained in such Report on Form 10-K, our financial condition, profitability or liquidity for the current period could have been materially different from those presented in this Form 10-Q.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There are no material changes related to market risk from the disclosures in Monsanto’s Report on Form 10-K for the fiscal year ended Aug. 31, 2017.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, including our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of Feb. 28, 2018 . The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Based upon the evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of Feb. 28, 2018 .

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting during the company's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are involved in various legal proceedings that arise in the ordinary course of our business, as well as proceedings that we have considered to be material under SEC regulations. These include proceedings to which we are party in our own name and proceedings to which our former parent Pharmacia LLC, or its former subsidiary Solutia, Inc., is a party but that we manage and for which we are responsible pursuant to certain indemnification agreements. Information regarding certain material proceedings and the possible effects on our business of proceedings we are defending is disclosed in Part I — Financial Information — Item 1 — Financial Statements — Note 19 — Commitments and Contingencies — under the subheading "Environmental and Litigation Liabilities" and is incorporated by reference herein. Other information with respect to legal proceedings appears in our Report on Form 10-K for the fiscal year ended Aug. 31, 2017 .

ITEM 1A. RISK FACTORS

Please see "Caution Regarding Forward-Looking Statements," at the beginning of this Report on Form 10-Q and Part I — Item 1A of our Report on Form 10-K for the fiscal year ended Aug. 31, 2017 , for information regarding risk factors. There have been no material changes from the risk factors previously disclosed in our Report on Form 10-K.

24. RECENT DEVELOPMENTS AND OUTLOOK

24.1 Recent Developments

In April 2018, a subsidiary of the investment company Temasek Holdings (Private) Limited, which is wholly-owned by the Government of Singapore, subscribed to 31 million new shares of Bayer AG issued from the Company's authorized capital against cash contributions and excluding the subscription rights of existing Bayer shareholders, corresponding to approximately 3.6% of Bayer AG's increased share capital, for total gross proceeds of €3.0 billion. The net proceeds from the Temasek Investment were used to reduce the commitments under the Loan Facilities Agreement by US$ 3.7 billion to US$46.0 billion.

On May 3, 2018, Bayer sold 28.81 million Covestro Shares, representing a 14.2% interest in Covestro AG at a price of €75.50 per share to institutional investors. The net proceeds of the sale amounted to €2.2 billion and were used to reduce the commitments under the Loan Facilities Agreement. Following the acquisition of Covestro Shares from Bayer Pension Trust in May 2018, Bayer now holds 6.8% of Covestro Shares, which it intends to use to repay the Exchangeable Bonds that mature in 2020. Following this transaction, Bayer's remaining interest in Covestro is being accounted as other financial assets measured for at fair value through profit and loss.

On May 31, 2018, all closing conditions required to complete the Transaction (other than those conditions that by their nature are to be satisfied at the closing of the Transaction), including the receipt of required antitrust and other regulatory approvals were satisfied or waived and the Transaction is expected to be completed on or about June 7, 2018. In connection with obtaining required antitrust approvals to complete the Transaction, Bayer has entered into the Transaction-related Divestments, including the Second BASF Divestiture Package in April 2018. For more information see "*8. The Acquisition of Monsanto*" and "*9. Pro Forma Financial Information – Effects of the Covestro Divestments and the Acquisition of Monsanto on the Consolidated Financial Information of Bayer for the Fiscal Year Ended December 31, 2017, and as of and for the Three Months Ended March* 31, 2018."

Except as described above, between March 31, 2018 and the date of this Prospectus, there have been no material changes to Bayer's financial position, financial performance or cash flows, or Bayer's trading position.

24.2 Economic Outlook

The global economy should continue to grow in 2018. Although Bayer estimates that the risks for the world economy have increased in view of growing political tensions, the recent tax cuts in the United States should stimulate growth, and Bayer also anticipates robust growth in Europe in 2018. As for the Emerging Markets, Bayer expects growth in economic output to match the pace of the prior year, while for China, Bayer anticipates continuing strong growth at a slightly slower rate.[1]

Bayer anticipates that the pharmaceuticals market will post slightly higher growth in 2018 (+4%) than in 2017 (+3%). The main growth drivers are likely to be new product launches. The expiration of patents is expected to have a negative impact as it could result in increased competition from generics. Bayer expects a positive development in the United States, Europe, Latin America and Asia, but slower growth in the Japanese pharmaceuticals market.

