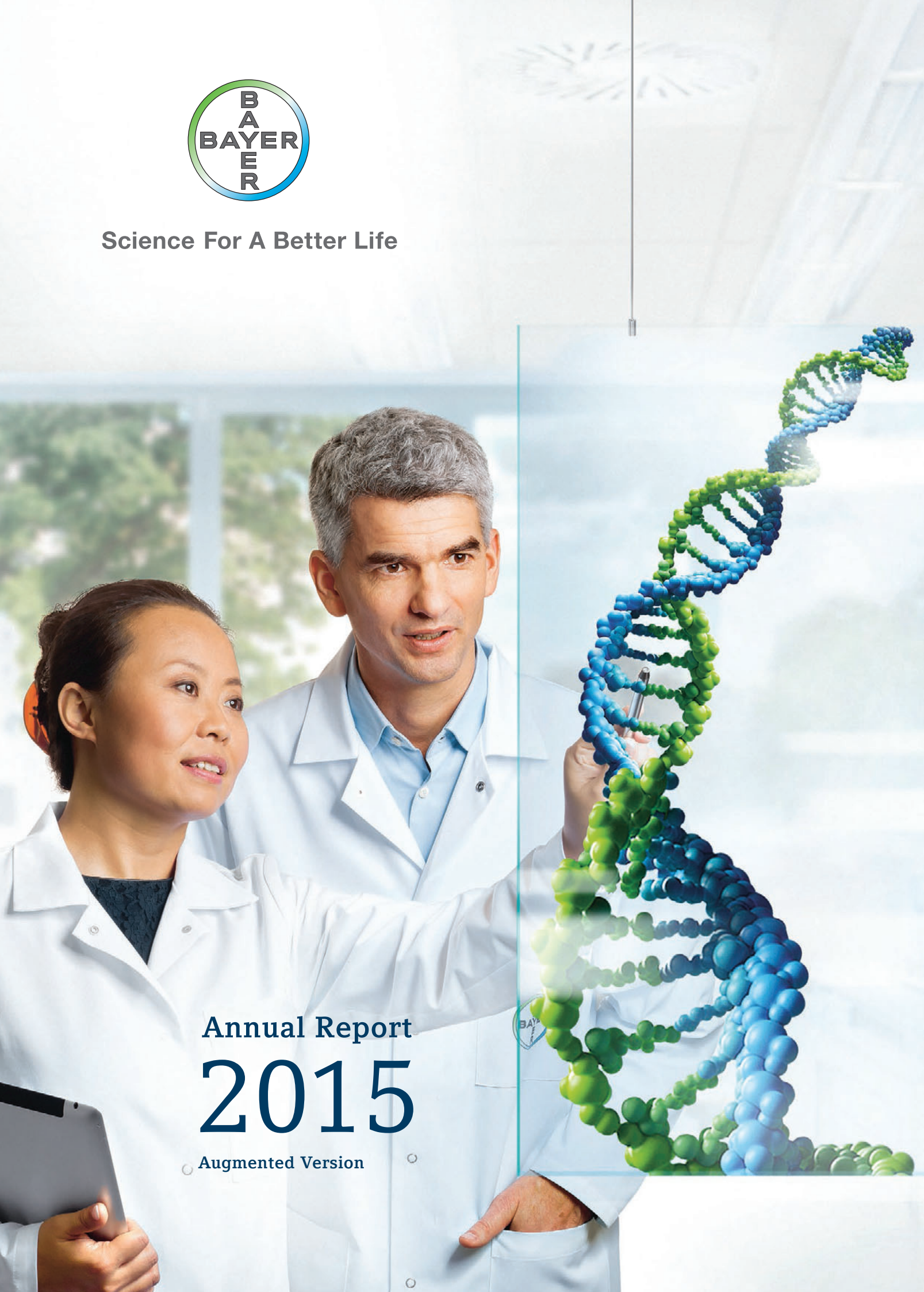
Science For A Better Life

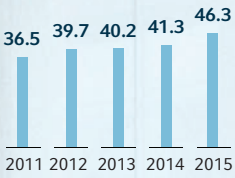


Annual Report 2015

Augmented Version

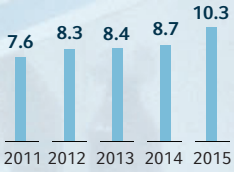
Five-Year Summary: Bayer on Track for Success

SALES[1]
(€ billion)



+6%
CAGR[2] 2011-2015

EBITDA BEFORE SPECIAL ITEMS[1]
(€ billion)



+8%
CAGR[2] 2011-2015

EARNINGS PER SHARE[1]
(€)

+14%
CAGR[2] 2011-2015

MARKET CAPITALIZATION
(€ billion)

+24%
CAGR[2] 2011-2015

R&D EXPENSES[1] (€ billion)

+10%
CAGR[2] 2011-2015

RECORDABLE INCIDENT RATE (RIR)

−7%
CAGR[2] 2011-2015

[1] 2014 figures restated; figures for 2011 – 2013 as last reported
[2] Compound annual growth rate

Cover picture // Bayer is focusing exclusively on its Life Science businesses. Our cover picture shows scientists Dr. Wen Chang from Crop Science and Dr. Daniel Forler (right) from Pharmaceuticals with a projected image of DNA.

You can read more about Life Sciences in the Magazine section of this Annual Report beginning on page 10.

Five-Year Summary

	2011	2012	2013	2014	2015	Change from 2014 (%)
	€ million	€ million	€ million	€ million	€ million	
Bayer Group						
Sales	36,528	39,741	40,157	41,339	46,324	+12.1
EBIT[1]	4,149	3,928	4,934	5,395	6,250	+15.8
EBIT before special items[2]	5,025	5,639	5,773	5,833	7,069	+21.2
EBITDA[3]	6,918	6,916	7,830	8,315	9,583	+15.2
EBITDA before special items[4]	7,613	8,280	8,401	8,685	10,266	+18.2
EBITDA margin before special items[5]	20.8%	20.8%	20.9%	21.0%	22.2%	
Income before income taxes	3,363	3,176	4,207	4,414	5,245	+18.8
Net income	2,470	2,403	3,189	3,426	4,110	+20.0
Earnings per share (€) from continuing and discontinued operations[6]	2.99	2.91	3.86	4.14	4.97	+20.0
Core earnings per share (€) from continuing operations[7]	4.83	5.30	5.61	5.89	6.83	+16.0
Gross cash flow[8]	5,172	4,556	5,832	6,707	6,999	+4.4
Net cash flow from continuing and discontinued operations[9]	5,060	4,530	5,171	5,810	6,890	+18.6
Net financial debt	7,013	7,022	6,731	19,612	17,449	−11.0
Capital expenditures as per segment table	1,666	2,012	2,155	2,484	2,556	+2.9
Research and development expenses	2,932	3,013	3,406	3,537	4,281	+21.0
Return on equity	13.0%	13.0%	16.2%	16.8%	17.9%	
Equity ratio	36.5%	36.1%	40.5%	28.8%	34.4%	
Bayer AG	€ million	€ million	€ million	€ million	€ million	
Net income	1,125	889	2,498	2,454	1,361	−44.5
Allocation to (withdrawal from) retained earnings	(239)	(682)	761	593	(706)	.
Total dividend payment	1,364	1,571	1,737	1,861	2,067	+11.1
Dividend per share (€)	1.65	1.90	2.10	2.25	2.50	+11.1
Employees						
Number of employees[10] (Dec. 31)	111,800	110,000	112,400	117,400	116,800	−0.5
Personnel expenses (including pension expenses) (€ million)	8,726	9,194	9,430	9,693	11,203	+15.6
Proportion of women in senior management (%)	22	23	25	26	28	
Number of nationalities in the Group Leadership Circle	22	23	31	35	33	−5.7
Proportion of employees with health insurance (%)	94	94	95	96	96	
Proportion of employees covered by collective agreements on pay and conditions (%)	54	53	54	52	53	
Safety[11]						
Recordable Incident Rate for Bayer employees (RIR)	0.56	0.49	0.47	0.43	0.42	−1.6
Lost Time Recordable Incident Rate for Bayer employees (LTRIR)	0.31	0.27	0.26	0.22	0.21	−6.4
Loss of Primary Containment Incident Rate (LoPC-IR)[12]	–	0.38	0.35	0.23	0.22	−7.7

	2011	2012	2013	2014	2015	Change from 2014 (%)
Environmental Protection[11]						
Primary energy consumption (petajoules[13]/a)	50.10	49.05	47.58	45.57	43.00	−5.7
Secondary energy consumption (petajoules[13]/a)	34.85	34.14	33.27	39.74	40.19	+1.1
Energy efficiency (MWh/t)[14]	3.63	3.50	3.44	3.37	3.34	−0.6
Direct greenhouse gas emissions (CO_2 equivalents in million t)[15]	4.23	4.24	4.09	4.02	4.41	+9.7
Indirect greenhouse gas emissions (CO_2 equivalents in million t), according to the market-based method[15]	–	4.72	4.91	5.53	5.30	−4.1
Specific greenhouse gas emissions (CO_2 equivalents in t/manufactured sales volume in t), according to the market-based method[15,16]	–	1.06	1.09	1.12	1.19	+6.0
Volatile organic compounds (VOC) (thousand t/a)[17]	2.69	2.60	2.27	2.12	1.61	−24.0
Total organic carbon (TOC) (thousand t/a)	1.50	1.42	1.53	1.20	1.16	−3.3
Hazardous waste generated (thousand t/a)	474	603	467	487	541	+11.1
Water use (million m^3/a)	411	384	361	350	346	−1.1

2014 figures restated; figures for 2011 – 2013 as last reported.

1 EBIT = income after income taxes, plus income taxes, plus financial result. This indicator is not defined in the International Financial Reporting Standards.

2 EBIT before special items = EBIT plus special charges, minus special gains. This indicator is not defined in the International Financial Reporting Standards. See also Combined Management Report, Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."

3 EBITDA = EBIT plus the 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. This indicator is not defined in the International Financial Reporting Standards. See also Combined Management Report, Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."

4 EBITDA before special items = EBITDA plus special charges, minus special gains. This indicator is not defined in the International Financial Reporting Standards. For details, see Combined Management Report, Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."

5 The EBITDA margin before special items is calculated by dividing EBITDA before special items by sales. This indicator is not defined in the International Financial Reporting Standards. For details, see Combined Management Report, Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."

6 Earnings per share as defined in IAS 33 = net income divided by the average number of shares. For details, see Note [16] to the Consolidated Financial Statements.

7 Core earnings per share = earnings per share, plus/minus amortization and impairment losses / impairment loss reversals of intangible assets, impairment losses / impairment loss reversals on property, plant and equipment, plus special charges, minus special gains (other than amortization and impairment losses / impairment loss reversals), plus/minus the related tax effects and the share of the adjustments attributable to noncontrolling interest. This indicator facilitates the comparability of performance over time. It is not defined in the International Financial Reporting Standards. For details, see Combined Management Report, Chapter 14.3 "Core Earnings Per Share."

8 Gross cash flow = 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. For details, see Combined Management Report, Chapter 14.5 "Liquidity and Capital Expenditures of the Bayer Group."

9 Net cash flow = cash flow from operating activities according to IAS 7

10 Full-time equivalents

11 Percentage changes not based on rounded figures

12 LoPC-IR: rate of incidents in which chemicals leak from their primary container, such as pipelines, pumps, tanks or drums, per 200,000 working hours in areas relevant to plant safety

13 1 petajoule = 10^{15} joules

14 Energy efficiency: quotient of total energy consumption and manufactured sales volume. For Covestro, only manufactured sales volumes that also form the basis for calculating Covestro-specific emissions are taken into account.

15 Portfolio-adjusted in accordance with the Greenhouse Gas Protocol

16 Specific Group emissions are calculated from the total volume of direct emissions and indirect – calculated using the market-based method of the new Scope 2 GHG Protocol – emissions of the subgroups, including the emissions at the Belford Roxo site and emissions from the vehicle fleet, both reported for the Group as a whole, divided by the manufactured sales volume of the three subgroups in metric tons. Quantities attributable to the supply of energy to external companies are deducted from the direct and indirect emissions. At Covestro, neither the by-products sodium hydroxide solution and hydrochloric acid generated during production nor trade products are included in the manufactured sales volume.

17 Volatile organic compounds (VOC) excluding methane

Chairman's Letter

Investment in the future

Dear Stockholders and Friends of Bayer:

2015 marked a decisive year in the history of our company. We successfully executed all the necessary steps to transform Bayer into an integrated Life Science company. For more than 150 years, the core of Bayer's business model has been to invent new molecules and turn them into innovative products. Now we are focusing solely on those molecules that influence the biochemical processes within living organisms.

With the enormous and ongoing progress being made in the Life Sciences, our ability to turn scientific findings into innovative products and solutions continues to grow. We are harnessing this potential to improve the health of humans, animals and plants. As a Life Science company, we can now sharpen the focus of our entire organization on fulfilling our mission, "Bayer: Science For A Better Life."

Our portfolio is well diversified and balanced, both in terms of profitability and risks. Our divisions are highly competitive, holding leadership positions in their markets. And our focused business model offers significant potential to leverage synergies across the board – from research to product approval processes and from operations to talent development. It is important to sustain this momentum and continue reaping the fruits of our strategy.

In order to leverage our focus, we have given our organization a clear, integrated and more operations-based structure. Since January 2016, the heads of our new divisions – Pharmaceuticals, Consumer Health and Crop Science – have been members of the Board of Management of Bayer AG. This enhances operational accountability and accelerates decision-making, which are important for an innovation company. In this connection, I'm proud of the extensive measures we have taken to broaden Bayer's diversity in terms of gender and culture. This is now also reflected in the membership of the Board of Management.

Bayer's transformation into a pure Life Science company has consistently been accompanied by robust financial results. Over the last five years we showed very good performance. It demonstrates the strength of our company and the commitment of our employees.

In 2015, revenues from continuing operations rose to a record level of more than €46 billion. On a currency- and portfolio-adjusted basis, this is an increase of 2.7 percent. Our clean EBITDA rose substantially by more than 18 percent to €10.3 billion, and core earnings per share advanced by 16 percent to €6.83. Our innovative new products especially contributed to this success and also played a substantial role in making 2015 another record year for Bayer. All three new divisions posted above-market growth.

Dialogue at a pharmacy in Germany: Bayer CEO Dr. Marijn Dekkers meets pharmacist Valeska Pritz-Gottschall from Cologne.

Sales of our Pharmaceuticals segment climbed by 9.9 percent on a currency- and portfolio-adjusted basis. Our five recently launched products – Xarelto™, Eylea™, Stivarga™, Xofigo™ and Adempas™ –

again contributed to this pleasing performance with combined sales of €4.2 billion, compared with €2.9 billion in 2014.

At Consumer Care (now called Consumer Health), currency- and portfolio-adjusted sales growth was 6.1 percent. During the past year, we successfully integrated the business acquired from Merck & Co., Inc.

Despite a weaker market environment, CropScience raised sales by 1.7 percent on a currency- and portfolio-adjusted basis. Of the regions, Europe showed the strongest growth, which was driven by the positive development of crop protection products and seeds.

Thanks to the ongoing support of our investors, Bayer continued to have the highest market capitalization of all the DAX companies in 2015. And despite a challenging market environment, we successfully floated our former MaterialScience subgroup on the stock market in October 2015 – nine months before the end of our original roadmap. It is now a legally and economically independent company: Covestro. We wish our former colleagues every success for the future!

In addition to the IPO of Covestro, we undertook further transactions in support of our strategy. In June 2015, we signed an agreement to sell the Diabetes Care business to Panasonic Healthcare Holdings Co., Ltd., Tokyo, Japan. In July 2015, we closed the acquisition of SeedWorks India Pvt. Ltd., based in Hyderabad, India.

Over the years, our portfolio strategy has consistently enhanced our profile as a Life Science company. In particular, the acquisitions of the consumer health businesses of Merck and Dihon in 2014 gave our Consumer Health business the necessary critical mass to operate as a separate division.

Being successful as a Life Science company requires a pronounced innovation culture that is the breeding ground for new ideas and facilitates their translation into successful products. It often all starts in the laboratory which is why, between 2011 and 2015, we increased our annual research and development spending by €1.4 billion to €4.3 billion. This is a substantial investment in our future. At the same time, we have become better and faster at bringing our innovations to market.

At the end of 2015, we established our new Bayer Life Science Center. This strategic innovation unit has been designed to help uncover, encourage and unlock breakthrough cross-species technologies and know-how for Bayer by enabling collaborations with entrepreneurial best-in-class companies. The first of these partnerships is a joint venture with CRISPR Therapeutics AG, a company specialized in utilizing the new CRISPR-Cas9 gene editing technology. Together we aim to discover, develop and commercialize groundbreaking therapeutics to cure blood disorders, blindness and congenital heart disease. We could use any findings that go beyond these three indications in nonhuman applications as well – for example, in agriculture.

Successful innovation requires an ongoing reassessment and refinement of processes and partnerships. The freedom to experiment and the determination to execute with precision must be well balanced. Today, Bayer is one of the most innovative companies in our industry. As a Life Science company, we are in very good shape to continue to deliver profitable growth.

With our innovations we address major societal challenges on a global scale. Around 9.7 billion people will be living on our planet

by 2050. How can humankind succeed in feeding so many people, especially in regions where agriculture is difficult? By developing better seeds and new products to protect crops, Bayer is helping to ensure an adequate food supply for the world's population.

At the same time, average life expectancy continues to increase. How can humankind ensure that a high quality of life is preserved at an advanced age? By developing innovative solutions and new medications, Bayer is helping people tackle diseases and lead an active life longer.

But it's not just through our innovations, but also through our activities, that we are helping people lead a better life. We seek to achieve economic growth in harmony with ecological and social responsibility. As evidence of this commitment, we adhere to the fundamentals of sustainable development and the ten principles of the United Nations Global Compact.

In this context, it is essential to maintain an open and active dialogue with all our stakeholders. We act responsibly, have good arguments and need not shun controversy. Ultimately, no one can deny the huge benefit delivered by the innovations from our laboratories. In the life science industry, it's all too easy to overlook the significant downside of not deploying these innovations. We need the societal acceptance and appreciation to continue to contribute those benefits.

The best ambassadors for our company are our employees. With their passion to innovate, they live our mission each and every day. On behalf of the entire Board of Management, I would like to thank them for their dedication. Their daily efforts are what make Bayer a great company and a good investment.

This is my last Chairman's Letter to you as CEO of Bayer. I am thankful for your continued trust and support. It has been an extremely rewarding experience for me to have the opportunity to lead such a fantastic company to new heights. I have enjoyed working with so many great colleagues, and while I contributed with my know-how to our joint success, I feel I learned just as much in turn.

Bayer is an iconic brand, offering an endless source of innovation. With its solid foundation and a deep management bench in place, I am convinced that Bayer can continue its journey as one of the most innovative companies in our industry.

Sincerely,

Dr. Marijn Dekkers
Chairman of the Board of Management of Bayer AG

MAGAZINE

LIFE SCIENCE

Our business portfolio is now focused exclusively on the Life Sciences and on solving the major challenges of the future – from Pharmaceuticals through Consumer Health and Animal Health to Crop Science. No comparable company is in a similar position to offer solutions for both health care and agriculture. As a Life Science company, we can focus more strongly than before on our mission.

Bayer: Science For A Better Life

Our Products

Our broad product portfolio includes many world-famous brands which have shaped the iconic Bayer brand. Some of them have been helping our customers for decades, others only recently came out of our labs. Their active ingredients are designed to influence the bio-chemical processes in living organisms. As different as people, animals and plants might seem, common rules govern the molecular mechanisms in all life forms. The active ingredients promote or enable positive processes or they prevent or suppress negative processes. That's what Life Science is all about. And with our innovative products, we help to make life better.

BRANDS*

NATIVO

nunhems

basta

BELT

Confidor

InVigor

FiberMax cotton

Gaucho

ADENGO

PONCHO

Xpro

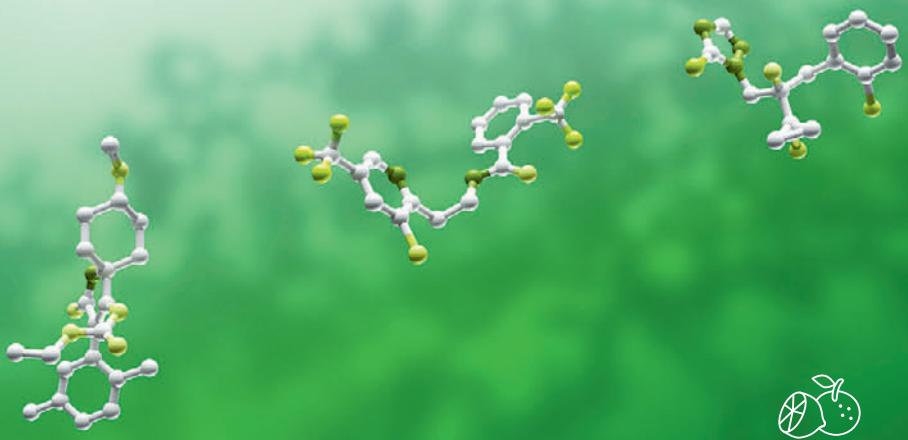
Baycox 5%
Prevent Protect Profit

PROSARO

Luna

MOVENTO

SCIENCE



BETTER LIFE

Reducing pest infestation

Controlling nematodes

Protecting against fungal infestation

Seed with improved properties

* Not all products are marketed by Bayer in all countries.

Science For A Better Life

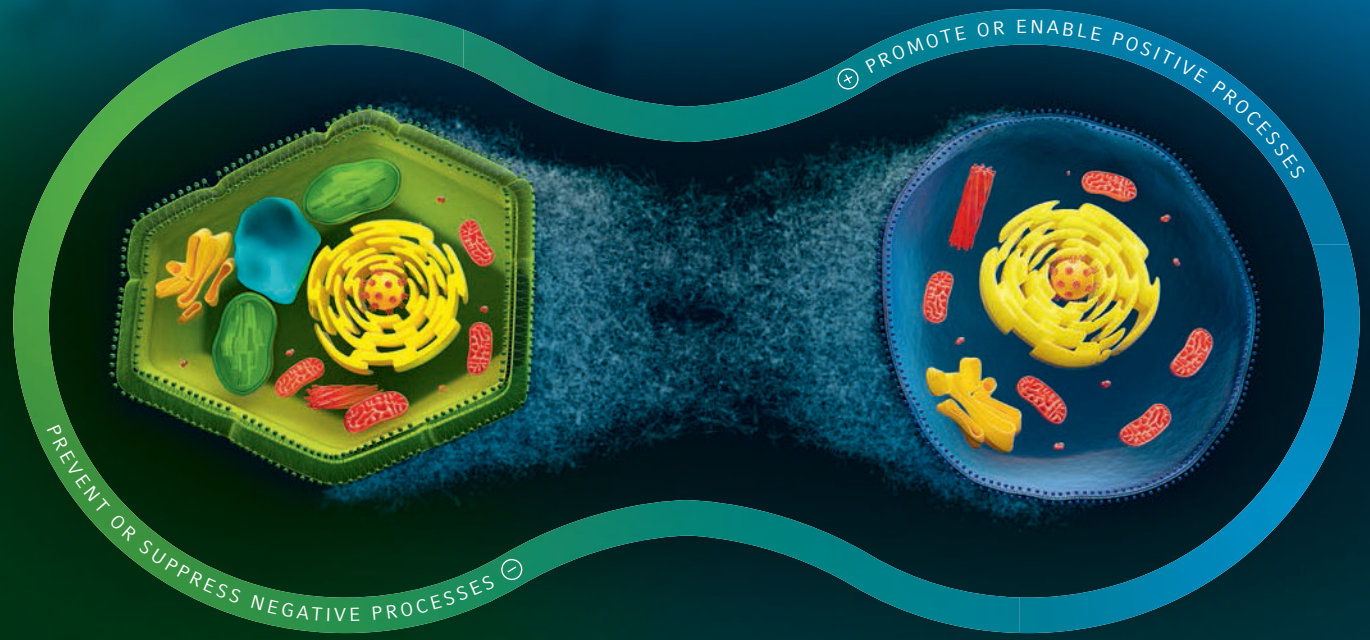
BAYER

seresto · ALEVE · Afrin · Talcid · elevit · MiraLAX · Iberogast · Alka-Seltzer · Avelox moxifloxacin

Baytril SUCCESS IN MOTION · Berocca · Supradyn · Redoxon · Coppertone SUNSCREEN · Priorin · Advantan · ONE A DAY

ZELNATE · Canesten · Bepanthen · ASPIRIN · Non-Drowsy Claritin Allergy Products · Skinoren · Rennie

advantix · Mirena · BETAFERON 250 µg INTERFERON BETA-1b



Protecting companion animals from infections and parasites

Protecting against weeds

Protecting and treating farm animals

Myocardial infarction, stroke, pulmonary hypertension

Contraception and menopausal disorders

Various types of cancer

Adempas riociguat

EYLEA aflibercept (rDNA origin)

YAZ

Adalat®

Stivarga® (regorafenib) tablets

Xofigo® radium Ra 223 dichloride SOLUTION FOR INJECTION

Gadovist® 1.0 Gadobutrol

LEVITRA (VARDENAFIL HCl)

Fosrenol®

MEDRAD® Stellant CT Injection System

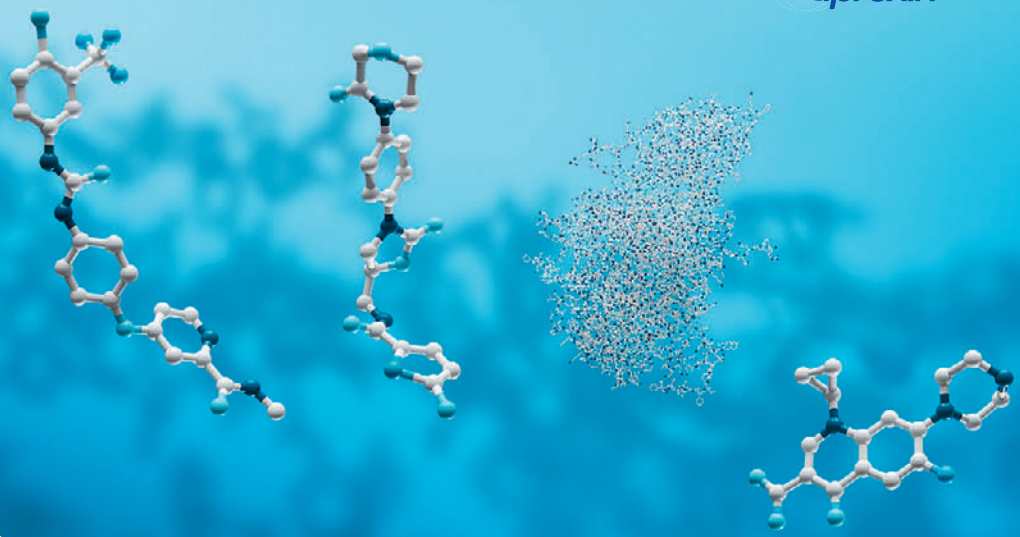
Glucobay®

Nexavar® (sorafenib) tablets

Xarelto® rivaroxaban

KOGENATE® Bayer

Ciproxin®



Hemophilia A

Multiple sclerosis

Vitamins and dietary supplements

Pain, inflammation, fever

Eye ailments

Sun protection and wound care

Cardiologist Dr. Anne-Katrin Schätzle examines her patient Axel Vogel at the Cardiology Center of Cologne University Hospital.

For the heart

A heart attack is invariably a severe setback in life. Leading a healthy lifestyle and regularly taking the right medication can reduce the risk of a second heart attack or secondary complication.

Cologne // GERMANY. "Nothing is ever the same again," says Axel Vogel. Six years ago, a myocardial infarction threw life off course for the now 57-year-old from Kerpen, Germany. Remigius Müller (52) from Rottweil, near Stuttgart, survived the same life-changing experience. A blood clot in a coronary vessel turned his life upside down in a matter of seconds: Müller suffered a heart attack at age 45. Until then, the plant manager had always thought: "How could anything stop me?" This attitude helped him cope with a busy life for years. Both men have changed their habits since their heart attacks. As they now know: "It's an experience you never want to go through again."

But both men are also aware that they might have to. "When people have already survived one heart attack, the risk of having another increases for the rest of their lives, meaning that long-term medical care is imperative," explains Dr. Wolfgang Steffen, a cardiologist in Rottweil and Müller's attending physician. Alongside the management of cardiovascular risk factors in line with standard care practice and any necessary lifestyle changes, an especially important part of treatment is that patients regularly take their prescribed medication, including drugs that counteract blood-clotting and therefore help prevent another heart attack. "It's also very important for patients to be aware of the many things they can do to help their heart recover," Steffen emphasizes. "In concrete terms, that means no smoking, a different diet, regular exercise, minimized alcohol intake, stress reduction and, if necessary, treatment for depression." His patient, Remigius Müller, has taken this advice to heart. He wouldn't even think of skipping his medications. Apart from acetylsalicylic acid, which inhibits platelet aggregation, he also takes blood pressure- and cholesterol-lowering medication. "I'm certain that the drugs are the reason I feel well again today," he says.

Axel Vogel is likewise thankful for the opportunities afforded by modern medicine. "They enable me to reach the best level of performance I am still capable of." Vogel's heart sustained permanent damage from his heart attack. He suffers from arrhythmia and had a pacemaker implanted three years ago. In addition, his heart function has deteriorated over the years and along with it his performance capabilities. Just climbing a few stairs wears him out. Because of his extreme heart failure, Vogel has been in treatment for some time under Professor Volker Rudolph, Chief Senior Physician of the Cardiology Center at Cologne University Hospital.

Heart failure is one of the potential complications following a heart attack. "Twenty to 30 percent of patients who have had a heart attack subsequently develop heart failure," reports Rudolph. It is a very serious condition, especially in its advanced stages. The heart is unable to pump blood through the body, causing the energy levels of sufferers to drop dramatically. "The survival time for severe heart failure is significantly shorter than for some types of cancer," Rudolph points out. "At present, the options for using drugs to treat this disease are limited. A lot of research needs to be done in the field," the cardiologist says. "If we could succeed in halting or possibly even healing pathological changes in the heart and blood vessels by means of regenerative therapy, it would be a major step forward."

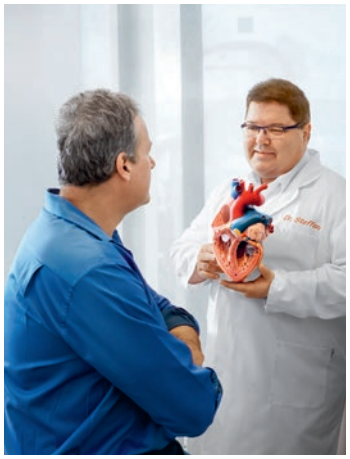
Developing innovative active substances to treat heart failure is one of Bayer's main areas of research. Several projects involving different treatment methods are currently in the advanced phases of clinical development. Furthermore, Bayer scientists in the cardiovascular research unit are working on novel active ingredients to treat severe diseases of the cardiovascular system such as coronary heart disease, stroke, thrombosis and pulmonary hypertension, as well as certain kidney diseases. "Cardiovascular diseases are a strategic priority for Bayer. Our pipeline covers a wide range of heart, circulatory and vascular diseases, for which patients and physicians are desperately waiting for further improved treatments," says Professor Andreas Busch, head of Drug Discovery in the Pharmaceuticals Division.

17.3 million

people worldwide die every year of a cardiovascular disease. This figure is forecast to increase to over 23 million by 2030.

(Source: American Heart Association: 2015 Heart Disease and Stroke Statistics Update)

A heart attack has severe repercussions. Patient Remigius Müller (right) has largely taken the advice of his cardiologist Dr. Wolfgang Steffen (below) to heart and is feeling well again. Patient Axel Vogel, by contrast, suffers from severe heart failure. He is receiving treatment from Professor Volker Rudolph, Chief Senior Physician of the Cardiology Center at Cologne University Hospital (below right).



Bayer also offers physicians and patients digital solutions to support drug-based treatments. For example, after registering, patients with atrial fibrillation can receive a daily text message reminding them to take their pills. "In the future, apps like this will offer even more possibilities," says Johannes Schubmehl, Chief Information Officer at Pharmaceuticals. One example is sending patient data to the attending physician.

A study of this is currently being conducted in Canada on patients with pulmonary hypertension. Cardiologist Volker Rudolph believes in the future of digital apps in medicine. "Patients won't need to make as many visits to the doctor's office, and we physicians will have faster access than ever before to critical results."

Bayer Annual Report 2015

Fit in old age

Every second, two people celebrate their 60th birthday. Through their research and the resulting products, Bayer's experts are helping the growing group of senior citizens live a life that is as active as possible. And younger generations can take steps to help prevent diseases as well, so that they can remain healthy well into their senior years.

Delray Beach, Florida // United States. It's seven o'clock in the morning. Henry Cohen is just finishing his first training session. He climbs energetically out of the swimming pool. His handshake is as powerful as a weightlifter's. Henry is 85 and lives in a neighborhood that is specially designed for elderly people. Active senior citizens like him are increasingly common. According to the United Nations World Population Prospects report, 901 million people worldwide were aged above 60 in 2015, and by 2050 this number will have doubled to more than 2 billion – that's almost every fifth person on the planet.

901 million

people worldwide were aged above 60 in 2015. By 2050, this figure will have doubled to approximately 2 billion – almost every fifth person on the planet.

Source: UN report, World Population Prospects, 2015

Whether yoga, a healthy diet, exercise or just a relaxing break with a four-legged friend: There are plenty of options available to those who want to stay fit well into old age, like U.S. retirees Nora Gerson and Henry Cohen (above).

Henry is an example which shows that being old doesn't automatically mean being sick. "But the rising life expectancy also means a higher risk for numerous disorders, many of which are chronic conditions," says Dieter Weinand, member of Bayer's Board of Management and head of the Pharmaceuticals Division. Typical age-related disorders include cardiovascular diseases such as stroke and heart attacks, eye disorders and cancer. "We are always looking for new and highly specific therapeutic approaches to be able to provide even better help to patients in the future," explains Weinand. Accordingly, Bayer's scientists are concentrating on new therapeutic options for conditions such as heart failure, wet age-related macular degeneration, and prostate and lung cancer. The results of this research could make it possible for elderly people to live an active life for longer.

In Delray Beach, there are regular information evenings on health issues. Dietary advisors and speakers from a number of different disciplines explain how senior citizens can stay fit for as long as possible, and how non prescription medicines can help them achieve that aim. These events are organized by Nora Gerson. "Many of my acquaintances and neighbors here suffer from classic risk factors such as hypertension and high cholesterol levels, which can be minimized through diet, exercise and an overall healthy lifestyle," says the 79-year-old.

Nora leads a yoga group for participants aged between 60 and 93. Henry is one of her students, too. Nora stands with her legs firmly planted and folds her arms around themselves in front of her chest. Her body is calm and relaxed, her gaze focused on the middle distance. The retiree has suffered from osteoporosis and minor arthritis for more than 30 years, but you wouldn't know it from looking at her. Sometimes the pain is overwhelming. "But I decided for myself that I won't let it negatively affect my daily life," says Nora. That's why she does a lot of exercise and, like many of her friends, takes mild analgesics for their pain-relieving and anti-inflammatory effects.

The senior citizens in Delray Beach are by no means exceptions. Many patients today are well aware of the benefits of prevention and a healthy lifestyle and are well informed about their health and the therapeutic options available, thanks in great part to the internet and digital media. "Patients are increasingly selecting medicinal products to treat minor ailments themselves," says Erica Mann, member of the Board of Management of Bayer, head of the Consumer Health Division and Chair of the World Self-Medication Industry (WSMI). "Individuals can take steps to stay healthy and productive by easily treating colds or flu, headaches and other minor health problems." Prevention is also becoming increasingly significant in all age groups, says Mann. Sunscreen, for example, can help to prevent skin cancer, particularly in sunny regions such as Florida. And probiotics support healthy intestinal flora, while dietary supplements ensure an adequate supply of calcium and vitamins D and B12, for example.

Bayer is the world's second largest provider of nonprescription medicinal products and dietary supplements, and the number one in the world's largest OTC (over-the-counter) market, the United States. Whether to treat pain, gastrointestinal complaints, hair loss or dry eyes, these products are designed to help people live a self-determined and satisfying life for as long as possible.

"Nowadays, everybody can take steps to stay healthy and productive by easily treating colds or flu, headaches and other minor health problems."

Erica Mann, head of the Consumer Health Division

Companion animals often assume a significant role in our families, but above all have a special place in the lives of millions of older people, as a study by the International Federation on Ageing (IFA) in Toronto, Canada, shows. "Decreases in debilitating conditions such as depression, anxiety and high blood pressure are all associated with the quiet companionship of humans and pet dogs," says Dr. Jane Barratt, Secretary General of the IFA. Owners had increased self-esteem, greater life satisfaction and more positive moods, thanks to the increased levels of relaxation-promoting messenger substances in the body. Companion animals are a high-impact and low-cost solution to remaining more active and less vulnerable to loneliness.

Henry can confirm that. "I always get chatting to people when I'm out for a walk with our dog Stella." At the moment, they're both sitting on the couch, but Henry will soon be on his way out again; the next training session in the pool is due to start. But that's one activity where Stella can't join in!

Bayer Annual Report 2015

Defying the weather

Rice growing in northern Vietnam: farmers Do Thi Tuyen (at the front of the boat) and Doan Thi Gai on the Halong Bay in Ninh Binh province, Vietnam.

Bayer is searching for new solutions to the massive challenges facing agriculture in the 21st century: heat, drought and floods, and the growing world population's rising demand for food.

Ninh Binh // VIETNAM. "Farmers like us have only one boss, and that's nature. Our work is dictated by the sun, the rain, the wind, the change of seasons. But in the past few years, nature has become a temperamental boss. Quite simply, we can no longer depend on the seasons. It has all become mixed up," says Do Thi Tuyen, a rice farmer in the northern Vietnamese province of Ninh Binh. First of all, an extreme drought last year delayed germination of the rice seeds. Then flooding after heavy rainfall threatened to destroy the delicate rice plants.

+30%

By 2030, rice yields will have to rise by 30 percent – from the same area of arable land – to guarantee food security.

Despite this, Do Thi Tuyen was optimistic about her most recent harvest. "My advisor Quyet Nguyen Van from Bayer showed me how I can employ innovative technologies and growing techniques to defy nature." This year, the farmer planted Bayer's Arize™ hybrid rice which offers increased resilience against extreme weather conditions. And, as in previous years, she has protected her rice plants against stress factors such as pests and diseases, taking proactive steps to boost the health of her crop. The result: "We were able to improve the quality of our rice and even increase yields." Too much water, too little water, or both are a major challenge for the rice farmers of North Vietnam. Do Thi Tuyen is happy that for many years now, she has not lost her entire harvest.

Mekong Delta // VIETNAM. In the south of Vietnam, in the Mekong Delta, the situation is more serious for many farmers. When the rainy season starts late and brings less rain than usual so that the Mekong River carries less water, the sea floods into the interior of the country and salinizes the soil. This can have devastating consequences. "Many rice growers in our region had to stop farming their fields last year because the strongly salinated water destroyed the rice shortly after it was planted," says Phan Van Giang, who has farmed a four-hectare rice farm in the Mekong Delta for 20 years. He has grown Bayer's Arize™ B-TE1 variety ever since he heard about this new variety a few years ago at a seminar. He was the first farmer in his region to try it out. "Compared with traditional rice, the hybrid rice Arize™ has greater tolerance to salinization, drought and flooding, it is less susceptible to disease, and it produces much higher yields, even in difficult years like last year."

Rice is an important staple food for more than 3.5 billion people, particularly in Asia. The main producers are approximately 200 million small farmers like Do Thi Tuyen and Phan Van Giang. They are exposed to extreme weather situations and need innovative technologies and state-of-the-art agricultural knowledge. Help is available through Bayer's "Much More Rice" program. "This program is a comprehensive package of solutions that helps small farmers in many countries in Asia to optimally employ innovative technologies such as Bayer's Arize™ seeds and crop protection solutions," explains Mahesh Girdhar, Bayer Global Crop Manager Rice. "Our experts also show farmers how they can increase the quality and quantity of their rice harvests even under difficult weather conditions." For example, the seed treatment Gaucho™ shields rice plants against stress during the initial, particularly vulnerable stage. The treatment strengthens the rice plant's root and shoot growth and helps it to withstand drought and heat phases. The fungicide Nativo™ promotes photosynthesis and positively impacts the plant's productivity under heat stress.

"Our experts show farmers how they can increase the quality and quantity of their rice harvests even under difficult conditions."

Mahesh Girdhar, Bayer Global Crop Manager Rice

As extreme weather is likely to continue to be a major problem in the future, Bayer has developed seed that is able to survive being immersed for 14 days. The market introduction is scheduled for 2016. In 2017, Bayer plans to launch a new Arize™ seed variety which will survive twice the level of salinity compared to previous varieties. For rice growers like Do Thi Tuyen and Phan Van Giang, that is good news.

Rice farmer Do Thi Tuyen (top) feeds her ducks in northern Vietnam. She is glad that she hasn't lost her entire harvest in years. Phan Van Giang farms in the southern Mekong Delta (left), where soil salinization is a problem. He uses a hybrid rice variety from Bayer, which produces higher yields even in difficult years.

200 million

Rice is an important staple food particularly in Asia. The main producers are approximately 200 million small farmers like Do Thi Tuyen and Phan Van Giang.

On his farm in Monument, Kansas, United States, Craig Reed is battling the consequences of persistent drought in particular. He's hoping for new wheat varieties and a broader spectrum of innovative herbicides.

Approximately

15%

of the world's arable land is planted with wheat. Wheat is a crucial factor for the food security of more than 2 billion people.

+60%

The demand for wheat will increase by approximately 60 percent by 2050.