As regards the consumer health market, Bayer anticipates growth of 3% to 4% in 2018, the same as in 2017. Bayer believes the market is likely to remain tight as a result of rising price pressure from e-commerce and consolidation of the retail sector.

Bayer estimates that the global seed and crop protection market should develop positively in 2018 (+3%), also compared to 2017 (+1%). In Bayer's view, the principal growth momentum will come from Latin America, mainly due to the expected normalization of inventories of crop protection products in Brazil and a further increase soybean acreages. Bayer also expects the market to grow in the Asia / Pacific region and in Eastern Europe. The persistently low price of agricultural commodities in North America and Western Europe is likely to be reflected in sluggish growth, which will lag behind the overall global development.

Following a slight upturn in the animal health market at the end of 2017, Bayer expects growth to pick up in 2018 (+4%) compared with 2017 (+2%). The main factors here in Bayer's view are likely to be an improvement in market conditions in the farm animals sector, along with further robust demand in the companion animals business.

The market growth forecast for 2018 is represented on a currency-adjusted basis and is based on Bayer's own estimate except the growth forecast for the Pharmaceuticals market which is taken from CBI – IQVIA Market Prognosis.

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[1] IHS Markit – Global Executive Summary; Global Insight – Comparative World Overview

24.3 Outlook for Bayer's Business

In light of the Transaction, which is expected to be completed on or about June 7, 2018 and will have a material impact on Crop Science, the outlook for the Bayer Group (excluding Monsanto) published by Bayer in its annual report as of and for the fiscal year ended December 31, 2017 and confirmed in its interim report as of and for the three months ended March 31, 2018, which was published on May 3, 2018, is no longer meaningful.

For its segments with the exception of Crop Science, taking into account the potential risks and opportunities, Bayer confirms the currency-adjusted segment forecasts for its operating performance published in its annual report as of and for the fiscal year ended December 31, 2017 on February 28, 2018 and confirmed on May 3, 2018 in its interim report as of and for the three months ended March 31, 2018, which are based on current business developments and the Bayer Group's internal planning (excluding Monsanto). The forecasts are based on the exchange rates as of March 31, 2018. To enhance the comparability of operating performance, the forecasts are also adjusted for currency effects applying the average monthly exchange rates for 2017. A 1% appreciation (depreciation) of the euro against all other currencies would decrease (increase) sales on an annual basis by some €250 million and EBITDA before special items by about €70 million:

- For Pharmaceuticals, Bayer plans to generate sales of more than €16.5 billion, taking into account product supply constraints out of the Leverkusen Supply Center. This corresponds to a low-single-digit percentage increase on a currency- and portfolio-adjusted basis. Bayer aims to raise sales of its key growth products Xarelto™, Eylea™, Stivarga™, Xofigo™ and Adempas™ towards €7 billion. Bayer expects EBITDA before special items to decline by a low-single-digit percentage (currency-adjusted: increase by a low-single-digit percentage), and anticipate a slight decline in the EBITDA margin before special items.
- For Consumer Health, Bayer expects sales of more than €5.5 billion, which would be at the prior-year level on a currency- and portfolio adjusted basis. Bayer expects EBITDA before special items to decline by a low-single-digit percentage (currency-adjusted: increase by a low-single-digit percentage).
- For Animal Health, Bayer expects a currency- and portfolio-adjusted increase in sales by a low-single-digit percentage. Bayer expects EBITDA before special items to decline by a mid-single-digit percentage (currency-adjusted: at the prior-year level). Both sales and EBITDA before special items are negatively impacted by revised financial reporting standards (IFRS 15).