Kansas // United States. On the other side of the Pacific, some 14,000 kilometers to the east of Vietnam in the U.S. state of Kansas, wheat farmer Craig Reed is just as embattled by the vagaries of the weather as his colleagues in Asia. "Drought is the main reason for harvest failures in wheat," he says. "We need about 50 centimeters of precipitation per year. But in some years, we only get 25 centimeters. That means that we farmers risk everything for the harvest on an annual basis. But no matter how often Mother Nature tries to trip us up, we always get up again and start afresh the following year. "

As a result of the dry conditions, Reed and many of his colleagues have decided against tilling in order to retain as much moisture in the soil as possible. But that has one major disadvantage, as Reed explains. "The weeds spread faster every year." Reed is particularly worried about increasing herbicide resistance, particularly in the weed species "kochia" (burningbush). This weed competes with wheat plants for light, nutrients and moisture, and can have a dramatic impact on harvests. "What we urgently need is a greater spectrum of new herbicides for the future to prevent resistances from developing so that existing herbicides will remain effective," says Reed.

While climate and resistance problems have been impacting the yields of wheat growers all over the world since the 1990s, what is really urgently needed is bigger harvests. "The demand for staple foods will rise by 60 percent by 2050," says Steve Patterson, Bayer Global Crop Manager Cereals. "For wheat, the major driver is the growing world population, followed by the shifting diets of the new middle classes in emerging countries."

Production, however, is unable to keep up. In addition, a recent study revealed that the wheat harvest could decline by six percent with every degree of climate warming. "To close this gap and safeguard the wheat supply, we need a technological breakthrough in wheat research," says Patterson. Miracles should not be expected though. "We're never going to be able to grow wheat in the Sahara and we can't bring withered plants back to life. But we can help to compensate for drought-related harvest losses. We can help the plants to perform better in key phases of drought and heat stress."

> **"We need a technological breakthrough in wheat research."**
>
> Steve Patterson, Bayer Global Crop Manager Cereals

Scientists are looking for chemical innovations to serve as a protective shield to plants in emergency situations. Meanwhile, researchers are also working on developing wheat varieties with greater vitality and enhanced heat tolerance. To adapt wheat varieties to the respective climate conditions, Bayer's breeding work is carried out all over the world with locally adapted varieties being bred for greater environmental tolerance and robustness at breeding stations in Canada, Belgium, Germany, France, Ukraine, Australia and the United States. The breakthrough is expected to arrive after 2023.

For wheat farmer Reed, this is a perspective that offers him hope. "To achieve this quantum leap in global nutrition, we need companies and organizations that can see the big picture, or we will never solve the problem."

Bayer Annual Report 2015

Living with dengue

Rodolfo Siqueira Rodrigues from Ubatuba, Brazil, loves water sports. The warehouse technician has already had dengue fever twice. His doctor, Dr. Juan Matías Jaco (top), can only treat the symptoms.

One billion people around the globe – or one in seven – suffer from a tropical disease, according to the World Health Organization (WHO). Bayer is supporting the international community in the battle against these diseases as part of its corporate citizenship activities.

Ubatuba // BRAZIL. "All of my co-workers have had dengue fever, and I've had it twice already myself," says Rodolfo Siqueira Rodrigues, a resident of Ubatuba, a city on the Atlantic coast of Brazil. Now the 23-year-old is afraid of developing hemorrhagic fever should he ever become infected again. "All of us are afraid of the fever, because then it really gets serious. If things go wrong, you could die of internal bleeding." He did not go to his physician, Dr. Juan Matías Jaco, because Rodolfo learned it was pointless as no treatment exists for this disease anyway. "We can do nothing but treat the symptoms with plenty of fluids, fever-reducing drugs and painkillers," says Dr. Jaco. Some 1,200 people in Ubatuba, a city with a population of 80,000, contracted dengue fever in 2014. Over 3,000 cases were reported in the first nine months

100 million

dengue fever infections are reported worldwide every year in the tropical and subtropical regions of the Americas, Africa and Asia.

of 2015 alone, and in the state of São Paulo as a whole, the total is up to 900,000. "Physicians in all specialties have dengue top of mind when making any diagnosis," Jaco says.

One hundred million dengue infections are reported every year in the tropical and subtropical regions of the Americas, Africa and Asia. Like Rodolfo, however, many sufferers treat themselves and therefore do not show up in the statistics. According to WHO, the actual number of cases is closer to 390 million a year. "Half of the global population is threatened by this disease. Dengue has been named the disease of the future by WHO," says Frederic Baur, head of Vector Control at Bayer. "The carrier of the disease, the tiger or Aedes mosquito, lives and breeds in the innumerable water reservoirs, both large and small, found in cities. Rising urbanization and possibly climate change are creating increasingly favorable habitat conditions for the mosquito." Dengue fever is currently endemic in more than 100 countries and is continuing to spread. The disease can be curbed effectively by combating its vector.

Bayer can help protect those at risk with larvicides to control mosquito larvae in water reservoirs and insecticide sprays to impregnate surfaces in residential buildings and on roadways. Bayer active ingredients for mosquito sprays also provide personal protection against bites. To prevent or break resistances to existing active ingredients, Bayer is also involved in several global research projects on new mechanisms of action. The company has considerably increased its overall investment in research into dengue fever in recent years. A new spray for treating building facades and municipal parks is now in the advanced stages of development. It is expected to be available by 2018 and promises an extended duration of action thanks to its resistance to rain and UV radiation.

Children swimming in a jungle river close to Ubatuba in Brazil's São Paulo state: Dengue fever is a major problem in the region.

While dengue fever can affect all population groups and receives widespread attention, other tropical diseases plague the poorest of the poor in our world. These diseases are referred to as "neglected tropical diseases." In 2012, institutions such as WHO, the World Bank, international government authorities and companies such as Bayer joined forces under the London Declaration on Neglected Tropical Diseases to stem or, if possible, eliminate ten of these diseases by 2020, including Chagas disease, which is widespread in Latin America, and African sleeping sickness. Bayer has been supplying WHO with free drugs to treat these diseases for over ten years, and their active ingredients are on the WHO List of Essential Medicines. "We have guaranteed WHO continuous availability of the active ingredients and a free supply of the drugs for as long as African sleeping sickness and Chagas disease exist," explains Kemal Malik, the member of the Bayer Board of Management responsible for Innovation.

"We can provide drugs to treat patients and offer solutions to control the vectors."

Kemal Malik, member of the Bayer Board of Management responsible for Innovation

One particularly insidious tropical disease, known as river blindness, is caused by nematodes that produce millions of young inside the human body. The medicines available at present are only capable of controlling the parasites in the early stage of their development. The drug must therefore be taken for more than 15 years, the length of time that adult nematodes – which can grow up to 70 centimeters long – live in the human body. Together with the nonprofit Drugs for Neglected Diseases Initiative (DNDi), Bayer is currently developing a new drug that will be able to eliminate adult worms as well.

"Our corporate citizenship activities include supporting the fight against neglected tropical diseases. As a Life Science company we are uniquely positioned to do so, by both providing medicines to treat patients, as well as offering innovative solutions to control vectors," says Malik.

Covestro on the stock market

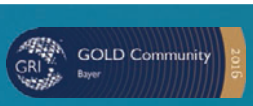
CEO Patrick Thomas (left) and CFO Frank H. Lutz rang in a new era for Covestro as a listed company.

In a rapid ascent, Covestro AG already figured among the 80 most important listed companies in Germany around two months after its IPO. In December 2015, the materials manufacturer – formerly Bayer MaterialScience – was included in the MDAX stock index.

The MDAX includes the 50 companies that rank immediately below the 30 DAX titles. "We are delighted to be included in the MDAX and proud that this step has occurred so quickly," said Covestro CFO Frank H. Lutz. "It reflects the gratifying performance of our stock and the great interest displayed by investors since our flotation on October 6, 2015. Membership in the MDAX will further enhance the perception of Covestro on the global financial markets." The Covestro share is now no longer listed only on the Frankfurt Stock Exchange, but on every other German stock exchange as well.

The stock market flotation was a further important step for Covestro in a new era of independence. The gross issue proceeds of €1.5 billion were mainly used to pay down debt to the Bayer Group, not least with the aim of achieving a good investment-grade rating.

About this Report



This integrated Annual Report combines our financial and our sustainability reporting. Our aim is to elucidate the interactions between financial, ecological and societal factors and underline their influence on our company's long-term development, thus providing our stakeholders with comprehensive and transparent information.

We are reporting on fiscal 2015 and thus refer to the organizational structure that was in place until December 31, 2015. Exceptions are those chapters in the Management Report which discuss forward-looking issues – strategy, targets and key performance indicators – as well as the Report on Future Perspectives and on Opportunities and Risks. These are aligned to the organizational structure as of January 1, 2016, which is described in Chapter 1.2 "Corporate Structure."

The consolidated financial statements of the Bayer Group as of December 31, 2015, comply with the International Financial Reporting Standards (IFRS) valid at the closing date and with the provisions of the German Commercial Code in conjunction with German financial reporting standards. The combined management report complies with these requirements and provides an overview of the financial position and results of operations of the Bayer Group.

The Compensation Report for the Board of Management and the Supervisory Board complies with the recommendations of the German Corporate Governance Code. The consolidated financial statements and the combined management report are published in line with statutory disclosure requirements.

GRI G4-23

The Bayer Group's sustainability reporting is aligned to the guidelines of the Global Reporting Initiative (GRI) and the 10 principles of the U.N. Global Compact (UNGC). In fiscal 2015, we applied the GRI G4 Guidelines in compliance with the "comprehensive" option for the first time. The detailed GRI content index with the corresponding UNGC principles can be found in the "Further Information" section in the augmented version of the Annual Report. Online only, we also publish a separate PDF file with a summary of the U.N. Global Compact Progress Report based on the criteria of the Blueprint for Corporate Sustainability Leadership.

Our reporting is also aligned to international guidelines and recommendations, including those on the definition and selection of nonfinancial indicators and on reporting such as those of the OECD and the ISO 26000 standards. In selecting and measuring our key data we also take into account the recommendations of the European Federation of Financial Analysts Societies (EFFAS) in the case of nonfinancial indicators, and those of the Greenhouse Gas Protocol regarding greenhouse gas emissions. We also consider the recommendations of the World Business Council for Sustainable Development (WBCSD) and the European Chemical Industry Council (CEFIC). This year we will again submit a declaration of conformity with the German Sustainability Code.

Data collection and reporting thresholds

GRI G4-17

We collected the data of all relevant organizational units and companies worldwide that fell within the scope of the Bayer Group's consolidated financial statements between January 1, 2015, and December 31, 2015.

We mainly use SAP systems to collect financial data worldwide. We use the global SAP HR information system and the associated reporting application – the Sustainability Management Annual Reporting Tool (SMART) – to collect HR indicators and social data. All HSE (health, safety and environmental protection) performance indicators for the Group are collated in our Group-wide site information system (BaySIS). The HSE data cover all fully consolidated companies in which Bayer owns at least 50% of the shares. The performance indicators of these companies are fully consolidated, irrespective of the exact proportion of the shares held by Bayer. Data on occupational injuries, transport accidents and environmental incidents are collected at all sites worldwide. Environmentally relevant indicators are measured at all production sites.

GRI G4-22

In accordance with IFRS 5 (Non-current Assets Held for Sale and Discontinued Operations), financial indicators are given for continuing operations unless otherwise explicitly indicated. The same applies to HR indicators and our social data. In the case of HSE indicators, the value shown is the total for the Bayer Group; no distinction is made between continuing and discontinued operations.

As the indicators in this report are stated in accordance with commercial rounding principles, totals and percentages may not always be exact.

External verification

PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft has audited the consolidated financial statements statements (including the notes thereto) of Bayer AG, Leverkusen, and the combined management report for the fiscal year from January 1, 2015, to December 31, 2015, and has issued an unqualified opinion. All the online annexes that supplement the management report in the augmented online version of the Bayer Annual Report 2015 ("Annual Report 2015 – Augmented Version") for the fiscal year from January 1 to December 31, 2015, have been reviewed by PricewaterhouseCoopers AG Wirtschaftsprüfungsgesellschaft on a limited assurance basis.

Additional information

The integrated Bayer Annual Report 2015 is available in a print version ("Annual Report 2015") and in an augmented online version ("Annual Report 2015 – Augmented Version"). The online version contains the notes to the consolidated financial statements of the Bayer Group, along with additional information. The print version contains numbered online annexes which refer the reader to additional information in the Augmented Version. You can enter these numbers in a search mask on any page of the online Annual Report to directly access the annexes.

Both versions of the Annual Report are available in PDF format for download from the Bayer website.

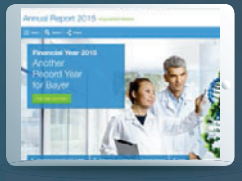
For further guidance, the Annual Report contains references to other chapters, to (Bayer) websites and, in the Augmented Version, to GRI G4 materiality disclosures.

Online annexes

Cross-references within the Annual Report

References to internet sites

The "Annual Report 2015 – Augmented Version" can be found at WWW.BAYER.COM/AR15.



The "Annual Report 2015 – Augmented Version" is also available as an app in the Apple App Store. Please search for "Bayer Annual Reports."

Bayer Annual Report 2015

Board of Management

On January 1, 2016, the Board of Management of Bayer AG was enlarged to include the heads of the Pharmaceuticals, Consumer Health and Crop Science divisions. Management of the company has thus been aligned more strongly with business operations.

KEMAL MALIK
Innovation · Latin America region

Kemal Malik studied medicine and worked in a London hospital. After holding different positions of increasing responsibility at Bristol-Myers Squibb, he joined Bayer in 1995. In 2007 Malik became a member of the Executive Committee, head of Global Development and Chief Medical Officer of Bayer HealthCare. He was appointed to the Bayer Board of Management in February 2014.

DIETER WEINAND
Pharmaceuticals · North America region

Dieter Weinand studied pharmacology, toxicology and biology in New York. After holding positions at various companies in the pharmaceutical industry including Pfizer and Bristol-Myers Squibb, he was President Global Commercialization & Portfolio Management at Otsuka Pharmaceutical Development & Commercialization Inc. in Princeton. In 2014, Weinand became President of the Pharmaceuticals Division at Bayer. He was appointed to the Bayer Board of Management in January 2016.

WERNER BAUMANN[1]
Strategy and Portfolio Management · Europe/Middle East/Africa region

Werner Baumann studied economics in Aachen and Cologne, joining Bayer AG in 1988. After holding positions of increasing responsibility in Spain and the United States, he became a member of the Board of Management of Bayer HealthCare. He was appointed to the Bayer Board of Management in 2010, first as Chief Financial Officer and then as Chief Strategy and Portfolio Officer. He was additionally appointed Chief Executive Officer of Bayer HealthCare in 2015.

DR. HARTMUT KLUSIK*
Human Resources · Technology and Sustainability

Hartmut Klusik studied chemistry in Marburg. After gaining a Ph.D., he began his professional career at Wolff Walsrode in 1984. He transferred to crop protection production at Bayer in Brazil in 1990. Following assignments in the United States and Australia and after holding positions of increasing responsibility at Bayer CropScience, he was appointed to the Board of Management of Bayer HealthCare with responsibility for Product Supply. He was appointed to the Bayer Board of Management in January 2016.

*Labor Director

DR. MARIJN DEKKERS[1]
Chief Executive Officer of Bayer

Marijn Dekkers studied chemistry and chemical engineering in Nijmegen and Eindhoven. After gaining a Ph.D., he began a career in research with General Electric in the United States. Having held various positions in the United States, latterly as Chief Executive Officer and President of Thermo Fisher Scientific Inc., Dekkers took over as Chief Executive Officer of Bayer in October 2010.

JOHANNES DIETSCH
Chief Financial Officer of Bayer · Asia/Pacific region

Johannes Dietsch completed his training with Bayer as a commercial assistant and business administrator in 1984. He subsequently held various managerial positions within the company, including one in Japan. In 2002, Dietsch took over as head of the Finance Department in the Corporate Center. He became Senior Bayer Representative and CFO of Bayer in China in 2011. He was appointed to the Bayer Board of Management in September 2014.

ERICA MANN
Consumer Health

Erica Mann holds a degree in analytical chemistry and a marketing diploma from her studies in Johannesburg, South Africa. She began her career with Eli Lilly & Company and held positions at Johnson & Johnson, Lederle Laboratories and Wyeth before moving into senior management at Pfizer in the United States. She became head of Consumer Care at Bayer HealthCare in 2011. She was appointed to the Bayer Board of Management in January 2016.

LIAM CONDON
Crop Science

Liam Condon studied international marketing in Dublin and Berlin. He held various positions of increasing responsibility with the former Schering AG, Berlin, Germany, and with Bayer HealthCare in Europe and Asia, including Managing Director of Bayer HealthCare China and head of Bayer HealthCare in Germany. Condon became Chief Executive Officer of Bayer CropScience in 2012. He was appointed to the Bayer Board of Management in January 2016.

[1] Effective May 1, 2016, Werner Baumann will become the new Chairman of the Board of Management of Bayer AG. Dr. Marijn Dekkers will leave the company at his own request on April 30, 2016.

Report of the Supervisory Board

During 2015, the Supervisory Board monitored the conduct of the company's business by the Board of Management on a regular basis with the aid of detailed written and oral reports received from the Board of Management, and also acted in an advisory capacity. In addition, the Chairman of the Supervisory Board and the Chairman of the Board of Management maintained a constant exchange of information. In this way the Supervisory Board was kept continuously informed about the company's intended business strategy, corporate planning (including financial, investment and human resources planning), earnings performance, the state of the business and the situation in the company and the Group as a whole.

Where Board of Management decisions or actions required the approval of the Supervisory Board, whether by law or under the Articles of Incorporation or the rules of procedure, the draft resolutions were inspected by the members at the meetings of the full Supervisory Board, sometimes after preparatory work by the committees, or approved on the basis of documents circulated to the members. The Supervisory Board was involved in decisions of material importance to the company. We discussed at length the business trends described in the reports from the Board of Management and the prospects for the development of the Bayer Group as a whole, the individual organizational units and the principal affiliated companies in Germany and abroad.

CHANGES ON THE SUPERVISORY BOARD AND THE BOARD OF MANAGEMENT

The Vice Chairman of the Supervisory Board, Thomas de Win, stepped down effective June 30, 2015. He was succeeded as a member of the Supervisory Board by Heinz Georg Webers, who had been elected as a substitute for de Win. The Supervisory Board elected Oliver Zühlke as its new Vice Chairman. Peter Hausmann stepped down from the Supervisory Board effective October 31, 2015. The Local Court of Cologne appointed Frank Löllgen as his successor.

In connection with Bayer's focus on the Life Science business and the reorganization of the Bayer Group, the Board of Management was expanded to include the heads of the new divisions. The Supervisory Board therefore appointed Dieter Weinand (Pharmaceuticals), Erica Mann (Consumer Health) and Liam Condon (Crop Science) to the Board of Management effective January 1, 2016. Also with effect from January 1, 2016, the Supervisory Board appointed Dr. Hartmut Klusik as new Labor Director with responsibility for Human Resources, Technology and Sustainability on the Board of Management of Bayer AG. He succeeds Michael König, who had requested that his contract not be extended.

WORK OF THE SUPERVISORY BOARD

Six meetings of the full Supervisory Board took place during 2015. No member of the Supervisory Board attended only half or fewer than half of its meetings or those of the committees on which he/she served. The average attendance rate by Supervisory Board members at the meetings of the full Supervisory Board and of its committees held in 2015 was approximately 97 percent.

The members of the Board of Management regularly attended the meetings of the Supervisory Board.

Werner Wenning, Chairman of the Supervisory Board of Bayer AG

The deliberations of the Supervisory Board focused on questions relating to Bayer's strategy, portfolio and business activities, as well as personnel decisions. The discussions at the respective meetings in 2015 centered on various topics. At the February meeting, the Supervisory Board discussed the 2014 Annual Report and the agenda for the 2015 Annual Stockholders' Meeting. It also dealt with the Bayer Group's risk management system, matters relating to the Board of Management's compensation and the results of the efficiency audit of the Supervisory Board.

At the May meeting, the Supervisory Board dealt with the planned sale of the Diabetes Care business and discussed the business performance to date in 2015 and the imminent Annual Stockholders' Meeting. At an extraordinary meeting in August, the Supervisory Board discussed in detail the stock market flotation of Bayer's MaterialScience unit under the name Covestro.

At the September meeting, the Supervisory Board discussed Bayer's strategy and the future organization of the Bayer Group effective January 1, 2016. With effect from January 1, 2016, the Supervisory Board appointed four new members to the Board of Management – Erica Mann, Dieter Weinand, Liam Condon and Hartmut Klusik – and approved the departure of Michael König from the Board of Management. In connection with the new appointments, the Supervisory Board also discussed in detail matters related to the Board of Management's compensation. In addition, the Supervisory Board once again discussed the planned stock market flotation of Covestro against the background of the market environment at that time. Finally, the Supervisory Board resolved upon changes to the rules of procedure of the Board of Management and the Supervisory Board and established an additional Supervisory Board committee, the Innovation Committee.

At an extraordinary meeting in October, the Supervisory Board again discussed the stock market flotation of Covestro and resolved upon the volume of the flotation and the issue price range. At its meeting in December 2015, the Supervisory Board undertook the routine review of the pension amounts of the

former members of the Board of Management. Also at this meeting, the Board of Management presented its planning for the business operations in the years 2016 through 2018 and provided information on the current rating situation. The Supervisory Board also approved the proposed financing framework for 2016. In addition, the Supervisory Board once again dealt with the company's strategy, including developments in the crop science industry, and with the collaboration between Bayer and CRISPR Therapeutics. Furthermore, the Supervisory Board resolved to designate Deloitte & Touche GmbH Wirtschaftsprüfungsgesellschaft as its first choice with regard to the bidding process for the audit of the financial statements for the years 2017 through 2021. In addition, the Supervisory Board resolved to issue an unqualified declaration of compliance with the German Corporate Governance Code. Following the meeting, an information and discussion forum took place on the topic of Life Sciences.

COMMITTEES OF THE SUPERVISORY BOARD

The Supervisory Board has a Presidial Committee, an Audit Committee, a Human Resources Committee, a Nominations Committee and an Innovation Committee. The current membership of the committees is shown in the "Further Information" section under "Governance Bodies."

The meetings and decisions of the committees, and especially the meetings of the Audit Committee, were prepared on the basis of reports and other information provided by the Board of Management. Reports on the committee meetings were presented at the meetings of the full Supervisory Board.

Presidial Committee: This comprises the Chairman and Vice Chairman of the Supervisory Board along with a further stockholder representative and a further employee representative. The Presidial Committee serves primarily as the mediation committee pursuant to the German Codetermination Act. It has the task of submitting proposals to the Supervisory Board on the appointment of members of the Board of Management if the necessary two-thirds majority is not achieved in the first vote at a plenary meeting. Certain decision-making powers in connection with capital measures, including the power to amend the Articles of Incorporation accordingly, have also been delegated to this committee. The Presidial Committee may also undertake preparatory work for full meetings of the Supervisory Board.

In 2015, the Presidial Committee was not required to convene in its capacity as the mediation committee. Based on the corresponding authorization by the Supervisory Board, it resolved in writing in 2015 on the issue and redemption of hybrid bonds. At a meeting in September, the Presidial Committee discussed in detail the planned stock market flotation of Covestro and submitted a proposal to the Supervisory Board concerning the volume of the flotation and the issue price range.

Audit Committee: The Audit Committee comprises three stockholder representatives and three employee representatives. The Chairman of the Audit Committee in 2015, Dr. Klaus Sturany, satisfies the statutory requirements concerning the independence and the expertise in the field of accounting or auditing that a member of the Supervisory Board and the Audit Committee is required to possess. The Audit Committee meets regularly four times a year.

Its tasks include in particular oversight of the financial reporting process, the effectiveness and ongoing development of the internal control system, the risk management system, the internal audit system, the compliance system and the audit of the financial statements. The Audit Committee prepares the resolutions of the Supervisory Board concerning the financial statements and management report of Bayer AG and the proposal for the use of the distributable profit, the consolidated financial statements and management report of the Bayer Group and the agreements with the auditor (particularly the awarding of the audit contract, the determination of the main areas of focus for the audit and the audit fee agreement). The committee submits a proposal to the full Supervisory Board concerning the auditor's appointment, and takes appropriate measures to determine and monitor the auditor's independence. The audit focuses particularly on whether the financial statements have been prepared in compliance with the statutory requirements and whether the financial reporting provides a true and fair view of the financial position and results of operations of the company and the Group.

The Audit Committee discusses developments in the area of corporate compliance at each of its meetings where necessary.

The Chairman of the Board of Management and the Chief Financial Officer regularly attended the meetings of the Audit Committee. Representatives of the auditor were also present at all the meetings and reported in detail on the audit work and the audit reviews of the interim financial reports.

The meetings focused on a number of topics. At the February meeting, the Audit Committee discussed the financial statements and the Group's tax strategy and tax risks. It also carefully considered the risk report, which covered the risk management system, planning and market risks, legal risks, corporate compliance, the report on process and organizational risks and the internal control system, and the report by the Internal Audit department. At this meeting, the Audit Committee also made a recommendation to the full Supervisory Board concerning the resolution to be submitted to the Annual Stockholders' Meeting on the appointment of the auditor of the financial statements.

The April meeting mainly dealt with the yearly report of the Group Compliance Officer, the determination of the main areas of focus for the audit of the 2015 financial statements and the bidding process for the audit of the financial statements for 2017 and the fiscal years thereafter. At its July meeting, the Audit Committee again addressed the bidding process for the audit of the financial statements. As at every meeting, the quarterly financial statements were also discussed, along with legal and compliance issues. At its meeting in October, the Audit Committee once more discussed the bidding process for the audit of the financial statements in addition to the regular items on the agenda.

Human Resources Committee: On this committee, too, there is parity of representation between stockholders and employees. It consists of the Chairman of the Supervisory Board and three other members. The Human Resources Committee prepares the personnel decisions of the full Supervisory Board, which resolves on appointments or dismissals of members of the Board of Management. 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. The Human Resources Committee also discusses the long-term succession planning for the Board of Management.

The Human Resources Committee convened on two occasions in 2015. The matters discussed at these meetings concerned the compensation and contracts of the members of the Board of Management and the preparation of the appointment of the new members of the Board of Management.

Nominations Committee: This committee carries 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.

On several occasions outside of the meetings in 2015, the members of the Nominations Committee discussed candidates for the elections to the Supervisory Board that are due to take place in 2016, along with the medium-term planning for the composition of the stockholder side of the Supervisory Board.

Innovation Committee: The Innovation Committee was established in September 2015. It is primarily concerned with the innovation strategy and innovation management, the strategy for the protection of intellectual property, and major research and development programs at Bayer. It is also responsible for advising and overseeing the management and preparing any Supervisory Board decisions. The Committee comprises the Chairman of the Supervisory Board and five other members, with parity of representation between stockholder and employee representatives. The Chairman of the Board of Management and the member of the Board of Management responsible for Innovation regularly attend the meetings of the Innovation Committee.

In 2015, the Innovation Committee convened once in December and dealt at this meeting with new technologies in the area of Life Sciences.

CORPORATE GOVERNANCE

The Supervisory Board dealt with the ongoing development of corporate governance at Bayer, partly through the amendment of the rules of procedure of the Supervisory Board, taking into account the May 5, 2015, version of the German Corporate Governance Code. In December, the Board of Management and the Supervisory Board issued a new declaration concerning the German Corporate Governance Code.

FINANCIAL STATEMENTS AND AUDITS

The financial statements of Bayer AG were prepared according to the requirements of the German Commercial Code and Stock Corporation Act. The consolidated financial statements of the Bayer Group were prepared according to the German Commercial Code and the International Financial Reporting Standards (IFRS). The combined management report was prepared according to the German Commercial Code. The auditor, PricewaterhouseCoopers Aktiengesellschaft, Wirtschaftsprüfungsgesellschaft, Essen, has audited the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report. The conduct of the audit is explained in the auditor's reports. The auditor finds that Bayer has complied, as appropriate, with the German Commercial Code, the German Stock Corporation Act and/or the International Financial Reporting Standards endorsed by the European Union, and issues an unqualified opinion on the financial statements of Bayer AG and the consolidated financial statements of the Bayer Group. The financial statements of Bayer AG, the consolidated financial statements of the Bayer Group, the combined management report and the audit reports were submitted to all members of the Supervisory Board. They were discussed in detail by the Audit Committee and at a meeting of the full Supervisory Board. The auditor submitted a report on both occasions and was present during the discussions.

We examined the financial statements of Bayer AG, the proposal for the use of the distributable profit, the consolidated financial statements of the Bayer Group and the combined management report. We have no objections, thus we concur with the result of the audit.

We have approved the financial statements of Bayer AG and the consolidated financial statements of the Bayer Group prepared by the Board of Management. The financial statements of Bayer AG are thus confirmed. We are in agreement with the combined management report and, in particular, with the assessment of the future development of the enterprise. We also concur with the dividend policy and the decisions concerning earnings retention by the company. We assent to the proposal for the use of the distributable profit, which provides for payment of a dividend of €2.50 per share.

The Supervisory Board would like to thank the Board of Management and all employees for their dedication and hard work in 2015.

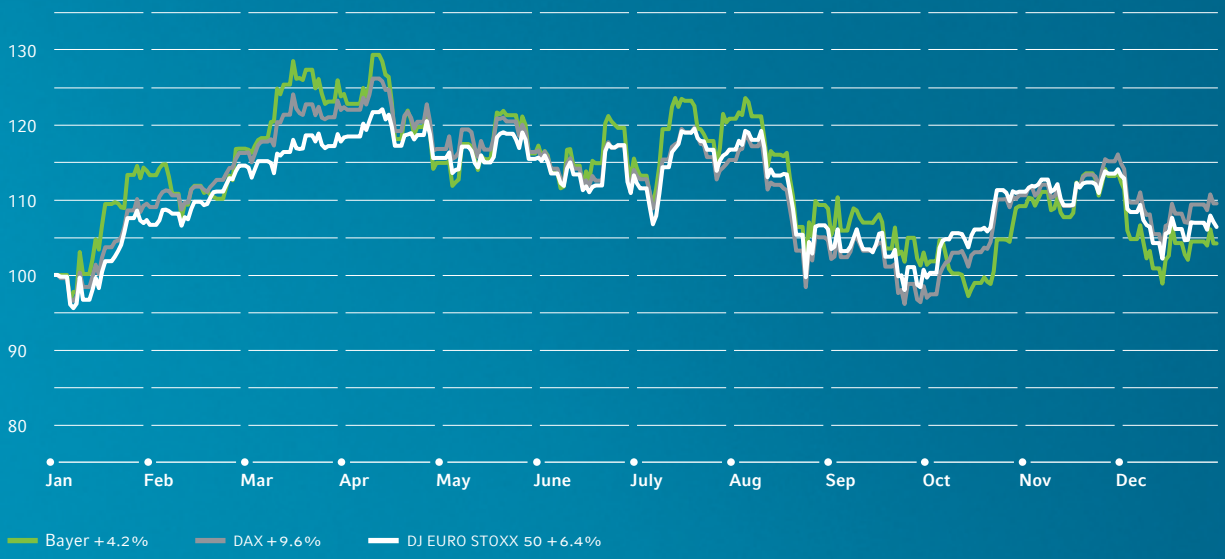
Leverkusen, February 24, 2016
For the Supervisory Board:

WERNER WENNING
Chairman

Investor Information

Performance of Bayer Stock in 2015 [Graphic 2.1]

(Indexed; 100 = Xetra closing price on December 31, 2014; source: Bloomberg)



// Bayer stock yields approximately 4 percent in 2015

// Successful stock market debut for Covestro

// Board of Management and Supervisory Board propose dividend increase to €2.50 per share for 2015

The Stock Market in 2015

STOCK MARKETS END THE YEAR WITH GAINS FOLLOWING EXTREME FLUCTUATIONS

Fiscal 2015 was characterized worldwide by high volatility. The program to purchase certain bonds announced by the European Central Bank in the spring stimulated optimism and increasing share prices. As the year progressed, however, the investment climate was dampened by speculation as to Greece's exit from the eurozone, economic concerns in China and the decline in the global oil price. Additionally, the capital market environment was influenced by the Fed rate increase in the United States at the end of 2015.

The DAX reached its high for the year in the second quarter of 2015, closing at 12,375 points on April 10. This was also an all-time record for the index. From that time until September, the DAX dropped almost 3,000 points to 9,428 points in a development characterized by strong fluctuations. In the closing months of the year, the index recovered to close at 10,743 points for a year-on-year gain of 9.6 percent. The European equities index EURO STOXX 50 (performance index) rose 6.4 percent, ending the year at 6,226 points. Share prices in the United States and Japan varied in their performance. The S&P 500 index was largely unchanged, while the Nikkei 225 increased by around 9 percent.

BAYER STOCK YIELDS FOUR PERCENT FOR THE YEAR

Including the dividend of €2.25 per share paid at the end of May, the return on Bayer stock was 4.2 percent in 2015. Bayer stock ended the year at €115.80, having reached a high for the year and an all-time high of €146.20 in April.

Following a period of significantly above-average value creation from 2012 to 2014, the yield of Bayer stock in 2015 was below that of the reference indices, with the exception of the EURO STOXX Chemicals Index (performance index). The EURO STOXX Chemicals Index (performance index) climbed by 3.6 percent in 2015, while the EURO STOXX Health Care Index (performance index) rose by 19.2 percent. More than 90 percent of the roughly 30 equity analysts who regularly rate our company had a buy or hold recommendation on our stock at the end of last year.

Bayer Stock Data [Table 2.1]

		2014	2015
Earnings per share	€	4.14	4.97
Core earnings per share from continuing operations[1]	€	5.89	6.83
Gross cash flow per share	€	8.11	8.46
Equity per share	€	24.45	30.77
Dividend per share	€	2.25	2.50
Year-end price[2]	€	113.00	115.80
High for the year[2]	€	120.95	146.20
Low for the year[2]	€	91.51	108.00
Total dividend payment	€ million	1,861	2,067
Number of shares entitled to the dividend (Dec. 31)	million shares	826.95	826.95
Market capitalization (Dec. 31)	€ billion	93.4	95.8
Average daily share turnover on German stock exchanges	million shares	2.1	2.3
Price/EPS[2]		27.3	23.3
Price/core EPS[2]		19.2	17.0
Price/cash flow[2]		13.9	13.7
Dividend yield	%	2.0	2.2

2014 figures restated
[1] For details on the calculation of core earnings per share, see Combined Management Report, Chapter 14.3.
[2] Xetra closing prices (source: Bloomberg)

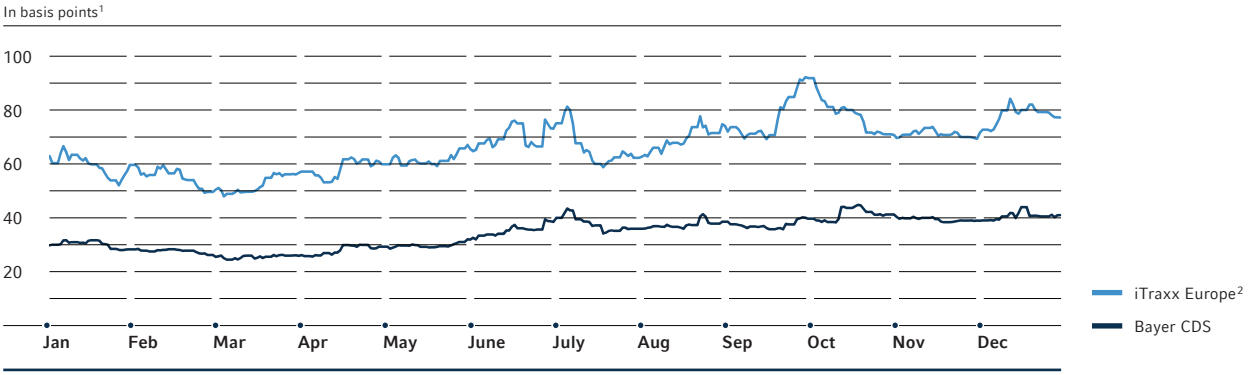
GOOD FINANCING CONDITIONS FOR BAYER IN VOLATILE MARKETS

The environment for corporate bonds remained favorable in 2015 – a year that, however, was marked by sharp fluctuations in the interest markets and a trend toward increased borrowing cost mark-ups. Particularly stark mark-ups were observed for the interest rate level, which saw its long-term downward trend cease at the end of the first quarter of 2015. The subsequent volatility occurred at a historically low absolute interest rate level. Against this background, investors sought medium- to long-term maturities. Interest in subordinated bonds remained high, even though investors increasingly demanded higher new issue premiums as the year progressed.

The development of risk premiums is apparent from the trend in credit default swaps (CDS) shown in Graphic 2.2. On the derivatives market, the price of these tradable insurance contracts, which are used to hedge against default of a borrower, shows how a company's credit standing is rated. The graphic shows the trend toward higher borrowing cost mark-ups and considerable volatility over the course of the year.

Benefiting from the still very positive market environment at the end of the first quarter, Bayer issued a hybrid bond with a volume of €1.3 billion and a coupon of 2.375 percent. Further details of outstanding bonds are given in Note [27] to the consolidated financial statements.

Rates for Five-Year Credit Default Swaps (CDS) 2015 [Graphic 2.2]



[1] Source: Bloomberg
[2] iTraxx Europe is a CDS index comprising the CDS of 125 companies (including financial institutions) with investment-grade ratings.

LONG-TERM RETURN ON BAYER STOCK STILL AHEAD OF THE MARKET

A long-term investor who purchased Bayer shares for €10,000 five years ago and reinvested all dividends would have seen the value of the position grow to €23,545 as of December 31, 2015, giving an average annual return of 18.7 percent. That was well above the return on the DAX and the EURO STOXX 50 (performance index) in the same period. Bayer stock also outperformed these indices on a three-year view.

Long-Term Returns on Bayer Stock in % p. a. (Dividends Reinvested) [Table 2.2]

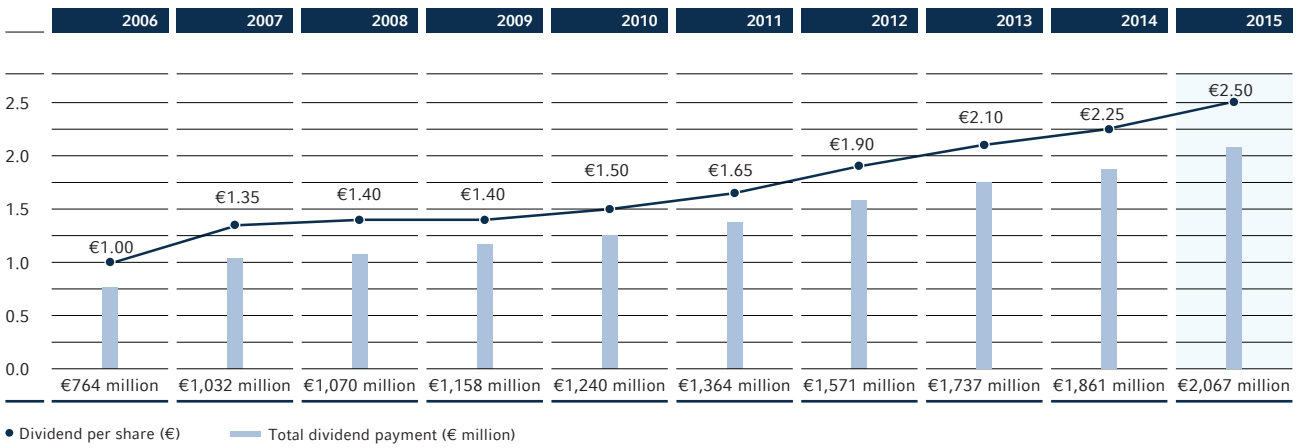
Annual returns	1 year 2015	3 years 2013 - 2015	5 years 2011 - 2015
	%	%	%
Bayer	4.2	19.6	18.7
DAX	9.6	12.2	9.2
EURO STOXX 50	6.4	10.4	6.4

DIVIDEND INCREASE TO €2.50 PER SHARE

The Board of Management and the Supervisory Board will propose to the Annual Stockholders' Meeting that the dividend be increased by €0.25 to €2.50 per share. Thus we once again intend that our stockholders should participate in last year's positive business performance. The resulting payout ratio of 37 percent calculated on core earnings per share is within our target corridor of 30 percent to 40 percent (for details of the calculation of core earnings per share, see Chapter 14.3 of the Combined Management Report).

The dividend yield calculated on the share price of €115.80 at year end 2015 amounts to 2.2 percent and the total dividend payment to €2,067 million.

Dividends Per Share and Total Dividend Payments [Graphic 2.3]



A SUSTAINABLE INVESTMENT

GRI
G4-26

We continued our dialogue with sustainability-oriented investors, analysts and rating agencies in 2015. In numerous conversations, we explained our strategy and the implementation of our nonfinancial targets, and provided information on the most important fields of our sustainability activity. This direct contact serves as the basis for transparent and fair evaluation.

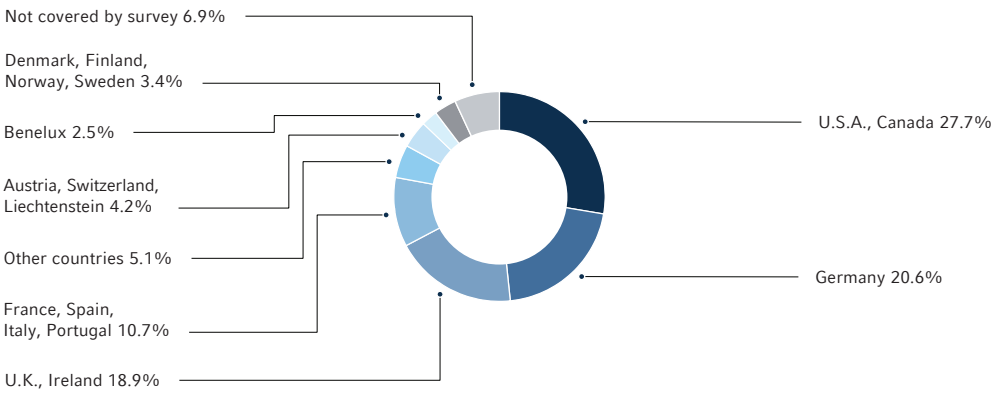
www.bayer.com/en/awards.aspx

In 2015, Bayer again qualified for inclusion in major sustainability indices that assess companies according to environmental, social and governance criteria: Dow Jones Sustainability World, FTSE4Good (Europe, Global and Environmental Leaders Europe 40), MSCI Low Carbon Target, NYSE Euronext Low Carbon 100 Europe, STOXX® Global ESG Leaders and Access to Medicine Index.