25. GLOSSARY

€, EUR or Euro	The single currency of the participating member states of the European Union.
ACS	Acute coronary syndrome. An umbrella term for situations where the blood supplied to the heart muscle is suddenly blocked.
Adempas™	For the treatment of particular forms of chronic thromboembolic pulmonary hypertension and pulmonary arterial hypertension. It is a member of a class of vasodilation agents known as soluble guanylate cyclase (sGC) modulators.
American Depositary Receipts (ADRs)	ADRs are certificates representing so called American Depositary Shares (ADSs). ADSs are shares that represent the equity of a company and that are used to facilitate trading in non-U.S. companies in the United States. Each ADS represents actual shares at a certain ratio. The ADRs are issued by a U.S. depositary. Bayer's ADR program is led by The Bank of New York Mellon (BNY Mellon). Under the current ADR-ratio, four ADRs represent one share in the Company.
Advantage™ product family	A line of flea, tick and worm control products.
Agronomic practices	Steps farmers incorporate into their farm management systems to improve soil quality, enhance water use, manage crop residue and improve the environment through better fertilizer management.
Aleve™	A pain relief medicine that is provided in tablet form.
Aliphatic isocyanate HDI	Specialty chemicals with functional groups. HDI stands for hexamethylene diisocyanate and is used to produce adducts and oligomers, used as hardeners in high performance coatings.
Alka-Seltzer™	A line of products that treat gastric complaints.
Alka-Seltzer™ Plus	A line of products that treat cold symptoms.
Analgesic	A generic term for a drug that relieves pain.
ANDA	Abbreviated New Drug Application. Under the Drug Price Competition and Patent Term Restoration Act, a company can seek approval from the FDA to market a generic drug before the expiration of a patent relating to the brand name drug upon which the generic is based. The first company to submit an Abbreviated New Drug Application (ANDA) with the FDA has the exclusive right to market the generic drug for 180 days.
Anetumab Ravtansine	A pipeline project currently in Phase II clinical trials, Anetumab is an antibody drug conjugate (ADC) aimed at treating various cancer types including ovarian cancer and mesothelioma.
ADC	Antibody-drug conjugates. Monoclonal antibodies (mAbs) attached to biologically active drugs by chemical linkers with labile bonds. By combining the unique targeting of mAbs with the cancer-killing ability of cytotoxic drugs, ADCs allow sensitive discrimination between healthy and diseased tissue.
Anticoagulant	A substance that prevents blood from clotting.
Asgrow	One of Monsanto's seed brands.
Aspirin™	A pain reliever. Its active ingredient has anti-platelet (i.e., reducing blood clotting) and blood thinning properties.
Aspirin™ Cardio	Aspirin™ Cardio is used for the secondary prevention of heart attacks.
Basta™	A non-selective weed control brand in plantation crops like sugar cane, oil palm, orchards or vine.

BayRisk	A Bayer early warning system with the purpose of identifying at an early stage any developments that are material and/or could endanger the company's continued existence.
Baytril™	An antibiotic for veterinary use in various indications in companion and farm animals.
Bepanthen™/Bepanthol™	A medicated skin care brand offering a range of healing and protection products for demanding skin conditions.
Betaferon™/Betaseron™	Betaferon™ / Betaseron™ is used for the treatment of multiple sclerosis, particularly to reduce the number of relapses in patients with relapsing forms of multiple sclerosis.
Biologicals	Substances derived from biological sources and subject to unique regulatory requirements in the U.S. and many other jurisdictions.
Bronchiectasis	A condition where the bronchial tubes of the lungs are permanently damaged, widened, and thickened.
Canesten™	Skin, foot and intimate health products used for the diagnosis, treatment and prevention of discomforting and embarrassing skin and intimate health conditions.
Cartagena Protocol	An international agreement that sets out the risk assessment framework for ensuring an adequate level of protection regarding the transfer, handling and use of genetically modified organisms (GMOs).
CBD	Convention on Biological Diversity, effective December 1993, which focuses on the conservation of biological diversity and the management of risks associated with genetically modified organisms.
CFIUS	Committee on Foreign Investment in the United States.
CHMP	Committee for Medicinal Products for Human Use.
Chronic thromboembolic pulmonary hypertension (CTEPH)	A type of rare pulmonary hypertension.
Cipro™/Ciprobay™	An anti-bacterial drug used for a wide variety of infections.
Citracal™	Calcium citrate supplements.
ClariSpray™	A 24-hour nasal spray form of Claritin™ which is available on the U.S. market.
Claritin™	An antihistamine brand that consists of allergy medicines in tablet and spray forms.
Clinical trials	Clinical trials account for a major portion of the development process for drugs and are an essential tool for determining the efficacy and safety/tolerability of new product candidates before they can be used to diagnose or treat diseases.
Code	German Corporate Governance Code (*Deutscher Corporate Governance Kodex*).
Companion vector-borne diseases	Diseases transmitted by blood-feeding ectoparasites like ticks, fleas, mosquitoes and sand flies.
Copanlisib	A pipeline project currently in a Phase II clinical trial, copanlisib is a novel, intravenous phosphatidylinositol 3-kinase (PI3K) inhibitor aimed at treating various types of lymphoma.
Coppertone™	A line of sunscreen products.
Core EBIT	Core earnings before interest and taxes. Core EBIT is defined as EBIT plus/minus amortization and impairment losses/loss reversals on intangible assets, impairment losses/impairment loss reversals on property, plant and equipment and accelerated