INTERNATIONAL OWNERSHIP STRUCTURE

The number of Bayer stockholders rose substantially in 2015. At the end of 2015, approximately 300,000 stockholders were listed in our share register – an increase of about 33,000 compared with the previous year. Our ownership structure shows the international distribution of our capital stock. The highest proportion of our outstanding shares, almost 28 percent, is held by investors in the United States and Canada, followed by Germany with nearly 21 percent. From a regional perspective, Bayer has a stable ownership structure that has altered only slightly in recent years. Bayer has a 100 percent free float as defined by Deutsche Börse, the operator of the Frankfurt Stock Exchange.

Ownership Structure by Country [Graphic 2.4]



Source: IPREO

INVESTOR RELATIONS FOCUSED ON THE COVESTRO STOCK MARKET FLOTATION

Bayer's investor relations (IR) activities last year were dominated by the focus on the Life Science businesses, and thus by the stock market flotation announced in 2014 of our former Bayer MaterialScience subgroup. Under the new name Covestro AG, these activities were successfully listed on the Frankfurt Stock Exchange at the beginning of October by way of an IPO (initial public offering). We handled many questions particularly from private investors in the period prior and subsequent to the listing.

Bayer's management and the IR team last year spent nearly 60 days communicating directly with analysts and investors during roadshows and investor conferences.

Our Meet Management conferences in Berlin and New York gave investors and analysts an opportunity for direct dialogue with Bayer's top management.

As in previous years, private investors also had an opportunity to find out about our company at various stockholder forums at which the Investor Relations team was present.

We received awards for our IR work again in 2015. In the Thomson Reuters Extel Survey 2015, investors and analysts named Bayer the company with the best investor relations work in the chemicals sector. We took third place in the same category in the Pan European Survey. We were also ranked second among DAX 30 companies in a report by the German Investor Relations Association (DIRK) and the German business magazine *Wirtschaftswoche*.

01

Combined Management Report

of the Bayer Group and Bayer AG as of December 31, 2015

Bayer Annual Report 2015

Fundamental Information About the Group

1. Bayer at a Glance

The Bayer Group in 2015 [Graphic 3.1.1]

SALES
€46,324 million
+2.7%[1]

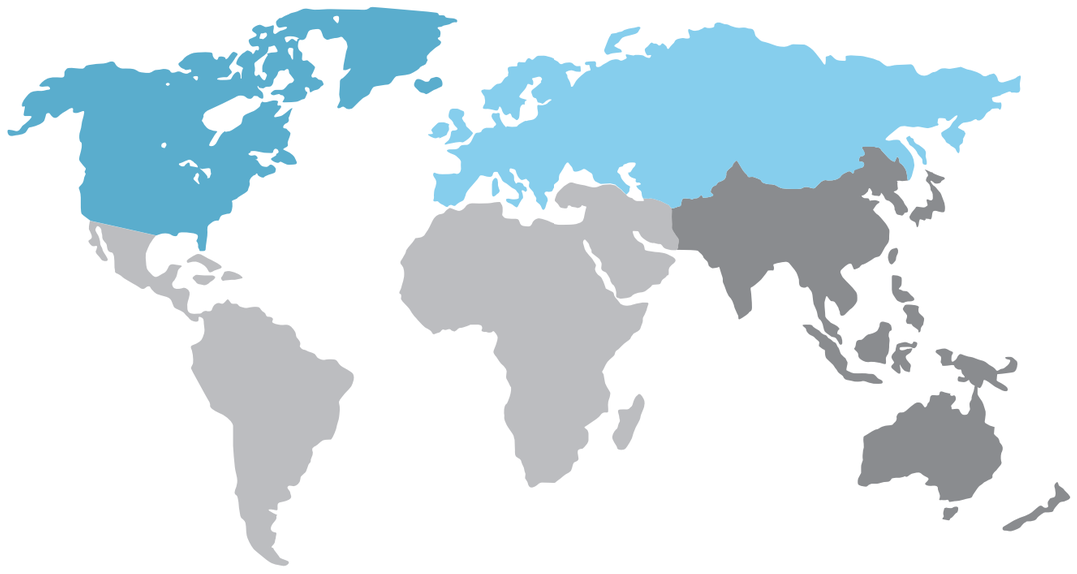
EBITDA BEFORE SPECIAL ITEMS
€10,266 million
+18.2%

NET INCOME
€4,110 million
+20.0%

CORE EARNINGS PER SHARE
€6.83
+16.0%

RESEARCH AND DEVELOPMENT
€4,281 million
+21.0%

NORTH AMERICA
€12,740 (€9,953)[2] million
16,000 (15,800)[2]
€1,051 (€866)[2] million



EUROPE
€15,949 (€15,312)[2] million
55,900 (54,600)[2]
€2,947 (€2,412)[2] million

LATIN AMERICA / AFRICA / MIDDLE EAST
€7,371 (€7,007)[2] million
16,100 (16,800)[2]
€69 (€61)[2] million

ASIA / PACIFIC
€10,264 (€9,067)[2] million
28,800 (30,200)[2]
€214 (€198)[2] million

EMPLOYEES
116,800

EMPLOYEE ENGAGEMENT
87%

PROPORTION OF WOMEN IN SENIOR MANAGEMENT
28%

SUPPLIER MANAGEMENT
84%
of all strategically important suppliers evaluated since 2012

ENERGY EFFICIENCY
IMPROVEMENT OF
4% SINCE 2012

2014 figures in parentheses
[1] Currency- and portfolio-adjusted
[2] 2014 figures restated

1.1 Corporate Profile

Bayer is a 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 are contributing to finding solutions to some of the major challenges of our time. The growing and increasingly aging world population requires improved medical care and an adequate supply of food. Bayer is improving people's quality of life by preventing, alleviating and treating diseases. And we are helping to provide a reliable supply of high-quality food, feed and plant-based raw materials.

We develop new molecules for use in innovative products and solutions to improve the health of humans, animals and plants. Our research and development activities are based on a profound understanding of the biochemical processes in living organisms.

Our goal is to achieve and sustain leadership positions in our markets, thus creating value for our customers, stockholders and employees. To this end, our strategy is designed to help solve some of the most pressing challenges facing humankind, and by doing this exceptionally well we aim to strengthen the company's earning power.

We are committed to operating sustainably and addressing our social and ethical responsibilities as a corporate citizen, while at the same time respecting the interests of all our stakeholders. Employees with a passion for innovation enjoy excellent development opportunities at Bayer.

All this goes to make up our mission – Bayer: Science For A Better Life.

EXCLUSIVE FOCUS ON THE LIFE SCIENCE BUSINESSES

Following the economic and legal independence of our former MaterialScience subgroup, now Covestro, Bayer has charted the course for its successful development as a Life Science company. Our businesses hold leading positions in innovation-driven growth markets. Together they make up a strong, attractive and balanced portfolio that is resistant to fluctuations in demand and to potential risks. The previous structure – comprising a strategic management holding company and operational subgroups – has thus been replaced by an integrated organization under the umbrella of the strong Bayer brand.

The chapters in this report dealing with corporate strategy and future perspectives are based on the new structure because they look ahead. All other chapters reflect the organizational structure in effect through December 31, 2015.

OUR VALUES

Bayer's values play a central role in our daily work and are intended to guide us in fulfilling our mission "Bayer: Science For A Better Life." They are represented by the acronym **LIFE**, which stands for **L**eadership, **I**ntegrity, **F**lexibility and **E**fficiency.

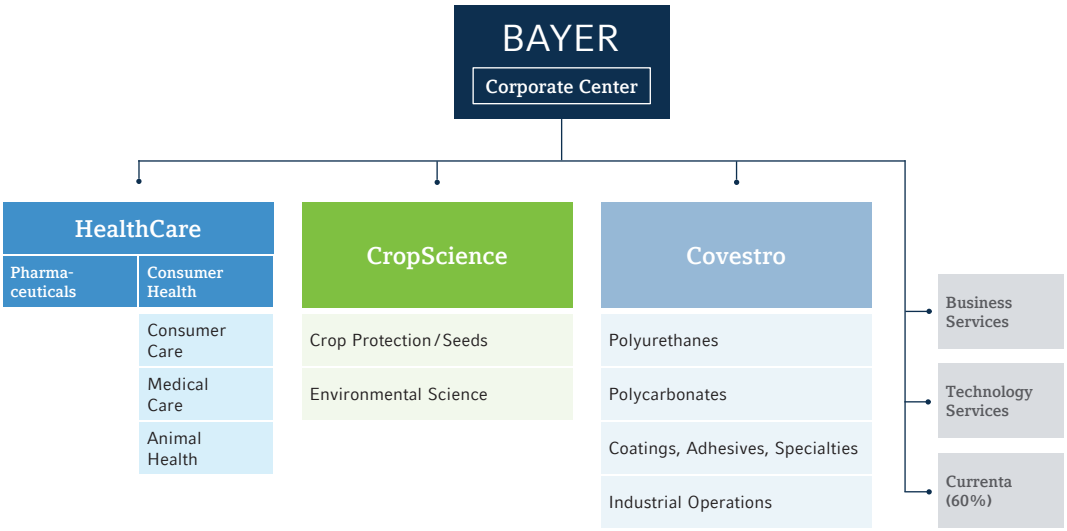
These values apply to everyone at Bayer and are firmly integrated into our global performance management system for managerial employees. Our value culture ensures a common identity throughout the enterprise across national boundaries, management hierarchies and cultural differences.

1.2 Corporate Structure

CORPORATE STRUCTURE IN 2015

Until December 31, 2015, Bayer AG, headquartered in Leverkusen, Germany, served as a strategic management holding company, defining common values, goals and strategies for the entire Bayer Group. It was also responsible for resource allocation and managerial appointments. Under its direction, the three subgroups – HealthCare, CropScience and Covestro (formerly MaterialScience) – conducted their business operations on their own responsibility in line with predefined goals, supported by three service companies. Following the signing of a sales agreement with Panasonic Healthcare Holdings, Ltd. on June 8, 2015, the Diabetes Care business is no longer reported under continuing operations.

Bayer Group Structure 2015 [Graphic 3.1.2]



Key Data by Subgroup and Segment [Table 3.1.1]

	Sales		EBIT		EBITDA before special items[1]	
	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	**19,075**	**22,874**	**3,470**	**4,050**	**5,357**	**6,419**
Pharmaceuticals	12,052	13,745	2,371	2,807	3,699	4,195
Consumer Health	7,023	9,129	1,099	1,243	1,658	2,224
CropScience	**9,494**	**10,367**	**1,806**	**2,103**	**2,360**	**2,416**
Covestro	**11,651**	**11,982**	**555**	**635**	**1,187**	**1,659**
Reconciliation	**1,119**	**1,101**	**(436)**	**(538)**	**(219)**	**(228)**
Group	**41,339**	**46,324**	**5,395**	**6,250**	**8,685**	**10,266**

[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."

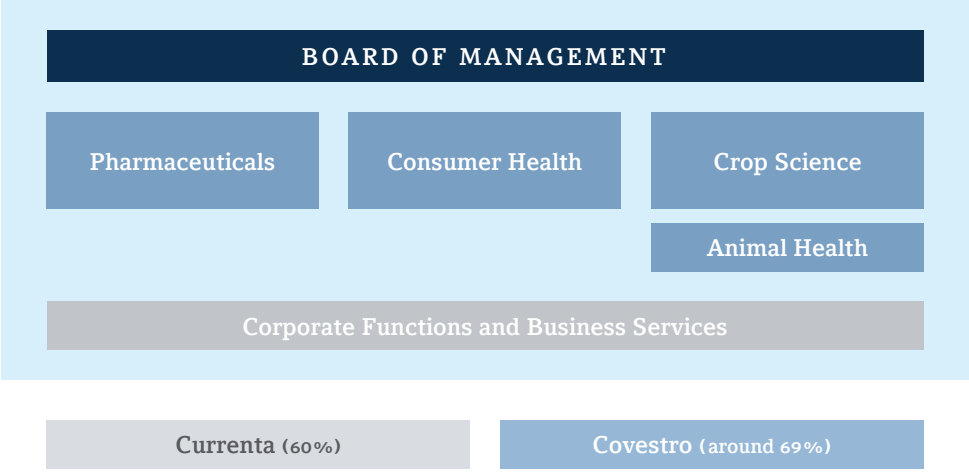
In 2015, the Bayer Group comprised 307 consolidated companies in 77 countries throughout the world.

NEW CORPORATE STRUCTURE EFFECTIVE 2016

With the company's focus now on the Life Science businesses, a new organizational structure was introduced effective January 1, 2016. The company's operations are now managed in three divisions – Pharmaceuticals, Consumer Health and Crop Science – and the Animal Health business unit. The former Bayer HealthCare subgroup has been dissolved. The Radiology and Pharmaceuticals businesses have been merged to form the Pharmaceuticals Division. The Consumer Health Division now consists entirely of the consumer care business. Animal Health has become a separate reporting segment. The Bayer CropScience subgroup is now the Crop Science Division. The former MaterialScience subgroup, renamed Covestro, became legally and economically independent on September 1, 2015. Covestro AG was floated on the stock market on October 6, 2015. Bayer currently still owns around 69% of Covestro AG. Covestro therefore remains a reporting segment of the Bayer Group because Bayer AG continues to exercise control.

Effective January 1, 2016, the Board of Management of Bayer AG was enlarged to include the heads of the new Pharmaceuticals, Consumer Health and Crop Science divisions. The business continues to be supported by Business Services and Currenta, while Technology Services is being integrated into Bayer AG, forming the Engineering & Technology function.

Bayer Group Structure in 2016 [Graphic 3.1.3]



Pro Forma Key Data by New Segment [Table 3.1.2]

	Sales		EBIT		EBITDA before special items[1]	
	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	€ million	€ million
Pharmaceuticals	13,512	15,308	2,627	3,027	4,081	4,615
Consumer Health	4,245	6,076	609	769	991	1,456
Crop Science	9,494	10,367	1,806	2,103	2,360	2,416
Animal Health	1,318	1,490	234	254	285	348
Reconciliation[2]	1,119	1,101	(436)	(538)	(219)	(228)
Total Life Sciences[3]	**29,688**	**34,342**	**4,840**	**5,615**	**7,498**	**8,607**
Covestro	11,651	11,982	555	635	1,187	1,659
Group	**41,339**	**46,324**	**5,395**	**6,250**	**8,685**	**10,266**

[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."
[2] Reconciliation includes the Business Services and Currenta service companies ("Other segments") as well as the corporate functions and consolidation effects.
[3] Including service companies

The **Pharmaceuticals** Division focuses on prescription products, especially for cardiology and women's healthcare, 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.

The **Consumer Health** Division markets mainly nonprescription products in the dermatology, dietary supplement, analgesic, gastrointestinal, cold, allergy, sinus and flu, foot care, sun protection and cardiovascular risk prevention categories. These products include globally known brands such as Claritin™, Aspirin™, Aleve™, Bepanthen™/Bepanthol™, Canesten™, Dr. Scholl's™[1] and Coppertone™.

The **Crop Science** Division has businesses in seeds, crop protection and nonagricultural pest control. It is organized into two operating units: Crop Protection/Seeds and Environmental Science. Crop Protection/Seeds markets a broad portfolio of high-value seeds along with innovative chemical and biological pest management solutions, while at the same time providing extensive customer service for modern and sustainable agriculture. Environmental Science focuses on nonagricultural applications, with a broad portfolio of pest control products and services designed for applications ranging from the home and garden sector to forestry.

The **Animal Health** Business Unit offers products and services for the prevention and treatment of diseases in companion and farm animals.

The corporate functions and Business Services operate as Group-wide competence centers in which business support services are bundled. Currenta is the service company responsible for managing and operating the Chempark sites in Leverkusen, Dormagen and Krefeld-Uerdingen.

Covestro is a leading supplier of high-tech polymer materials and develops innovative product solutions for a wide variety of everyday uses.

1.3 Group Strategy

Our mission "Bayer: Science For A Better Life" continues to guide our endeavors. The steadily growing and aging global population needs new and better medicines and an adequate food supply. With our Life Science innovations, we offer answers to these challenges.

OUR OBJECTIVE: PROFITABLE GROWTH

Our corporate strategy is aligned toward profitable growth that will increase the company's value in the long term. As well as expanding in growth markets, we attach special importance to the development of new products that create significant value for our stakeholders.

THE FOUNDATION FOR OUR SUCCESS: INNOVATION

Science-based innovations have made us the globally successful company we are today. Going forward, we will continue to strengthen this important foundation for our success. In 2016 alone, we plan to invest around €4.5 billion in research and development – more than ever before. Our scientists will continue to collaborate across divisional boundaries, supported in part by the new Bayer Life Science Center, which has been created to identify innovative technologies developed by startups and universities and make them available for our fields of activity. We are also driving forward new business models that include utilizing the opportunities offered by digitization for our company and our customers.

[1] Trademark rights and distribution only in certain countries outside the European Union

A FUNDAMENTAL PREMISE: SUSTAINABILITY

Sustainable business practices are essential to our company's future viability. We apply our scientific expertise and innovation strength to help solve global challenges. Our goal in developing, manufacturing and marketing our products is to balance commercial success with societal and ecological requirements while increasing enterprise value. We aim to ensure broad social acceptance for our business through responsible practices in areas such as product stewardship, environmental protection, safety, compliance, supplier management and human resources policy, taking into account the expectations of relevant stakeholders.

OUR MOST IMPORTANT RESOURCE: THE EMPLOYEES

Our employees are the key to our company's success. We therefore create a working environment in which each employee can unfold his or her full potential, drive forward innovations and achieve performance excellence. Our objective as an employer is to partner an employee throughout his or her career and not just at a certain phase. We live up to this aspiration with flexible worktime models, a firm commitment to social responsibility and the provision of wide-ranging development opportunities across the company. A diverse employee structure is also vital for our company's future competitiveness. We therefore strive for a good cultural and gender balance in all areas.

1.4 Targets and Performance Indicators

To consistently implement our strategy, we have set ambitious targets for our company and measure their attainment annually in terms of selected performance indicators. This program encompasses not only financial targets and innovation goals, but also sustainability objectives that are aligned to important areas along the value chain. Our aim is to make clear the challenges we have identified in our core business in the context of sustainable development, and at the same time to highlight the continuous improvements we are committed to making across the enterprise.

Following the legal independence and stock market flotation of Covestro, this company is not included in the new innovation, sustainability and employee targets. Where necessary, we have adjusted the reference data for unchanged targets to eliminate the contributions for Covestro.

The current status of our progress in respect of our targets and performance indicators is documented in the following table and the respective chapters.

Bayer Group Targets (Graphic 3.1.4)

Target	Target attainment (as of 2015)	New or adjusted target
Profitable Growth		
Increase in Group sales (Fx & portfolio adj.); forecast issued in February 2015: low-single-digit percentage increase to approx. €46 billion	2.7% increase to €46.3 billion	Low-single-digit percentage increase (Fx & portfolio adj.) to more than €47 billion
Increase in EBITDA before special items; forecast issued in February 2015: low- to mid-teens percentage increase	18.2% increase	Mid-single-digit percentage increase
Increase in core earnings per share; forecast issued in February 2015: low-teens percentage increase	16.0% increase	Mid-single-digit percentage increase
Innovation		
Group: increase in R&D investment to over €4.0 billion (2015)	€4.3 billion	Increase in R&D investment to €4.5 billion (2016)
HealthCare: transition of more than 10 new molecular entities (NMEs) into development (2015)	12 new molecular entities (NMEs) transferred	**Pharmaceuticals:** transition of 10 new molecular entities (NMEs) into development (2016) **Consumer Health:** transition of 20 consumer-validated concepts into early development (2016)
CropScience: transfer of 2 new molecular entities (NMEs) or plant traits into confirmatory technical proof-of-concept field studies (2015)	Start of field studies on 1 new plant trait, 1 new molecular entity (NME) and 2 new biologics	Transfer of 3 new molecular entities (NMEs), plant traits or biologics into confirmatory technical proof-of-concept field studies
Covestro (formerly MaterialScience): improvement in production process technology to achieve better energy efficiency (2015)	Further use of improved production technologies (e.g. in TDI, MDI and chlorine production)	-
Sustainability		
SUPPLIER MANAGEMENT		
Evaluation of all strategically important suppliers (2017)	84%	Target unchanged
Evaluation of all potentially high-risk suppliers with significant Bayer spend (2020)	73%	Target unchanged
Development and establishment of a new sustainability standard for our supply base (2020)	In implementation	Target unchanged

See Chapters 4 and 10 for more information

See Chapter 7 for more information

Bayer Group Targets (Graphic 3.1.4 [continued])

Target	Target attainment (as of 2015)	New or adjusted target
RESOURCE EFFICIENCY		
Improvement of 10% in Group-wide energy efficiency (2020); reference year 2012: 3.50 MWh/t	3.34 MWh/t (4% improvement)	Target unchanged; new reference value (2012): 8.86 MWh/t
Reduction of 20% in Group-wide specific greenhouse gas emissions (2020); reference year 2012: 0.98 t CO_2/t	1.09 t CO_2/t (+11%)	Reduction of 15% in Group-wide specific greenhouse gas emissions (2020); new reference value (2012): 1.88 t CO_2/t
Establishment of water management at all sites in water-scarce areas	Approx. 58%	Target unchanged
See Chapter 10 for more information		
SAFETY		
Reduction of 35% in occupational safety incident rate (2020); reference year 2012: RIR (Recordable Incident Rate) 0.49	RIR 0.42 (– 14%)	Target unchanged; new reference value (2012): RIR 0.50
Reduction of 30% in transport incidents (2020); reference year 2012: 6 incidents	12 (+100%)	Target not being continued
Reduction of 30% in process and plant safety incidents (2020); reference year 2012: LoPC-IR (Loss of Primary Containment Incident Rate) 0.38	LoPC-IR 0.22 (– 42%)	Target unchanged; new reference value (2012): LoPC-IR 0.21
See Chapter 9 for more information		
PRODUCT STEWARDSHIP		
Conclusion of assessment of hazard potential of all substances (>99%) used in quantities exceeding one metric ton per annum (2020)	66%	Target unchanged
See Chapter 8 for more information		
COMPLIANCE		
Conducting of precautionary risk assessments in all three subgroups (2015)	Successfully completed	–
Annual compliance training for all Bayer managers (>99%)	97%	Annual compliance training for close to 100% of Bayer managers
See Chapter 16.3 for more information		
Employees		
Continuous improvement in employee engagement; reference year 2012: 85%	87%	Target unchanged
Increase in the proportion of women in senior management to 30% (2015); reference year 2010: 21%	28%	Increase in the proportion of women in senior management to 35% (2020); reference value remains
Increase in the proportion of senior managers from outside the European Union, the United States or Canada to 25% (2015); reference year 2013: 18%	21%	Increase in the proportion of senior managers from outside the European Union, the United States or Canada to 25% (2020)
See Chapter 6 for more information		

Details of further key financial data are found in Chapter 18 "Future Perspectives." Information on Bayer Group targets is also provided in the relevant chapters, indicated by "Bayer Group Target" in the margin.

See Chapter 18

1.5 Internal Management System

The economic planning and steering for the business units is carried out within a framework laid down by the Board of Management that is refined during the strategic planning process. Operational planning then translates this framework into specific, measurable targets. Continuous monitoring of business developments complements the planning and management process, and key management and performance indicators are regularly updated. This process also involves tracking the implementation of the strategic objectives and adopting countermeasures in the event of deviations from the budget.

One of the prime objectives of the Bayer Group is to steadily increase enterprise value. We use the following steering parameters to plan, steer and monitor the development of our business.

The key performance indicators at the strategic level are cash value added (CVA), which is a value-based steering parameter, and cash flow return on investment (CFROI). These indicators support management in its decision-making, especially in the areas of strategic portfolio optimization and the allocation of resources for acquisitions and capital expenditures. In fiscal 2015, Bayer achieved a positive CVA of €1,285 million and a CFROI of 9.6%. (See Chapter 14.4 "Value Management" for further details.)

See Chapter 14.4

The principal economic steering parameters within the Bayer Group at the operational level are sales and earnings figures. With regard to earnings, special attention is paid to EBITDA (EBIT plus the 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) before special items. The EBITDA margin before special items, which is the ratio of EBITDA before special items to sales, serves as a relative indicator for the internal and external comparison of operational earning power. In 2015, EBITDA before special items amounted to €10,266 million, resulting in an EBITDA margin before special items of 22.2%. (See Chapter 14.2 "Calculation of EBIT(DA) Before Special Items" for further details.)

See Chapter 14.2

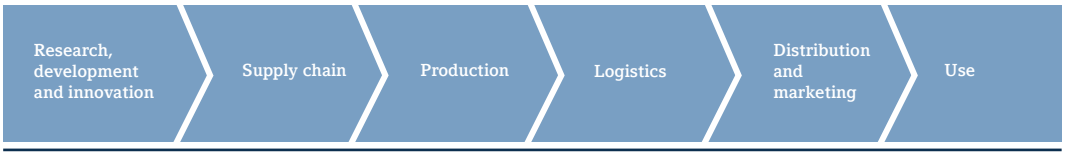
The Board of Management and the relevant committees steer the sustainable alignment of the company, defining responsibilities and framework conditions by way of Group directives, for example. Operations are steered using defined targets and performance indicators in areas such as innovation, supplier management, safety, product stewardship and environmental protection. On the basis of a materiality analysis, Bayer has determined the principal activities in these areas and established the relevant management systems, committees and working groups, which have been implemented by the subgroups. The ongoing review and revision of guidelines and regular internal audits ensure that our management systems are continuously improved and aligned to the specific requirements at any given time.

1.6 Value Creation

Bayer creates sustainable value in various ways for its stakeholders at all stages of the value chain (Graphic 3.1.5) by focusing on innovative products and solutions in its core businesses. Moreover, we operate production sites throughout the world, invest in research and development, work with international and local suppliers and contribute to the economic development of our target markets. As an employer, we provide jobs in industrialized, emerging and developing economies and create purchasing power through the salaries we pay. We also support public infrastructure through the payment of taxes and other contributions.

See Chapter 5 for more information about our areas of activity along the value chain.

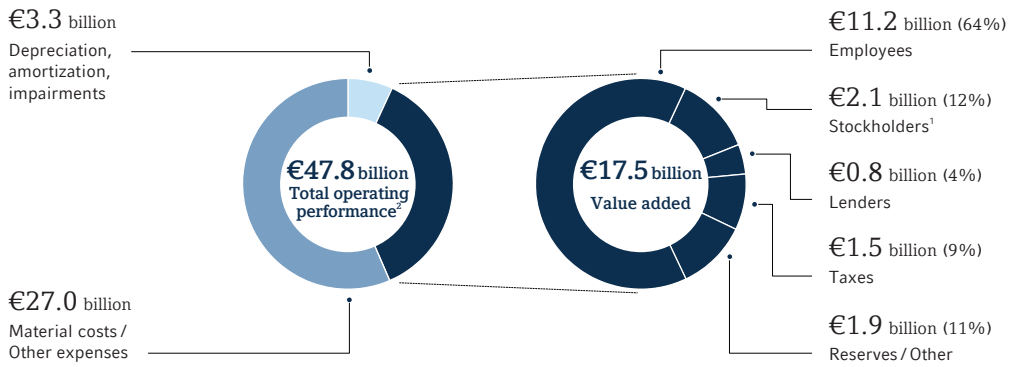
Value Chain Stages [Graphic 3.1.5]



The value added statement shows Bayer's direct contribution to public and private incomes and is a measure of the direct financial value created for stakeholders by its business activities. We define value added as the company's total operating performance in the previous fiscal year less the costs of procured and consumed goods and services, depreciation and amortization.

The total operating performance of the Bayer Group in 2015 was €47.8 billion. Value added amounted to €17.5 billion. Of the value added, €11.2 billion (64%) was distributed to employees, €2.1 billion (12%) to stockholders, €0.8 billion (4%) to lenders and €1.5 billion (9%) to governments. The remainder was allocated to reserves.

Bayer Group Value Added 2015 [Graphic 3.1.6]



[1] Bayer AG dividend proposal for 2015
[2] Total operating performance = sales + other operating income + financial income/equity-method income (loss)

1.7 Corporate Environment

Bayer's business activities are impacted by economic and social conditions. At the same time, the company contributes to shaping these conditions.

ECONOMIC ENVIRONMENT

In 2015, the global economy grew at a slightly slower pace than in the previous year. Momentum decreased in the emerging economies in particular; growth in China declined further but remained strong while economic output in Russia and Brazil contracted significantly. By contrast, growth in the European Union accelerated, supported by very low interest rates, an exchange rate favorable to the eurozone and sinking oil prices. At the same time, the United States continued its robust recovery, driven above all by private consumption and rising employment.

Economic Environment [Table 3.1.3]

	Growth[1] 2014	Growth[1] 2015
World	+2.7%	+2.5%
European Union	+1.4%	+1.8%
of which Germany	+1.6%	+1.5%
United States	+2.4%	+2.4%
Emerging Markets[2]	+4.4%	+3.7%

2014 figures restated
[1] Real GDP growth, source: IHS Global Insight
[2] Including about 50 countries defined by Global Insight as Emerging Markets in line with the World Bank
As of February 2016

For more information on the economic environments of our subgroups in 2015, see Chapter 3 "Economic Environments of the Subgroups."

See Chapter 3

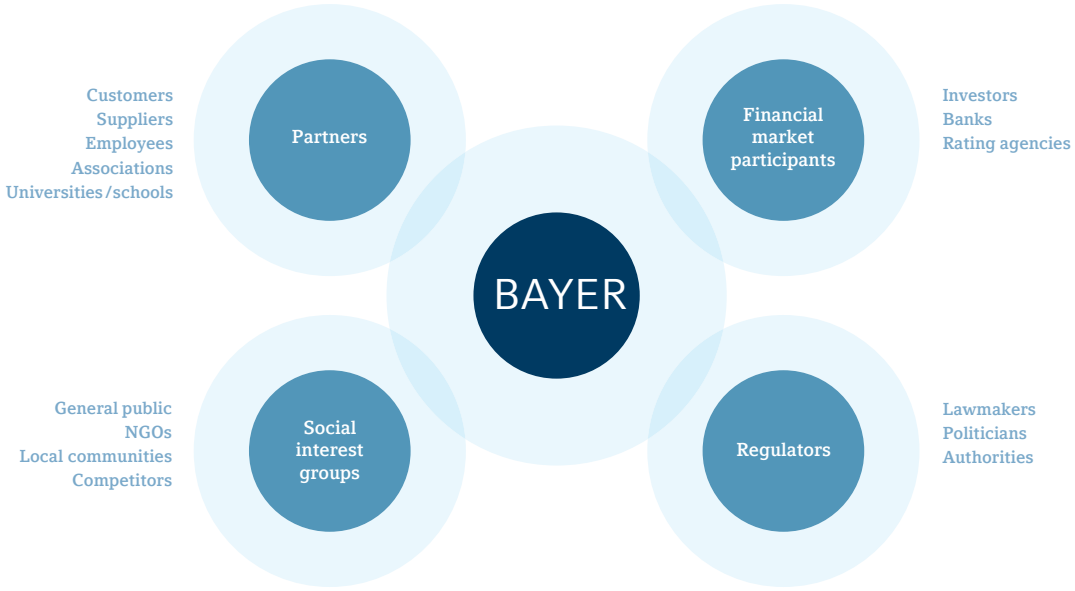
SOCIAL ENVIRONMENT

Our economic activity is closely linked with the social environment. Certain stakeholders have become increasingly significant to our business operations in recent years. Their expectations affect public acceptance of Bayer and thus our commercial success. They provide important input for the continuing development of our business processes, risk management and reporting. We therefore take the wide-ranging requirements of our stakeholders seriously and consider them wherever possible in our business activities. At the same time, open dialogue with our stakeholders gives us an opportunity to explain the value of our products and services for society. This is of growing importance for the success of our business model.

GRI
G4-25, G4-26, G4-27

GRI
G4-24

Stakeholder Dialogue: Our Most Important Interest Groups [Graphic 3.1.7]



See Chapter 5

Read more about Bayer's commitment to its stakeholders in Chapter 5 "Sustainability Management and Governance."

2. Strategies of the Segments

See Chapter 1.3 for Bayer Group strategy

PHARMACEUTICALS

At Pharmaceuticals, our largest division in terms of sales, we focus on researching, developing and marketing innovative medicines with a positive cost-benefit ratio primarily in the therapeutic areas of cardiology, oncology, gynecology, hematology and ophthalmology. In this way, we are addressing the growing requirements of patients, physicians, health care payers and regulatory agencies.

As part of the Bayer Group's reorganization, we have dissolved the Medical Care Division and integrated the Radiology business unit into our Pharmaceuticals Division.

To achieve our medium-term growth targets, we are continuing to rely on marketing our recently launched products Xarelto™, Eylea™, Stivarga™, Xofigo™ and Adempas™. We plan to steadily expand the indications for these medicines through comprehensive study programs – some of them in collaboration with other pharmaceutical companies – and thus make them available to further patient groups.

To safeguard long-term growth, we will further increase our investment in research and development. Besides expanding early research, we are concentrating on the clinical development of active drug substance candidates in the therapeutic areas of cardiology, oncology, hematology and gynecology. In addition, we are selectively expanding and supplementing our development portfolio through licensing agreements and acquisitions.

To improve access to our products in developing and emerging countries (Access to Medicine), we augment our philanthropic activities (see Chapter 11 for more information) with economically feasible concepts.

www.bayer.com/atm

ONLINE ANNEX: 3-2-1:
As an innovation company, we aim to address current challenges in order to improve people's quality of life in the areas of disease prevention and therapy. Within the scope of our entrepreneurial possibilities in a dynamic market environment, we seek to make a responsible contribution for the benefit of society. Through our Access to Medicine (ATM) activities, we aim to enable access to our products for certain patients, aligning these efforts to our company's expertise and our specific product portfolio. Here we distinguish between not-for-profit and economically feasible activities. The former include our efforts in respect of neglected tropical diseases (NTDs). In this connection, we provide the WHO free of charge with two of our active ingredients to treat African sleeping sickness and Chagas disease. Other activities in this area are our education programs and the development of products to treat NTDs.

Our family planning programs are economically feasible and facilitate improved access to hormonal contraceptives for women in developing countries. These programs, which are anchored in our business strategy, provide international development partners with our products at preferential prices.

In some countries, where sections of the population have no access to innovative medicines via health care systems, we have 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, for example, the United States and China as well as a number of countries in South and Southeast Asia and Southeastern Europe.

CONSUMER HEALTH

As part of the Bayer Group's reorganization, the Consumer Care Division will be renamed Consumer Health. The strategy of the new Consumer Health Division is aimed at building on our strong position in the market for over-the-counter (OTC) products, nutritional supplements and other self-care products in selected consumer health categories.

We aim to strengthen our established brands, such as Aspirin™, Aleve™, Bepanthen™, Berocca™, Canesten™, Claritin™, Coppertone™, Dr. Scholl's™, Elevit™, MiraLAX™ and Supradyn™, by driving organic growth through product innovation and geographical expansion. We are also seeking to expand our position in important markets such as the United States, Brazil, Russia and China.

Alongside the ongoing integration of the consumer care businesses acquired in 2014 from Merck & Co., Inc., United States, and Dihon Pharmaceutical Group Co. Ltd., China, we continue to pursue external growth opportunities arising from the progressive global consolidation of the OTC industry. In this way, we aim to further expand in selected categories and markets where it makes strategic sense to do so and can contribute to increasing Bayer's enterprise value.

CROP SCIENCE

We are aligning our Crop Science business to the long-term trends of the agricultural markets, from which we have derived three focuses for our strategy:

- Improvement in agricultural sustainability – in other words the most responsible possible deployment of our resources
- Increase in agricultural productivity through innovation – in other words higher crop yields and quality
- Full leveraging of digitization opportunities to help farmers make the right decisions and to make product applications even safer

Our aim is to help shape the future of the agricultural industry with innovative offerings that increase its productivity, thus generating profitable and sustainable growth for Crop Science and our customers and enabling the production of sufficient food, animal feed and renewable raw materials for a growing world population despite the limited amount of available arable land. Crop Science's strategy is built on four key elements:

- Enhancing the Crop Protection and Environmental Science portfolio
- Expanding the Seeds business
- Increasing customer centricity along the entire value chain
- Leading the way in innovation

We aim to enhance our Crop Protection and Environmental Science portfolios by adding new and improved products, concentrating on core brands and offering integrated solutions in major crops. Support for this endeavor is provided by our innovative technology platform for both chemical and biological crop protection. We are continuously investing in the expansion of our production capacities to meet rising demand for our products.

We continue to work on the expansion of our Seeds business. We plan to further strengthen our positions in our established crops – cotton, oilseed rape/canola, rice and vegetables – and to establish competitive positions in soybeans and wheat. We intend to gain long-term access to high-quality breeding material through acquisitions, in-licensing and partnerships and to steadily expand our existing breeding expertise.

Another major part of our strategy is to strengthen customer centricity along the entire value chain and continuously optimize distribution. We are steadily expanding our successful food chain partnerships. In these projects, Crop Science works with all participants in the food chain to safeguard and increase yields, and to improve the quality of harvested produce. With the Bayer Forward Farming initiative, Crop Science cooperates with farmers to demonstrate innovative crop solutions and services for sustainable agriculture to interested stakeholders. Crop Science will also increasingly concentrate on developing solutions especially tailored to help smallholder farmers increase their profitability while ensuring environmentally friendly cultivation, thus lastingly improving their standard of living.

To lead the way in innovation and develop holistic solutions, we aim to build on our expertise in the integration of seed technology with chemical and biological crop protection and to support our customers with new and improved solutions. New areas of innovation, such as digitization in agriculture, account for another major part of this. We intend to support this development in the future by making use of proprietary digital platforms and data models that can enable us to give farmers special agronomic recommendations. The aim here is to make agriculture more sustainable.

ANIMAL HEALTH

Our Animal Health business aims to strengthen its position in the already heavily consolidated market for veterinary medicines. Here we rely on organic growth through the expansion of our R&D activities and the increased use of our existing distribution channels, particularly specialist retail chains. We also intend to strengthen our position with targeted in-licensing and acquisitions.

COVESTRO

Covestro helps to address global challenges

As a global supplier of high-tech polymer materials and application solutions for many areas of modern life, Covestro aims to generate profitable growth in the long term. Over the coming five years, the company aims to build on its leading positions in its industry sectors and participate in the growth that experts are predicting for its customer industries. Covestro supplies key industry sectors worldwide such as the automotive, construction and electronics industries. It develops and manufactures components for polyurethane foams, the high-tech plastic polycarbonate and raw materials for coatings, adhesives and sealants, as well as specialty products such as films and elastomers.

Growth impetus is expected to come from macro trends such as climate change, the diminishing availability of fossil resources, the expanding global population, urbanization and increasing mobility. Through its products, Covestro aims to help master these challenges in line with its vision "To make the world a brighter place." In keeping with this, the company's activities are embedded in a comprehensive sustainability strategy.

Covestro's large-scale facilities around the world have been extended and are capable of serving the anticipated growth in demand. Therefore, the company does not predict any greater need for expansion in the foreseeable future.

At the same time, Covestro intends to further optimize its network of sites and its cost structures. To this end, the company has initiated a structured profitability program.

Covestro is focusing on continuous product and process innovation as a means of safeguarding and building its competitive position in the global marketplace. Research and development is steered by targets aligned to the needs of the company's customer industries.

The **Polyurethanes (PUR) business unit** intends to further expand its strong position as an integrated raw material and systems supplier, mainly for rigid and flexible foams. While flexible foam ensures added comfort in everyday life through its use in products such as mattresses and upholstery, rigid foam serves above all as an insulating material for buildings and refrigerated appliances, and thus helps to lower energy consumption and greenhouse gas emissions.

In the automotive, electronics and construction sectors, in particular, rising demand is anticipated for polycarbonate, an engineering thermoplastic characterized by positive properties such as low weight, transparency, stability and design flexibility. The **Polycarbonates (PCS) business unit** aims to further strengthen its technological leadership and is focusing on, for example, polycarbonate-based composite materials as a low-cost substitute for solutions based on glass and metal.

The **Coatings, Adhesives, Specialties (CAS) business unit** develops and manufactures mainly polyurethane-based raw materials primarily for coatings and adhesives. The main areas of application are automotive and transportation, infrastructure and construction, wood processing and furniture. The business unit aims to secure and build its position in its core business and to achieve accelerated growth in specialties.

3. Economic Environments of the Subgroups

See Chapter 1.7 for corporate environment

The economic environments in which the subgroups operated are outlined below.

Economic Environments of the Subgroups [Table 3.3.1]

	Growth [1] 2014	Growth [1] 2015
HealthCare		
Pharmaceuticals market	+9%	+9%
Consumer care market	+4%	+5%
Medical care market [2]	−1%	+1%
Animal health market	+5%	+5%
CropScience		
Seed and crop protection market	+7%	≤0%
Covestro (main customer industries)		
Automotive	+3%	+2%
Construction	+3%	+2%
Electrical/electronics	+4%	+3%
Furniture	+4%	+4%

2014 figures restated
[1] Bayer's estimate, except pharmaceuticals. Source for pharmaceuticals market: IMS Health., IMS Market Prognosis. Copyright 2015. All rights reserved, currency-adjusted
[2] Excluding the diabetes care market
As of February 2015

HEALTHCARE

Growth in the **pharmaceuticals market** in 2015 was flat with the prior year. In the United States in particular, new products especially continued to drive ongoing growth. In Japan and Europe, growth rates increased slightly, whereas demand in the emerging markets was unchanged against the previous year.

The global **consumer care market** saw somewhat stronger growth than a year earlier. In the medical care category, slight growth was seen in the market for contrast agents and medical equipment. The **animal health market** expanded at the same rate as in the prior year.

CROPSCIENCE

Overall, the global **seed and crop protection market** receded in 2015. While the demand for high-value seeds remained at the previous year's level, worldwide crop protection sales declined.

Market volumes decreased in Latin America, particularly in Argentina and Brazil, primarily as a result of political uncertainties, macroeconomic developments and lower pest pressure. The market also declined in North America, mainly due to a reduction in corn and cotton acreages and because of lower overall price levels for agricultural commodities than in the previous year. Positive growth impetus for the seed and crop protection market in 2015 came from the Asia/Pacific and Europe regions. Growth rates in the Mediterranean area were above average.

COVESTRO

Growth in the principal customer industries for Covestro (automotive, construction, electrical/electronics and furniture) in 2015 was slightly weaker than in the previous year. One of the main reasons for this was slower demand in China and other emerging economies, which could not be compensated by positive stimuli such as the expansionary monetary policy of the industrialized countries and the lower oil price.

4. Research, Development, Innovation

Scientifically founded innovations and the skills of our employees form the basis for our success as a company. To drive innovation in the future as well, we continuously develop new molecules, technologies and business models in the research-intensive fields of medicine and modern agriculture, invest in research and development projects and expand our activities through targeted acquisitions and collaborations with external partners (open innovation). We plan to invest around €4.5 billion in research and development in 2016 alone. We also promote our culture of innovation in all areas of the company to face the challenges of our time and safeguard profitable growth for our company.

Group target 2015: increase in R&D investment to over €4 billion

See also Chapter 1.4 for Group targets

Bayer maintains a global network of research and development locations in which 14,673 researchers around the world focus on improving the health of people, animals and plants. The focuses of the research projects are determined by the R&D strategies of the subgroups. On this basis, projects are set up that are managed in the development pipeline through defined processes and targets. The budgets requested for this purpose are checked annually and allocated per area. In 2015, we raised our research and development spend by 15.9% (Fx adj.) to €4,281 million. Adjusted for special items of €67 million (2014: €2 million), this represented a 14.1% increase (Fx adj.) and was equivalent to 9.1% of sales. The following table shows the development of R&D key data in the individual segments:

Research and Development Expenses Full Year 2015 [Table 3.4.1]

	Research and development expenses		Research and development expenses before special items		Share of R&D expenses		R&D expenses before special items/sales		R&D employees	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	%	%	%	%	FTE	FTE
HealthCare	**2,264**	**2,834**	**2,260**	**2,768**	**64.0**	**66.2**	**11.8**	**12.1**	**7,968**	**8,594**
Pharmaceuticals	1,878	2,333	1,876	2,285	53.1	54.5	15.6	16.6	7,066	7,741
Consumer Health	386	501	384	483	10.9	11.7	5.5	5.3	902	853
CropScience	**974**	**1,089**	**974**	**1,089**	**27.5**	**25.4**	**10.3**	**10.5**	**5,004**	**5,073**
Covestro	**210**	**262**	**213**	**261**	**5.9**	**6.1**	**1.8**	**2.2**	**923**	**1,005**
Group[1]	**3,537**	**4,281**	**3,535**	**4,214**	**.**	**.**	**8.6**	**9.1**	**13,900**	**14,673**

2014 figures restated
[1] Sum of the segments plus reconciliation

We augment our own research capacities through collaborations and strategic alliances with industrial and academic research partners around the world. These include leading universities, public research institutes, partner and start-up companies, and science and innovation centers established by Bayer to give young companies access to features such as suitable laboratory and office infrastructure in the direct vicinity of Bayer's own research facilities. These are supplemented by our crowdsourcing platforms through which researchers around the world can offer their expertise for collaboration with Bayer. With the newly established strategic innovation unit, the Bayer LifeScience Center (BLSC), we additionally want to drive the development of decisive interspecies research with the aid of a network of external partnerships. On the initiative of BLSC we signed an agreement at the end of 2015 with the biotech company CRISPR Therapeutics AG based in Basel, Switzerland, with the goal of discovering, developing and marketing new treatment methods for blood disorders, blindness and heart disease based on the CRISPR-Cas9 technology for gene editing.

More information on this can be found in the sections for the individual subgroups.

We also invest in venture capital funds that finance promising Life Science start-up companies, among other projects. In this way we support the development of new therapies in areas with a high unmet medical need and drive innovation in the Life Sciences.

GRI
G4-26

ONLINE ANNEX: 3-4-1

Scientists from our company are involved in constant dialogue with renowned research institutes and support partnership projects in the public and private sectors. Of these, more than 50 projects worldwide were supported in 2015 by public funding worth around €5 million. This is equivalent to roughly 0.1% of our annual R&D expenses.

We also participate in industry associations, hold professorships at universities worldwide and regularly invite scientists, university students and schoolchildren to attend events such as symposiums on health topics or research days for school students. We view this as an investment in the future, because as a research-based company, we rely on the availability of talented and highly trained people and on society's acceptance of technology.

We promote our innovation capability not just by increasing our research and development budget and expanding external collaborations, but also by strengthening our internal innovation culture, which promotes fascination, creativity, willingness to experiment, customer centricity and cooperation among all disciplines. In this connection, we have launched a number of programs and initiatives in recent years to honor the achievements of our scientists and provide them with suitable platforms and projects for scientific discourse and cross-subgroup cooperation in scientific matters, as well as to give employees throughout all organizational units the opportunity to help jointly generate ideas or solve problems.

ONLINE ANNEX: 3-4-2

The following table lists the most important programs/initiatives for strengthening the innovation culture at Bayer:

Programs/Initiatives for Strengthening Bayer's Innovation Culture [Table 3.4.1-1]

Program	Objective	Approach
Life Sciences Fund	Strengthen interdisciplinary research in the Life Sciences	Since 2012, supports scientists at HealthCare and CropScience involved in interdisciplinary projects aimed at achieving a better understanding of diseases, identifying mechanisms of action, individualizing therapies or explaining resistance mechanisms
Expert Career	Strengthen recognition for scientific success	Initiative by the Board member responsible for Innovation aimed at fostering the cross-company scientific exchange between leading experts in research and development
Otto Bayer Medals	Awards for scientific success	Research prize for outstanding development work that is awarded biennially to teams of Bayer scientists
Hype	Collaborative definition of ideas in information technology	Intranet-based platform for the collaborative generation of ideas by our employees; the most promising ideas are allocated an initial budget which is used by an interdisciplinary team to elaborate the concept within just a few weeks.
WeSolve	Collaborative problem-solving	Current problems in research and development, marketing and production are publicized via the internal WeSolve platform for discussion by employees from all subgroups and service companies; the best solutions are then identified.
Bayer Ideas Pool employee suggestion program and Ideas Forum	Promotion of innovative ideas from the working environment	Application and honoring of employee suggestions for the improvement of processes, occupational safety and health protection. In total, 5,446 ideas were submitted in 2015. Around 46% of the suggestions for improvement evaluated in 2015 were implemented. In the first year of implementation alone, more than €9 million was saved through those improvements that allowed calculation. In 2015, Bayer distributed bonuses of around €2 million to employees for the implemented proposals.

Globally reliable protection of intellectual property rights is essential for an innovation company like Bayer. The Bayer Group endeavors to obtain patent protection for its products and technologies in the major markets. The degree of protection a patent provides varies from one country to another and depends on the type and scope of the patent claim and the options available for enforcing our rights. At the end of 2015, we owned approximately 66,700 valid patent applications and patents worldwide relating to some 7,200 protected inventions.

ONLINE ANNEX: 3-4-3

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 European Union 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. We endeavor to obtain such extensions wherever possible.

www.bayer.com/political-position-ip

The term of a patent is normally 20 years. Since it takes an average of 12 years to develop a new medicine, for example, only eight years of patent protection generally remain following the product's approval. In most cases it would be impossible to cover the substantial costs incurred in the research and development of innovative medicines or of new indications or dosage forms for existing drugs without patent protection. We are therefore committed to protecting both the international patent system and our own intellectual property worldwide. Further details are given in the political positions posted on our website.

4.1 HealthCare

PHARMACEUTICALS

Research areas and sites

Drug discovery in the Pharmaceuticals segment focuses on indications with high medical need in the areas of cardiology, oncology, ophthalmology, hematology and gynecology. We conduct research and development activities at several locations, the most important of which are as follows:

Research and Development Sites [Table 3.4.2]

Site	Country	Focus
Berlin	Germany	R&D in oncology, gynecology and non-indication-specific areas
Wuppertal	Germany	R&D in cardiology, ophthalmology and non-indication-specific areas
Mission Bay, San Francisco	U.S.A.	Research in the areas of hematology and biologicals
Berkeley	U.S.A.	Development in the areas of hematology and biologicals
Turku	Finland	Development of hormone-releasing intrauterine devices and implants for contraception
Oslo	Norway	Research on thorium conjugates for the treatment of cancer

Cooperation

We augment our own research capacities through collaborations and strategic alliances with external industrial and academic research partners. In this way we gain access to complementary technologies and external innovation potential. A number of examples are listed in the table on the following pages:

Pharmaceuticals Cooperation Partners [Table 3.4.3]

Partner	Cooperation objective
Cardiology	
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
Ionis Pharmaceuticals, Inc.	Development of an antisense molecule for the prevention of thrombosis
Janssen Research & Development, LLC of Johnson & Johnson	Development of Xarelto™ (rivaroxaban)
Ludwig Boltzmann Institute	Research into lung vascular disease, especially pulmonary hypertension
Merck & Co., Inc.	Development collaboration in the field of soluble guanylate cyclase (sGC) modulation
Oncology	
Amgen Research GmbH	Access to BiTE™ antibodies for developing novel tumor therapies
Ardea Biosciences Inc. of Astra Zeneca	Codevelopment of oncology products based on MEK (mitogen-activated ERK kinase) inhibitors
Broad Institute	Strategic partnership in oncology to discover and develop active substances that specifically target tumor-specific gene mutations
Compugen Ltd.	Collaboration for the research and development of new immunotherapy approaches in oncology
German Cancer Research Center	Strategic partnership for the research and development of new therapeutic options in oncology, especially in immunotherapy
Dyax Corp.	Access to antibody library with the option to in-license antibodies for the development and commercialization of novel tumor therapies
ImmunoGen Inc.	Development of antibody-drug conjugates (ADCs) for novel tumor therapies
OncoMed Pharmaceuticals Inc.[1]	Discovery and development of novel therapeutics relating to cancer stem cells
Onyx Pharmaceuticals Inc. of Amgen Inc.	Codevelopment of Nexavar™ (sorafenib) for various types of cancer
Orion Corporation	Development of ODM-201 for the treatment of patients with prostate cancer
Qiagen Manchester Ltd.	Development of diagnostic tests in personalized oncology treatment
Seattle Genetics Inc.	Access to technology for antibody-drug conjugates (ADCs) for novel tumor therapies
Sprint Bioscience	Research and development of oncological drug candidates
Ophthalmology	
Inception 4, Inc.	Research into new approaches for the treatment of various eye diseases
Johns Hopkins University	Research and development of innovative drug products to treat serious back-of-the-eye diseases
Regeneron Pharmaceuticals Inc.	Development of Eylea™ (aflibercept) to treat various eye diseases Development of a PDGFR-beta antibody for ophthalmology
Hemophilia	
Dimension Therapeutics, Inc.	Development of a novel gene therapy for hemophilia A
Gynecology	
Evotec AG	Research collaboration to identify and validate development candidates in endometriosis
University of Oxford	Strategic research alliance for the development of novel gynecological therapies
Infectious diseases	
Merck & Co., Inc.	Codevelopment of tedizolid to treat various infections
Novartis AG	Development of a targeted antibiotic inhalation therapy for lung infections (ciprofloxacin DPI)
Nektar Therapeutics	Codevelopment of a targeted antibiotic inhalation therapy for lung infections (amikacin inhale)
General	
BioInvent International AB	Access to antibody library with in-licensing of antibodies
Peking University	Research cooperation and establishment of a research center for joint projects
Tsinghua University	Research cooperation and establishment of a research center for joint projects

[1] Bayer is not active in the area of human embryonic stem cell research.

We also operate our own science and innovation centers. We coordinate primarily our research partnerships in Asia through our science hubs in Beijing, China; Singapore; and Osaka, Japan. In Berlin, Germany, and San Francisco, California, United States, we operate the "CoLaborator™," an incubator model for young life science companies. The objective of the global CoLaborator™ concept is to offer these companies suitable laboratory and office infrastructure in the direct vicinity of Bayer's own research facilities. In the area of crowdsourcing, we are very successfully continuing our "Grants4Targets™" program. We supplemented "Grants4Leads™," which concentrates on small molecules, with "PartnerYourAntibodies™," a program that focuses on the evaluation of biological actives. Furthermore, the "Grants4Apps™ Accelerator Program" offers mentoring to start-up companies that can offer innovative solutions relevant to health care and therapy. In the area of venture capital, we are active with the "High-Tech Gründerfonds" and Versant Ventures.

Clinical trials

Clinical trials account for a major portion of the development process for medicines. They are an essential tool for determining the efficacy and compatibility of new developmental products before they can be used to treat diseases. The benefits and potential risks of new medicines must always be scientifically proven and well documented. All studies at Bayer satisfy strict international guidelines and quality standards, as well as the respective applicable national laws and standards.

ONLINE ANNEX: 3-4.1-1

Bayer publishes information about clinical trials in line with the respective applicable national laws and according to the principles of the European (EFPIA) and North American (PhRMA) pharmaceutical associations, these principles being defined in a joint position paper.

HealthCare publishes information on its own clinical trials both in the publicly accessible register www.ClinicalTrials.gov and in its own "Trial Finder" database. In the case of approved products, summarized results of Phase II, III and IV clinical trials are accessible online through the "Trial Finder." Upon request, scientists can receive access to anonymized data at the patient level via the portal www.clinicalstudydatarequest.com.

Further information on our globally uniform standards, the monitoring of studies and the role of the ethics committees can be found on the internet.

www.bayer.com/ethics-in-rnd

Activities in 2015

In line with our targets for 2015 we transferred 12 new molecular entities from our research pipeline into preclinical development in the reporting year. We define a new molecular entity (NME) as a new chemical or biological substance that has not been in development to date. 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. In 2015, we conducted clinical trials with several drug candidates from our research and development pipeline. We strengthened products that were already on the market through life cycle management activities to improve their application and/or expand their spectrum of indications.

Group target 2015: HealthCare – transition of more than 10 new molecular entities (NMEs) into development

More details on our drug candidates can be found in Table 3.4.6

We are investigating some of our development candidates with respect to their potential for the treatment of rare diseases, also known as orphan diseases. In February 2015, copanlisib received orphan drug designation from the U.S. Food and Drug Administration (FDA) for the treatment of follicular lymphoma, a histological subtype of non-Hodgkin lymphoma.

The following tables show our most important drug candidates currently in Phase II or III of clinical testing:

Research and Development Projects (Phase II)[1] [Table 3.4.4]

Phase II projects	Indication
Anetumab ravtansine (mesothelin ADC)	Cancer
BAY 1067197 (partial adenosine A1 agonist)	Heart failure
BAY 1007626 (progestin IUS)	Contraception
BAY 1142524 (chymase inhibitor)	Heart failure
BAY 2306001 (IONIS-FXIRx)	Prevention of thrombosis[2]
BAY 98-7196 + anastrozole (intravaginal ring)	Endometriosis
Copanlisib (PI3K inhibitor)	Recurrent/resistant non-Hodgkin lymphoma (NHL)
Molidustat (HIF-PH inhibitor)	Renal anemia
PDGFR-beta + aflibercept	Wet age-related macular degeneration[3]
Radium-223 dichloride	Bone metastases in breast cancer
Radium-223 dichloride	Cancer, various studies
Refametinib (MEK inhibitor)	Cancer
Regorafenib	Cancer
Riociguat	Pulmonary hypertension (IIP)
Riociguat	Diffuse systemic sclerosis
Riociguat	Cystic fibrosis
Rivaroxaban	Secondary prevention of acute coronary syndrome (ACS)[4]
Roniciclib (CDK inhibitor)	Small-cell lung cancer (SCLC)
Vericiguat (BAY 1021189, sGC stimulator)	Chronic heart failure
Vilaprisan (S-PRM)	Symptomatic uterine fibroids
Vilaprisan (S-PRM)	Endometriosis

[1] As of January 27, 2016
[2] Sponsored by Ionis Pharmaceuticals, Inc.
[3] Sponsored by Regeneron Pharmaceuticals, Inc.
[4] Sponsored by Janssen Research & Development, LLC
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 projects listed above may have to be discontinued due to scientific and / or commercial reasons and will not result in commercialized products. It is also possible that the requisite Food and Drug Administration (FDA), European Medicines Agency (EMA) or other regulatory approvals will not be granted for these compounds.

Research and Development Projects (Phase III)[1] [Table 3.4.5]

Phase III projects	Indication
Amikacin Inhale	Pulmonary infection
BAY 1841788 (ODM-201, AR antagonist)	Prostate cancer
Damoctocog alfa pegol (BAY 94-9027, long-acting rFVIII)	Hemophilia A
Ciprofloxacin DPI	Pulmonary infection
Copanlisib (PI3K inhibitor)	Various forms of non-Hodgkin lymphoma (NHL)
Finerenone (MR antagonist)	Chronic heart failure
Finerenone (MR antagonist)	Diabetic kidney disease
Radium-223 dichloride	Combination treatment of castration-resistant prostate cancer
Regorafenib	Refractory liver cancer
Riociguat	Pulmonary arterial hypertension (PAH) in patients who do not sufficiently respond to PDE-5i/ERA
Rivaroxaban	Prevention of major adverse cardiac events (MACE)
Rivaroxaban	Anticoagulation in patients with chronic heart failure[2]
Rivaroxaban	Long-term prevention of venous thromboembolism
Rivaroxaban	Prevention of venous thromboembolism in high-risk patients after discharge from hospital[2]
Rivaroxaban	Embolic stroke of undetermined source (ESUS)
Rivaroxaban	Peripheral artery disease (PAD)
Tedizolid	Pulmonary infection

[1] As of January 27, 2016
[2] Sponsored by Janssen Research & Development, LLC
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 projects listed above may have to be discontinued due to scientific and/or commercial reasons and will not result in commercialized products. It is also possible that the requisite Food and Drug Administration (FDA), European Medicines Agency (EMA) or other regulatory approvals will not be granted for these compounds.

We regularly evaluate our research and development pipeline in order to prioritize the most promising pharmaceutical projects.

Following the completion of the required studies with a number of these drug candidates, we submitted applications to one or more regulatory agencies for approvals or approval expansions.

The most important drug candidates in the approval process are:

Products Submitted for Approval[1] [Table 3.4.6]

	Indication
Bay 81-8973 (rFVIII)	E.U., U.S.A., Japan; treatment of hemophilia A
LCS-16 (ULD LNG Contraceptive System)	E.U., U.S.A.; contraception
Radium-223 dichloride	Japan; treatment of prostate cancer patients with bone metastases
Rivaroxaban[2]	U.S.A.; secondary prophylaxis of acute coronary syndrome (ACS)

[1] As of February 4, 2016
[2] Submitted by Janssen Research & Development, LLC

In 2015, we achieved further progress in various therapeutic areas:

Cardiology

Xarelto™ (active ingredient: rivaroxaban) has been approved for more indications in the area of venous and arterial thromboembolism than any of the other non-vitamin-K-dependent oral anticoagulants. Xarelto™ is approved in more than 130 countries worldwide across all indications, its approval status varying from country to country. Xarelto™ is marketed in the United States by Janssen Pharmaceuticals, Inc., a subsidiary of Johnson & Johnson.

In May 2015, Xarelto™ was approved by the China Food and Drug Administration (CFDA) for the prevention of stroke and systemic embolism in patients with nonvalvular atrial fibrillation and for the treatment of deep vein thrombosis (DVT). The approval also includes the use of Xarelto™ to reduce the risk of recurrent DVT and pulmonary embolism following acute DVT. In September 2015, Xarelto™ was approved by the Japanese Ministry of Health, Labour and Welfare (MHLW) for the treatment and secondary prevention of pulmonary thromboembolism and deep vein thrombosis.

In addition to the already approved indications, the use of rivaroxaban is also being investigated in other cardiovascular diseases such as prevention of major adverse cardiac events, embolic stroke of undetermined source or peripheral artery disease.

Rivaroxaban was invented by Bayer and is being jointly developed with Janssen Research & Development, LLC, United States, a subsidiary of Johnson & Johnson.

Adempas™ (active ingredient: riociguat) is the first member of a new class of vasodilation agents known as soluble guanylate cyclase (sGC) modulators. Administered in tablet form, riociguat is currently being investigated as an innovative, specific approach for the treatment of various forms of pulmonary hypertension.

Adempas™ is approved in the United States and Europe for the treatment of particular forms of chronic thromboembolic pulmonary hypertension (CTEPH) and pulmonary arterial hypertension (PAH). In Japan, Bayer was granted marketing authorization for CTEPH in 2014 and for PAH in February 2015.

The trial program for riociguat also includes studies outside of the pulmonary hypertension indication. For example, riociguat is also in Phase II testing for the treatment of patients with diffuse systemic sclerosis.

Another representative of the sGC modulator class is vericiguat, currently in Phase IIb clinical testing to treat chronic heart failure.

The development and commercialization of sGC modulators is part of our strategic collaboration with Merck & Co., Inc., United States.

The active ingredient finerenone (BAY 94-8862) is a novel oral nonsteroidal mineralcorticoid receptor antagonist (MRA) that is currently in Phase III clinical development. In September 2015, two Phase III trials were initiated to investigate the efficacy and safety of finerenone in patients with diabetic kidney disease. Another Phase III trial is being prepared in the indication chronic heart failure.

The development candidate molidustat is being investigated for the treatment of patients with anemia accompanied by chronic kidney disease and/or end-stage kidney failure.

In March 2015, we expanded our partnership with the Broad Institute at the Massachusetts Institute of Technology (MIT) and Harvard University, United States, to include collaboration on cardiovascular genomics and drug discovery.

In April 2015, furthermore, we entered into an exclusive license agreement with Ionis Pharmaceuticals, Inc., United States, pertaining to IONIS-FXIRx (BAY 2306001), an antisense drug in clinical development for the prevention of thrombosis. Under the agreement, Bayer will further develop and commercialize BAY 2306001 in areas of high medical need. Antisense drugs bind to the mRNA molecules in the cell in a targeted way and inhibit the production of proteins that may become significant in the course of a disease. The novel mechanism of inhibiting Factor XI synthesis may offer an additional treatment option for patients for whom none is currently available.

Oncology

Stivarga™ (active ingredient: regorafenib) is an oral multikinase inhibitor. It inhibits various signal pathways that are responsible for tumor growth. Stivarga™ is approved in the United States, Europe, Japan and other countries for the treatment of patients with metastatic colorectal cancer (mCRC) and gastrointestinal stromal tumors (GIST).

In March 2015, we suspended enrollment in a Phase III trial with regorafenib due to insufficient patient recruitment at that time. The trial is investigating regorafenib as an adjuvant treatment option for patients with colorectal cancer following resection of liver metastases with curative intent. The results of a further Phase III trial with regorafenib as a second-line treatment for liver cancer are expected in 2016.

Stivarga™ was developed by Bayer. In 2011, Bayer and Onyx Pharmaceuticals, Inc., a subsidiary of Amgen Inc., United States, agreed that Onyx would receive royalties on global sales of Stivarga™ in the area of cancer treatment.

Xofigo™ (active ingredient: radium-223 dichloride) is approved in the E.U. and the United States for the treatment of adult patients with castration-resistant prostate cancer (CRPC) with symptomatic bone metastases but no known visceral metastases. In April 2015, we submitted an application to the Japanese health authority MHLW for marketing authorization for radium-223 dichloride for the treatment of prostate carcinoma with bone metastases. The active ingredient is being investigated in additional trials in prostate cancer and in Phase II trials involving breast cancer patients.

The active ingredient copanlisib is a novel, intravenous phosphatidylinositol 3-kinase (PI3K) inhibitor. In 2015, we expanded our global clinical development program. A new Phase II and two Phase III trials are designed to investigate the safety and efficacy of copanlisib in patients with recurring indolent non-Hodgkin lymphoma (NHL) and diffuse large B-cell lymphomas (DLBCL), an aggressive subtype of NHL.

Another active ingredient, BAY-1841788 (ODM-201), is being jointly developed with Orion Corporation, Espoo, Finland. This novel oral androgen receptor inhibitor is in Phase III clinical development for the treatment of patients with prostate cancer.

In July 2015, we entered into a collaboration and license agreement with Sprint Bioscience AB, Sweden, for the research, development and commercialization of oncological drug candidates. Under the agreement, we will receive the license for a research program currently undergoing preclinical development that is geared toward the inhibition of tumor cell metabolism.

Ophthalmology

Eylea™ (active ingredient: aflibercept) is our joint development project with Regeneron Pharmaceuticals, Inc., United States. 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. Regeneron Pharmaceuticals, Inc., United States, holds exclusive rights to the product in the United States, while in other countries it is marketed by Bayer.

Eylea™ is approved for the treatment of wet age-related macular degeneration (AMD), visual impairment due to macular edema secondary to central retinal vein occlusion (CRVO) and diabetic macular edema (DME). In Japan, Eylea™ is additionally approved for the treatment of myopic choroidal neovascularization (mCNV).

In February 2015, the European Commission extended marketing authorization for Eylea™ to include the treatment of patients with visual impairment due to macular edema secondary to branch retinal vein occlusion (BRVO). Eylea™ therefore can be used in Europe by all patients with visual impairment due to macular edema resulting from retinal vein occlusion (RVO). In June 2015, the product was approved in this indication in Japan. In October 2015, Eylea™ was approved by the European Commission for the treatment of myopic choroidal neovascularization (mCNV).

A Phase IIa clinical study with regorafenib eye drops did not show the desired results and the project is therefore being discontinued. The study investigated the use of regorafenib for the treatment of wet age-related macular degeneration (AMD).

In June 2015, we entered into a strategic research alliance with Johns Hopkins University, United States, concerning the discovery and development of innovative drugs for the treatment of serious back-of-the-eye diseases that affect many people worldwide. The five-year collaboration will aim to develop new ophthalmic therapies for various retinal diseases.

Hematology

In June 2015, we submitted an application to the Japanese MHLW for marketing authorization for the recombinant Factor VIII compound BAY 81-8973 for the treatment of hemophilia A. The approval process has been under way in the United States and Europe since the end of 2014. In December 2015, the European Committee for Medicinal Products for Human Use (CHMP) recommended approval. BAY 81-8973 is a further development of recombinant Factor VIII (rFVIII) which has demonstrated clinical evidence of efficacy when used for prophylaxis twice or three times per week, with standard dosages.

Damoctocog alfa pegol (BAY 94-9027) is a long-acting recombinant Factor VIII that is currently in Phase III clinical development.

Gynecology

Vilaprisan (sPRM) is a novel oral progesterone receptor modulator that is currently being investigated in Phase II trials for the treatment of uterine fibroids and endometriosis. In June 2015, an additional Phase II trial began that is investigating the efficacy of vilaprisan compared with its major competitor product.

In November 2015, we filed for marketing authorization for the new intrauterine system (IUS) LCS-16 in the European Union and the United States. This low-dose, levonorgestrel-releasing product enables contraception for a period of up to five years.

CONSUMER HEALTH

Research and development at Consumer Health is performed essentially at the following sites:

Research and Development Sites [Table 3.4.7]

Site	Country	Focus
Consumer Care		
Morristown	U.S.A.	Allergy, analgesic, cough & cold and dermatological products
Memphis	U.S.A.	Suncare, footcare and dermatological products; consumer research testing center
Gaillard	France	Nutritional supplements, dermatological and gastrointestinal products
Darmstadt	Germany	Herbal medicines
Chengdu	China	Over-the-counter (OTC) products and herb-based traditional Chinese medicines (TCM)
Medical Care (Radiology)		
Pittsburgh	U.S.A.	Medical devices, sterile disposables, informatics
Berlin	Germany	Contrast agents
Animal Health		
Monheim	Germany	Antiparasiticides, anti-infectives and pharmaceuticals
Shawnee	U.S.A.	Antiparasiticides, anti-infectives and pharmaceuticals
Auckland	New Zealand	Dairy cattle health
São Paulo	Brazil	Antiparasiticides

In **Consumer Care**, research and development activities focus on the development of nonprescription (over-the-counter = OTC) medications as well as skin and foot care products, sunscreens, dietary supplements and other self-medication products. Placing the consumer at the center of everything we do, our development strategies are geared toward expanding and improving our brand portfolio. We want to achieve this through new product developments, forms, formulations, claims, pack designs and other innovations. We introduced a number of new product line extensions to various markets in 2015. They included new delivery forms and uses and innovations for existing brands such as Aspirin™, Elevit™, Berocca™, Canesten™, Bepanthen™/Bepanthol™ and Coppertone™. We also actively pursue the reclassification of current prescription medicines as OTC products.

The goal of our research and development activities in **Medical Care** is steadily to improve our contrast agents and our contrast injection systems in order to build on our leadership position in the field of radiology.

In March 2015, we received approval in Japan for Gadovist™ (active ingredient: gadobutrol) injection for use with resonance imaging (MRI). Gadovist™ is the first high concentration/high relaxivity gadolinium-based contrast agent to be made available in Japan. In July 2015, Gadovist™ was approved by the European Commission for use in children under two years of age. This label extension applies to all indications that have already been approved.

In August 2015, the MRXperion injection system was approved by the FDA for the injection of contrast agents. Our system optimizes injection workflow, provides enhanced point-of-care capabilities and can be connected to our Radimetrics™ Enterprise platform.

In 2015, we also worked to expand the capabilities of our informatics product offerings by developing new software applications to improve contrast agent and radiation dosage management across CT, MRI and nuclear medicine modalities.

At **Animal Health** we focus our research and development activities on antiparasitics, antibiotics, medicines to treat noninfectious disorders and nonantibiotic alternatives for infectious diseases. Our central research activities are conducted as part of our Life Sciences platform in conjunction with pharmaceutical research and in close collaboration with our researchers at CropScience. We also reinforce the business by continually identifying further product development candidates through our existing collaborations.

Since August 2015, our innovative immunostimulant Zelnate™ has been available in the United States. It was approved by the United States Department of Agriculture (USDA) to aid in the treatment of bovine respiratory disease caused by *Mannheimia haemolytica* bacteria. The product offers veterinarians and farmers a new approach alongside vaccines and antibiotics for mitigating this complex infectious disease that has substantial negative impact on the cattle industry.

4.2 CropScience

Research fields and sites

CropScience maintains a global network of research and development facilities. Our largest R&D sites are as follows:

Research and Development Sites [Table 3.4.8]

Site	Country	Focus
Monheim	Germany	R&D of crop protection products, focus on insecticides
Frankfurt	Germany	R&D of crop protection products, focus on herbicides
Lyon	France	R&D of crop protection products
Sophia Antipolis	France	R&D of crop protection products
Raleigh/Research Triangle Park	U.S.A.	R&D of crop protection products; research center for seeds
Sacramento	U.S.A.	R&D of crop protection products
Ghent	Belgium	Research center for seeds
Nunhem	Netherlands	Research center for vegetable seeds
Lubbock	U.S.A.	Research center for seeds, focus on cotton
Morrisville	U.S.A.	Research center for seeds

While research is carried out centrally at a small number of sites, our development and plant breeding activities take place both at these sites and at numerous field testing stations across the globe. This ensures that future active ingredients and crop varieties can be tested according to specific regional and local requirements. The research centers of the Seeds unit focus on improving seed and targeted seed traits through seed technology and breeding.

In November 2015, CropScience opened three new institutes within the research and innovation center at Paulínia, Brazil: the company's first applications technology center outside of Germany, a resistance monitoring laboratory and a center for agriculture in tropical regions.

CROP PROTECTION / SEEDS

Research fields

In **Crop Protection/Seeds** our scientists working across the fields of improved seed traits, seed technology, seed breeding, agricultural chemistry and biologics closely collaborate as part of our integrated research approach. This optimally bundles the technical expertise acquired in chemical and biological research and field development, aligning it with our long-term research objectives and business strategies for the various crops.

In the Crop Protection unit, we pursue the goal of identifying and developing innovative, safe products for use as insecticides, fungicides, herbicides or seed treatments in sustainable agriculture. In the fields of chemistry, biology and biochemistry, modern technologies such as high-throughput screening and bioinformatics play an important role in identifying new chemical lead structures. In addition, we are broadening the range of uses for our active ingredients by developing new mixtures or innovative formulations to enable their application in additional crops or in different regions and make them easier to handle. Successful collaborations with external partners complement our own activities.

Research in our Seeds unit is devoted to optimizing plant traits. We are developing new varieties in our existing core crops – cotton, oilseed rape/canola, rice and vegetables. We have now expanded our research activities to include two further core crops – wheat and soybeans. Our work focuses on improving the agronomic traits of these crops. Our researchers are working to increase the quality and yield potential of crop plants – for example by improving the profile of rapeseed oil or enhancing the properties of cotton fibers. We are also targeting the development of plants that have high tolerance to external stress factors such as drought, and can more efficiently utilize water. Further areas of focus include developing new herbicide tolerance technologies based on alternative modes of action, and improving insect resistance and disease tolerance. To do this we employ modern breeding techniques ranging from marker-assisted breeding to plant biotechnology methods.

Technological advances offer farmers faster and more accurate methods of monitoring their plants. Such digital solutions can help them to better understand processes in their fields and enable them to make quicker and simpler decisions and calculate the risks more effectively. We would like to support this development in the future by giving farmers specific agronomic recommendations. Therefore, in addition to our conventional research projects, we are developing digital products in which we augment field analyses and statistical models with additional data that we can adapt or individualize for a certain field in order to help our customers to make decisions.

New products and registrations

In 2015, CropScience once again attained a series of important new registrations. In January 2015, for example, we received regulatory approval from the U.S. Environmental Protection Agency (EPA) for the new insecticide **Sivanto™**, which controls sucking pests on fruits and vegetables as well as most broadacre crops. Based on the active ingredient flupyradifurone, Sivanto™ is a novel systemic insecticide. CropScience received marketing authorization for this product in Mexico and South Korea in the spring of 2015, and flupyradifurone was approved by the European Commission in November 2015. We anticipate attaining the first national registrations for Sivanto prime™ in European countries in 2016; its market launch is planned for 2017.

The product **Council™** was already granted regulatory approval in South Korea in 2014 and it has been available there since the 2015 planting season. The new rice herbicide will considerably improve weed control, as it features a favorable environmental profile and outstanding compatibility – characteristics that make Council™ an environmentally friendly and future-oriented product in the Asian rice market.

In August 2015, CropScience received marketing authorization from the European Commission for terpenoid blend QRD 460, the active ingredient in the product **Requiem™**. This biological insecticide serves to control sucking pests. Its market launch in Europe is scheduled for 2017.

In September 2015, CropScience opened a new building for its European Wheat Breeding Center in Gatersleben, Germany. Our wheat activities focus primarily on the development of hybrid seed that promises considerably improved yield stability compared with conventional seed and is scheduled for launch after 2020. CropScience announced in September 2014 that it will invest a total of €1.5 billion in the research and development of wheat seed and crop protection between 2010 and 2020. Here CropScience combines the discovery and development of plant traits, molecular breeding and the latest IT applications in order to optimize the genetic potential of wheat seed in terms of increased yields. In 2015, we took the first step in this direction by launching our first conventional wheat seed in Ukraine.

With many crops, such as vegetables, major success can be achieved using conventional plant breeding methods. As vegetables are intended especially to be marketed and eaten fresh, merchants and consumers have particularly strict requirements regarding their appearance, nutrient content, taste and shelf life. We are launching a succession of new vegetable seed varieties that satisfy these requirements.

Acquisitions and cooperation

In February 2015, representatives of Bayer CropScience and GLOBALG.A.P. signed an agreement to further intensify their collaboration. The partners aim to implement sustainable cultivation methods and help fruit and vegetable growers worldwide to meet GLOBALG.A.P. certification standards.

Around the world, weed resistances to herbicides jeopardize agricultural efficiency and sustainability. CropScience has significantly expanded its herbicides research capacities in order to be able to more rapidly offer new solutions to global agricultural problems: in June 2015, CropScience and the Grains Research & Development Corporation (GRDC) entered into a five-year innovation partnership centered partly on the accelerated discovery and development of new active ingredients to manage major and resistant weed species. The GRDC will finance the expansion of existing capacities at the global herbicides research center of CropScience in Frankfurt to include some 40 additional scientists and technicians.

In June 2015, CropScience announced the acquisition of SeedWorks India Pvt. Ltd., headquartered in Hyderabad, India. The company is specialized in the breeding, production and marketing of hybrid seeds of tomato, hot pepper, okra and gourds. Existing and forthcoming varieties will be marketed under CropScience's Nunhems™ brand.

In September 2015, CropScience and the Round Table on Responsible Soy (RTRS) announced that they would jointly assist soybean producers in the certification of their crops according to RTRS standards. RTRS certification guarantees that soybeans – whether used as a raw material or in processed products – originate from environmentally friendly, socially compatible and economically viable production. This collaboration will initially be focused on Brazil.

Special mention should be made of our food chain partnerships, in which CropScience supports all the players in the food chain – from farmers and food processors to importers, exporters, wholesalers and retailers. CropScience has participated worldwide in food chain partnership projects for 10 years, particularly in Asia, Latin America and Europe. Some 7,400 Bayer experts advise farmers on sustainable cultivation methods – from seed selection and the controlled, eco-friendly use of crop protection products to the transparent monitoring of production and assistance in attaining certifications.

ONLINE ANNEX: 3-4.2-1

Our cooperation with partner organizations in these joint projects is now an internationally successful business model for all participants in the food chain. Smallholder farmers in developing countries and Emerging Markets draw particular benefit from the improved production and marketing structures. Since 2014, we have significantly expanded our partnership with Unilever. This includes a food chain partnership project in Kenya focused on rapeseed whose integrated solution comprises crop protection, seed and support in certification attainment and agronomic training measures. The goal of the project is to stabilize or even increase harvest yields and quality, and thus farmers' incomes.

CropScience is part of a global network of research and industry partners from diverse segments of the agriculture industry, chemical and biological research, and the food industry. An overview of the major research partnerships is contained in

ONLINE ANNEX: 3-4.2-2

CropScience: Important R&D Collaborations [Table 3.4.8-1]

Partner	Cooperation objective
CSIRO	Increase in wheat yields by means of native plant traits – discovery, validation and integration
Elemental Enzymes	Use of microbes to improve soil health and thereby increase crop productivity
GRDC	Herbicide Innovation Partnership for the discovery and development of innovative weed management solutions
IVCC	Joint development of new substances to control mosquitoes that transmit diseases such as malaria and dengue fever
Targenomix	Development and application of systems biology approaches to achieve a better understanding of metabolic processes in plants

Integrated research and development pipeline

Our integrated product pipeline for crop protection and seed technology contains numerous new crop protection products, seed varieties and enhanced products (life cycle management) that have estimated launch dates between 2014 and 2019. We believe these products have a combined peak sales potential in excess of €5 billion. In line with our Group target 2015 we launched confirmatory technical proof-of-concept field studies for one new molecular entity, one new plant trait and two new biologics. A new plant trait is a specific characteristic that has not yet been available or offered at Bayer for the crop plant in question.

Group target 2015: transfer of two new molecular entities (NMEs) or plant traits into confirmatory technical proof-of-concept field studies

See also Chapter 1.4 for Group targets

The table lists a selection of products launched in 2015 and market launches expected through 2019:

Innovation Pipeline[1] [Table 3.4.9]

Indication/crop	Product/plant trait	Product group	Market launch[2]
Insecticide	Sivanto™	Chemical crop protection	2015
Herbicide	Council™	Chemical crop protection	2015
Wheat	Conventional seed	Seeds	2015
Oilseed rape/canola	Dual herbicide tolerance	Seeds	2016
Insecticide	New active ingredient	Biological crop protection	2017
Cotton	Dual herbicide tolerance and insect resistance	Seeds	2017
Oilseed rape/canola	Dual herbicide tolerance	Seeds	2017
Oilseed rape/canola	Herbicide tolerance	Seeds	2017
Soybeans	Dual herbicide tolerance	Seeds	2017
Insecticide	New active ingredient	Chemical crop protection	2019
Fungicide	New active ingredient	Chemical crop protection	2019
Soybeans	Triple herbicide tolerance	Seeds	2019
Soybeans	Dual herbicide tolerance	Seeds	2019

[1] Selected new products
[2] 2016-2019: planned market launch
As of January 6, 2016

ENVIRONMENTAL SCIENCE

Research fields

Environmental Science offers consumers and professional users chemically and biologically based pest and weed control solutions by tailoring substances from our Crop Protection unit or external partners for use in the garden, on golf courses, on road- or railways or in forestry.

Activities in 2015

Environmental Science expanded its product range for professional users in the Middle East by introducing various innovative formulations of our insecticide Maxforce™. The new biological product Dedevap Green™ is available in Germany for use in granaries. Environmental Science also cooperates with companies in Brazil and Argentina to promote sustainable forestry – through the use of products such as our herbicide Esplanade Forest™, which enables reduced application of herbicides thanks to its long-lasting effect. We are continuously expanding our range of fungicides. Examples here include the launch of Dedicate™ in Europe, Chipco Signature Xtra™ in the United States and the biological nematicide Nortica™.

For consumers we continued to work in 2015 on the development of innovative and user-friendly packaging and the expansion of our range of biological solutions. We rounded out our range of pest and weed control products with the launch of the new fungicides Consento™ and Emerald™ in central Europe and Italy, the snail control product Dismo™ in France and Austria and new formulations of Decis Garten™ in Italy and the Benelux countries.

For more than 50 years, Bayer has played an active role in the fight against malaria, which remains one of the most dangerous tropical diseases to this day. Environmental Science is a leading supplier of indoor spray insecticides that control malaria-transmitting mosquitoes, protecting some 50 million people a year from the disease. In 2015, Environmental Science received support from the World Health Organization of the United Nations (WHO) for the use of the Fludora™ brand to combat malaria within the context of integrated pest management. Environmental Science is also currently developing a new outdoor spray, K-Othrine Polyzone™, to combat dengue fever in Southeast Asia. This product is targeted for launch in 2017.

4.3 Covestro

Covestro operates major Innovation Centers in Leverkusen, Germany; Pittsburgh, Pennsylvania, United States; and Shanghai, China. With its strong global presence, the company endeavors to account particularly for regional market trends and customer needs.