	depreciation included in special items as well as special items (other than amortization and impairment losses / loss reversals).
Core EPS	Core earnings per share. Core EPS is defined as Core EBIT plus/minus financial result, special items in the financial result, income taxes, special items in income taxes, tax effects relating to amortization/impairment losses/impairment loss reversals and special items, income after income taxes attributable to noncontrolling interest and portion of the above-mentioned adjustments attributable to noncontrolling interest; divided by the weighted average number of shares.
CTD	Common technical document. A regulatory document containing detailed information about the drug candidate, including its efficacy, safety and quality that is required in most jurisdictions as part of the registration process.
Currenta	The service company responsible for managing and operating the Chempark sites in Leverkusen Dormagen and Krefeld-Uerdingen, Germany.
Cydectin™	A de-wormer for beef and dairy cattle.
Cystic fibrosis	Cystic fibrosis is a progressive, genetic disease that causes persistent lung infections and limits the ability to breathe over time.
Darolutamide	A pipeline project currently in Phase III clinical trials, darolutamide is a novel oral androgen receptor inhibitor aimed at treating patients with prostate cancer, specifically non-metastatic castration-resistant prostate cancer and metastatic hormone-sensitive prostate cancer.
De Ruiter	One of Monsanto's seed brands.
DEKALB	One of Monsanto's seed brands.
Deltapine	One of Monsanto's seed brands.
Dicamba	One of Monsanto's herbicides.
Diffuse large B-cell lymphoma (DLBCL)	An aggressive form of non-Hodgkin lymphoma.
Diffuse systemic sclerosis	A subtype of systemic sclerosis (scleroderma). It is a chronic connective tissue disease generally classified as one of the autoimmune rheumatic diseases. It affects a variety of organs, such as the gastrointestinal tract, heart, muscles, and joints, causing severe damage.
Diphenylmethane diisocyanate (MDI)	A chemical compound that when combined with polyol makes a rigid foam, which is used as an industrial insulating material to reduce energy consumption, e.g., of buildings and refrigerators.
Dr. Scholl's™	Foot care products sold by Bayer in the Americas.
Drontal™ product family	A product family of de-wormers for the elimination of every type of intestinal worm commonly found in dogs and cats.
Drug pipeline projects	A drug pipeline project is a project regarding the set of drug candidates that a pharmaceutical company has under discovery or development at any given point in time.
EBIT	Earnings before interest and taxes, which is defined as income before income taxes less financial result.
EBITDA	Earnings before interest, taxes, depreciation and amortization, which is defined as the sum of EBIT plus amortization of intangible assets and the depreciation of property, plant and equipment, plus impairment losses and minus impairment loss reversals, recognized in profit or loss during the reporting period.