Essential in this context is also cooperation with external scientific institutions, start-up companies and academic spin-offs. These collaborations are mainly based in Germany, the United States, China or Japan. Our partners in Germany include RWTH Aachen University, while in China Covestro maintains a close alliance with Tongji University, and in the United States Covestro supports research activities at a number of renowned universities.

Research and development is a core element of Covestro's corporate strategy so that the company can maintain and build on its own competitive position. The company continuously works to evolve and improve its products and manufacturing, processing and business procedures. It is ensured through targeted management that ongoing projects and the project pipeline satisfy the current and future needs of customer industries and ultimately the consumer markets.

The thematic focus is on high-end applications, the enhancement of functionalities, design flexibility, cost-reducing production processes and sustainability, whereby the company also endeavors to find alternatives to petrochemical raw materials.

The **Polyurethanes (PUR) Business Unit** focuses among other things on driving forward new technologies such as microcellular foams that enable the development of even more efficient insulation of buildings and refrigeration chains. It also works to increase the flame-retardant properties of its materials. Another current theme is lightweight composite materials, including applications in the automotive industry that lead to weight savings and at the same time higher productivity and improved comfort.

In the area of process development, the business unit is progressing with the use of carbon dioxide as a new source of carbon in order to reduce dependence on petrochemical raw materials. The PUR Business Unit's first priority in 2016 is to launch an innovative CO_2-based form of the polyurethane component polyol.

Activities in the **Polycarbonates (PCS) Business Unit** are mainly geared to the development of products for the automotive and electrical/electronics industries. The focus here is on reducing weight, improving energy efficiency and safety, and enabling greater design freedom.

Light-emitting diodes contribute to sustainability in vehicles and in other applications, as they require less energy and last longer than traditional light sources. PCS has developed special materials for channeling, scattering and reflecting LED light and for discharging the generated heat. In addition, the business unit is channeling its focus on fiber-reinforced composites based on polycarbonates. These can improve performance in high-grade IT products and automotive components in particular.

The **Coatings, Adhesives, Specialties (CAS) Business Unit** is actively involved in the development primarily of polyurethane-based raw materials for high-performance coatings, colorants, adhesives, sealants and specialty products. One of the goals here is to open up new application possibilities and markets for the core products. CAS is also driving forward technologies such as processes that make use of sustainable raw materials, focusing consistently on the needs of the market here as well.

In April 2015, for example, the business unit presented an innovative curing agent for polyurethane coatings and adhesives for which 70% of the raw materials are derived from biomass that does not compete with food production. CAS has also developed a thermolatent curing agent for automotive coatings that can be applied at significantly lower temperatures than standard products. This in turn lowers energy consumption and shortens production times. For textiles and artificial leather, furthermore, CAS offers a new generation of polyurethane dispersions that also conserve natural resources and do not require the use of any organic solvents.

5. Sustainability Management and Governance

To us, sustainability basically means future viability and, as part of corporate strategy, is integrated into everyday procedures.

We underline our mission as a sustainably operating company through our commitment to the U.N. Global Compact with its internationally recognized 10 principles and to the Responsible Care™ initiative, and through our active global involvement in leading (industry) forums such as the World Business Council for Sustainable Development (WBCSD).

www.bayer.com/sustain-commitment

Bayer also expressly backs the comprehensive approach of the new Sustainable Development Goals (SDGs) agreed by the U.N. in September 2015 for the period to 2030. In our core business we support in particular the goals that focus on combating hunger and ensuring good health care provision across the globe. The other SDGs are also in line with our internal requirements relating to responsible business practices.

Responsibility for steering and aligning our Group-wide sustainability strategy lies with the Board of Management member responsible for Human Resources, Technology and Sustainability in his function as Chief Sustainability Officer, and with a Sustainability Council chaired by the Environment & Sustainability corporate function.

Structure of Sustainability Management [Graphic 3.5.1]

SUSTAINABILITY MANAGEMENT

Organization	Major areas of activity	Steering, measurement and documentation
Member of the Board of Management responsible for Human Resources, Technology and Sustainability	Product and process innovation	Group regulations on, for example, • Human Rights • Compliance • Sustainable Development • Responsible Marketing
Environment & Sustainability corporate function	Access to health care	Targets/Indicators
Group committees focusing on sustainability and HSEQ issues	Sustainable food supply	HSEQ management systems and audits
	Human capital	Opportunity and risk management
	Business ethics	Integrated Annual Report with independent auditing
	Product stewardship	
	Safety	
	Environmental protection	
	Supplier management	
	Stakeholder engagement/Partnering	
	Societal engagement	

Commitment to standards and organizations such as WBCSD, GRI, U.N. Global Compact, Responsible Care

See also Chapter 1.3 for Group strategy

www.bayer.com/policies

The Sustainability Council sets targets, draws up initiatives, management systems and Group regulations, and is responsible for their implementation. In order to operationalize the Group strategy and make it measurable, we have set ambitious nonfinancial targets and indicators all along the value chain. Internal Group regulations ensure our sustainability principles are implemented in business operations, where they are realized through corresponding management systems, regulations and processes.

GRI
G4-18, G4-26, G4-27

www.bayer.com/materiality

We regularly check that our areas of activity are up to date and relevant. To do so, we analyze and evaluate what the major stakeholders expect and require and match this against our own assessment. Thanks to this approach, we are quick to identify sustainability-related opportunities and risks and can incorporate these into our strategy. In 2014, we used a multi-stage process to identify issues of relevance to us and prioritized these in respect of sales, costs, risk and reputation. We summarized the 24 areas of activity that are relevant to Bayer in a materiality matrix.

In 2015, we once again discussed the results of the materiality analysis at internal workshops and reconciled these with current developments and the Group targets. We also analyzed the results' relevance for the Bayer value chain (see graphic) and reporting in line with the new GRI G4 guidelines. During this process, the original 24 areas of activity were condensed into 11, presented to the Board of Management and approved by it. The graphic below shows the assignment of our areas of activity to the stages of the value chain.

Areas of Activity Across the Different Stages of the Value Chain [Graphic 3.5.2]

Areas of activity \ Value chain stages	Research, development, innovation	Supply chain	Production	Logistics	Distribution and marketing	Use
Product and process innovation	⊗		⊗			
Access to health care	⊗				⊗	
Sustainable food supply	⊗		⊗		⊗	
Human capital	⊗		⊗	⊗	⊗	
Business ethics	⊗		⊗	⊗	⊗	⊗
Product stewardship	⊗		⊗	⊗	⊗	⊗
Safety			⊗	⊗		
Environmental protection	⊗		⊗	⊗	⊗	⊗
Supplier management		⊗				
Stakeholder engagement / Partnering	⊗		⊗	⊗	⊗	⊗
Societal engagement					⊗	

In the augmented version of the Annual Report you will find a detailed GRI content index with the corresponding UNGC principles and the GRI aspects to which we have assigned our areas of activity. There we indicate whether our scope for exercising influence lies within or outside the company. An overview of our areas of activity, their definition, the corresponding Group targets and the assigned GRI aspects is available online.

www.bayer.com/gri-content-index

www.bayer.com/key-areas-of-activity

STAKEHOLDER DIALOGUE AT BAYER

We consider the maintenance of constant contact and continuous dialogue with our stakeholders at a global and local level to be very important. Bayer is a part of society and of public life. Society's acceptance and appreciation of our corporate activities are therefore essential to Bayer's reputation and business success. Involving the different interest groups is a vital element of the company's activities with the goal of creating better mutual understanding and trust in respect of our work and products.

ONLINE ANNEX: 3-5-1

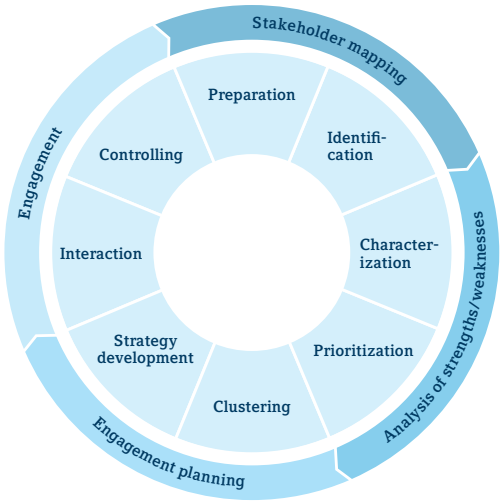
We believe that systematic dialogue with the stakeholders relevant to us offers a vital key to understanding their viewpoints and expectations and being able to incorporate them into our business decision-making processes as far as possible. This procedure helps us to identify social and market trends and developments early, avoid risks, assess our contribution and thereby set focus areas for our corporate activities.

GRI
G4-25

We systematically involve our stakeholders in various ways, including the Stakeholder Engagement Process. This describes how, throughout the Group, stakeholder groups for a project can be identified, their expectations charted and dialogue with them steered. The engagement process requires regular review and needs to be reflected against social trends.

GRI
G4-25

Stakeholder Engagement Process [Graphic 3.5.2-1]



To ensure the long-term acceptance and appreciation of our business, we seek to link the interests of our stakeholders even more closely to our corporate strategy. It is important to approach key social and political players right from the start of a new project and, early on, to canvass their support, identify risks and opportunities and seek open dialogue. The Group has developed a guide to engaging stakeholders in strategic decision-making processes such as investment projects and the launch of new products. The Virtual Resource Center platform that emerged from this provides online tools and a tutorial to help identify social and political trends at an early stage so that they can be successfully incorporated into project planning. The concept is currently being applied to various projects at Bayer, and the practical experience gathered is being channeled back into further refinements. In addition, senior managers are systematically undergoing specific training to improve interaction with critical stakeholders.

GRI
G4-26

Bayer's day-to-day stakeholder activities range from targeted dialogue at local, national and international level and active involvement in committees and specialist workshops, through to comprehensive information programs and participation in international initiatives and collaborations. Our stakeholder dialogue includes both communication and active interaction with individual target groups and also issue-related multi-stakeholder events.

GRI
G4-24

We basically divide the stakeholders with whom we mainly interact into four groups: partners, regulators, financial market players and social interest groups. In the following and in the relevant chapters, we use examples to provide an insight into the commitment Bayer has shown in 2015.

GRI
G4-27

OUR PARTNERS

Customers and suppliers

More on this topic can be found in Chapter 7 "Procurement, Production, Logistics, Distribution."

Employees

More information about internal communications can be found in Chapter 6 "Employees."

Universities and scientific institutions

Bayer's research and development activities are supported by an international network of collaborations with leading universities, public-sector research institutes and partner companies. More about this can be found in Chapter 4 "Research, Development, Innovation."

GRI
G4-26, G4-27

Schools and universities

You can find more information on Bayer's comprehensive activities in dialogue with school and university students in Chapter 11 "Social Commitment."

Associations

Alongside our business activities, Bayer is also an active member of, or holds leadership positions on, numerous national, European and international associations and their committees such as the Federation of German Industries (BDI, Vice-Presidency from 2015), the German Chemical Industry Association (VCI, Presidency), the German Equities Institute (DAI, Presidency), the European Chemical Industry Council (CEFIC, membership of the Board and Executive Committee), BusinessEurope and the International Council of Chemical Associations (ICCA). Bayer also currently chairs econsense, the Forum for Sustainable Development of German Business.

The subgroups are also active members of their respective industry associations. For example, HealthCare is on the boards of both the European (EFPIA) and the American (PhRMA) pharmaceutical trade associations, CropScience is represented on the boards of the international crop protection association CropLife International, the regional associations (CropLife America, Latin America, Africa & Middle East) and the European Crop Protection Association (ECPA), and the CEO of Covestro is the President of PlasticsEurope, the association of plastics manufacturers.

FINANCIAL MARKET PLAYERS

More information on our dialogue with the capital market – stockholders, capital investment companies, institutional investors, banks and rating agencies – can be found in the Chapter "Investor Information."

REGULATORS

Legislators, authorities and politicians

The framework for the company's operations is determined by authorities, legislators and politicians through statutory regulations and licensing, for example. The dialogues Bayer is currently pursuing with authorities and ministries at local, national and international level include targeted discussions with political decision-makers and active involvement in specialist workshops and cooperation projects. Our active participation in political decision-making processes is also explicitly sought by the key players involved.

Lobbying

In its Bayer Group Regulation "Code of Conduct for Responsible Lobbying," Bayer sets out clear and binding rules for its involvement in political matters, aiming to ensure transparency in any collaboration with the representatives of political institutions. The Group's Public and Governmental Affairs Committee is responsible for the strategic planning of Bayer's political work. This especially includes developing the company's political standpoints, as well as determining the position of the Bayer Board of Management on important political issues. In 2015, Bayer's political lobbying again focused on the acceptance of products and technologies in society, on submitting proposals for creating sustainable health care systems, on dismantling obstacles to innovation, on chemicals and energy policy, on trade policy and on climate protection. Bayer actively promotes the protection of intellectual property in order to be able to continue developing innovative products. In addition, Bayer makes suggestions relating to the regulatory framework for crop protection products and seeds. More information on our political principles can be found on the internet.

www.bayer.com/pol-involvement

www.bayer.com/eu-transparency-register

Our liaison offices in Berlin, Brussels, Washington, Moscow, Brasilia and Beijing are key points of contact between the Group and the political arena. Bayer actively participates in existing transparency initiatives. It publishes details of costs, employee numbers and any of the other statistics required in each country, e.g. in the transparency registers of the European institutions and the U.S. Congress. Bayer goes way beyond the statutory requirements in doing so. For instance, the Group also publishes data for countries, e.g. in Germany, where there is no legal requirement to publish such information. In 2015, the costs incurred at the liaison offices for human resources, material and projects totaled approximately: €1.2 million in Berlin, Germany; €2 million in Brussels, Belgium; €6.9 million in Washington, United States; €0.14 million in Moscow, Russia; €1.1 million in Brasilia, Brazil; and €1 million in Beijing, China.

www.bayer.com/us-lobbying-disclosure

In keeping with our Group regulation, we have committed not to make any direct donations to political parties, politicians or candidates for political office. However, some associations to which the Group belongs make donations on their own initiative, in compliance with statutory regulations.

In the United States, a number of employees use the Bayer Corporation Political Action Committee (BayPac) to make private donations supporting candidates for parliamentary office. Political action committees in the United States are state-regulated, legally independent employee groups. In the United States, companies are legally prohibited from donating to political candidates directly. Consequently, such donations are not donations made by the company. The BayPac contributions are regularly reported to the U.S. Federal Election Commission and can be viewed on its website.

www.fec.gov

SOCIAL INTEREST GROUPS

Nongovernmental organizations, the public, local community, competitors

Bayer is involved in a variety of projects, thematic initiatives and specialist conferences at a national and international level in order to play an active role in the common task of shaping sustainable development. Alongside exchange and cooperation with nongovernmental organizations (NGOs) and supranational organizations, this primarily involves dialogue with the public.

Among other involvement, Bayer is actively engaged in the U.N. Global Compact and its initiatives, the CEO Water Mandate and Caring for Climate, as well as the Global Compact LEAD network and local Global Compact networks. We have also acted as an organizational stakeholder in the Global Reporting Initiative since 2004.

HealthCare is an active participant in the social dialogue addressing sustainability issues and creates forums to encourage exchange and develop viable problem-solving approaches together with partners. The subgroup supports the International Dialogue on Population and Sustainable Development conference in close collaboration with various governmental and nongovernmental organizations. The concept of this political dialogue involves finding solutions for internationally relevant issues in reproductive health and sharing experiences of implementing the Millennium Development Goals.

GRI
G4-26, G4-27

Together with the DSW (Deutsche Stiftung Weltbevoelkerung – the German foundation for world population), HealthCare organizes a series of parliamentary evenings where experts in development cooperation and representatives from the political sphere, foreign agencies, medical research, international NGOs and think tanks discuss issues related to development policy and population growth.

GRI
G4-26, G4-27

CropScience wants to strengthen and expand societal dialogue about the need for and benefits of science and innovation in agriculture and inform the public of the potential and challenges in today's agriculture. The Agricultural Education program is primarily aimed at encouraging young people to take a greater interest in agriculture and food production. The program includes practical exercises in student laboratories, agricultural science scholarships and sharing ideas about the future of agriculture at international youth conferences such as the Youth Ag-Summit.

In 2015, the second Youth Ag-Summit was held in Canberra, Australia, in partnership with the Australian agricultural youth organization FFN (Future Farmers Network). The focus was on nutrition for the growing global population. At the end of the year, delegates from the Youth Ag-Summit presented a declaration by the young people on specific campaigns and recommendations for safeguarding food supplies to the United Nations' Committee of World Food Security in Rome, Italy.

The neighborhoods near Bayer's sites are a key subject in our stakeholder dialogue. The Group is working at all sites on being recognized as a reliable partner and attractive employer that is aware of its social responsibility. For example, the involvement of the local community plays a decisive role in the success of any investment project.

CropScience regularly uses forums, print media and personal discussions with citizens' initiatives, representatives of the church communities and the regional press to keep its neighbors continually informed, for instance at the Dormagen, Frankfurt-Hoechst and Knapsack sites in Germany. Stakeholder dialogue is also taking place with the communities around sites in other countries, such as Muskegon, United States, and Hangzhou, China.

Covestro engages in dialogue with neighbors, the public and non-governmental organizations (NGOs) on a case-by-case basis. The communities around the sites are proactively informed and involved when it comes to investment projects. One example is the intensive voluntary information policy adopted by Covestro and the German Chempark operator Currenta with respect to the relocation of a section of the existing carbon monoxide pipeline under the Rhine between Dormagen and Leverkusen. The permit documentation for the culvert could be openly viewed by interested parties in both cities affected and was additionally accessible on a specially dedicated website. For more detailed up-to-date information go to www.dueker.chempark.de (in German only). Both the media and local residents are kept informed about the planned carbon monoxide pipeline between the German sites of Dormagen and Krefeld-Uerdingen. The dialogue forum initiated by Covestro also plays an important role in the exchange of information with a critical public

www.bayer.com/COV-CO-pipeline

In the United States, Covestro's site dialogue takes place through local Community Advisory Panels (CAPs). These, for example, organize regular meetings with local government or the community, in order to provide information on current issues or news from the area of site safety. In Germany, dialogue with the community is conducted through the Chempark neighborhood offices run by Currenta at the Lower Rhine sites.

Among other things, Covestro is a member of the U.N. Global Compact and is active in econsense. It also maintains various partnerships with NGOs as part of a commitment to wider society, for instance with Habitat for Humanity, which seeks to build sustainable and affordable housing in India.

6. Employees

Our business success is based to a large extent on the knowledge, skills, commitment and satisfaction of our employees. The aim of human resources work at Bayer is to create a working environment that encourages personal development and where every employee can drive forward innovations and achieve an excellent performance. Our corporate culture therefore builds on integrity, fosters strengths, identifies potential and helps us in our common goal of attracting the most talented employees and retaining them in the company in the long term.

Our human resources work starts with selecting and hiring new employees. We reward achievement and encourage ongoing development. We constantly develop our organizational structures and adapt them to the changing business environment. In addition, we have a wide range of initiatives and offerings to help managers lead their teams and enable employees to perform optimally.

The global strategy introduced by the Human Resources (HR) Committee helps us meet present and future business requirements. The HR Committee sets binding policies and defines priorities for all regions and organizational units. It is chaired by the member of the Board of Management responsible for human resources.

GRI
G4-26

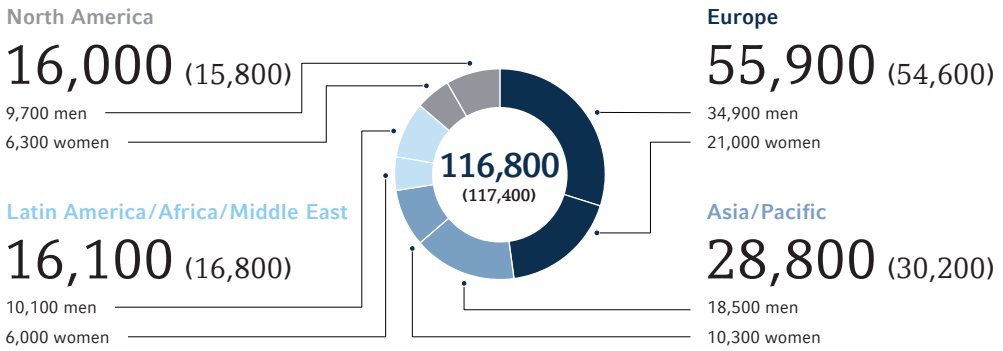
Group target: continuous improvement in employee engagement

See Chapter 1.4 for Group targets
See Chapter 4 for more details

To monitor the effectiveness of our human resources work, we conduct a Group-wide Employee Survey every two years. This is supplemented by institutionalized feedback processes and analyses. The information we receive in this way is used to steadily improve our activities. One area of focus derived from the results of the last Employee Survey was improving our innovation culture. Cultivating innovation has therefore been integrated into the Bayer Competency Model as one of the key leadership competencies and we have introduced new initiatives such as the "WeSolve" knowledge platform. Further information on Bayer's innovation culture can be found in Chapter 4 "Research, Development, Innovation."

At the end of 2015 we had 116,800 employees worldwide.

Employees by Region and Gender 2015 [Graphic 3.6.1]



2014 figures restated and in parentheses
Number of employees converted into full-time equivalents (FTE)
Values rounded to the nearest hundred

IDENTIFYING TALENTS

Bayer actively encourages its employees to develop their individual abilities, talents and strengths. Scientific innovations, changing customer requirements and a strong competitive environment are just some of the reasons why we welcome open-minded employees. A professional approach to attracting suitable talents is key to this. In 2015 we successfully continued the rollout of our uniform employer branding "Passion to Innovate | Power to Change." This message expresses what Bayer expects of its employees and, at the same time, what it can offer them. The employer branding "Passion to Innovate | Power to Change" was deployed worldwide for internal communication with employees in 2015 and was also used to position Bayer as an employer in many key markets. In addition, in 2015 we took the first steps toward further optimizing Group-wide recruitment of new employees. This was supported by

an increased presence in social media. Our excellent reputation as an employer is shown by many external rankings, awards and accolades.

ONLINE ANNEX: 3-6-1

New Hires[1] by Region and Gender [Table 3.6.0-1]

	Women		Men		Total	
	2014	2015	2014	2015	2014	2015
Region						
Asia / Pacific	1,745	1,569	2,758	2,762	4,503	4,330
Europe	2,717	2,359	3,104	3,162	5,821	5,521
Latin America / Africa / Middle East	1,080	820	1,670	1,400	2,750	2,220
North America	990	2,359	1,510	1,406	2,500	3,765
Total	**6,532**	**5,772**	**9,042**	**8,729**	**15,574**	**14,502**

The figures also include the discontinued operations.
[1] Converted into full-time equivalents (FTE)

Vocational training plays an important role at Bayer in order to meet the need for skilled employees. We provide sound training in more than 20 different occupations and offer more vocational training places than required to meet our needs. In Germany alone, around 920 young people embarked on a vocational training course at Bayer in 2015. We also give young people an opportunity to gain an insight into working for our company at any early age. Overall, Bayer provided around 2,900 demanding professional internships for students around the world in 2015.

www.bayer.com/career

PRESENT EMPLOYEE DATA

On December 31, 2015, Bayer had around 116,800 employees worldwide, a slight decrease compared with the previous year. In Germany we had some 36,700 employees (2014: approximately 35,700), which was 31% of the total Group workforce.

Employment Data[1] [Table 3.6.1]

	2014	2015
	FTE	FTE
Employees by function		
Production	49,300	47,800
Marketing and distribution	45,100	44,700
Research and development	13,900	14,700
General administration	9,100	9,600
Total	**117,400**	**116,800**
Apprentices	2,600	2,600

2014 figures restated
Values rounded to the nearest hundred
[1] The number of employees on either permanent or temporary contracts is stated in full-time equivalents and rounded to the nearest hundred. Part-time employees are included on a pro-rated basis in line with their contractual working hours.

The breakdown by age group was as follows:

Employees by Age Group [Table 3.6.2]

Age in years	< 20	20 – 29	30 – 39	40 – 49	50 – 59	> 60
2014	0.1%	15.8%	30.2%	28.2%	22.3%	3.4%
2015	**0.1%**	**15.3%**	**30.0%**	**27.7%**	**23.0%**	**3.9%**

Of the total Group workforce, 112,100 employees had permanent contracts while 4,700 had temporary contracts.

ONLINE ANNEX: 3-6-2

Employees[1] by Employment Status, Region and Gender 2015 [Table 3.6.2-1]

	Permanent employees			Temporary employees		
	Women	Men	Total	Women	Men	Total
Europe	19,900	33,500	53,400	1,100	1,400	2,500
North America	6,200	9,600	15,800	100	100	200
Asia/Pacific	10,100	17,700	27,800	200	800	1,000
Latin America/Africa/Middle East	5,700	9,400	15,100	300	700	1,000
Total	**41,900**	**70,200**	**112,100**	**1,700**	**3,000**	**4,700**

[1] The number of employees on either permanent or temporary contracts is stated in full-time equivalents (FTE) and rounded to the nearest hundred. Part-time employees are included on a pro-rated basis in line with their contractual working hours.

The voluntary fluctuation rate shows that we were again successful in retaining staff in the company long-term. On the reporting date, our employees had worked for the company for an average of 11 years. The proportion of employee-driven terminations (voluntary fluctuation) was 5.0% in 2015, level with the previous year's figure. Group-wide, the fluctuation rate was around 13.9% and thus up 2.5 percentage points on the previous year. This figure includes all employer- and employee-driven terminations, retirements and deaths.

Employee Fluctuation [Table 3.6.3]

	Voluntary fluctuation		Total	
	2014	2015	2014	2015
Women	5.3%	5.8%	11.6%	13.9%
Men	4.6%	4.5%	11.3%	13.9%
Total	**4.8%**	**5.0%**	**11.4%**	**13.9%**

ONLINE ANNEX: 3-6-3

Employee Fluctuation[1] by Region, Gender and Age Group [Table 3.6.3-1]

	Europe		North America		Asia/Pacific		Latin America/ Africa/Middle East		Total	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	%	%	%	%	%	%	%	%	%	%
Women	**8.2**	**7.8**	**14.8**	**15.7**	**15.2**	**22.2**	**13.6**	**19.0**	**11.6**	**13.9**
<30[2]	23.6	19.5	31.0	36.1	17.7	24.9	23.6	29.6	21.5	24.5
30–49	6.2	6.5	13.1	14.1	13.6	20.4	11.3	17.1	9.8	12.6
>=50[3]	5.3	5.4	13.6	13.2	19.5	29.1	9.9	12.9	8.5	9.1
Men	**6.8**	**6.7**	**15.8**	**13.2**	**16.1**	**23.6**	**13.0**	**21.8**	**11.3**	**13.9**
<30[2]	32.1	23.8	40.0	35.8	21.4	31.3	27.4	41.9	26.8	30.7
30–49	4.4	4.7	13.5	10.0	14.3	21.7	10.3	17.5	9.4	12.3
>=50[3]	4.1	4.9	14.1	12.8	13.2	17.2	9.4	20.2	7.3	8.7
Total	**7.4**	**7.1**	**15.4**	**14.2**	**15.8**	**23.1**	**13.2**	**20.7**	**11.4**	**13.9**

[1] The data include all employer- and employee-driven terminations, retirements and deaths.
[2] The comparatively high proportion of employees in the <30 age group is due to the inclusion of employees on temporary contracts (working for 2–6 months of the year) and other short-term employees. It does not include apprentices.
[3] The fluctuation rates for the >= 50 age group are mainly due to retirements.

At our significant locations of operation, which represent a selection of countries in which we generate around 68% of our total sales, Bayer also uses temporary personnel from staffing agencies on a small scale, based on stringent rules that are rooted in the LIFE values.

ONLINE ANNEX: 3-6-4

Temporary personnel from staffing agencies are primarily used where this is necessary as a result of short-term personnel requirements, fluctuations in order levels, temporary projects or long-term illness. The proportion of temporary staff employed in Germany is around 2.9% of the total workforce, and the average for the significant locations of operation is 7.5%.

6.1 Utilizing Potential to the Full: Personnel Development at Bayer

We aim to develop our employees on the basis of their abilities. To ensure this, in 2015 we introduced the Bayer Competency Model as a uniform, Group-wide standard. It comprises 16 clearly defined core and leader competencies, which are derived from our business strategy and LIFE values. They enable both employees and managers to use a common language and enhance transparency of the skills and behaviors we expect from both current and future employees.

This common understanding facilitates development opportunities for employees and at the same time gives them guidance on their career path. The Bayer Competencies are now used as criteria for many employee development tools, ranging from recruitment interviews through the Development Dialogue to various Assessment Centers to identify future managers. In 2015, 28,000 nonmanagerial staff and 23,000 managerial staff around the world were trained to use the competencies in interviews and Development Dialogues.

The aim of the Development Dialogue is to draw up an individual development plan that fosters employees' strengths and addresses areas in which they would like to develop further. 30,000 Development Dialogues were held in 2015. They are an opportunity for employees to discuss their personal strengths and development needs, career expectations and professional aspirations with their supervisor. This tool is to be rolled out Group-wide and given a firm place in our global leadership culture. In 2015, the Development Dialogue was extended to nonmanagerial employees in Germany.

Thanks to its wide-ranging business activities, Bayer is able to offer employees throughout the Group good opportunities for development. Vacancies throughout the Bayer Group, from nonmanagerial right up to senior management level, are advertised via a globally accessible platform. In 2015, we posted around 13,000 vacancies in 61 countries on this platform.

Selective training is also part of our philosophy of personnel development. We actively encourage "lifelong learning" by our employees as an integral element in the management of demographic change. Our aim is to empower all employees to broaden their knowledge and skills and keep up with the latest changes throughout their working lives.

www.bayer.com/training

We have training programs for all employees throughout the company. An overview of the various programs, together with details of their aims and uptake can be found on the internet.

At the heart of our ongoing training concept is the Group-wide Bayer Academy, which bundles our extensive range of continuing education offerings. Alongside systematic development of managerial employees, it offers continuous professional training through various functional academies. Managers from different management levels have taken a total of 31,966 training courses through the programs offered by the Bayer Academy for managers since 2013, including 11,623 in 2015. In 2015, the Bayer Academy was honored with the renowned Brandon Hall Group Excellence Award in bronze for its training offerings to enhance the performance and feedback culture. A total of 302,205 training sessions in Skill & Competency were taken by managers across all managerial levels.

Every employee at our significant locations of operation received an average of 20.0 hours of vocational and ongoing training.

ONLINE ANNEX: 3-6.1-1

Training Activities in Hours in 2015 by Employee Group and Gender[1] [Table 3.6.3-2]

	Women	Men	Total
Employee group			
Senior management	18.3	15.9	16.3
Junior management	33.2	24.4	27.4
Specialists	19.9	14.3	16.4
Overall average	**24.1**	**17.7**	**20.0**

The figures also include the discontinued operations.
[1] Selected training activities in the 14 largest countries covered by the global training system, in which we generate 71.8% of our sales; the gender-specific averages do not include the United States or Japan as statutory regulations preclude differentiation by gender in these countries.

ACHIEVING EXCELLENT PERFORMANCE – FOSTERING FLEXIBILITY

Above-average performance is only possible in an environment where fairness and respect are key elements of the corporate culture. That includes observing Bayer-wide standards of conduct and protecting employees from discrimination, harassment and retaliation. These standards are set forth in the corporate policy on Fairness and Respect at Work.

Specific and differentiated feedback forms the basis for positive personal development. Bayer encourages a culture of candid feedback to help employees achieve their individual goals. The global performance management system is part of this culture. Employees agree individual objectives with their supervisor that are directly based on corporate goals. Alongside continuous feedback throughout the year, attainment of the objectives is assessed by the supervisor at the end of the year and discussed personally with each employee. The results are documented in the employee portal and made available to each employee on an individual basis. In 2015, this system covered more than 88,000 employees, i.e. about 75% of our total workforce. Of the participants, 42% were female and 58% male. The system is mandatory for all managerial employees. This ensures that they receive feedback on how well they have applied our corporate values in the fulfillment of their individual objectives. Applying the LIFE values is as important as meeting business targets and therefore affects the level of their variable compensation.

Bayer's corporate culture is shaped by its employees. As a modern employer, Bayer endeavors to respond to employees' widely differing lifestyles. The company therefore offers employees in all countries a wide range of options to help them balance employment with their personal and family lives. Today's employees and prospective employees attach great importance to flexible working arrangements and to support in caring for children and close relatives. Bayer offers a variety of flexible working opportunities throughout the world. In many countries, these go well beyond the statutory requirements. We significantly expanded our benefits and services in this area in 2015, for example in China.

In 2015, Bayer concluded a new General Works Agreement with the Works Council in Germany on a binding and uniform framework for short-term mobile working. For the first time, this agreement is applicable throughout the Group.

We regularly conduct extensive global surveys of family-friendly working arrangements. In 2015, these showed further progress at our significant locations of operation. New and improved programs for flexible working from home, flextime and caring for relatives have been introduced. In 2015, the Bayer Group had some 10,200 part-time employees, in particular in Europe. This figure represents 8.5% of the total headcount.

ONLINE ANNEX: 3-6.1-2

Percentage of Part-Time Employees by Region and Gender [Table 3.6.3-3]

	Women		Men		Total	
	2014	2015	2014	2015	2014	2015
	%	%	%	%	%	%
Region						
Asia/Pacific	2.2	2.1	0.3	0.1	1.0	0.8
Europe	23.5	24.1	11.2	12.2	15.9	16.9
Latin America/Africa/Middle East	0.1	0.2	0.0	0.0	0.1	0.1
North America	1.6	1.2	0.1	0.2	0.7	0.6
Total	**12.1**	**12.7**	**5.3**	**6.0**	**7.9**	**8.5**

Bayer enables both men and women to take parental leave. Since national parental leave regulations vary widely from country to country, we only compile data for our significant locations of operation. Group-wide 1,315 women and 788 men took parental leave in 2015. By the end of the year, around 1,847 employees on parental leave had returned to work. 81% of women and 99% of men who took parental leave in 2015 returned to work in the same year.

ONLINE ANNEX: 3-6.1-3

The next table shows the number of employees who have returned after the standard statutory parental leave program and Bayer's more far-reaching "Family & Career" model in the past seven years, using Germany as an example. By the end of 2015, 82.6% had returned to work.

Employees Returning from Parental Leave using Germany as an Example [Table 3.6.3-4]

	%	Absolute
Employees who have taken parental leave since 2009	**100.0**	**3,178**
Returnees by 2015	82.6	2,624
Women	**58.7**	**1,867**
Still on parental leave/with a dormant employment contract	17.2	321
Returned by 2015	72.4	1,352
Left the company[1]	10.4	194
Men	**41.3**	**1,311**
Still on parental leave/with a dormant employment contract	1.3	17
Returned by 2015	97.0	1,272
Left the company[1]	1.7	22

[1] Includes employees who have left the company due to employer- and employee-driven terminations, severance agreements and expiration of contracts

The General Works Agreement on caring for close relatives helps Bayer employees in Germany to combine working with their role as carers.

ONLINE ANNEX: 3-6.1-4

Under this agreement, employees can take up to 10 days' paid leave to provide emergency care for family members. For longer periods, they are entitled to work part-time. During this time, their salary can be topped up by drawing funds from their long-term account. Alternatively, employees who need to care for close relatives full-time can take unpaid leave for up to six months (or up to one year in exceptional cases). The new General Works Agreement on mobile working, which includes working from home for short periods, also offers employees greater flexibility in dealing with personal emergencies.

EMPLOYEE COMMUNICATION

GRI
G4-26

We regard providing regular, up-to-date information for our employees and involving them through active dialogue as an integral part of modern human resources and talent management based on competitive structures and processes. To ensure this, Bayer stepped up open and transparent communication with employees in 2015. The previously separate intranet sites providing HR information, company news, country-specific information and background facts have been combined, offering extensive information on career paths, compensation, training and benefits.

Communication with employees also includes meeting national and international obligations to inform staff promptly and extensively about upcoming changes in the Group.

In Germany we combine providing timely information to the employee representatives on the Economics Committee of the company concerned with coordinating and jointly deciding on the proposed communication measures.

We also actively involve our employees in dialogue through a range of offerings and specifically encourage open discussion. These include regular employee assemblies, information events for managers and the European Forum, where employee representatives from all European sites engage in discussion with the Board of Management. Particular attention is paid to explaining strategic issues, business performance, research, innovation and sustainability.

6.2 Diversity and Internationality

A diverse employee structure is vital for our company's future competitiveness. Diversity improves our understanding of changing markets and consumer groups, gives us access to a broader pool of talented employees, and enables us to benefit from the enhanced innovative and problem-solving abilities that are demonstrably associated with a high cultural diversity within the company.

A better gender and cultural balance at management level is especially important for our success as a company. Our activities in this area are bundled in "Leading Across Cultures and Genders." At the heart of this program are special training sessions for managers. These provide an opportunity for them to consider the economic benefits of greater diversity, cultural and gender-specific differences and positive examples from within the Group in order to develop action plans for their own areas of responsibility.

ONLINE ANNEX: 3-6.2-1

Since November 2014, Bayer has been a member of the Gender Parity Council of the World Economic Forum in Davos. It is also a founding member of the new "Chefsache" network sponsored by the German Chancellor Angela Merkel, which was set up in the summer of 2015. The members of this initiative are committed to working together to develop practically oriented strategies to drive diversity and gender balance in their organizations.

Overall, the Bayer Group employs people from around 150 different nations. Of the members of our Group Leadership Circle, in which 33 nationalities are currently represented, around 67% come from the country in which they are employed. The Group Leadership Circle comprises managers who perform senior functions in the Group. At the end of 2013, 82% of senior managers in our five top contract levels came from Western Europe, the United States and Canada and 18% came from other countries. By the end of 2015, the proportion of employees in the latter group had increased by three percentage points to 21%. We aim to increase this to 25% by 2020.

Group target 2015: increase in the proportion of senior managers from outside the E.U., the United States or Canada to 25%

In 2010, Bayer set itself the voluntary target of raising the proportion of women at the five highest management levels throughout the Group to 30% by the end of 2015. In just five years, we have increased the proportion of women in this management segment from 21% to around 28%. We aim to raise this to 35% by 2020.

Group target 2015: increase in the proportion of women in senior management to 30%

In the Group Leadership Circle – the top management level below the Board of Management – the ratio likewise improved from 93% men and 7% women at the end of 2010 to 87% men and 13% women at the end of 2015.

See Chapter 1.4 for Group targets

ONLINE ANNEX: 3-6.2-2

Bayer Group Workforce Structure[1] [Table 3.6.3-5]

	Women		Men		Total	
	2014	2015	2014	2015	2014	2015
Senior management	2,800	3,100	7,700	7,900	10,500	11,000
Junior management	10,900	11,300	16,600	16,700	27,500	28,000
Skilled employees	30,200	29,300	49,200	48,500	79,400	77,800
Total	**43,900**	**43,700**	**73,500**	**73,100**	**117,400**	**116,800**
Apprentices	800	800	1,800	1,800	2,600	2,600

2014 figures restated

[1] Number of employees converted into full-time equivalents (FTE) and rounded to the nearest hundred

6.3 Employee Compensation and Variable Pay

Compensation at Bayer combines a basic salary reflecting performance and responsibility with elements based on the company's success, plus extensive additional benefits. In this way, we aim to offer our employees working conditions that give them a high degree of security and reliability. Adjustments based on continuous benchmarking are designed to ensure that our compensation is always internationally competitive. We also attach great importance to equal pay for men and women, providing fair and competitive compensation worldwide and informing our employees transparently about the overall structure of their compensation.

ONLINE ANNEX: 3-6.3-1

At Bayer, individual salaries are based on each employee's personal and professional abilities and the level of responsibility assigned to them. At managerial level, this is based on uniform evaluation of all positions throughout the Group using the internationally recognized Hay method. In areas of the Group and jobs that fall within the scope of binding collective bargaining agreements, there are no differences in pay based on gender either. This also applies for the compensation of trainees. In the Emerging Markets and developing countries, too, compensation levels are aligned to local market conditions. To provide a transparent overview of their compensation, including all additional benefits provided by the company and employer pension and social insurance contributions, more than 30,000 employees in 12 countries up to now annually receive an extensive "Total Reward Statement" containing all relevant information. This will be rolled out successively to further countries in the next few years.

Our compensation concept also includes variable one-time payments. More than €1,100 million is earmarked for bonus awards to employees for 2015 under the Group-wide short-term incentive (STI) program. In many countries, employee stock programs enable our staff to purchase Bayer shares at a discount. This offers them a further opportunity to participate in the company and its business performance. We also offer senior managers throughout the Group "Aspire," a uniform long-term compensation program based on the development of the share price (see NOTE [26.6] to the consolidated financial statements). For members of the Group Leadership Circle, an appropriate personal investment in Bayer stock is the prerequisite for participating in this program.

In the continuing operations, our personnel expenses amounted to €11,203 million in 2015 (2014: €9,693 million). The change was mainly due to currency effects, an increase in average employee numbers, and higher employee bonuses. Offering a stable income and financial security is a basic principle of our global compensation strategy. This also applies to financial security in old age. More than 70% of Bayer employees worldwide are included in a Bayer pension plan. Pension provision is available to most employees for the period after their retirement. 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. Further details of pension provision and pension obligations are given in NOTE [29] to the consolidated financial statements.

Personnel Expenses and Pension Obligations [Table 3.6.4]

	2011	2012	2013	2014	2015
	€ million	€ million	€ million	€ million	€ million
Personnel expenses	8,726	9,194	9,430	9,693	11,203
of which pension and social security contributions	1,672	1,823	1,845	1,818	2,191
Pension obligations[1]	19,310	22,588	20,682	27,771	26,809

2014 figures restated; figures for 2011 – 2013 as last reported
[1] Present value of defined-benefit obligations for pensions and other post-employment benefits for continuing and discontinued operations

HUMAN RIGHTS AND SOCIAL RESPONSIBILITY

Our social responsibility as a company and an employer is based on our corporate values and our unreserved commitment to supporting and fostering human rights in our sphere of influence. Bayer's Human Rights Position is set out in a binding Group-wide policy. We are committed to respecting, fostering and reporting transparently on human rights both internally and within our sphere of influence. That means, in particular, that we have policies, processes and monitoring systems to enforce human rights in our business operations. Alongside working conditions in the Bayer Group, these outline our expectation that human rights will be respected at all stages in the supply chain, as detailed in our Supplier Code of Conduct. In addition, our LIFE values and Corporate Compliance Policy commit all employees around the world to fair and lawful conduct toward staff, colleagues, business partners and customers. We are a founding member of the UN Global Compact and respect the United Nations' Declaration of Human Rights and a range of globally recognized declarations applicable for multinational corporations.

See Chapter 7.1

ONLINE ANNEX: 3-6.3-2

These include, in particular, the OECD Guidelines for Multinational Enterprises, the Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy, and the core labor standards of the International Labour Organization (ILO). We also observe the U.N. Guiding Principles on Business and Human Rights, which were adopted in 2011. To implement these, in 2015, we played an active part in the consultation process, which aims to support the German government in drafting a national action plan.

To enhance our employees' awareness of the importance of human rights in their day-to-day activities, we trained around 52% of our workforce in the main aspects of our Human Rights Position at various courses with a total duration of 201,000 hours in 2015. That included training for internal and external security staff. The compliance organizations at Group and country levels monitor compliance with the relevant corporate policies. If there are signs of violation, employees can contact their Compliance Officer at any time, anonymously if required. Alternatively, they can contact the Group-wide compliance hotline, which is available worldwide to the general public as well as to employees. For further details see Chapter 16.3 "Compliance."

See Chapter 16.3

At Bayer, social responsibility includes ensuring safe working conditions and thus an environment where our employees can work and undertake international business travel without fear. We support our employees by providing training to prepare them for business trips, including training in the correct conduct in emergencies.

Our social responsibility is also reflected in our approach to necessary changes and restructuring measures. In Germany, which remains the company's largest operational base with 36,700 employees, business-related dismissals are excluded through the end of 2020 for a large proportion of employees under an agreement with the employee representatives.

In 2015, the working conditions for around 53% of our employees worldwide were governed by collective or company agreements. The contractually agreed working hours of our employees do not exceed 48 hours a week in any country. 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.

ONLINE ANNEX: 3-6.3-3

Percentage of Collective Agreements by Region [Table 3.6.4-1]

	Percentage of employees covered by collective agreements, especially on compensation and working conditions[1]	
	2014	2015
	%	%
Region/area		
Asia/Pacific	14	15
Europe	87	88
Latin America/Africa/Middle East	45	45
North America	5	5
Total	**52**	**53**

[1] Collective or company agreements

Our understanding of our role as a socially responsible company includes a commitment to helping disadvantaged people. We employ some 2,500 people with disabilities in 29 countries. That is around 2% of our total workforce. 35% are female and 65% male. Most employees with disabilities work for our companies in Germany, where they made up 4.9% of the workforce in 2015.

An important part of our sustainable human resources policy is ensuring a high level of social protection for our employees. For example, nearly all employees worldwide either have statutory health insurance or can obtain health insurance through the company. In 2015, we once again expanded or improved the quality of the health benefits provided for employees in many countries. 78% of employees have access to a company pension plan.

Health Insurance and Pension Coverage [Table 3.6.5]

	Health insurance[1]		Pension plans[2]	
	2014	2015	2014	2015
	%	%	%	%
Region				
Asia/Pacific	95	95	57	64
Europe	99	99	86	86
Latin America/Africa/Middle East	94	93	59	56
North America	92	93	99	99
Total	**96**	**96**	**77**	**78**

[1] State or employer-/employee-funded
[2] Programs to supplement statutory pension plans

Employees' health and vitality are important to Bayer. The company therefore specifically encourages health awareness and healthy lifestyles. We have therefore introduced a wide range of workplace health management programs at all levels, which are being expanded in response to employee surveys. Further information can be found in Chapter 9.1 "Occupational Health and Safety."

See Chapter 9.1

7. Procurement, Production, Logistics, Distribution

We strive to offer our customers innovative products and high-quality solutions. This requires efficient processes all along the value chain for our products – in procurement, production, logistics and distribution. Economic factors play a role here, as do ecological and social criteria such as comprehensive product stewardship, human rights and a clear commitment to safety and environmental protection.

At our production sites throughout the world, we continuously work to improve our cost structure, react more rapidly to market fluctuations through increased flexibility and achieve our ambitious quality and safety objectives. The quality requirements for our products and services vary due to divergent regulatory demands: the manufacture of pharmaceutical and medical devices in particular is subject to extraordinarily stringent requirements.

This chapter presents the (internal) value chain: how we procure, manufacture and transport our products, as well as how we market and distribute them.

7.1 Procurement and Supplier Management

Bayer's procurement organization supplies our internal business partners around the world with goods and services while operating in accordance with the ethical, ecological, social and economic principles established in our procurement directive. This directive is binding for all employees. Our procurement activities aim to ensure security of supply, provide a financial value contribution and meet quality and sustainability requirements. Procurement makes a substantial value contribution to the Bayer Group by centrally pooling know-how, leveraging network effects and economies of scale throughout the organization and facilitating access to innovation.

We exert significant influence on society and the environment in many regions as a result of our procurement activities, which in 2015 took place in 151 (2014: 147) countries and accounted for a procurement spend of some €22.2 billion (2014: €20.3 billion) from transactions with approximately 112,500 (2014: approximately 112,000) suppliers in all areas.

In 2015, our procurement spend in Germany, the United States and Japan accounted for nearly 67% of our expenditures in OECD (Organisation for Economic Cooperation and Development) countries, which in turn made up about 53% of the Bayer Group's global procurement spend. Brazil, India and China together accounted for about 68% of expenditures in the non-OECD countries or about 14% of the total spend.

ONLINE ANNEX: 3-7.1-1

Procurement Spend and Number of Suppliers in OECD and Non-OECD Countries in 2015 [Table 3.7.0-1]

	Spend		Suppliers	
	€ billion	%	Number	%
OECD countries				
Germany	5.4	24.3	22,286	19.8
United States	5.3	23.9	11,515	10.2
Japan	1.1	4.8	1,888	1.7
Other	5.8	26.3	43,461	38.7
Total	**17.6**	**79.3**	**79,150**	**70.4**
Non-OECD countries				
China	2.1	9.5	4,032	3.6
India	0.5	2.5	3,738	3.3
Brazil	0.5	2.1	2,387	2.1
Other	1.5	6.7	23,103	20.6
Total	**4.6**	**20.7**	**33,260**	**29.6**

Where possible, Bayer buys locally. In 2015, this applied to 75% of our procurement spend at our main business locations, and 71% of our total worldwide procurement spend. This enables us to align our procurement activities to the requirements of our sites in the regions and to help strengthen local economies.

Bayer minimizes procurement-specific risks for goods and services of strategic importance, such as supply bottlenecks or major price fluctuations, through long-term contracts and active supplier management. In this way we ensure both the company's global competitiveness and smooth production processes.

Indirect goods that are not of relevance to production are procured by the respective major user within the Bayer Group. The individual procurement organizations were coordinated during the reporting period by the Group Procurement Committee, which reports directly to the Chief Financial Officer. In line with the company's procurement strategy, direct and production-related procurement in the Bayer Group is organized decentrally in the subgroups so that Bayer can act in accordance with differentiated market and production requirements. The composition of HealthCare's supplier portfolio has changed as a result of the acquisitions of the nonprescription medicines businesses of Merck & Co., Inc. and Dihon Pharmaceutical Group Co. Ltd., as well as the divestiture of the Diabetes Care business.

ONLINE ANNEX: 3-7.1-2

Main Procurement Products by Subgroup / Segment [Table 3.7.0-2]

Subgroup/segment	Main procurement products
HealthCare	
Pharmaceuticals	Zetia (finished product), cell media culture (raw material), Betaferon (interferon-beta-1b) (bulk product)
Consumer Health	Consumer Care: Supradyn (finished product), naproxen (active ingredient), Berocca (finished product) Radiology: iopamidol (active ingredient), iodine (raw material), cyclen (raw material) Animal Health: moxidectin (active ingredient), Avenge (finished product), Baycox-isocyanate (intermediate)
CropScience	
CropScience	Packaging materials, adjuvants and solvents (e.g. rapeseed oil, soybean oil, toluene, ammonia), complex intermediates (e.g. pyridine polyfluoride) and active ingredients (e.g. mancozeb)
Covestro	
Covestro	Key basic raw materials are benzene and phenol, propylene oxide, toluene, acetone and hexamethylenediamine.

The use of renewable raw materials currently plays only a subordinated role at Bayer. We use them more intensively when it makes technical, economic and ecological sense to do so.

ONLINE ANNEX: 3-7.1-3

A number of hormones are synthesized at **HealthCare** through certain sterols and phytosterols that result as byproducts during the production of plant oils from soybeans, oilseed rape / canola or sunflowers, as well as during wood processing. Palm oil or palm kernel oil is not used here due to its low sterol content. We additionally purchase various steroids that are manufactured from diosgenin or its intermediate stages. Today, this substance is usually obtained from yam grown in countries such as China. We also use raw materials such as water, glucose, yeast, soybean starch, castor oil and corn steep water in our fermentation processes. Extracts of plant leaves (Centella asiatica) are used in some Consumer Care products. This plant is widely found in Asia and is not an endangered species. We also take great care with the cultivation and harvesting of the raw materials for manufacturing plant-based pharmaceuticals for holistic treatments. They are collected and cultivated in line with the GACP (Good Agricultural and Collection Practice) guidelines of the European Medicines Agency.

On the European market, **CropScience** offers a mild weed control product based on fatty acids derived from palm oil. As the production of palm oil is often associated with social and ecological problems, Bayer takes part in the Round Table for Sustainable Palm Oil (RSPO). This underscores our commitment to responsible materials procurement. In 2015, Bayer for the second time purchased GreenPalm certificates, which support the production of sustainable palm oil.

Covestro is developing processes for the replacement of raw materials derived from crude oil. In 2016, for example, the company is planning the commercial production and market launch of pentamethylene diisocyanate (PDI), an isocyanate produced from a novel renewable raw material derived in turn from biomass.

Sustainability in supplier management

Bayer regards adherence to sustainability standards within its supply chain as both a crucial factor for value creation and an important lever for minimizing risks. For this reason, not just economic standards, but also ethical and environmental, social and governance (ESG) standards apply for the selection of new as well as established suppliers. These standards are defined in Bayer's Supplier Code of Conduct, which is based on the principles of the U.N. Global Compact and our Human Rights Position. It forms the basis for our collaboration with suppliers and is available online in 14 languages. The Code of Conduct is integrated into electronic ordering systems and contracts throughout the Bayer Group. Since 2015, furthermore, relevant new and renewed supply contracts have contained special clauses that request suppliers to observe the sustainability requirements defined in the Code of Conduct and authorize Bayer to monitor this.

Group targets: supplier management

See also Chapter 1.4 for Group targets

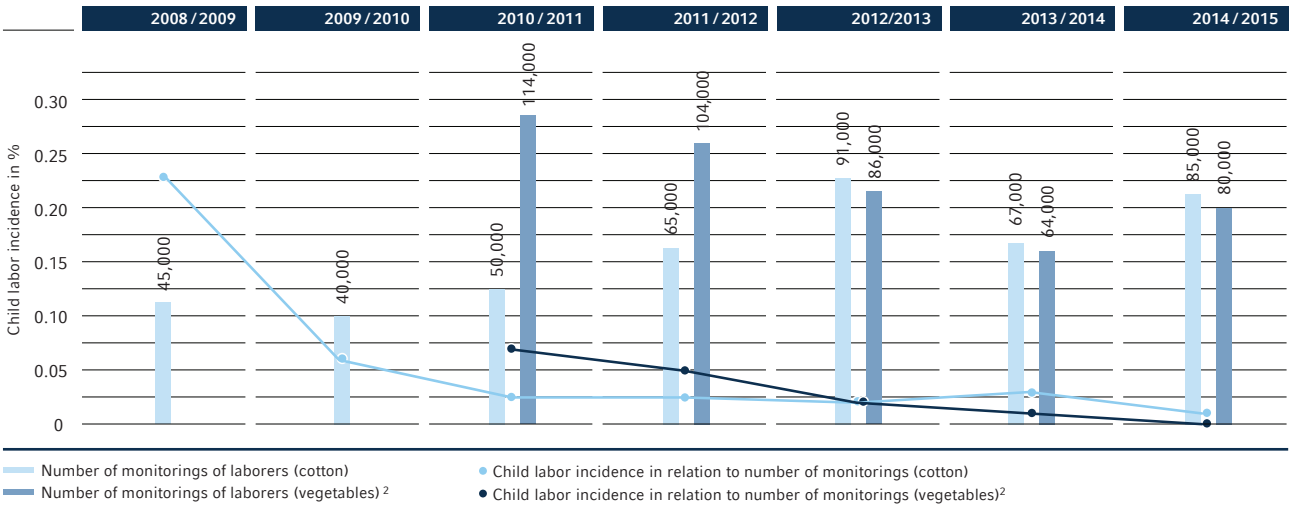
In order to consistently drive sustainability in supplier management, Bayer has set ambitious targets. By 2017, we plan to evaluate all strategically important suppliers i.e. those with a major influence on business in terms of, for example, procurement spend and long-term collaboration prospects (3-5 years) according to sustainability-relevant criteria (target attainment as of 2015: 84%). By 2020, we also aim to include in the evaluation all those suppliers with a significant procurement spend (> €1 million p.a.) that are regarded as potential high-risk suppliers (target attainment as of 2015: 73%). Risk definition is based on a country- and material-based approach. Another objective is the development and establishment of a sustainability standard for our supply base by 2020. Here we are working with both the Together for Sustainability (TfS) initiative and the Pharmaceutical Supply Chain Initiative (PSCI). The goals include standardizing and sharing sustainability assessments and audits of suppliers in the same industry and describing clear expectations regarding sustainability so as to establish appropriate sustainability practices among our suppliers. The TfS initiative counts 16 and the PSCI 19 participating companies.

A key challenge for sustainable supplier management in the Bayer Group is to prevent child labor in the seed supply chain of our CropScience subgroup.

Our Human Rights Position is unequivocal and includes a strict ban on child labor. We therefore also obligate our suppliers along our supply chain strictly to refrain from employing children. For many years, CropScience has taken systematic action to prevent child labor in the seed supply chain in India, Bangladesh and the Philippines through its Child Care Program. Special teams from Bayer visit the fields used, for example, in cotton, rice and vegetable seed production without prior notice throughout the cultivation season in order to raise awareness of the issue and the Bayer requirements and to determine the age of the workers there. Thanks to this stringent monitoring system, which is supported by local educational initiatives, there are now only very few incidences of child labor among our contractors, and we are closely tracking these cases. Further risk assessments were carried out in vegetable and rice seed production for Bayer in Thailand, China, Indonesia and Vietnam. It is planned to introduce the Child Care Program in these countries as well in 2016. We measure the success of our comprehensive program using the indicators "Child labor incidence per monitored km²" and "Child labor incidence as a percentage of total monitorings of laborers."

In the following diagram depicting the latter indicator, we demonstrate the continued elimination of child labor in Indian cotton and vegetable seed production sites contracted by Bayer based on the results of field monitoring.

Child Labor Incidence in the Production of Cotton and Vegetable Seed for Bayer in Relation to the Total Number of Monitorings[1] [Graphic 3.7.1]

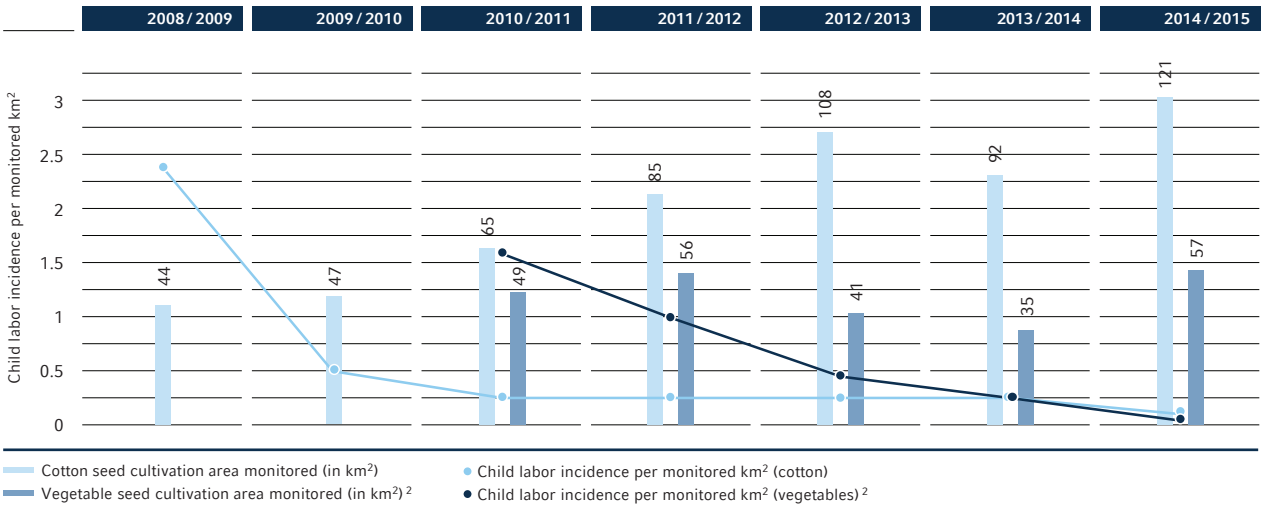


[1]The figures cover several growing cycles per cultivation year. In India the cultivation year runs from the middle of one year to the middle of the next, depending on climatic conditions and the various different seed types. Cumulated depiction on the basis of control inspections performed (at least 3 per cultivation season for vegetables and up to 6 per season for cotton)
[2] Vegetable seed included in field monitoring from 2010 / 2011 onward; for vegetables, cultivation areas and number of monitorings refer to a combination of various different seed types. Each type of seed has its own monitoring intensity.

Below you will find a graphic for the indicator "Child labor incidence per monitored km²" and further information on our Child Care Program.

ONLINE ANNEX: 3-7.1-4

Child Labor Incidence in the Production of Cotton and Vegetable Seed for Bayer in Relation to the Cultivation Area Monitored[1] [Graphic 3.7.1-1]



[1] The figures cover several growing cycles per cultivation year. In India the cultivation year runs from the middle of one year to the middle of the next, depending on climatic conditions and the various different seed types. Cumulated depiction on the basis of control inspections performed (at least 3 per cultivation season for vegetables and up to 6 per season for cotton)
[2] Vegetable seed included in field monitoring from 2010 / 2011 onward; for vegetables, cultivation areas and number of monitorings refer to a combination of various different seed types. Each type of seed has its own monitoring intensity.

Once a year, the audit firm EY (formerly Ernst & Young), India, conducts unannounced inspections of randomly selected farms on behalf of Bayer.

Suppliers who can verify that they strictly observe our ban on child labor receive a bonus from Bayer along with training in raising agricultural efficiency. Graduated sanctions are applied for noncompliance. These range from written warnings to termination of the contract in the case of repeated noncompliance.

Bayer regards school attendance not only as essential for children's development but also as an effective tool to drive the elimination of child labor. We therefore also visit the parents of children we find working in the fields to convince them of the importance of school education. We promote this with the "Learning for Life" initiative within our Child Care Program. This initiative aims to ensure that children and young people get a proper education and covers everything from reintegrating children into the regular school system to vocational training measures. Between 2005 and the end of 2015, the "Learning for Life" educational programs benefited more than 6,100 children and young people.

The Child Care Program Advisory Council, comprised of international experts and recognized professionals, supports Bayer in the protection of children's rights and the obligation of seed production without child labor. The annual meeting of the Advisory Council, which took place in India in May 2015, focused on the effectiveness of the Child Care Program and on a project concerning minimum wages in the seed supply chain.

Evaluating the sustainability performance of our suppliers

Bayer verifies the observance of sustainability requirements by our suppliers through online assessments and on-site audits. Suppliers are selected for these evaluations based on a combination of country and material risks as well as strategic importance in accordance with our Group targets.

The online assessments are carried out on Bayer's behalf by EcoVadis, an established provider of sustainability performance evaluations. They are comprised of a web-based, modular questionnaire completed by the supplier, coupled with accompanying verification documents and 360° screening. The evaluation criteria comprise the areas environment, labor practices and human rights, fair business practices and sustainable procurement.

Together with external, independent auditors, Bayer carries out on-site audits of its suppliers based on the PSCI and TfS sustainability criteria. In addition, internal auditors evaluate suppliers with a focus on health and safety, environmental protection and sustainability.

Through cooperation with the industry initiatives PSCI and TfS, we leverage synergies through the exchange of comparable, high-quality supplier assessments and/or audits among members using the IT platforms of the respective initiatives.

An overview of the number of supplier assessments and audits can be found in

› ONLINE ANNEX: 3-7.1-5

Supplier Assessments and Audits for 2015 [Table 3.7.0-3]

	2014	2015
Sustainability assessments[1] via the EcoVadis platform	692	521
Sustainability audits[2] by external auditors	56	71
HSE[3]/sustainability audits by Bayer auditors	94	107

[1] Supplier assessments initiated by Bayer as well as assessments of suppliers working for Bayer exchanged as part of the TfS initiative
[2] Initial and follow-up audits initiated by Bayer of suppliers working for Bayer and exchanged as part of the TfS and PSCI initiatives
[3] Health, safety, environment

Within the scope of the TfS initiative, a total of 2,580 supplier assessments using EcoVadis and 179 audits – performed, for example, in China, India and Brazil – were successfully completed in 2015. A total of 40 joint and/or shared audits were carried out in 2015 through PSCI, for example in Turkey, Brazil and Uruguay.

Alongside consideration of our sustainability criteria in the selection of suppliers, CropScience and HealthCare undertake separate evaluations of suppliers with regard to the contract manufacturing of quality-relevant goods and services. These evaluations encompass the areas of health, safety and environmental protection among others and are performed prior to the start of operations. Since 2015, furthermore, HealthCare has obligated newly selected suppliers with a prospective annual procurement spend in excess of €1 million to undergo an EcoVadis sustainability assessment or an on-site audit after being awarded business. The suppliers evaluated in 2015 in this context satisfied our sustainability requirements.

Moreover, Bayer monitors suppliers who process minerals such as tin, tungsten, tantalum and gold to establish whether these originate in conflict regions. In this way we want to rule out that such materials find their way into our products through supply chains. To tighten up our requirements, the issue of conflict materials has also been included in our Supplier Code of Conduct.

› ONLINE ANNEX: 3-7.1-6
International regulations such as the Dodd-Frank Act in the United States obligate companies to disclose the origin of certain raw materials to rule out that conflict minerals from the Democratic Republic of the Congo or its neighboring countries find their way into products through supply chains. Bayer has questioned about 100 suppliers who could potentially be impacted by this issue. Nearly 60% of them confirmed to us that they do not procure potential conflict minerals. The status of the remaining suppliers is being clarified.

All online assessments and audits are comprehensively analyzed and documented so that – in the event of unsatisfactory results – specific improvement measures can be defined together with the suppliers to ensure the future observance of social, ethical and environmental standards. In 2015, 33 suppliers (equivalent to 6% of those evaluated) posted a critical result. These suppliers were requested by Bayer to rectify the identified weaknesses with the help of corrective instructions or action plans.

› ONLINE ANNEX: 3-7.1-7
The corrective action established together with the suppliers in 2015 mainly related to the areas of occupational health, occupational safety, fair business practices and sustainable procurement. In 2015, we monitored the implementation of the stipulated improvements among 324 suppliers by means of reassessments through the EcoVadis platform; approximately 73% improved their sustainability performance to a relevant degree. In 2015, Bayer was not prompted to end any supplier relationship due solely to sustainability performance or serious sustainability deficiencies.

Training measures and dialogue on the issue of sustainability

GRI
G4-26

We support our HSEQ and procurement employees in the implementation of our sustainability requirements with targeted Group-wide training measures. In the reporting period, 162 of these employees completed training courses dealing with the EcoVadis sustainability assessment process. CropScience carried out additional training courses on the subject of sustainability audits. HealthCare organized supplementary sustainability workshops for selected procurement employees. In addition, we also offer our suppliers a wide range of training and dialogue opportunities in order to familiarize them with Bayer's sustainability requirements.

› ONLINE ANNEX: 3-7.1-8
In 2015, Bayer once again held Supplier Days, which are an important dialogue platform for our subgroups. CropScience organized special training courses on quality, health and safety, and environmental protection for selected suppliers. The TfS initiative organized Supplier Days in China and Brazil that dealt, for example, with environmental protection and occupational safety. In India, PSCI held an education conference where suppliers were trained in occupational safety, environmental protection, process and plant safety, and labor and business ethics. Both initiatives offer extensive supplementary information material and online training courses on their websites.

7.2 Production

Bayer operates production facilities at more than 120 sites in 35 countries. We deploy our competencies and experience at all our sites to continuously optimize production processes and technologies, as well as infrastructure. That is because product quality and the efficiency of materials and energy are crucial competitive factors.

The safe and responsible operation of our facilities and the comprehensive safety of our employees and the people who live near our sites are of utmost importance to Bayer. Bayer also places great importance on protecting the environment and using natural resources responsibly. Accordingly, management systems have been established for the areas of health, safety, environmental protection and quality (HSEQ) that apply throughout the Bayer Group. They are integrated into all business processes and regularly audited and updated. All relevant HSEQ performance indicators from our production sites are compiled in a Group-wide Bayer site information system (BaySIS). Extensive information on the topics of safety, product stewardship, environmental protection and the corresponding management systems can be found in chapters 8, 9 and 10.

HEALTHCARE

SITES

HealthCare operates production sites around the world at which active ingredients are manufactured and at which formulation and packaging services are performed for the product portfolio of all HealthCare divisions. The importance of the production sites within the network is regularly assessed, giving consideration to site- and product-specific criteria. Product supply strategies and site strategies are further developed and/or adjusted on this basis. The most important production and formulation sites for global product supply in 2015 are listed in the following table.

HealthCare Sites [Table 3.7.1]

Segment / site	Main activity
Pharmaceuticals	
Bergkamen, Germany	Active ingredient production
Berkeley, California, U.S.A.	Active ingredient production based on biotechnological processes
Berlin, Germany	Formulation and packaging
Leverkusen, Germany	Formulation and packaging
Turku, Finland	Formulation and packaging of intrauterine systems
Weimar, Germany	Formulation and packaging
Wuppertal, Germany	Active ingredient production
Consumer Health	
Bitterfeld-Wolfen, Germany	Formulation and packaging
Cimanggis, Indonesia	Formulation and packaging
Grenzach, Germany	Formulation, filling and packaging
Kiel, Germany	Formulation and packaging of animal health products
Myerstown, Pennsylvania, U.S.A.	Formulation and packaging
Pittsburgh, Pennsylvania, U.S.A.	Manufacture of medical devices such as contrast agent injectors and consumables
Wuppertal, Germany	Active ingredient production

QUALITY MANAGEMENT

The manufacturing of pharmaceutical and medical devices is subject to extraordinarily stringent quality requirements that are based on internationally recognized standards. Compliance with these requirements at Bayer is regularly audited by internal experts, regulatory authorities and external consultants.

ONLINE ANNEX: 3-7.2-1

Quality standards are developed on the one hand according to regulatory requirements, approvals and authorizations, and relevant standards of nongovernmental organizations and industry associations, and on the other hand according to customer expectations. These requirements are evaluated by HealthCare and integrated into an internal quality management (QM) system that is based on international standards of the ISO (e.g. ISO 9001 and ISO 13485) and the ICH (International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use), as well as on rules for good working practice (GxP) in the development and manufacture of pharmaceuticals (e.g. Good Manufacturing Practices (GMP), Good Distribution Practices (GDP) and Good Clinical Practices (GCP)). With the help of our QM system, we effectively and transparently implement and manage the quality control processes and responsibilities according to established, documented and binding procedures and methods. The goal is to ensure the quality of our products throughout their entire life cycle and safeguard the value chain over the long term.

INVESTMENTS IN PROPERTY, PLANT AND EQUIPMENT

See Chapter 14.5

HealthCare continuously invests in its global production network in order to ensure security of supply, provide the necessary capacities and satisfy regulatory requirements. Further production capacities for the manufacture of hemophilia A products are being established at the Wuppertal and Leverkusen sites through the biggest current capital expenditure program with a total volume of more than €500 million. Another major project with a volume of some €100 million is aimed at expanding production capacities in Beijing, China.

CROPSCIENCE

SITES

The products of the Crop Protection and Environmental Science units are mainly produced at the company's own production and formulation sites, the largest of which are listed in the following table:

CropScience Sites [Table 3.7.2]

Site	Main activity
Dormagen, Germany	Development of new production processes and manufacture of Crop Protection and Environmental Science products
Frankfurt am Main, Germany	Manufacture of Crop Protection and Environmental Science products
Nunhem, Netherlands	Vegetable seed production
Kansas City, Missouri, U.S.A.	Manufacture of Crop Protection and Environmental Science products
Knapsack, Germany	Manufacture of Crop Protection and Environmental Science products
Vapi, India	Development of new production processes and manufacture of Crop Protection and Environmental Science products

Numerous decentralized formulation and filling sites enable the company to quickly react to the needs of local markets. At these sites the active ingredients are processed into herbicides, fungicides, insecticides, seed treatment products and Environmental Science products according to local requirements and application areas. Packaging of the products also takes place in these facilities.

Production of seeds takes place at locations close to our customers in Europe, Asia, and North and South America at our own farms or under contract.

QUALITY MANAGEMENT

Our CropScience products are manufactured according to high quality standards based on ISO 9001, to which more than 80% of CropScience production sites are certified. The compliance of the production processes and registered product specifications is regularly monitored by external auditors. All our products are reviewed and registered by the national authorities in the various countries, and thus fulfill the respective requirements with regard to quality and user safety.

INVESTMENTS IN PROPERTY, PLANT AND EQUIPMENT

We invest continuously in our global production network in order to generate capacities for new products and technologies and to improve manufacturing processes. We plan to significantly increase our capital investment to meet the steadily rising demand. We intend to invest approximately €2.4 billion in property, plant and equipment between 2013 and 2016.

The construction of a new crop protection facility for the production of methane phosphorous acid ester (MPE), an important precursor for the active ingredient glufosinate-ammonium, commenced at the Knapsack site. The capital expenditure volume is more than €150 million. In September 2015, we expanded our capacity for oilseed rape/canola through the construction of a new production site in Monheim, Germany.

COVESTRO

Covestro operates a large number of locations worldwide, including eight world-scale production sites. The company also maintains specialized technical centers around the world that offer customers individually tailored solutions and that are designed for regional supply. Covestro thus guarantees not just a global presence, but also above all customer centricity with short supply times and flexible service. At these production sites Covestro pursues the ambitious goal of assuming and further expanding its leading position in the future, too, with regard to production volume, quality, efficiency and safety. Innovative and environmentally friendly production processes are employed as a result of the continuous technological improvement of our facilities. The selectively backwards-integrated production process enables Covestro to procure key raw materials such as chlorine and propylene oxide from within the company or through joint ventures so as to reduce the dependency on external supply sources.

SITES

Covestro's most important production sites are listed in the following table:

Covestro Sites [Table 3.7.3]

Site	Main activity
Leverkusen, Germany	Coatings, adhesives and specialties production; technical laboratories; chlorine production
Uerdingen, Germany	Polycarbonates and polyurethanes (MDI) production; chlorine and CO production
Dormagen, Germany	Polyurethanes (TDI, PET) and coatings, adhesives and specialties production; chlorine and nitric acid production
Baytown, Texas, U.S.A.	Polyurethanes (MDI, TDI), polycarbonates and coatings, adhesives and specialties production
Shanghai and Shanghai Chemical Industry Park, China	Polyurethanes (MDI, TDI), polycarbonates and coatings, adhesives and specialties production; chlorine production
Brunsbüttel, Germany	Polyurethanes (MDI) production
Antwerp, Belgium	Polyurethanes (PET) and polycarbonates production
Map Ta Phut, Thailand	Polycarbonates and coatings, adhesives and specialties production

To serve our differentiated businesses, we maintain several production facilities in selected countries that include systems houses where we formulate and supply customized polyurethane systems, as well as plants where we compound polycarbonate granules to meet specific customer requirements or manufacture semi-finished products (polycarbonate sheets). We also operate regional production facilities for derivatives of the Coatings, Adhesives, Specialties Business Unit and for functional films made of polycarbonate or thermoplastic polyurethane.

QUALITY MANAGEMENT

Covestro applies very high standards for the quality of the raw materials it uses and their further processing into high-tech plastics and polymer precursors. A quality management system was implemented for this purpose that is certified to the international standard ISO 9001. In terms of total energy consumption, over 99.97% of the reporting production and nonproduction sites of Covestro worldwide are certified. This is regularly monitored by internal and external auditors.

INVESTMENTS IN PROPERTY, PLANT AND EQUIPMENT

To safeguard competitiveness, Covestro continuously invests in a global production network so as to maintain the production facilities and their infrastructure, optimize production processes and, in the case of profitable growth prospects, appropriately expand capacities. Due to the significant expansion of capacities in recent years, Covestro plans to invest less through 2020 and focus on maintaining and optimizing existing production facilities.

7.3 Logistics

Logistics at Bayer does not just involve the transport, handling or warehousing of goods. On the contrary, it comprises the entire planning, steering, coordination, implementation and monitoring of all internal and intercompany flows of goods and the related information. Not only are individual business functions combined into process chains, all processes are integrated – from the procurement of raw materials to the sale to end users. We work continuously to develop efficient and environmentally friendly logistics concepts with the goal of reducing transport and storage complexity.

The safe transport of our materials and products is very important to Bayer. With this objective in mind, we have installed management systems and directives with global validity, implemented an agile corporate structure and carefully selected contracted logistics services suppliers. You can find out more in Chapter 9 “Safety.”

See Chapter 9

Concrete production and logistics planning depends on the products to be transported and the resulting specific requirements. Logistics processes are therefore decentrally organized at Bayer. Each subgroup maintains its own logistics units to account for the demands of different business models.

HEALTHCARE

Among other activities, the internal Product Supply organization steers all logistics services at HealthCare across divisions – from suppliers to the company’s own sites, within the production network and from the company to its customers. This also includes warehouse and transport management and the steering of supplier-, production- and customer-specific material streams. HealthCare both utilizes internal capacities and employs external logistics partners to meet its storage and transport needs. Warehouse sites and transport flows are established and continuously optimized accordingly. Service, quality and costs are continuously monitored according to corresponding guidelines and indicators.

The means of transport is generally selected in a standardized process between the production site and the recipient country, with consideration given to demand, costs and environmental aspects. These aspects also serve to continually optimize transport processes. To this end, hubs are established in the distribution network, planning processes are optimized and air transport reduced. These globally steered measures are supported by greater standardization and transparency along the supply chain.

CROPSCIENCE

CropScience manages the transport and storage of products through a multi-stage system that is aligned to production and distribution. Subsequent to production, active ingredients are distributed to a global network of specialized warehouses and then forwarded to our regional formulation and filling sites for further processing depending on current demand. The finished products manufactured there are then transferred to local distribution warehouses in the respective destination countries where the products are stored, commissioned after release and shipped to customers. The logistics process at Seeds encompasses the various stages of production all the way to ready-to-sell seed, which is distributed to customers via local distribution warehouses.

CropScience generally deploys trucks for land transportation, while container ships are primarily used for overseas traffic. Air freight is only selected in exceptional cases, and accounts for less than 1% of the transport volume.

COVESTRO

At Covestro, logistics in the regions are centrally organized in Supply Chain Centers. Transport is handled by logistics service suppliers that are selected according to stringent safety, environmental and quality criteria. The preferred mode of transport is by rail or intermodal – in other words employing a combination of road, rail and water transport. This increases energy efficiency and reduces CO_2 emissions. Customers are supplied from close-to-production warehouses, wherever transport times and supply security allow this. In the case of longer distances, goods are temporarily stored in regional distribution centers and then dispatched at short notice. Logistics are steered according to indicator-based management that is aligned toward safety, environmental and supply security aspects.

7.4 Distribution

Bayer markets its products worldwide through a market- and customer-specific distribution network. The marketing and distribution units play a key role in communicating to customers the benefits and advantages of our high-quality products and services. Our distribution activities are geared toward the long-term retention of existing customers and the acquisition of new clients. In this connection, we offer smooth business processing from ordering to delivery in adequate time. Responsible conduct is also a top priority for Bayer in marketing and distribution. The necessary rules of conduct, which do not permit legal violations in marketing, are established in our Group Responsible Marketing & Sales Policy. This Group regulation and the respective training programs are implemented decentrally in the subgroups. A high level of customer satisfaction is essential for the long-term success of our business. We therefore systematically analyze both the needs and satisfaction of, as well as complaints voiced by, our customers, and thus foster partnership-based cooperation and dialogue with them.

HEALTHCARE

Our pharmaceutical products are primarily distributed through wholesalers, pharmacies and hospitals. Co-promotion and co-marketing agreements serve to optimize our distribution network.

Consumer Care's products are generally sold in pharmacies, with supermarket chains and other large retailers also playing a significant role in certain important markets such as the United States. The contrast agents and medical equipment of our Medical Care Division are marketed to radiologists, cardiologists and other specialists in medical imaging in hospitals and out-patient clinical sites through a global direct sales organization, supplemented in some cases by local distributors. Depending on local regulatory frameworks, we market our animal health products through veterinarians and other distribution channels such as pharmacies or retail stores.

RESPONSIBLE BUSINESS PRACTICES IN MARKETING AND DISTRIBUTION

In the development, sale and marketing of its products, HealthCare does not tolerate bribery or any other form of improper exertion of influence on our business partners. Furthermore, Bayer is committed to ethical advertising and communication for all its products and services. Our minimum standards are derived from three basic sources: laws and other statutory regulations, industry codes and internal rules.

The marketing and distribution of pharmaceuticals and medical devices are strictly regulated and subject to relevant laws that we are committed to observing. Also applicable at the global or regional levels are industry codes adopted by associations of the pharmaceuticals, medical devices and animal health industries. In many countries, furthermore, these standards are further concretized by local codes – all of which apply to prescription pharmaceuticals and many of which additionally apply to nonprescription medicines.

› ONLINE ANNEX: 3-7.4-1

All codes of the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) serve as a binding global minimum global standard for all products marketed by HealthCare. 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 enshrined in industry codes at the local level, represent the minimum global standard for the advertising of pharmaceutical products at HealthCare. All the aforementioned codes contain provisions governing, among other issues, advertising material standards, the distribution of samples, cooperation with members of medical and pharmaceutical specialist groups in connection with speaker and consultancy contracts, and scientific studies. Adherence to these codes is designed to ensure the independence of both health care professionals and patient organizations. Based on the new EFPIA transparency code and beginning in June 2016 at the latest, furthermore, Bayer will disclose any grants to health care professionals and organizations annually for the preceding calendar year.

The most important Bayer Group regulation in this connection is our Anti-Corruption Procedure, which establishes minimum global standards on this topic for the entire company. HealthCare has summarized the key requirements and the minimum global standard for compliant and ethical conduct in the Anti-Corruption Compliance Manual, which applies worldwide in all divisions. The main principles for ethically and legally acceptable advertising for pharmaceuticals and medical devices are also set out in an internal HealthCare directive. The goal of these directives is to help HealthCare employees to always act in compliance with all applicable regulations. Should several regulations be relevant, HealthCare principally applies the more stringent standards.

Training measures on product-related communication and anti-corruption are fundamental elements of the system at Bayer. They are directed toward certain employee groups and are tailored to account for the special risks these employees are exposed to. The principles presented in these training courses provide an overview of globally applicable minimum requirements for cooperation with key stakeholders of HealthCare, such as physicians, hospitals or patient organizations. The courses not only explain general compliance principles but also give specific instructions in relation to nonreciprocal benefits and the exchange of services with health care professionals.

As part of our compliance management system, we register and investigate any suspected violation of our responsible marketing principles. This applies to complaints both from within the company and as notified to us from outside.

See Chapter 16.3

GRI
G4-26

CUSTOMER DIALOGUE

A keen understanding of manifold customer needs is especially important if HealthCare's products are to be successful in the market. Our customers include patients, physicians, caretakers, health policy decision-makers and opinion leaders, partners from research and development, and health care payers. Due to the stark distinctions between these groups, the individual HealthCare divisions take specific steps to enter into dialogue with customers and measure their satisfaction.

Different legal requirements apply for prescription medicines than for nonprescription or medical devices. This makes the conditions under which customer satisfaction data are gathered in the health sector correspondingly complex. For example, it is not permitted to directly survey patients about the effects and side effects of prescription medicines. HealthCare therefore conducts primary market and data research in this area.

ONLINE ANNEX: 3-7.4-2

We use market research projects to identify the needs of the various customer groups and thus further strengthen customer orientation at Pharmaceuticals. We also carry out systematic internet analyses that give us a better understanding of our stakeholders' opinions, interests and networks. To measure customer satisfaction, Pharmaceuticals conducts international surveys of its customer groups according to therapeutic areas. The results of the studies are regularly integrated into brand planning. To continuously optimize customer service, moreover, we support our medical sales force through product- and country-specific training courses.

Following the success of pilot projects in key markets, Consumer Care in 2015 began introducing its excellence program to improve customer orientation worldwide. The program is designed to identify examples of best practices in the areas of market launch strategies, distribution and trading. It has already been successfully implemented in 13 countries, and others will follow in 2016.

Animal Health also conducts studies on customer satisfaction and customer retention, applying varying methods according to the respective market segment. From studies that track long-term customer behavior, performance indicators are developed that in turn are used to measure customer satisfaction.

Complaints, customer services for orders, product and delivery information, information on health care topics or the handling of general inquiries pertaining to HealthCare are processed by the relevant business units and country organizations. The respective contact information is available online.

As the Bayer Group is headquartered in Germany, HealthCare operates a customer service center in that country with a quality management system certified to ISO 9001:2008.

CROPSCIENCE

DISTRIBUTION

CropScience markets its products in more than 120 countries. We market our crop protection products mainly through wholesalers or directly through retailers. We also sell products directly to customers in selected markets where market conditions require this mode of distribution.