EBIT before special items	EBIT before special items is defined as the sum of EBIT plus/ minus special items, i.e., special charges or special gains, which may include, litigations, restructuring, integration costs, impairment losses and impairment loss reversals.
EBITDA before special items	EBITDA before special items is defined as the sum EBITDA plus/ minus special items, i.e., special charges or special gains, which may include, litigations, restructuring, integration costs, impairment losses and impairment loss reversals.
EBITDA margin before special items	EBITDA margin before special items is defined as EBITDA before special items divided by net sales.
Ectoparasiticides	An agent that is applied directly to the host to kill ectoparasites.
Ectopic pregnancy	A type of pregnancy occurring when the fertilized egg attaches itself in a place other than inside the uterus.
EEA	European Economic Area.
EFPIA	European Federation of Pharmaceutical Industries and Associations.
EFSA	European Food Safety Authority.
Elevit™	A prenatal nutritional supplement.
EMA	European Medicines Agency.
Embolic stroke of undetermined source	A clinical entity that refers to patients with embolic stroke for which the etiology of embolism remains unidentified despite thorough investigations ruling out established cardiac and vascular sources.
Endectocide	A drug effective against both endoparasites and ectoparasites (e.g., the macrolide antibiotic avermectin).
Endometriosis	A condition resulting from the appearance of endometrial tissue outside the uterus and causing pelvic pain especially associated with menstruation.
Ectoparasites	Parasites that live on or in the surface of the host but not within the body (e.g., fleas or lice).
Endoparasites	Parasites that live in the internal organs or tissue of the host (e.g., tapeworms).
Endoparasiticides	A drug effective against endoparasiticides.
EPA	United States Environmental Protection Agency.
EPS	Earnings per share. Calculated by dividing net income by the weighted average number of shares as defined in IAS 33.
ERS	ERS Genomics, Ireland. ERS Genomics was formed to commercialize the foundational CRISPR-Cas9 intellectual property held by Dr. Emmanuelle Charpentier.
Essure™	A medical device offering permanent birth control with a nonsurgical procedure.
EU	European Union.
EURIBOR	Euribor is short for Euro Interbank Offered Rate. The Euribor rates are based on the average interest rates at which a large panel of European banks borrows funds from one another.
EYLEA™	A product jointly marketed with Regeneron Pharmaceuticals, Inc., United States. The active ingredient, aflibercept, blocks the natural growth factor VEGF (vascular endothelial growth factor),

	thus preventing the abnormal formation of new blood vessels that tend to leak fluid. The medication is administered directly into the eye.
FAO	Food and Agricultural Organization of the United Nations.
FDA	United States Food and Drug Administration.
Finerenone	A pipeline project currently in Phase III clinical trials, Finerenone is a novel oral non-steroidal mineralocorticoid receptor antagonist (MRA) aimed at preventing the effects of high levels of aldosterone and cortisol, two hormones that, when unregulated, contribute to damage the heart and kidneys.
Folate	A salt or ester of folic acid.
FSMA	Financial Services and Markets Act 2000.
Fulacimstat	A pipeline project currently in Phase II clinical trials for the prevention of heart failure and the treatment of chronic kidney disease.
Fungicide	A chemical that destroys fungus.
GDP	Gross domestic product. The monetary value of all finished goods and services produced within a country's borders during a specific period of time.
Generic	A drug with active ingredient(s) and therapeutical efficacy equivalent to those of a drug that already has marketing authorization.
Germplasm	The genetic material of germ cells.
GHS	Globally harmonized system on the classification and labeling of chemicals.
GM	Genetically modified.
GMO	Genetically modified organism.
GRI	Global Reporting Initiative.
Hematology	The branch of medicine involving study and treatment of the blood.
Hemophilia	A medical condition in which the ability of the blood to clot is severely reduced, causing the sufferer to bleed severely from even a slight injury. The condition is typically caused by a hereditary lack of a coagulation factor, most often factor VIII.
Hexamethylene diisocyanate (HDI)	An aliphatic diisocyanate monomer typically used to produce oligomers and prepolymers that when combined with a polyol produce light-stable polyurethane.
Herbicide	Chemical product used to fight weeds by controlling weed pressure and providing reliable, season-long control and burndown solutions.
IAS 34	IFRS for interim financial reporting.
IASB	International Accounting Standards Board, London, an independent, private-sector body that develops, approves and issues the International Financial Reporting Standards (IFRS).
ICCA	International Council of Chemical Associations.
ICH	International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use.