Distribution activities for seeds are focused on the crops cotton, oilseed rape/canola, rice, soybeans and vegetables from our own research laboratories and breeding facilities. In our core crops, we have achieved strong market positions and are internationally represented. Our seeds are sold to growers, seedling companies, specialist retailers and the processing industry. Plant traits developed using modern breeding methods are either incorporated into our own seed varieties or licensed to other seed companies.

The Environmental Science products are mainly sold through wholesalers and specialist retailers. We market our range of pest and weed control products to professional users in the green industry (including public parks and golf courses), forestry, industrial vegetation management and professional pest control. In the area of public health, an example being vector control to combat malaria and dengue fever, much of our business is transacted in response to tendering by government agencies and non-governmental organizations. We also offer pest control and plant care products to private customers in the home and garden sector.

RESPONSIBLE BUSINESS PRACTICES IN MARKETING AND DISTRIBUTION

CropScience 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 Group Responsible Marketing & Sales Policy, is based on the International Code of Conduct issued by the Food and Agriculture Organization of the United Nations (FAO). Training materials to explain this Group policy have been distributed throughout the global organization and are available to the employees on the Bayer intranet.

ONLINE ANNEX: 3-7.4-3

Responsible business practices in marketing and sales are addressed at CropScience in compliance training courses and are also an integral element of marketing and sales excellence training measures. In 2015, we trained a total of 600 (2014: 2,400) CropScience employees worldwide in three- and one-day training courses.

CUSTOMER DIALOGUE

GRI
G4-26

CropScience sees tremendous value in the satisfaction of its customers. Our goal is to establish long-term customer relationships that ensure the business success and meet the expectations of both parties. We strive to fulfill the high expectations of our customers through targeted communication, smooth business processing and effective complaint management. We regularly determine these expectations through our commercial excellence activities so that we can offer our customers tailored solutions. In addition to the customer surveys we conduct through our country organizations every two years according to a standardized process, we analyze all channels of interaction with our customers. We use the findings of these analyses to align our distribution and marketing processes around the world to the respective customer needs. In general, we aim to make our dialogue with customers more target group- and region-specific and to continuously improve it. We improve our customer processes in part with the help of a customer relationship management database that is now used in more than 60 of our country organizations. We assess our performance using a system of qualitative and quantitative indicators.

CropScience is also intensifying its direct cooperation with farmers through the Bayer Forward Farming initiative. Our solutions for sustainable agriculture in practice are demonstrated at Bayer ForwardFarms. The first farms have been established in Belgium, France, Germany and the Netherlands, and further collaborations are being prepared in Spain and Brazil. CropScience will successively expand this type of cooperation worldwide.

COVESTRO

DISTRIBUTION AND CUSTOMER DIALOGUE

Covestro's products are mainly supplied to the automotive and transportation, construction, wood processing and furniture, and electrical/electronics industries. Other customer industries are the sports and leisure, cosmetics and health care sectors, as well as the chemical industry.

Covestro markets its products mostly through regional and local distribution channels. Here three regional Supply Chain Centers serve as the central link to the customer. Covestro makes use of e-commerce platforms and other channels for order processing. Customer satisfaction is systematically analyzed on a global basis, enabling the development of improvement measures.

ONLINE ANNEX: 3-7.4-4

The Supply Chain Centers pool all information streams from order acceptance to dispatch planning, delivery and complaint acceptance in the Europe/Middle East/Africa/Latin America, North America and Asia/Pacific regions. This ensures a high level of expertise particularly in order management and in transaction, supply chain and logistics solutions. Using the "Order@Covestro" online information platform, customers can at any time place orders, call up material safety data sheets and track the status of their orders.

Covestro's highest quality objective is faultlessness so as to attain a high level of customer satisfaction. To systematically increase customer satisfaction and ensure optimal quality of service, complaints registered in the global management system and by the individual business units are regularly evaluated. Customer evaluations are also analyzed in detail. Through dialogue with internal stakeholders, preventive and corrective measures are undertaken to further increase quality and customer satisfaction while at the same time lowering the error rate and thus also the incidence of complaints. In 2015, for example, a total of 5,178 complaints by around 2,088 customers were registered worldwide. This yields a rate of 7.61 complaints per 1,000 deliveries, about the same as in 2014 (7.75 complaints per 1,000 deliveries).

Covestro also works with trading houses and local distributors who are responsible for business with small customers. Major customers with global operations are serviced directly by key account managers.

RESPONSIBLE BUSINESS PRACTICES IN MARKETING AND DISTRIBUTION

In the marketing of its products, Covestro also takes into account all the requirements of the Bayer Group's Responsible Marketing & Sales Policy. The importance of observing antitrust law and preventing corruption is regularly emphasized in training programs, internal communications and discussions with management. In 2015, training focused on export control. Around 4,980 Covestro managerial employees took part in web-based compliance training courses and supplementary target group-oriented, on-site training sessions.

8. Product Stewardship

Our products and services are designed to benefit people and improve their quality of life. We consider product stewardship to mean that our products are safe for people, animals and the environment when properly used. This is a key factor in creating lasting trust in our products and maintaining our business foundation over the long term.

All substances and finished products undergo extensive testing and evaluation to ensure a high degree of safety. We assess the possible health and environmental risks of a product along the entire value chain – starting with research and development and continuing through production, marketing and use by the customer through to disposal. From this we derive suitable steps to mitigate risks based on the observation of legal requirements and internal standards that go beyond these.

Bayer has put in place suitable directives and management systems for the implementation of regulatory and voluntary product stewardship requirements that are steered by our HSEQ (health, safety, environmental protection and quality) departments. These efforts are underscored by the Bayer Group's target of completing the assessment of the hazard potential of all substances (>99%) used in quantities exceeding one metric ton per annum by 2020.

IMPLEMENTING STATUTORY REQUIREMENTS

Extensive legal regulations apply to all products manufactured by Bayer. Chemical substances are subject to the European chemicals regulation REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) and the CLP regulation (Regulation on Classification, Labelling and Packaging of Substances and Mixtures). The classification and labeling of chemicals is intended to clearly inform employees and consumers in the European Union about the risks associated with chemicals.

ONLINE ANNEX: 3-8-1

The registration obligation under REACH applies irrespective of marketing activities for all substances that we produce or import in quantities of more than one metric ton. There is also an authorization procedure that limits the use of particularly hazardous substances or can lead to their replacement or ban. To fulfil the complex requirements of REACH, we have approved Group-wide and subgroup-specific regulations. 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 inclusion in the REACH authorization procedure. This is indeed the case for some Bayer substances. The authorities enforce the implementation of REACH through regular inspections. So far none of the inspections at Bayer has resulted in complaints. As we also use many substances from other manufacturers, we maintain close contacts with our suppliers and ensure that they reassure conformity with REACH for the substances they supply.

In the European Union, the Globally Harmonized System (GHS) for the classification and labeling of chemicals is implemented through the CLP regulation. The purpose of the GHS is to achieve a globally standardized system for classifying chemicals and labeling them appropriately on packaging and in material safety data sheets. Bayer assesses all its marketed products and implements the GHS worldwide.

Before any product is introduced to the market, we assess it under this stringent process to determine whether it is safe for people, animals and the environment.

Furthermore, the end products from our Life Science units – such as pharmaceuticals, crop protection products and biocides – are subject to specific approval/authorization procedures.

VOLUNTARY COMMITMENT

Since 1994, Bayer has supported the voluntary Responsible Care™ initiative of the chemical industry, which was globalized in 2006 with the introduction of the Responsible Care™ Global Charter. We cover all main elements of the charter at all Group sites with our HSEQ management systems and activities. We are also actively involved in the further development of scientific risk assessment through our work in associations and initiatives.

ONLINE ANNEX: 3-8-2

International associations such as the European and international chemical industry associations (CEFIC, ICCA) and the OECD (Organisation for Economic Co-operation and Development), as well as initiatives such as ECETOC (European Centre for Ecotoxicology and Toxicology of Chemicals) and the EPAA (European Partnership for Alternative Approaches to Animal Testing), work to evolve the scientific assessment of chemicals, develop new test methods and oversee the implementation of statutory regulations. Bayer actively supports these efforts through its activities in the associations. We are also involved in the ICCA Long-Range Research Initiative, for example, and endorse the goals of the WHO and E.U. action plans for improving health and environmental protection. We also support the Global Product Strategy (GPS), a voluntary commitment of the chemical industry initiated by the International Council of Chemical Associations (ICCA). Its objective is to improve knowledge about chemical products, especially in Emerging Markets and developing countries, and thus increase safety in the handling of these products.

We concern ourselves intensively with our substances' properties and regularly evaluate them already at the research and development stage. In application of the precautionary principle, the development of substances with undesirable properties is discontinued.

ONLINE ANNEX: 3-8-3

We accept the precautionary principle as explained in Principle 15 of the Rio Declaration of the United Nations and communiqué COM (2000) 1 of the European Commission as a possible consumer protection and risk management tool. It is applied whenever there is no final scientific certainty in a given area and evidence also exists that people or the environment could suffer significant or irreversible damage that must be rectified. There should not be a unilateral focus on hazard potential, but rather a balanced risk-benefit evaluation.

To assess the effects of our products, especially on human health, but also on nature and the environment, animal studies are legally required. Wherever possible, we use existing data or approved alternative test methods to avoid animal studies. We set high animal welfare standards in this regard. For more information, see the section "Focusing on Animal Welfare."

Group target 2020: assessment of the hazard potential of all substances > 1 metric ton p.a.

The safe handling of chemicals is a top priority in the manufacture of our products (see also Chapter 9). In Europe we operate under strict legal requirements. We voluntarily apply comparable standards around the world, independent of the respective national legislation. In this way we exceed statutory requirements and are ensuring that substance assessments comparable to those established under REACH will also be applied at Bayer sites that are not subject to this European regulation. How we aim to realize this target is established in our Bayer Group Regulation "Substance Information and Availability."

See also Chapter 1.4 for Group target

To ensure the safe handling of chemicals, risk assessments are carried out applying recognized scientific methods such as the Guidance on Information Requirements and Chemical Safety Assessment of the ECHA (European Chemicals Agency).

Should the assessment or new findings reveal that it is not safe to use a certain chemical, we take the steps to mitigate risks. We support our customers in the safe handling and use of our products through close, trust-based cooperation. Bayer compiles material safety data sheets for all products regardless of whether or not they are legally required. All end consumer products come with suitable packaging information, an example being package inserts for pharmaceuticals.

ONLINE ANNEX: 3-8-4

Risk mitigation measures can range from revised application recommendations through the withdrawal of support for a certain application to the substitution of a substance. In this case, a replacement substance must be sought that is economically and technically feasible. The substitution of chemicals is basically a continuous task of the chemical and pharmaceutical industry to obtain new or substantially improved products and processes. This is integral to our commitment to Responsible Care.

Material safety data sheets are the central means of communication for safety-relevant information about substances and mixtures in the supply chain. Targeting professional users, they contain information on the substance's properties and on the safe use of the substance or mixture. In addition, technical information is provided for professional use.

In accordance with the respective product safety and information obligations, all subgroups compile product information – regardless of whether it is for raw materials, intermediates or end products. To ensure worldwide access to this information, Bayer uses appropriate IT systems, including those for product labeling. This data compilation is updated accordingly whenever new legal requirements are established.

Another important element of our product stewardship is the monitoring of all products that are already on the market. We have established processes in all subgroups aimed at addressing inquiries on product safety or problems with our products. This feedback and these experiences are systematically accounted for in our assessment of risks, which also covers substances that are regarded as potentially high-risk by regulatory authorities and independent institutions.

In all subgroups, we examine additional steps that go beyond the legally required disposal specifications.

See Chapter 10.5

PRODUCT STEWARDSHIP IN THE USE OF BIOTECHNOLOGY

Biotechnological methods are used for product development in our Pharmaceuticals and Crop Protection businesses.

Biotechnology has already gained significant importance in pharmaceutical product development. The HealthCare products Betaferon™/Betaseron™, Eylea™ and Kogenate™ are manufactured by a biotechnological process. Further biotechnologically manufactured active ingredients are undergoing clinical development.

Plant biotechnology can improve crop yields, yield security and the stress tolerance of plants through both genetic engineering and conventional breeding methods but with the same input of resources.

Safety is Bayer's top priority in the use of biotechnology, too. Beyond our observance of all relevant legal provisions, we have formulated a Bayer Group Regulation "Position on the Responsible Use of Gene Technology" and specific regulations for HealthCare and CropScience. We provide our stakeholders with comprehensive, transparent and reliable information about our products and services in accordance with our Bayer Responsible Marketing & Sales Policy.

ONLINE ANNEX: 3-8-5

HealthCare has established strict safety measures for handling biological agents in research, development and production in its "Biological Safety" regulation and its "Requirements for the safe handling of biological agents" procedure.

CropScience has included the responsible measures taken when utilizing plant biotechnology in both the Product Stewardship Policy and the Seeds Stewardship Directive. CropScience maintained its focus on product stewardship for customers both within and outside the company through its activities in the context of the industry's Excellence Through Stewardship Program (ETS). Audits by ETS-certified auditors are required to maintain our ETS membership, and in 2015 CropScience successfully completed audits of its operations in Brazil and Argentina which included for the first time the new ETS Insect Resistance Management best practices for biotechnology-derived plant products.

FOCUSING ON ANIMAL WELFARE

Animal studies are legally required and essential from a scientific viewpoint to assess the safety and efficacy of pharmaceuticals and other chemical compounds. We aim to minimize the use of study animals and to employ replacement and complementary methods wherever possible.

In our handling of animals, we respect all legal requirements pertaining to animal welfare. Bayer's principles on animal welfare and animal studies apply in countries without special animal welfare legislation, and in the case of external studies compliance with these guidelines is contractually agreed. Bayer's in-house Global Animal Welfare Committee – comprised of the animal welfare officers at our research sites and further Bayer experts – monitors compliance with our principles on animal welfare and animal studies within the Bayer Group and in external studies. It defines supplementary standards that are essential for carrying out animal studies in the Bayer Group.

Bayer ensures that international and national laws and directives are strictly observed during all animal studies. This is verified by both regulatory authorities and internal audits. Bayer additionally deploys its own animal welfare experts at all sites at which animal studies are carried out.

www.animalstudies.bayer.com

Our principles also apply to both the research institutes we commission and our suppliers, whose compliance with our animal welfare requirements we regularly monitor. The information provided in supplier self-evaluations is verified through on-site audits. Current figures and further information are available on our website.

ONLINE ANNEX: 3-8-6

The Global Animal Welfare Committee has defined performance criteria. Each year we analyze the development of animal numbers, the distribution according to species, the burden placed on our test animals and the ratio of regulatorily required studies to exploratory studies, and discuss possible steps in accordance with the 3Rs principle (replace, reduce, refine). We are thus able to demonstrate that since 2005 the number of study animals used per €1 million research budget (including animals in Bayer studies performed by contract research organizations) has declined from 96 animals to around 31 animals in 2015.

We continuously update our internal database, which combines all information about our own animal studies and the evaluation of our cooperation partners and makes it available to all employees in this area. All subgroups apply clear rules to ensure that animal welfare standards are comprehensively observed by our partners.

Bayer also participates in several European consortia that aim to reduce the number of animal studies or improve their validity, such as the European Partnership for Alternative Approaches to Animal Testing (EPAA). HealthCare is involved in the leadership of the eTOX project and the MARCAR and K4DD projects of the Innovative Medicines Initiative (IMI). Bayer is a member of the scientific advisory boards of the European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC) and the Long Range Research Initiative (LRI). In Germany, we support the Foundation for the Promotion of Alternate and Complementary Methods to Reduce Animal Testing (SET).

PROTECTION AGAINST PRODUCT COUNTERFEITING

Counterfeit medicines and crop protection products harbor substantial risks for patients and consumers. Product counterfeiting is a global problem that can only be addressed internationally through a joint approach by industry, associations, governmental agencies and nongovernmental organizations. Bayer consistently advocates the strengthening and expansion of existing laws and provisions aimed at the identification and confiscation of illegal products. We try to protect patients and our products through extensive measures of our own.

ONLINE ANNEX: 3-8-7

www.bayer.com/beware-of-counterfeits

The focus of HealthCare's activities is on raising awareness and providing information to ensure the clear identification of our original products, as well as on legal steps aimed at minimizing illegal trade. Through our "Beware of Counterfeits" campaign, we inform patients on the internet about the risks of counterfeit pharmaceuticals and provide patients with tips on how they can protect themselves. Through the use of various technological means in production, we constantly strive to ensure that patients, too, can distinguish between original and counterfeit products.

We also support the establishment of a Europe-wide system for the identification of original pharmaceuticals that satisfies the requirements of the E.U. Falsified Medicine Directive. In addition, Bayer participates in the Pharmaceutical Industry Initiative to Combat Crime (PIICC) of Interpol to counteract pharmaceutical counterfeiting through global prosecution and the elimination of related criminal networks. We participate in the SecurPharm initiative in Germany. Since 2015, Bayer has contributed its expertise to a research project (ALPhA) supported by the German Ministry of Education and Research to prevent the sale of counterfeit pharmaceuticals on the internet.

www.illegalpesticides.eu/

For crop protection products, too, a worldwide increase in the trade of counterfeit and illegal products can be observed. According to a study conducted in 2015 on behalf of the European Commission, such products account for an average of 10% of the total market across all E.U. member states. To protect against the import of counterfeit and illegal crop protection products into the E.U., CropScience intensively advocates the uniform interpretation and implementation of existing E.U. regulations in all E.U. member states. In addition to supporting regulatory authorities with the identification

of counterfeit products through chemical analysis, we conduct our own inspections in the market and also actively support initiatives by associations.

To educate about the potential dangers and risks of counterfeit and illegal crop protection products, we provide information material and train customers, dealers, farmers and regulatory authorities as part of our product stewardship programs. We document all indications of suspicious and potentially counterfeit or illegal CropScience products in an established, systematic process. CropScience's efforts yield measurable results: in 2015, for example, we successfully asserted our patent protection rights against an illegal Chinese producer. In Brazil, counterfeit CropScience products with a market value in the double-digit million range were confiscated.

8.1 HealthCare

BENEFIT-RISK MANAGEMENT FOR MEDICINAL PRODUCTS AND MEDICAL DEVICES

Patient safety is Bayer's top priority. HealthCare continuously assesses the medical benefit-risk balance of its medicinal products and medical devices throughout their entire product life cycle. The efficacy, safety and tolerability of pharmaceuticals and their behavior in the body are studied in Phases I-III of preclinical and clinical development. The documentation submitted to the regulatory authorities contains the results of these studies and comprehensive information on the product's benefit-risk assessment. Marketing authorization is only granted for a product if it satisfies the safety requirements of the health and regulatory authorities.

Following registration, HealthCare continues to compile safety-relevant information in an internal pharmacovigilance database. This information is continuously evaluated and the risk-benefit balance regularly assessed by medical experts in the Global Pharmacovigilance Department. In this process, Bayer works closely with the responsible regulatory and supervisory authorities at the international and national levels. These include the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMA) and Germany's Federal Institute for Drugs and Medical Devices (BfArM).

Additional safety-relevant information is also compiled using Post-Authorization Safety Studies (PASS) conducted after approval. Protocols and summaries of PASS results are entered into the PASS registry in compliance with E.U. pharmacovigilance legislation.

› ONLINE ANNEX: 3-8.1-1

HealthCare has a global pharmaceutical monitoring system in which experts from various disciplines work together in functional safety management teams (SMTs). These teams jointly evaluate the available benefit and safety data and other relevant product information so as to identify potential safety concerns at an early stage or detect possible changes in the benefit-risk ratio. In addition to internally compiled safety data from clinical trials, post-marketing studies and ad hoc information on adverse side effects, the company's experts conduct assessments using external databases and the information contained in scientific publications. SMTs produce detailed safety risk management plans. These plans are updated as soon as relevant new benefit-risk data become available. Implementation of risk mitigation activities is coordinated by local SMTs in the country organizations. All processes are documented, regularly updated and integrated into a quality management system.

Should risks be identified during this assessment, Bayer immediately undertakes suitable steps to safeguard the health of patients – such as updating product information for patients and physicians. Further elements of risk mitigation programs can include targeted information, e.g. patient education brochures and training measures for medical specialists, as well as direct communication with medical experts (Direct Healthcare Professional Communication, DHPC) and even product withdrawals if necessary. These measures are coordinated with the competent authorities.

HealthCare's quality and risk management functions also make further contributions to increased safety. We examine external and internal quality assurance requirements for our products through systematic internal audits – not just in research and development, but also in production. These audits also cover both institutes sub-contracted by us and our suppliers. More information on our quality management can be found in Chapter 7.2 "Production."

See Chapter 7.2

In line with the statutory requirements, strict safety and quality standards also apply to animal health products. Within the scope of the approval/authorization procedures, Animal Health also carries out studies in order to ensure the quality, efficacy and safety of its products.

ANALYSIS OF RESIDUES OF PHARMACEUTICALS IN THE ENVIRONMENT

Active pharmaceutical ingredients can enter the environment, either through human or livestock excreta, improper disposal of unused medicines or during the production process. HealthCare carries out ecotoxicological investigations of the environmental behavior of residues and degradation products to assess the potential environmental impact of our pharmaceutical products. In accordance with applicable law regarding human and veterinary pharmaceuticals, an environmental risk assessment takes place for all active ingredients for which the company is targeting an approval procedure in Europe or the United States. Here it must be examined whether significant risks may arise for the environment when the pharmaceuticals are used as instructed.

Based on currently available information derived from measurements carried out by authorities and scientific institutes, the existing concentrations of individual active pharmaceutical ingredients from human or veterinary medicines in drinking water do not have any adverse effects on human health. This subject is dealt with in particular by a WHO report on pharmaceuticals in drinking water published in 2012 that comes to the conclusion that traceable effects on human health through the current extent of exposure via drinking water are highly improbable. This estimation corresponds with the studies by national authorities and institutes known to us.

In the production of our pharmaceuticals, internal company wastewater threshold values ensure that no risk to the environment results from the release of traces of active ingredients in wastewater from our production sites. All HealthCare production sites worldwide are evaluated with regard to these threshold values. Site-specific measures aimed at a further reduction are taken should it not be possible to observe these standards over the long term. This includes substance-specific measures such as filtration, evaporation, oxidation, incineration or biological clarification in wastewater treatment plants.

ONLINE ANNEX: 3-8.1-2

Within the scope of our product stewardship, we actively participate in research projects aimed at further studying pharmaceutical residues in the environment and introducing targeted measures to prevent them.

Since 2015, we have coordinated the "Intelligence-led Assessment of Pharmaceuticals in the Environment" project in Europe, which seeks new ways to improve environmental risk assessment. To this end, information from toxicological studies, pharmacological modes of action and computer-based models are analyzed with the goal of developing models and methods for determining possible environmental risks of pharmaceutical substances in early development stages and prioritizing for further environmental assessment existing substances that previously have not been evaluated.

Bayer was represented on the Scientific Advisory Board of noPILLS, an E.U.-sponsored cooperation project completed in 2015 and involving several European countries with the goal of reducing pharmaceutical residues in water. The project demonstrated that a reduction in

pharmaceutical residues in water can only be achieved through cooperation between numerous parties. Educating consumers on the correct disposal of pharmaceuticals, improving wastewater treatment technology and the collection of excreta in connection with certain medicines proved to be effective approaches for achieving this objective.

In Germany, HealthCare participates in the "Risk Management of Emerging Compounds and Pathogens in the Water Cycle" initiative sponsored by the German Ministry for Education and Research. HealthCare is a member of the steering committee. The "SAUBER+" ("Clean+") project, which is part of this initiative, deals with the study of wastewater from health care industry facilities that is contaminated with active pharmaceutical ingredients and disease pathogens. Here it was determined that these emissions are not higher on average than those from private households. The reduction of pharmaceutical emissions generally depends on the individual active ingredients and should pursue a holistic approach. HealthCare was a member of the Stakeholder Advisory Board of that project, which was concluded in 2015.

8.2 CropScience

FOCUSING ON PRODUCT SAFETY

Before crop protection products and technologies can be introduced to the market, they must demonstrate that they are harmless to people and animals and can be used without causing unjustifiable burden on the environment. For this they require official authorization, which is regulated by numerous international and national laws and provisions. The requirements for marketing authorization, particularly as pertains to the environment, have risen sharply in recent years with the goal of further increasing product safety and minimizing potential risks. CropScience satisfies all the regulatory requirements of the countries in which our products are sold to protect crops.

Product safety and environmental compatibility of crop protection products and technologies play a central role in development. CropScience examines the products during the development phase in stringent tests that are required by law. The tests evaluate a product's mode of action, its ecotoxicological and toxicological properties and potential remaining trace concentrations in the plants or the environment following proper application. Each new crop protection active ingredient and each new technology must undergo several years of studies and testing to ensure that it can be applied effectively and that its use is safe for people, animals and the environment.

It takes roughly 10 years for a crop protection product or technology to complete the entire development process including all studies and be launched onto the market. But our product stewardship does not end there. CropScience also observes the International Code of Conduct on Pesticide Management of the United Nations Food and Agriculture Organization (FAO). The principles of this code cover the entire life cycle of a product or technology, from its development to its application and beyond. We implement all major aspects of responsible product handling in our Product Stewardship Program, which is based on the principles of our Product Stewardship Policy.

› ONLINE ANNEX: 3-8.2-1

Even beyond its core business, CropScience participates specifically in projects aimed at increased product stewardship – such as the Better Sugarcane Initiative, which works to promote sustainable sugarcane cultivation, and the International Sustainability & Carbon Certification organization, which is working to establish a system for certifying biomass and bioenergy. We are also a member of the Round Table for Sustainable Palm Oil Production and the Round Table for Responsible Soy (rtrs). In 2015, we signed an agreement with rtrs to support the certification of soybean production in Brazil. In the United States, the e3 cotton sustainability program was introduced to support farmers in the production of sustainably grown cotton, which is much in demand by retailers. Farmers who sign up for the program commit to ensuring that the cultivation of their cotton is certified as traceable, environmentally responsible, economically viable and socially equitable.

RESPONSIBILITY FOR CUSTOMERS AND PARTNERS

The application of crop protection products requires the greatest possible care. Supporting our customers and partners in the proper and safe handling of our seed and crop protection products is therefore a focus of our product stewardship. In this connection, we offer targeted training measures worldwide particularly for farmers and dealers that are designed to promote the responsible handling of our products and thus improve safety for users, the environment and consumers. These training measures are carried out in all countries in which our products are sold. Responsibility for their implementation lies with the country organizations, which align their training concepts to the needs of the respective countries.

ONLINE ANNEX: 3-8.2-2

We maintained our training activities in the Asia and Latin America regions in 2015. In India, CropScience trained farmers in good agricultural practice. We teach them how they can enhance the growth of their produce, use crop protection products effectively and safely, and thus increase the quality of their harvested goods. This opens up new ways of marketing their products that help smallholder farmers in particular to gain increased profit from them.

Our AgroVida program in Latin America comprises various initiatives with which we have been continuously increasing the farmers' safety awareness and specialist expertise for more than 20 years. Safety training offerings for farmers are an important aspect here. In 2015, for instance, we trained more than 35,100 farmers in the Andean region and almost 30,400 farmers in the Central America and Caribbean region (excluding Mexico). Together with the international crop protection association CropLife, we also carried out safety training measures in numerous African countries in 2015.

Our product stewardship measures also include internal employee training measures. Our Product Stewardship Policy also provides information on all principles for the responsible handling of our products, combined with specific instructions for use for our employees and those who work with our products.

In addition to training activities, we produce manuals explaining the safe use and scope of protective clothing and the correct storage and disposal of our products. These manuals are available online to our customers and partners, an example being the "DressCode" containing information on optimal protective clothing for the handling of our products. They are also distributed in the aforementioned training courses as brochures or information sheets. Furthermore, we offer farmers our support in implementing practical steps for user and environmental protection.

Users of our products can contact CropScience through a range of communication channels should they have complaints or feedback or wish to report any incidents. These include direct contact with our sales staff; our hotline, which is printed on all our product packaging; and, for example, in Germany, the "Agrar Telefon" hotline. All incoming product complaints and incidents are locally compiled and processed by the respective CropScience experts. Entries necessitating corrective measures are additionally recorded in a global database. An internal Bayer directive governs the processing, communication and, if necessary, implementation of corrective measures. Employee training courses also take place regularly here as well.

CROP PROTECTION PRODUCTS IN THE ENVIRONMENT

Stringent legal regulations apply to the approval and use of crop protection products. They are aimed at protecting the environment from unwanted side effects, as every farmer's livelihood depends on an intact environment and fertile soil. Responsible Care is extremely important in all areas of agriculture to minimize possible effects and the discharge of crop protection products outside of the treated crops. Bayer believes its responsibility includes protecting the environment from emissions and optimizing the safety of its products through extensive stewardship measures.

Protecting water from agricultural emissions and maintaining good groundwater quality are cornerstones of the responsible use of water as a natural resource. It cannot be completely ruled out in agricultural practice that substances can leach into groundwater or be emitted into flowing waters and lakes through surface runoff. Improper disposal of residual liquids following the cleaning of spraying apparatus can also lead to discharges of crop protection products into surface water. The application of crop protection products is subject to national water protection regulations, including in Europe the requirements of the Water Framework Directive. CropScience places particular importance on water protection and supports agriculture in environmentally friendly land cultivation and the disposal of residual liquids following the application of crop protection products.

ONLINE ANNEX: 3-8.2-3

In the area of water pollution mitigation, we promote the biological remediation system Phytobac™ to customers. This is intended to prevent point source discharges of crop protection active ingredients into water bodies during the disposal of residual liquids that are generated during the filling and cleaning of spraying devices. There are already some 3,500 Phytobac™ plants in Europe (primarily in France).

www.bayer.com/phytobac

Erosion and runoff processes on agricultural land can also lead to substance emissions into adjacent water systems. In this context, we are collaborating with external partners on the development of a web-based geoinformation system for water protection in agriculture. This enables the visualization of site-related runoff/erosion risks by means of high-resolution risk maps supplemented with suitable mitigation proposals. It is planned for this system to be used as an advisory tool for water protection in agriculture.

Pollinator protection is another focus of our product stewardship activities. As a Life Science company with a long tradition in agriculture and animal health, we know how important healthy bees are – not just as pollinators for sustainable food production and as honey producers, but also due to the key role they play in many ecosystems throughout the world. Promoting pollinator health and sustainable agriculture is of central importance for our business activity. In our view, protecting honey bees and wild bees is a matter that concerns society at large; maintaining their health is everyone's responsibility. Bayer takes its role very seriously in this regard and wants to make a contribution.

In our Bee Care Program, we coordinate and combine all Bayer activities in the area of pollinator health and pollinator safety in order to advance the development and implementation of suitable solutions. Within the framework of this program, we proactively approach numerous stakeholder groups – including industry partners, scientists, farmers, beekeepers, governmental agencies, nongovernmental organizations and representatives of the food value chain – to improve our networks with them, address their questions and concerns and seek opportunities for cooperating with them in the area of pollinator health. Bee Care Centers exist in Germany and the United States for this purpose. In 2015, furthermore, we entered into a collaboration in the area of bee health in Latin America with the Fraunhofer Chile Research Foundation. A global Bee Care network has now been built up.

www.beecare.bayer.com

The Bayer Bee Care Program combines our well-founded knowledge in the areas of animal health and crop protection so as to contribute to protecting pollinator health. The objectives here are to:

- Develop further solutions to promote bee health so that beekeepers can better fight pests and disease pathogens
- Actively promote the bee-friendly use of our innovative solutions (products, technologies and services) and to enable involved stakeholder groups to ensure bee safety in farming and gardening
- Expand and improve pollinators' food sources to help offset nutritional deficits
- Openly and actively promote an honest dialogue and transparent communication on pollinator health with all involved stakeholders
- Exchange knowledge and specialist information with all stakeholder groups and institutions (beekeepers, farmers, research institutes, NGOs, political decision-makers and registration authorities)

ONLINE ANNEX: 3-8.2-4

Bee health is impacted by several factors for which Bayer pursues various solutions.

Bayer is investing in the research and development of a new form of application for products to control the Varroa mite, which scientists consider to be the biggest danger for honey bees. Bayer is also active in setting up flowering areas that can provide pollinators with a rich food source for pollen and nectar. The treatment of seed is an important step to protect sensitive crop seedlings from pest pressure. In the sowing of treated seed, however, small amounts of insecticide dust that is potentially harmful to pollinators can be released. Our "Zero Dust" project and further cooperation projects to reduce dust emissions help to minimize the dust release.

Bayer is firmly convinced that neonicotinoids are an important insecticide class with beneficial properties. They are effective against key pests that in many regions have already developed resistances against other substances. They are especially user-safe due to their low human toxicity. Seed treatment with neonicotinoids is an environmentally friendly application technique because it significantly reduces the likelihood that pollinators and other environmental organisms can come into contact with crop protection products. Bayer is also convinced that neonicotinoids are safe for bees if they are used responsibly and properly. This was confirmed by risk evaluations performed during marketing authorization reviews by the responsible authorities of countries outside Europe. In Europe, however, Bayer products that contain two of our neonicotinoid compounds have been prohibited since 2013 from use in crops that are attractive to bees. The European Commission has recently instructed the European Food Safety Authority (EFSA) to examine all newly available data and reports from the past two years. The results are expected for the end of 2016.

Bayer has brought the restriction on neonicotinoid use in the E.U. before the Court of Justice of the European Union in order to clarify the legal basis of the Commission's decision. This decision is based on an assessment by the EFSA that in turn is based on neither a validated nor an officially recognized risk assessment system. With a view to future investment decisions, the company is primarily asking that the court clarify the regulatory framework.

8.3 Covestro

The products of Covestro satisfy the most stringent of safety requirements. This does not just apply to those chemical substances subject to standard review in accordance with the European REACH Regulation. Within the context of the voluntary Global Product Strategy (GPS) of the chemical industry, we also assess the substances we use and reduce potential health and environmental risks that could result from our chemicals. The product safety assessments apply to the entire life cycle of a product – from research and procurement through production and logistics to application, disposal and recycling. Our product stewardship does not end at the company gate, but also includes suppliers, customers and partners. GPS is accessible at Covestro through the "Product Safety First" internet portal, and is available worldwide in seven languages. Through this website, we inform customers and other stakeholders about our activities and product safety assessments.

> ONLINE ANNEX: 3-8.3-1
> A product safety assessment at Covestro takes place in several steps: first, chemicals that are subject to statutory regulations are identified and the corresponding laws compiled. Then we examine their risk potential to obtain a basis for the effective minimization of risks. Such steps can include proposals for technical measures such as protective clothing, or marketing restrictions. Finally, we produce the legally required material safety data sheets, technical information sheets and labeling for the chemicals. Here we go beyond the extent prescribed by law and also produce these documents for chemicals that are not subject to this statutory obligation. All product groups undergo this process.

For especially important products such as MDI, TDI, polycarbonate and polyether, Covestro additionally works with associations to draw up environmental product declarations and eco-balances certified according to ISO 14040 and 14044 based on industry averages.

Covestro follows the scientific discussion about the chemical bisphenol A (BPA), a feedstock for various plastics with a controversial public profile. Critics are concerned that health risks could result for users if traces of BPA are released from polymers. As documented by numerous scientifically valid studies, we are convinced that BPA can be safely used in its existing areas of application – especially those that involve contact with food. This assessment is consistent with evaluations by the authorities responsible for food safety in Europe, the United States, Australia, Japan and other countries. In cooperation with the PlasticsEurope association, we work to make the discussion more objective and more strongly based on scientific analysis. Covestro actively participates in this dialogue and informs customers and the public via the internet.

www.bayer.com/COV-BPA

9. Safety

Safety management and the continuous development of a safety culture are a cornerstone of corporate responsibility in the Bayer Group. Preventing accidents and incidents in day-to-day work, when operating production facilities, and on work-related travel and transportation routes where people or the environment could suffer harm or damage has top priority for us. Responsibility for health, safety, environmental protection and quality (HSEQ) thus lies directly with the Bayer Board of Management. Our HSEQ activities are geared toward ensuring occupational health and safety, the smooth and safe operation of our facilities, and the safe transportation of our products. In this way, we also reduce running costs by avoiding damage and disruptions to work and production.

At the Group level, responsibilities and framework conditions for HSEQ are regulated through appropriate directives such as our new Bayer Group Regulation "Safety at the Bayer Group." Operational responsibility lies with the boards of management/executive boards of the respective subgroups and service companies and the corresponding line organizations, which have their own management systems, committees and working groups to steer HSEQ. Continuous review and revision of directives and regular internal audits and external certification processes ensure our HSEQ management systems at all sites meet the specific requirements in each case.

See Chapter 10.1

Our safety management is based on four pillars:

Safety Pillars [Graphic 3.9.1]

9.1 Occupational Health and Safety

We regard safeguarding the occupational health and safety of our employees and of contractors and suppliers working on our company premises and under the supervision of Bayer as one of our core tasks. This entails preventing work-related accidents and occupational illnesses, identifying and assessing potential hazards, maintaining comprehensive risk management and designing a healthy working environment.

The rate of occupational injuries with lost workdays at Bayer has been falling for several years. In 2015 intensive training and awareness-raising once again helped enable the Bayer subgroups and service companies to report an overall reduction in injury figures.

Group target 2020: reduction of 35% in occupational safety incident rate (RIR)

We record all injuries to Bayer employees requiring medical treatment that goes beyond simple first aid. These are indicated by the Recordable Incident Rate (RIR), which includes both injuries with lost workdays and those without. In 2015, this rate dropped to 0.42 cases per 200,000 hours worked (2014: 0.43) throughout the Group, corresponding to 543 occupational injuries worldwide. This means that, in statistical terms, one recordable incident occurred for around every 476,000 hours worked.

See also Chapter 1.4 for Group targets

The rate of recordable occupational injuries with lost workdays (LTRIR, Lost Time Recordable Incident Rate) also fell. In 2015, it stood at 0.21 (2014: 0.22).

Regrettably, two Bayer employees lost their lives in work-related accidents in 2015. One employee was killed in a plane crash. Another employee suffered serious burns in a work-related accident at the Chempark Leverkusen site and later died in a hospital. Investigations into the causes of the latter incident are still ongoing.

Occupational Injuries [Table 3.9.1]

	2011	2012	2013	2014	2015
Occupational injuries to Bayer employees with lost workdays (LTRIR)	0.31	0.27	0.26	0.22	0.21
Recordable occupational injuries to Bayer employees (RIR)	0.56	0.49	0.47	0.43	0.42
Fatal injuries (total)	3	2	2	4	2
of which Bayer employees	2	2	1	3	2
of which contractor employees[1]	1	–	1	1	–

[1]Employees working for third parties whose accidents occurred on our company premises and under Bayer supervision

The injury figures varied both within individual regions and between the various subgroups and service companies and depended, among other aspects, on employees' range of activities.

ONLINE ANNEX: 3-9.1-1

Recordable Occupational Injuries (RIR [1]) by Region [Table 3.9.1-1]

	2012	2013	2014	2015
Europe	0.56	0.72	0.62	0.60
North America	0.53	0.49	0.64	0.58
Asia/Pacific	0.21	0.20	0.14	0.12
Latin America/Middle East/Africa	0.54	0.40	0.33	0.41
Total	**0.49**	**0.47**	**0.43**	**0.42**

[1] RIR = Recordable Incident Rate

Cases of occupational illness are recorded by us in the countries in which this is legally permissible and are also included in the LTRIR parameter, irrespective of whether they are included in the occupational diseases listed in international registers.

As in previous years, we hardly recorded any sector-typical accidents involving contact with chemicals in 2015. The absolute number of injuries with lost workdays continued to decline. A significant proportion of our work-related accidents and injuries have behavior-linked causes. To increase the focus on this area, the Bayer Safety Council headed up by the Chairman of the Board of Management launched the Behavioral Safety initiative and the program was rolled out in the subgroups in 2015. The subject was also the focus of our annual global Safety Day in 2015.

ONLINE ANNEX: 3-9.1-2

The Behavioral Safety initiative focuses on the promotion of safety-conscious conduct among employees. Behavioral safety involves identifying and preventing unsafe working practices and reinforcing and consolidating safe working methods at all levels. This approach is by no means limited to production but also covers areas of work such as research & development, marketing & sales and administration. The initiative is rolling out a comprehensive behavioral safety program in the subgroups. The first step of this process involved carrying out an assessment of the existing safety culture at all CropScience production sites in 2015, while the focus at HealthCare was on sites with the biggest impact on safety performance. At Covestro, a pilot project was conducted at the site in Antwerp, Belgium. As a next step, all subgroups carried out both basic training courses for employees and manager training courses on behavioral safety at a number of these sites. The successfully launched program will be intensified next year.

We are committed to maintaining and promoting employee health and performance through targeted shaping of the working environment. As part of our occupational health management activities, we offer numerous preventive measures, ranging from ergonomic workplaces and stress management to incentive systems to promote healthy behavior. This also includes support for treating illnesses or reintegration measures.

As Bayer is active in countries with major differences in health care infrastructures and legal frameworks, the needs and options in health promotion vary. Bayer aims to provide employees with access to adequate, affordable and targeted health offerings such as regular medical check-ups, sports programs, help in overcoming illness and on-site medical care.

Our employee representatives are included in operational health management and are actively involved in its development.

ONLINE ANNEX: 3-9.1-3

At the Bayer European Forum – a joint committee of representatives of management and employees – both parties signed the Luxembourg Declaration on Workplace Health Promotion in the E.U.. According to the declaration, workplace health promotion covers all joint measures by employers, employees and society to improve health and well-being in the workplace. The objective of the network is to identify and disseminate best practices on the basis of continuous sharing of experience. So far around 200 European companies have signed the declaration.

Group-wide initiatives to foster employees' health and maintain their employability in view of the rise in the retirement age include, in Germany, the General Works Agreements on lifetime working and demographic change and on shaping demographic change for nonmanagerial employees at Bayer. These innovative agreements contain measures to reduce the workload of shift workers from the age of 55 and of all other nonmanagerial employees in Germany from the age of 57 and ease the return to work of nonmanagerial employees after long-term illness, along with an extensive health screening program for all employees. In 2015, More than 97% of those who were eligible took part in the program to reduce the workload of older employees.