ICS	Bayer Group's internal control system to ensure proper and effective accounting and financial reporting in accordance with the German Commercial Code.
Idiopathic intracranial hypertension	A condition due to high pressure within the spaces that surround the brain and spinal cord.
IDW	German Institute of Public Auditors (*Institut der Wirtschaftsprüfer*).
IFP-MA	International Federation of Pharmaceutical Manufacturers & Associations.
IFRS	International Financial Reporting Standards. A set of international accounting standards issued by the International Accounting Standards Board (IASB), London, and adopted by the European Union.
IFRS IC	International Financial Reporting Standards Interpretation Committee.
Immunotherapy	A type of cancer treatment that boosts the body's natural defenses to fight the cancer. It uses substances made by the body or in a laboratory to improve or restore immune system function. It is also referred to as biologic therapy.
Induced pluripotent stem cells (iPSCs)	Derived from skin or blood cells that have been reprogrammed back into an embryonic-like pluripotent state that enables the development of an unlimited source of any type of human cell needed for therapeutic purposes.
Insecticide	A substance used for killing insects.
IPR&D	In process research and development.
Isocyanate	A family of highly reactive, low molecular weight chemicals. They are widely used in the manufacture of flexible and rigid foams, fibers, coatings such as paints and varnishes, and elastomers, and are increasingly used in the automobile industry, autobody repair, and building insulation materials.
Kogenate™/Kovaltry™	A blood-clotting medicine allowing for prophylactic treatment of hemophilia A patients to prevent or reduce the frequency of bleeding episodes and in connection with peri-operative management (surgical prophylaxis). It has also demonstrated efficacy and tolerability as an on-demand therapy.
Larotrectinib (LOXO-101)	An oral, potent and highly selective TRK inhibitor.
Late-stage pipeline assets	Drugs or assets in their latest stage of development or already submitted for regulatory approval.
Levitra™	On demand treatment of erectile dysfunction.
Life Sciences	Bayer's business activities in health care and agriculture, comprising the Pharmaceuticals, Consumer Health and Crop Science divisions and the Animal Health business unit.
LIBOR	Benchmark rates that some of the world's leading banks charge each other for short-term loans. LIBOR or ICE LIBOR (previously BBA LIBOR) stands for Intercontinental Exchange London Interbank Offered Rate and serves as the first step to calculating interest rates on various loans throughout the world.
LOXO-195	A next-generation, selective TRK inhibitor capable of addressing potential mechanism of acquired resistance that may emerge in patients receiving larotrectinib or multikinase inhibitors with anti-TRK activity.

LTI	Long-term variable cash payment incentive.
Malignant pleural mesothelioma	A rare form of cancer commonly caused by occupational or environmental exposure to asbestos
Mastitis	Inflammation of the mammary gland or udder. Mastitis in dairy cows is caused by udder infections, usually resulting from bacteria introduced either during the milking process or from environmental contact.
MDI	Methylene diphenyl diisocyanate. MDI is a member of the diisocyanate family associated with polyurethane chemistry.
Member States	Designation for any European Union Member State.
Mesothelin	A tumor differentiation antigen that is normally present on the mesothelial cells lining the pleura, peritoneum and pericardium.
Mesothelioma	A cancer that most commonly starts in the layers of tissue that cover each lung (the pleura).
Mirena™ product family	Hormone-releasing intrauterine (in utero) devices that provide long-term reversible contraception.
MRI	Magnetic resonance imaging.
mRNA	Molecule in cells that carries codes from the DNA in the nucleus to the sites of protein synthesis in the cytoplasm (the ribosomes).
Multiple myeloma	A cancer that develops in the bone marrow, the spongy tissue found in the center of the bones.
NCE	New Chemical Entity. A drug that contains a drug substance or an active ingredient that has not been previously approved by the FDA or marketed in the United States.
NDA	New Drug Application.
Neglected tropical diseases	A diverse group of communicable diseases that prevail in tropical and subtropical conditions in 149 countries.
Nematicide	A substance used to kill nematodes, which may be plant parasites that can infest parts of the plant.
Nematode	Parasites that can infest all parts of the plant, leading to severe crop damages.
Neonicotinoid	A class of broad-spectrum insecticides having a chemical structure similar to that of nicotine and acting on the central nervous system of insects by selectively binding to nicotinic acetylcholine receptors.
Neurotrophic tyrosine receptor kinase (NTRK) gene fusions	Genetic alterations present across a wide range of tumors resulting in uncontrolled TRK signaling and tumor growth.
Nexavar™	An oral multikinase inhibitor that inhibits various signal pathways that are responsible for tumor growth.
NMEs	New molecular entities. New chemical or biological substances that have not been in development to date.
Non-Hodgkin lymphoma (NHL)	A cancer that starts in white blood cells called lymphocytes, which are part of the body's immune system.
NOPAT	Net operating profit after tax. Calculated by subtracting income taxes (which are based on a historical average tax of 24%) from EBIT.
OECD	Organisation for Economic Co-operation and Development.
One A Day™	A line of vitamin products geared toward gender-specific formulas for the different nutritional concerns of women and

	men, prenatal support for women before, during and after pregnancy and nutritional support for people over the age of 50 and growing teens.
OSHA	U.S. Occupational Safety and Health Administration.
OTC	Over-the-counter medicines that are sold directly to a consumer without a prescription from a health care professional.
Paragraph IV Certification	Under the Drug Price Competition and Patent Term Restoration Act, a Paragraph IV Certification refers to an applicant certifying in its ANDA that the patent in question is invalid or is not infringed by the generic product.
Parasiticides	A product that destroys parasites.
Peripheral artery disease (PAD)	A narrowing of the peripheral arteries to the legs, stomach, arms, and head – most commonly in the arteries of the legs.
Pharmacodynamic effects	The branch of pharmacology concerned with the effects of drugs and the mechanism of their action.
Pharmacokinetic effects	The study of the time course of drug absorption, distribution, metabolism, and excretion. Clinical pharmacokinetics is the application of pharmacokinetic principles to the safe and effective therapeutic management of drugs in an individual patient.
Phosgenation	The reaction or treatment with phosgene, which is a colorless poisonous gas made by the reaction of chlorine and carbon dioxide.
Polycarbonate	An engineering thermoplastic that may be easily worked, molded, and thermoformed.
Polyether polyol	The polymeric reaction product of an organic oxide and an initiator compound containing two or more active hydrogen atoms. The active hydrogen compound in the presence of a base catalyst initiates ring opening and oxide addition, which is continued until the desired molecular weight is obtained.
Polymer	Any of various chemical compounds made of smaller, identical molecules linked together.
Polyurethane	A class of plastics, namely polyol and isocyanate. These polymers display, e.g., thermal and sound insulating properties and are useful for a very broad spectrum of applications.
PPACA	U.S. Patient Protection and Affordable Care Act.
Preclinical development	Development phase during which substances are examined in various models to determine suitability for clinical trials and linked "first-in-man" studies.
Prophylaxis	A measure taken to maintain health and prevent the spread of disease.
Pulmonary arterial hypertension (PAH)	Type of high blood pressure that affects the arteries in the lungs and the right side of the heart.
Pulmonary embolism	Sudden blockage in a lung artery. The blockage usually is caused by a foreign body that travels to the lung from a vein in the leg.
Qui tam complaint	A type of whistleblower lawsuit that is brought under the U.S. False Claims Act, a law that rewards whistleblowers in successful cases where the government recovers funds lost to fraud.
R&D	Research and development activities.
Renal anemia	The medical term for anemia resulting from a kidney disease. Anemia is defined as a decrease in the total amount of red blood

	cells or hemoglobin in the blood. Hemoglobin (Hb) transports oxygen from the lungs to the rest of the body to give energy.
Reproductive toxicity	Includes adverse effects on sexual function and fertility in adult males and females, as well as adverse effects on development of the offspring. Adverse effects on sexual function and fertility include changes in the structure and function of the male and female reproductive systems and modifications in any other functions that are dependent upon the integrity of the reproductive systems.
Responsible Care™	An initiative, to which Bayer has voluntarily committed, to conserve natural resources, safely operate facilities and minimize the environmental impact of activities.
rFactor VIII	The recombinant protein rFactor VIII is used for the treatment of hemophilia A. Production is performed by way of a biotechnological procedure with modified cells, which produce human factor VIII molecules.
RMS	Reference Member State, i.e., the first member state in the EU where marketing authorization for a given drug has been approved.
ROCE	Return on capital employed. The ratio of net operating profit after tax to the average capital employed.
Roundup™	Agricultural herbicide products of Monsanto's agricultural chemicals business.
SDG	U.N. Sustainable Development Goals.
Seminis	One of Monsanto's seed brands.
Seresto™	A flea and tick collar for cats and dogs.
Soluble guanylate cyclase (sGC)	An enzyme and the only known nitric oxide (NO) receptor in the human body. Nitric oxide is formed in the endothelium – a thin layer of cells on the inside of blood vessels – and plays an important role in the human cardiovascular system. Nitric oxide activates soluble guanylate cyclase, which in turn initiates the production of the messenger cGMP (cyclic guanosine monophosphate).
Soluble guanylate cyclase (sGC) modulator	Acts as an activator and stimulator for sGC in the therapy for decompensated heart failure and pulmonary hypertension.
Staphylococcus aureus	A bacterium that causes most staphylococcus infections, including skin infections, pneumonia, food poisoning, toxic shock syndrome and blood poisoning (bacteremia).
STI	Short-term incentive program. A variable income component for all managerial staff.
Stivarga™	An oral multikinase inhibitor developed by Bayer. It inhibits various signal pathways that are responsible for tumor growth.
Symptomatic uterine fibroids	Uterine fibroids (or leiomyoma) are the most common pelvic tumors and the most common benign tumors in women. Approximately 25% of the fibroids are symptomatic (abnormal uterine bleeding, infertility, recurrent pregnancy loss, and the impact of the enlarged uterus on adjacent structures in the pelvis) and often lead to a significant reduction in patient's quality of life as a result of pelvic and abdominal pain, heavy menstrual bleeding, and fertility issues.
Tankmix compatibility	The compatibility of pesticides when mixed together. Some combinations can be physically or chemically incompatible, causing clumps and uneven distribution in a spray tank.

Therapeutic equivalence (bio-equivalence)	A drug that has the same pharmacological effects and actions in the treatment of illnesses as another drug even though the drugs may not be chemically equivalent.
Thrombosis	Development of a blood clot in the venous or arterial systems. The symptoms that occur with a thrombosis relate to the part of the vascular system in which they occur, the extent of the clot, and whether the clot breaks off and travels to another part of the body.
Toluene diisocyanate (TDI)	A chemical compound that when combined with polyol makes a flexible foam that is commonly used in products such as mattresses, upholstered furniture and automobile seats.
Trasylol™	A protease inhibitor used for reducing blood loss and the need for blood transfusions in patients undergoing certain types of heart surgery.
Triderm™	A topical dermatology product used for reducing itching, redness and swelling associated with many skin conditions.
TRK	Tropomyosin receptor kinase. Tropomyosin receptor kinase gene fusions are genetic alterations across a wide range of tumors resulting in uncontrolled TRK signaling and tumor growth.
TSCA	Toxic Substances Control Act.
U.S. GAAP	United States Generally Accepted Accounting Principles (U.S. GAAP), which are published by the Financial Accounting Standards Board and recognized by the Securities and Exchange Commission.
USDA	United States Department of Agriculture.
Vasodilation agents	Medicines that act directly on muscles in blood vessel walls to make blood vessels widen (dilate).
Vector control	Methods for the avoidance or targeted control of organisms that transmit pathogens triggering infectious diseases. Vectors include blood-sucking insects such as the Anopheles mosquito, which can transfer malaria parasites, for example.
Venous thromboembolism	A disease that includes both deep vein thrombosis (a blood clot in a deep vein) and pulmonary embolism.
Vericiguat	A pipeline project currently in Phase III clinical trials. Vericiguat is an oral once-daily stimulator of soluble guanylate cyclase (sGC) aimed at treating patients suffering from chronic heart failure with reduced ejection fraction.
Vilaprisan	A pipeline project currently in Phase II and Phase III clinical trials, Vilaprisan is a novel oral progesterone receptor modulator that could aid in treating endometriosis as well as tumors of the uterus.
WBCSD	World Business Council for Sustainable Development.
Xarelto™	An oral anticoagulant for the treatment and prevention of blood clots.
Xofigo™	Used for a treatment of adult patients with castration-resistant prostate cancer (CRPC) with symptomatic bone metastases but no known visceral metastases.
Xtendimax	One of Monsanto's herbicides (Dicamba-based).
Yaz™/Yasmin™/Yasminelle™	Oral contraceptives.
Zelnate™	An immunostimulant for cattle in the United States.