9.2 Process and Plant Safety

We aim to design and operate our processes and facilities in such a way that they do not pose any inappropriate risks to employees, the environment or the community. To improve the safety of our production facilities and processes worldwide, Bayer is continually working to further develop the safety culture and the corresponding standards for identifying and evaluating the associated risks. At the same time, we promote the skills of relevant employees on a regular basis. The corresponding Bayer Group Regulation "Process and Plant Safety" specifies globally harmonized procedures and standards.

ONLINE ANNEX: 3-9.2-1

In a key move to maintain and raise safety awareness, the globally binding training program for all Bayer employees who are able to influence process and plant safety in their work environment has been further enhanced. The process and plant safety training program is firmly anchored in the subgroups' HSEQ management systems. Both traditional and web-based training has been established for tradespeople and chemical technicians in the production facilities.

The organization and staffing levels of the Bayer Group's central competence center for process and plant safety, together with the Group HSEQ Platform for Process and Plant Safety, in Leverkusen, Germany, have been strengthened. Together with the regional competence centers in Shanghai, China, and Kansas City, Missouri, United States, it works closely together in a professional network with plant safety experts from production sites all over the world. To improve our risk analysis process, an additional system audit on the content and completeness of our safety reviews was conducted this year on a trial basis. This quality improvement measure is due to be rolled out across HealthCare and CropScience next year and will be mandatory.

ONLINE ANNEX: 3-9.2-2
Our experts work in international working groups of the European Chemical Industry Council (CEFIC) and the American Petroleum Institute with the goal of developing a global reporting standard for key performance indicators in plant safety. We also are involved in an intensive exchange of experiences nationally and internationally in this area at an industrial level.

A globally standardized KPI for plant safety incidents, Loss of Primary Containment (LoPC), applies to all Bayer plants and is integrated into Group-wide safety reporting. LoPC refers, for example, to chemicals in amounts above defined thresholds leaking from their primary container, such as pipelines, pumps, tanks or drums, and is thus an indicator of incidents in production facilities. We use the LoPC Incident Rate (LoPC-IR) to determine the number of LoPC incidents per 200,000 working hours in areas relevant to plant safety. In 2015, this was 0.22 (2014: 0.23).

Group target 2020: reduction of 30% in process and plant safety incidents (LoPC-IR)

See also Chapter 1.4 for Group targets

Rate of Plant Safety Incidents (LoPC-IR) [Table 3.9.2]

	2012	2013	2014	2015
LoPC-IR (Loss of Primary Containment Incident Rate)	0.38	0.35	0.23	0.22

More information on the procedures in the case of LoPC incidents can be found in

ONLINE ANNEX: 3-9.2-3
The causes of every reported incident are carefully analyzed. The evaluations indicate areas where there is room for further improving the safety of existing facilities. The results of the cause analysis are published across the Group. The introduction of both the LoPC-IR parameter and the globally established training program mentioned above is helping us raise employees' safety awareness.

The reporting level is set so low that even material and energy leaks that have no impact on employees, neighbors or the environment are systematically recorded and reported. This approach is in line with our commitment to maintaining the integrity of our facilities at all times.

The global, comprehensive Bayer Emergency Response System (BayERS) is an overarching early warning system for the Group. The subgroups and service companies have integrated their internal reporting procedures into BayERS and adapted them to it.

ONLINE ANNEX: 3-9.2-4
The handling of unusual incidents is the responsibility of the local crisis organization/emergency response team. For this purpose, organizational precautions with defined responsibilities and procedures have been implemented at the sites/in the countries. Depending on the situation, these involve business partners and the local community around the sites.

9.3 Transportation Safety

Great importance is attached to transportation safety within the Bayer safety culture. This applies to the transportation of materials on public transportation routes, particularly in the case of hazardous materials. This includes various processes such as loading and unloading, classification, labeling, packaging and selecting the right logistics partners.

In a dedicated Bayer Group directive, we have defined procedures that ensure all transported materials are handled in line with applicable regulations and the potential hazard they pose. Logistics service providers are selected following a defined procedure, and their fulfillment of safety and quality standards is assessed. Under the directive, people responsible for transportation safety are appointed in every organizational unit concerned. As part of our Responsible Care activities, transportation safety instructions are also drawn up and distribution safety audits performed for nonhazardous materials. We thus go beyond what is required under transportation legislation. Bayer's objective is to achieve an appropriate and equally high standard of HSEQ throughout the world and to continuously improve this, particularly regarding transportation processes. The transportation safety and security management of our subgroups is part of the audit system of the Bayer Group detailed in the Bayer Group Regulation "Health, Safety, Environment and Quality (HSEQ) Audits," which was updated in 2015.

The subgroups have also set up a network of transportation safety experts and users with practical experience to share and harmonize know-how and procedures for transportation and distribution safety and security including emergency response management and incident reporting. The Transportation Safety Platform acts as a global forum for exchanging information and standardizing procedures between the subgroups. In 2015, the platform focused, for example, on regulations management, training in transportation safety and use of this worldwide, the review of internal process instructions and the evaluation and selection of our logistics service providers.

In total, well over one million transport movements took place in 2015. Despite our extensive safety precautions and training activities, residual risks remain and can result in transport incidents. We classify critical incidents during the transportation of our products as transport incidents. These include accidents that cause personal injury or significant damage to property and environmental impact through the release of substances or leakage of hazardous materials. We record transport incidents using defined criteria. Assessment is based on the spilled load, graded according to the volume and dangerous goods class, personal injury and blocked transportation routes. We take into account both our own chemical transport movements and those we commission and pay third parties to perform on our behalf. We carefully analyze and evaluate all transport incidents so that adequate steps can be taken to prevent a recurrence.

TRANSPORT AND ENVIRONMENTAL INCIDENTS

The number of transport incidents in 2015 was 12, the same as last year. These were mainly traffic accidents.

Group target 2020: reduction of 30% in transport incidents

See also Chapter 1.4 for Group targets

In recent years most transport incidents occurred at Covestro. For this reason, as a Life Science company Bayer will refrain from continuing with the relevant Group target in the future. Instead, we shall endeavor to minimize the number of such incidents through preventive measures.

ONLINE ANNEX: 3-9.3-1

Transport Incidents by Means of Transport [Table 3.9.2-1]

	2011	2012	2013	2014	2015
Road	6	6	8	11	11
Rail	1	0	0	1	1
Inland waterways	0	0	0	0	0
Sea	0	0	3	0	0
Air	0	0	0	0	0
Pipeline	0	0	0	0	0
Total	**7**	**6**	**11**	**12**	**12**

The number of environmental incidents fell from four to two in 2015. Bayer uses the term "environmental incidents" to define incidents in the course of our business activities that result in the release of substances into the environment. Factors that determine whether there is a reporting obligation include, in particular, the nature and quantity of the substance, the amount of damage caused and any consequences for nearby residents. In accordance with our internal voluntary commitment, we report any leakage of substances with a high hazard potential from a quantity of 100 kg upward.

ONLINE ANNEX: 3-9.3-2

Number of Environmental Incidents [Table 3.9.2-2]

	2011	2012	2013	2014	2015
Environmental incidents	**3**	**5**	**10**	**4**	**2**

In total there were 13 incidents reported in 2015, one of which had to be classified both a transport and an environmental incident. A detailed overview of the transport and environmental incidents can be found in the table below.

ONLINE ANNEX: 3-9.3-3

Environmental and Transport Incidents 2015[1] [Table 3.9.2-3]

	Environ-mental	Transport	Personal injury
Covestro, Illinois, United States, January 15, 2015 At a truck parking lot, approximately 7,600 liters of 36% hydrochloric acid escaped from a leaky tanker and entered a wastewater pipe, from where it continued in a diluted form into the wastewater treatment system. No injuries or hazards occurred.		X	No
Covestro, Hubli, India, January 18, 2015 Approximately 1,200 kg of product (hazardous polyisocyanate) leaked from a truck in a transport incident. Specialist staff ensured expert cleanup and disposal.		X	No
Covestro, California, United States, February 7, 2015 A tanker was accidentally overfilled during loading, resulting in around 1,150 liters of TDI (hazardous material) leaking into the collection area of the filling station. No injuries or hazards occurred.		X	No
Covestro, Ward Creek, United States, May 31, 2015 In an accident, an overturned truck tractor lost 1,500 liters of MDI, which spilled onto the road and into the surrounding area. This accident was also classified as an environmental incident. The product was cleaned up in a professional manner. No injuries occurred.	X	X	No
Covestro, Helsinki, Finland, June 4, 2015 An IBC[2] was damaged in a vehicle transport incident at a site belonging to the postal service. An unquantified amount (maximum capacity of the IBC 1,000 kg) of Bayhydrol escaped. 24 people were endangered by the product leak, 12 of whom underwent hospital examinations as a precaution and were discharged the same day. The product was cleaned up and disposed of in a professional manner.		X	No
Covestro, Budapest/Sibiu, Hungary, June 8, 2015 The driver of a tanker was killed in a traffic accident. No product was spilled.		X	Yes
Covestro, Antwerp, Belgium, August 18, 2015 Due to incorrect operation during transfer between a tank container and a flexitank, the flexitank burst and lost approximately 6,000 kg of Desmophen (not a hazardous material). No injuries or hazards occurred.		X	No
Covestro, Dormagen, Germany, September 3, 2015 During unloading, around 150 liters of nitric acid (hazardous material) were accidentally spilled. An employee who came into contact with the acid was treated at a hospital as a precaution and was then able to resume work. An investigation into the impact on the environment was initiated.	X		Yes
Covestro, Laredo, United States, September 28, 2015 A forklift truck pierced a drum filled with Desmodur (TDI). 150 kg of the product spilled onto the loading ramp. The product was cleaned up and disposed of in a professional manner.		X	No
Covestro, Seelze, Germany, September 30, 2015 Approximately 100 liters of 30% hydrochloric acid escaped from a leaky rail tank car. No injuries or hazards occurred. An investigation into the incident was initiated.		X	No
Covestro, Cologne, Germany, October 28, 2015 While a truck was being loaded, a forklift truck accidentally pierced a drum filled with Desmodur I (hazardous material). 150 liters of the product spilled onto the floor of the warehouse and were cleaned up and disposed of in a professional manner. No personal injury or environmental damage occurred.		X	No
Covestro, Martinsburg, United States, December 9, 2015 A truck driver noticed a leak in his tanker. This was caused by a leaky drum filled with Desmodur. The fire department was notified and cleaned up the spilled liquid on the road surface using binding agent. The remaining product was transferred to a new drum.		X	No
Covestro, Charleston, United States, December 16, 2015 Almost 1,900 liters of a polyalcohol spilled from a tanker truck in a traffic accident. The fire department sealed up the spillage, thus preventing release into the environment. The driver of the truck was injured in the accident and treated at a hospital.		X	Yes

[1] Standard practice at Bayer is to record every fatality reported to us relating to our business activities. A difference between the number of fatalities in Table 3.9.1 (occupational injuries) and Table 3.9.2-3 may occur because for occupational injuries, by definition, we indicate only fatalities of Bayer and contractor employees who were under immediate Bayer supervision.

[2] IBC (intermediate bulk container)

The following incident was recorded and analyzed, but is not classed as an environmental or transport incident according to Bayer criteria.

Further Incidents Not Considered Environmental or Transport Incidents under Bayer Criteria [Table 3.9.2-4]

Location of the incident	Description	Comments
CropScience, Muskegon, United States, October 5, 2015	Small quantity of product entered the municipal wastewater system	At the Muskegon site, a small quantity of product entered the municipal wastewater system. The local community complained about the odor this caused. The responsible authorities were notified as a precaution. There were no hazards. Due to the low quantity, the incident is not classified as an environmental incident.

10. Environmental Protection

Bayer takes its responsibility to protect the environment very seriously. We are continuously working to reduce the environmental impact of our business activities and find innovative product solutions that benefit the environment. Our environmental standards apply worldwide.

An efficient approach to raw materials and energy is now both an ecological and economic imperative. Eco-efficient processes help reduce environmental impact and at the same time cut the costs associated with materials, energy, emissions and disposal.

Our use of energy sources, water and other resources, as well as the emissions and waste we generate, are determined to a great extent by just a few factors. Our product portfolio and demand for our products determine the use of materials and energy. At the same time, we continuously improve our production processes to make them more resource-friendly and lower the emissions they generate. We measure how efficiently we use our resources in relation to manufactured sales volume, which does not include intermediates.

Responsibilities and framework conditions for health, safety, environmental protection and quality (HSEQ) are stipulated at the Group level, with Group regulations, targets and performance indicators (KPIs), among other things, serving this purpose. In the field of environmental protection (from, for example, resource use to air, water and soil emissions and waste generation), operational management takes place at the subgroup level, with the aid of HSEQ management systems, committees and working groups.

Our commitment to environmental protection, health and safety extends beyond the scope of legal requirements. It includes factoring in environmental aspects in a particular way and performing a voluntary ecological assessment for capital expenditure projects exceeding €10 million. In the case of acquisitions, we examine prior to the transaction whether the applicable environmental and occupational safety regulations and fundamental employee rights are complied with at the production sites in question.

10.1 International Standards and Certifications

To maintain high HSEQ standards throughout the Group, Bayer has established appropriate management systems that are aligned to acknowledged international standards and are regularly evaluated and updated. They form an integral part of all our business processes. Regular upkeep of the management systems and appropriate training and certification also demonstrate our commitment to the chemical industry's Responsible Care™ initiative and in particular the guidelines of the Responsible Care Global Charter.

With regard to the coverage of our business activities with HSEQ management systems based on energy consumption, in 2015 around 96% of our production sites featured an HSE management system audited by Bayer. Some 93% of our entire business activities were certified externally to at least one internationally recognized standard. As part of a Group-wide certification plan, it is planned, by 2017, to achieve virtually complete coverage based on energy consumption by external standards in both environmental and occupational safety management. One hundred percent coverage is not feasible owing to the frequent changes in our site portfolio.

Standards and Certifications in % of Business Activities (Based on Energy Consumption) [Table 3.10.1]

	2011	2012	2013	2014	2015
Certification to external standards					
ISO 14001 certification/EMAS validation	66	84	84	91	93
Certified to OHSAS 18001[1]	27	30	30	34	80
Certified to ISO 50001[2]	–	–	–	40	47
Degree of coverage with certification to at least one of the above standards	87	89	90	95	93
HSE management systems internally audited by Bayer					
HSE management systems audited by Bayer	99	99	99	94	96

[1] The rise in 2015 is due to enhanced OHSAS 18001 certification at Covestro sites.
[2] Group values determined from 2014 onward

All subgroups also have industry-specific international quality management systems such as ISO 9001, ISO 17025, ISO 13485 or GMP (Good Manufacturing Practice). Group-wide, the coverage by this kind of certification is over 98%. More information about quality management in the various subgroups can be found in Chapter 7 "Procurement, Production, Logistics, Distribution."

See Chapter 7

10.2 Energy Consumption

In 2015, we succeeded in reducing the Group's total energy consumption by 2.5% to 83.2 petajoules. Basically, we differentiate between primary energy consumption – mainly of fossil fuels for our own generation of electricity and steam – and secondary energy consumption that reflects the purchase of electricity, steam and refrigeration energy and the use of process heat.

Primary energy consumption fell by 5.7%. This was mainly due to the reduction in natural gas, which was primarily achieved through more efficient facility operation at the Uerdingen site in Germany. The use of coal was approximately at the same level as the previous year, while consumption of liquid fuels and other primary energy sources was reduced. Waste utilization was significantly higher than the previous year, mainly owing to the use of liquid waste as a source of energy at Covestro's site in Caojing, China. Secondary energy consumption rose by 1.1%. The use of electricity declined, while consumption of steam and process heat was higher than in 2014 (see Table 3.10.2).

The drop in total energy consumption (primary and secondary energy sources) was mainly caused by lower energy needs at the Leverkusen and Uerdingen sites in Germany. Moreover, the partial shutdown of production facilities at the Belford Roxo site in Brazil also contributed to a reduction in total energy consumption.

In 2015, Bayer's manufactured sales volume rose by 2.7%. We were able to slightly improve our energy efficiency, which we define as the total energy consumption in megawatt hours (MWh) per metric ton of manufactured sales volume, from 3.37 MWh/t in 2014 to 3.34 MWh/t in 2015. This development confirms the trend of a decoupling of manufactured sales volume from energy consumption identified in previous years. This brings us closer to our Group target of improving energy efficiency by 10% by 2020.

Group target 2020: improvement of 10% in Group-wide energy efficiency

See also Chapter 1.4 for Group targets

Energy Consumption in the Bayer Group [Table 3.10.2]

	2011	2012	2013	2014	2015
Primary energy consumption for the in-house generation of electricity & steam (TJ)	**50,096**	**49,047**	**47,582**	**45,572**	**42,996**
Natural gas	31,162	30,411	29,796	31,580	28,813
Coal	16,776	15,954	15,094	12,611	12,755
Liquid fuels	660	656	416	421	350
Waste	515	1,005	1,282	833	1,523
Other[1]	983	1,021	994	127	(445)
Secondary energy consumption (net, TJ)	**34,846**	**34,137**	**33,266**	**39,745**	**40,186**
Electricity[2]	25,475	25,849	25,560	27,177	25,977
Steam	1,054	(121)	(801)	3,579	4,694
Steam from waste heat (process heat)	9,000	9,144	9,146	9,639	9,974
Refrigeration energy	(683)	(735)	(639)	(650)	(459)
Total energy consumption (TJ)	**84,942**	**83,184**	**80,848**	**85,317**	**83,182**
Energy efficiency[3] (MWh/t)	**3.63**	**3.50**	**3.44**	**3.37**	**3.34**

[1] E.g. hydrogen
[2] Secondary energy consumption for electricity is based on the raw material mix of the country concerned.
[3] Energy efficiency is the quotient of total energy consumption and manufactured sales volume. For Covestro, this includes neither the secondary products sodium hydroxide solution and hydrochloric acid generated in production nor trade products.

More than 90% of our own energy generation comes from combined heat and power processes. These efficient power plants convert approximately 80% of the fuel energy used into electricity and heat. In addition, we purchase electricity on the market – through energy exchanges, for example. The electricity and heat generated and purchased are used in our own production facilities and third-party facilities (especially of Lanxess Deutschland GmbH as the other shareholder of our service company Currenta). The proportion of renewable energies is determined by the energy mix of our energy suppliers. We comment in detail on these issues in our CDP (previously Carbon Disclosure Project) Report.

www.bayer.com/CDP-climate

10.3 Air Emissions

At Bayer, air emissions are caused mainly by the generation and consumption of electricity, steam and process heat. Our commitment to greater energy efficiency helps reduce both costs and emissions. We also aim to contribute to climate protection on several levels. We have set ambitious targets for resource efficiency and established relevant measures across the Group.

Our commitment is divided into three areas:

Group target Covestro: improvement in production process technology to achieve better energy efficiency

1. More efficient production: we aim to reduce the emissions of greenhouse gases in our own production facilities by increasing energy efficiency, using combined heat and power generation in our power plants and developing and marketing new, more climate-friendly technologies. Thanks to our own energy management systems and production and process innovations, considerable resources have been saved in recent years. Energy efficiency projects resulting from STRUCTese™ (Structured Efficiency System for Energy) implemented since 2008 lead to annual savings. Taking into account all sustainable savings effects since the system was introduced, these savings amounted to 1.55 million MWh in the area of primary energy consumption in 2015.

www.bayer.com/COV-production

2. Reducing emissions using market solutions: our products play their part in saving energy and conserving resources in many different ways. We are able to help our customers in the areas of building insulation, lightweight construction and agriculture in particular. We provide solutions both for reducing emissions and for adapting to climate change. These include state-of-the-art crop protection products that enable higher yields, new cultivation methods such as precision farming and the development of crops that are better able to cope with stress factors such as extreme temperatures and aridity. You can read more, for example, about combating the growing threat of malaria – resulting from climate change – in the CropScience section of Chapter 4 "Research, Development, Innovation."

See also Chapter 4

3. Reducing emissions in nonproduction areas of Bayer: this includes – with the planned reduction of specific CO_2 emissions of newly registered vehicles to 110 g/km through 2020 – an ambitious reduction target for our vehicle fleet, optimized logistics and enhancement of the environmentally friendly credentials of our information and communication technologies (Green IT). Through our EcoFleet initiative, CO_2 emissions of newly registered vehicles for our global fleet of over 25,000 vehicles were reduced by a further 7 g/km to 141 g/km in 2015.

GREENHOUSE GAS EMISSIONS

Bayer reports all Group greenhouse gas emissions in line with the requirements of the Greenhouse Gas Protocol (GHG Protocol). Direct emissions from our own power plants, waste incineration plants and production facilities (corresponding to Scope 1 of the GHG Protocol) and indirect emissions that result from the external procurement of electricity, steam and refrigeration energy (Scope 2) are determined at all production locations and relevant administrative sites.

Dual reporting was introduced in 2015 with the updating of the GHG guidelines for Scope 2. According to this, indirect emissions have to be reported using both the location-based and the market-based methods. The location-based method uses regional or national average emissions factors, while the market-based method uses provider- or product-specific emissions factors. From 2015, we are reporting for the first time in line with the new guideline, shown retroactively to 2012. To ensure the comparability of the data we are additionally reporting according to the previous system once more this year.

Group Greenhouse Gas Emissions[1] [Table 3.10.3]

	Million metric tons of CO_2 equivalents				
	2011	2012	2013	2014	2015
Direct greenhouse gas emissions[2]	4.23	4.24	4.09	4.02	4.41
Indirect greenhouse gas emissions[3], according to the previous method (reported until 2014)	3.92	4.12	4.29	4.70	4.64
Indirect greenhouse gas emissions[3], according to the location-based method (reported from 2015)	–	4.71	4.85	5.03	4.94
Indirect greenhouse gas emissions[3], according to the market-based method (reported from 2015)	–[4]	4.72	4.91	5.53	5.30
Total greenhouse gas emissions, according to the previous method (reported until 2014)	8.15	8.36	8.37	8.72	9.05
Total greenhouse gas emissions, according to the market-based method (reported from 2015)[5]	**–**	**8.96**	**9.00**	**9.55**	**9.71**
Specific greenhouse gas emissions (t CO_2e/t), according to the previous method (reported until 2014)[6]	0.95	0.98	1.00	1.02	1.09
Specific greenhouse gas emissions (t CO_2e/t), according to the market-based method (reported from 2015)[5,6]	**–**	**1.06**	**1.09**	**1.12**	**1.19**

[1] Portfolio-adjusted in accordance with the GHG Protocol
[2] In 2015, 86.8% of emissions were CO_2 emissions, 12.7% N_2O emissions, just under 0.5% partially fluorinated hydrocarbons and 0.04% methane.
[3] Typically, CO_2 in incineration processes accounts for over 99% of all greenhouse gas emissions. When determining indirect emissions, our calculations are therefore limited to CO_2.
[4] Back calculation using the market-based method is only possible from 2012, as the RE-DISS factors needed for the calculation were only available for the first time for that year.
[5] The market-based method of the new Scope 2 GHG Protocol most reliably reflects the indirect emissions and the success of emissions reduction measures, so we used emissions volumes calculated using this method when calculating the total and specific greenhouse gas emissions.
[6] Specific Group emissions are calculated from the total volume of direct emissions and indirect – calculated using the market-based method of the new Scope 2 GHG Protocol – emissions of the subgroups, including the emissions at the Belford Roxo site and emissions from the vehicle fleet, both reported for the Group as a whole, divided by the manufactured sales volume of the three subgroups in metric tons. Quantities attributable to the supply of energy to external companies are deducted from the direct and indirect emissions. At Covestro, neither the by-products sodium hydroxide solution and hydrochloric acid generated during production nor trade products are included in the manufactured sales volume.

The total volume of Group-wide greenhouse gas emissions rose by 1.7% (Scope 2 market-based) in 2015. Broken down, direct emissions rose by 9.7%, while indirect emissions fell by 4.1% (Scope 2 market-based). The rise in direct emissions is largely due to higher nitrous oxide emissions caused by a significant increase in nitric acid production at the site in Caojing, China, and to additional emissions from the incineration of liquid and thermal waste there. Another reason was increased energy consumption by third parties at the CropScience site in Institute, United States.

Group target 2020: reduction of 20% in specific greenhouse gas emissions

In line with our Group target we are endeavoring to reduce specific greenhouse gas emissions (total emissions divided by the manufactured sales volume) by 20% through 2020. 2015 saw a rise of 6.0% (Scope 2 being calculated according to the market-based method) owing mainly to the effects described above.

See also Chapter 1.4 for Group targets

ONLINE ANNEX: 3-10.3-1

Even though a significant proportion of our direct emissions comes from the generation of energy that is delivered to other companies, we include all greenhouse gas emissions from the conversion of primary energy sources into electricity, steam or refrigeration energy in our energy balance, in line with the regulations of the GHG Protocol. Consequently, our absolute figures for greenhouse gas emissions are higher than the actual emissions resulting from Bayer's business activities. The level of specific greenhouse gas emissions is a more meaningful statistic. This indicates only the greenhouse gas emissions for which Bayer is directly responsible in relation to the manufactured sales volumes of the three Bayer subgroups.

Greenhouse Gas Emissions by Subgroup and Service Company[1] [Table 3.10.3-1]

	Total direct and indirect emissions in million metric tons of CO_2 equivalents			
	2012[2]	2013	2014	2015[5]
HealthCare	0.60	0.57	0.57	0.57
CropScience	0.96	0.99	0.97	1.05
Covestro	5.29	5.42	6.27	6.41
Currenta[3]	1.99	1.92	1.62	1.47
Specific greenhouse gas emissions at Covestro (metric tons of CO_2 equivalents per metric ton of manufactured sales volume)[4]	0.93	0.97	1.03	1.10

[1] The indirect emissions were calculated according to the market-based method. Since the RE-DISS factors needed for this were only available from 2012 on, the data are only indicated for the past 4 years.
[2] Emissions from the Bayer Group's vehicle fleet have been recorded since 2012, but not specific to any subgroup, and are assigned to the direct Group emissions in Table 3.10.3. In 2015, fleet emissions amounted to 0.14 million metric tons of CO_2 equivalents.
[3] The emissions reported for Currenta are attributable to the provision of energy to external companies at the Chempark sites.
[4] The by-products sodium hydroxide solution and hydrochloric acid generated during production are not included in the manufactured sales volume, nor are trade products.
[5] The emissions from the production site in Belford Roxo, Brazil, totaling 0.06 million metric tons of CO_2 equivalents, are not included in this table but are reported for the Group as a whole in Table 3.10.3.

In 2015, the waste incineration plants operated by Currenta generated just under 1 million metric tons of steam from the incineration of more than 250,000 metric tons of hazardous waste from the Chempark sites and some external production companies. Compared to using fossil energy sources, the use of this steam enables approximately 200,000 metric tons less CO_2 TO BE EMITTED per year.

The reporting of all relevant indirect emissions resulting from the value chain is bindingly regulated by the GHG Protocol Corporate Value Chain (Scope 3) Accounting & Reporting Standard. Following a thorough examination, Bayer has identified nine essential Scope 3 categories, which we report on in detail in the CDP Report. We take particular account of those emissions where there is significant potential for reduction e.g. our transport-related emissions resulting from business trips.

In 2015, the Bayer Group was involved in European emissions trading with 19 plants in total. The greenhouse gas emissions of these plants amounted to approximately 2.32 million metric tons of CO_2 equivalents.

OTHER DIRECT EMISSIONS INTO THE AIR

Emissions of ozone-depleting substances (ODS) fell by 20.7%. Emissions of volatile organic compounds excluding methane (VOCs) decreased by 24.0%. The main source of both types of emissions remains the CropScience site in Vapi, India, which accounts for 55.4% of VOC emissions and 94.3% of ODS emissions. The project initiated there four years ago to reduce these emissions continues to have an impact. VOC emissions fell by a further 38.3%. ODS emissions there also decreased, by 21.1%. A central waste air treatment system will go into operation at the Vapi site during 2016. This will bring together the many different sources of emissions there and cause another significant reduction in these emissions.

Emissions of Ozone-Depleting Substances (ODS)[1] [Table 3.10.4]

	2011	2012	2013	2014	2015
ODS in metric tons p.a.	16.3	16.3	15.7	14.8	11.7

[1] Ozone-depleting substances (ODS) in CFC-11 equivalents

Emissions of Volatile Organic Compounds (VOC)[1] [Table 3.10.5]

	2011	2012	2013	2014	2015
VOC in 1,000 metric tons p.a.	2.69	2.60	2.27	2.12	1.61
VOC in kg per metric ton of manufactured sales volume	0.2457	0.2316	0.2047	0.1864	0.1379

[1] Volatile organic compounds (VOC) without methane

Emissions of sulfur dioxide fell by 4.1%. Particulate emissions also declined, in this case by 8.9%, caused by reductions at Covestro's sites in Baytown, Texas, United States, and Caojing, China. Emissions of nitrogen oxides, on the other hand, rose by 2.4% and of carbon monoxide by 2.1%. Both increases could essentially be attributed to differences in the types of coal used at the Uerdingen site in Germany.

ONLINE ANNEX: 3-10.3-2

Other Important Direct Air Emissions [Table 3.10.5-1]

	1,000 metric tons p.a.				
	2011	2012	2013	2014	2015
CO	1.31	1.00	0.94	0.91	0.93
NO_X	3.66	3.07	2.51	2.36	2.42
SO_X	2.27	1.85	1.32	1.22	1.17
Particulates	0.18	0.18	0.16	0.25	0.23

10.4 Use of Water and Emissions into Water

The continuous availability of clean water in sufficient quantities is essential for supplying our production sites and the surrounding areas. However, this can no longer be taken for granted in many parts of the world. We plan to design our water supply in such a way that industrial water usage continues not to lead to local problems such as a shortage of water for the people living in the area.

Our Water Position commits us to compliance with international and local legislation and to fulfilling the strictest requirements worldwide while at the same time ensuring the reliable operation of our production facilities. The goal is to protect water as a resource and use it efficiently.

In their respective directives, our subgroups have defined responsible water use, ranging from resource-friendly usage to appropriate disposal of wastewater, and anchored implementation in their HSEQ management systems.

Group target 2017: establishment of water management at all sites in water-scarce areas

As part of our Water Position, we used the WBCSD Global Water Tool™ to identify all Bayer sites that are located in regions affected or threatened by water shortage. In line with our Group target, these sites are to establish a water management system with local targets by 2017. The sites concerned are analyzed annually, including an evaluation of their water usage, quality and discharge data. In addition, site-specific initiatives that enable the reuse of water and thus contribute to reducing water consumption are also examined and evaluated. Results of the current analysis show that an effective water management system is already in place at around 58% of the sites examined.

See also Chapter 1.4 for Group targets

Although the framework conditions for sites can differ very considerably according to region, some measures successfully implemented at several sites have already been seen to be effective. These include both in-house water treatment plants to make river water usable and river water reservoirs to avoid having to take drinking water from local water suppliers even when water levels are low. Further effective steps for pursuing the water target include continuous analysis of wastewater in line with site-specific performance indicators and training new employees in responsible water usage.

Awareness of this issue is being raised through ongoing Group-wide dialogue. Equally important in this is active participation in forums and discussions on this subject with government officials and other stakeholders. The next step will be to agree specific measures for the targeted development at those sites with identified potential for improvement.

www.bayer.com/CDP-water

Bayer supports the CEO Water Mandate of the U.N. Global Compact with the goal of working with key stakeholders to develop sustainable strategies for water usage. In our annual response to the CDP Water Disclosure, we report in detail on our water usage, the company-specific water footprint and the associated opportunities and risks. This represents a progress report for the CEO Water Mandate.

WATER CONSUMPTION AND USAGE

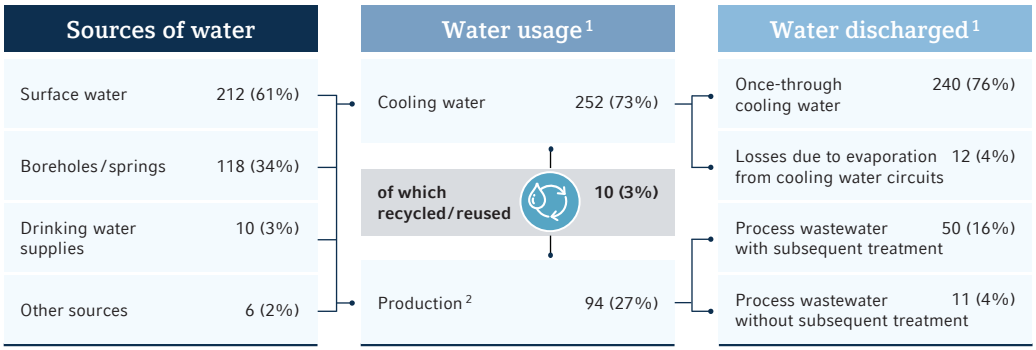
In 2015, total water consumption in the Group fell by 1.1% to around 346 million cubic meters.

Some 73% of all water used by Bayer is cooling water. This water is only heated and does not come into contact with products. It can be returned to the water cycle without further treatment in line with the relevant official permits. The total volume of once-through cooling water was around 240 million cubic meters in 2015. In our production activities, we endeavor to use water several times and to recycle it. Water is currently recycled at 35 sites, e.g. in closed cooling cycles, or through the reuse of treated wastewater or the recirculation of steam condensates as process water. A total of 10.5 million cubic meters of water were reused in 2015.

ONLINE ANNEX: 3-10.4-1

The diagram shows the distribution of the different types of water usage within the Bayer Group.

Water Use in the Bayer Group in 2015 (million m³) [Graphic 3.10.0-1]



[1] The differences between volumes of water consumed and water discharged can be explained, for example, by unquantified losses due to evaporation, leaks, quantities of water used as raw materials in products and volumes of condensate generated through the use of steam as a source of energy.
[2] Sum from production processes, sanitary wastewater and rinsing and cleaning processes in production

Water was essentially obtained from the same sources as in the previous year.

Net Water Intake by Source [Table 3.10.6]

	2011	2012	2013	2014	2015
Water consumption (million m³ p.a.)	411	384	361	350	346
Proportion from surface water (%)	65	64	63	63	61
Proportion from boreholes/springs (%)	31	32	33	32	34
Proportion from public drinking water supplies (%)	2	2	3	3	3
Proportion from other sources, generally rainwater (%)	2	2	2	2	2

WASTEWATER AND WASTEWATER DISCHARGES

The total volume of process wastewater fell by 7.7%. All wastewater is subject to strict monitoring and analysis before it is discharged into disposal channels. 81.9% of Bayer's process wastewater worldwide is purified at wastewater treatment plants (Bayer or third-party facilities). Following careful analysis, the remaining volume was categorized as environmentally safe according to official provisions. Part of it contained nutrients and was therefore used to water gardens and agricultural land, as in the previous year.

Volume of Process Wastewater [Table 3.10.7]

	2011	2012	2013	2014	2015
Volume of process wastewater (million m³)	72	65	63	66	61

The goal is to minimize emissions into wastewater. Total emissions of nitrogen compounds into wastewater fell by 26.1% in 2015. The main factors behind this reduction were the decrease in production at CropScience's Dormagen site in Germany and the fact that the denitrification process at Covestro's Baytown site in Texas in the United States operated without interruption again in 2015. Discharges of phosphates into wastewater rose by 2.0% in 2015. Total organic carbon (TOC) emissions, however, decreased by 3.3%.

Emissions into Water [Table 3.10.8]

	2011	2012	2013	2014	2015
Phosphorus (1,000 metric tons p.a.)	0.08	0.15	0.11	0.10	0.10
Nitrogen (1,000 metric tons p.a.)	0.53	0.70	0.69	0.76	0.56
Nitrogen (kg per metric ton of manufactured sales volume)	0.0486	0.0624	0.0620	0.0671	0.0483
TOC[1] (1,000 metric tons p.a.)	1.50	1.42	1.53	1.20	1.16
TOC (kg per metric ton of manufactured sales volume)	0.137	0.126	0.138	0.105	0.100
Heavy metals (1,000 metric tons p.a.)	0.0108	0.0098	0.0091	0.0063	0.0064
Inorganic salts (1,000 metric tons p.a.)	926	1,048	946	845	927
COD[2] (1,000 metric tons p.a.)	4.51	4.25	4.58	3.59	3.48

[1] Total organic carbon
[2] Chemical oxygen demand; calculated value based on TOC figures (TOC x 3 = COD)

10.5 Waste and Recycling

Systematic waste management minimizes material consumption and disposal volumes. Safe disposal channels with separation according to the type of waste and economically expedient recycling processes serve this purpose. Production fluctuations and building refurbishment/land remediation work also influence waste volumes and recycling paths.

In 2015, the total volume of waste generated rose by 4.9%. Although the volume of nonhazardous waste fell by 2.5%, the volume of hazardous waste generated rose by 11.1%. This contrast is largely due to the re-categorization of fluidized bed ash from the power plant at the Chempark Leverkusen site, which now has to be classified as hazardous waste. Increased production at the sites in Wuppertal, Germany, and Muttenz, Switzerland, also led to greater volumes of hazardous waste.

Waste Generated[1] [Table 3.10.9]

	2011	2012	2013	2014	2015
Total waste generated (1,000 metric tons p.a.)	958	1,014	899	896	940
Hazardous waste generated[2]	474	603	467	487	541
of which hazardous waste from production	354	397	417	442	488
Specific volume of hazardous production waste (%)	3.23	3.54	3.77	3.89	4.18

[1] Waste generated by Bayer only
[2] Definition of hazardous waste in accordance with the local laws in each instance

The volume of waste disposed of rose by 5.6%. This increase is mainly due to the construction of new production facilities at the Knapsack site in Germany. More information about the distribution of waste according to the different means of disposal is available in:

ONLINE ANNEX: 3-10.5-1

Waste by Means of Disposal [Table 3.10.9-1]

	2011	2012	2013	2014	2015
Total volume of waste disposed of[1] (1,000 metric tons p.a.)	**966**	**1,021**	**915**	**898**	**949**
Proportion removed to landfill (%)	38	36	32	28	26
Proportion incinerated (%)	33	33	38	40	39
Proportion recycled (%)	28	29	27	29	31
Others[2] (%)	1	2	2	3	4

[1] Bayer serves as a certified waste disposal plant operator at various sites. At these locations, Bayer disposes not only of its own waste but also of waste from third parties (companies not belonging to the Bayer Group). For that reason, the volume of waste disposed of differs slightly from the volume of waste generated by Bayer.
[2] E.g. passed on to third parties (providers/waste disposal companies)

In 2015, the volume of recycled waste was 295,826 metric tons. Expressed as a proportion of the total waste disposed of, this represented an increase from 29% in 2014 to 31% in 2015. Site-specific reasons such as changes to the product portfolio, other production volumes, variations in the intensity of construction measures and recycling projects were key to this.

Hazardous Waste[1] Generated by Means of Disposal [Table 3.10.9-2]

	2011	2012	2013	2014	2015
					1,000 metric tons p.a.
Total volume of hazardous waste generated[2]	**474**	**603**	**467**	**487**	**541**
Amount removed to landfill	122	175	53	65	75
Amount incinerated/recycled	352	428	414	422	466

[1] Waste generated by Bayer only
[2] Definition of hazardous waste in accordance with the local laws in each instance

RECYCLING

In addition to satisfying economic and environmental criteria, the recycling and treatment of our materials also has to comply with legal requirements. This results in restrictions, in particular in the areas of pharmaceuticals and crop protection. Throughout the Group, we are developing opportunities for recycling within the framework of legal regulations. Examples of recycling measures provide proof of Bayer's commitment to recycling.

ONLINE ANNEX: 3-10.5-2

Production-related recycling at HealthCare is conducted in line with the requirements of the relevant production site. When determining the best means of disposal, recycling options are explicitly included, and are to be considered preferable to landfilling or incineration.

Material-based recycling is important in CropScience's active ingredient and intermediate product production. For reasons of resource efficiency, solvents, catalysts and intermediates are repeatedly processed and returned to the production process. Since these are recycling steps that are closely linked with the process, there is no global regulation. Material-based recycling is regulated separately at each production site and production plant. In the global process development of active ingredients and intermediates, material recycling is considered an important development criterion. In accordance with CropScience's global Environment Policy, all CropScience sites are obliged to prevent, recycle and reduce waste and dispose of it safely and in line with good environmental practices.

The subgroups select the best means of disposal for any given waste type at the production site based on the applicable national or local legal requirements, the technical possibilities available on site, environmental protection aspects and the internal hierarchy of waste disposal.

No product-related recycling is possible for the HealthCare portfolio because pharmaceutical products are subject to strict quality requirements. Packaging materials are recycled in line with national regulations as part of the national infrastructure for waste disposal.

CropScience does not generally take back crop protection products it has sold. Packaging materials are disposed of or recycled in line with national legislation. In many countries where there is no legal regulation, the industry has set up a returns system in collaboration with other providers.

Returns of obsolete stocks of crop protection products are only conducted in individual cases where there is good reason. However, the crop protection product industry has set up voluntary initiatives in various countries that enable farmers to ensure obsolete stocks are disposed of safely. As part of its activities in the CropLife association, CropScience is working with the United Nations' Food and Agriculture Organization (FAO) and the World Bank to support the proper collection and disposal of obsolete stocks in Africa.

In its own production operations, Covestro also uses material recycled from plastic waste. These kinds of high-quality secondary raw materials are used to manufacture certain grades of engineering thermoplastics. A flame-retardant plastic compound for television set housings, for example, comprises 30% recycled PET water bottles.

The Global Sideline Business unit at Covestro sells unwanted plant and tools on the open market, thus feeding them back into circulation. Approximately 150 tangible assets were sold to third parties worldwide in 2015. Scrap metal from plants is returned to the material cycle. In 2015, this amounted to around 1,600 metric tons in Germany alone.

Covestro is actively committed to recycling through its involvement in associations such as PlasticsEurope and to the avoidance of plastic granule wastage in industrial plants through the Zero Pellet Loss initiative. The company is also a shareholder of BKV GmbH, German industry's competence platform for recycling plastic.

Using conventional recycling measures, Currenta was able to return approximately 45,000 metric tons of building materials, FGD gypsum and slag, 14,300 metric tons of metal and 15,800 metric tons of chemicals such as sulfuric acid and solvents to the material cycle in 2015.

10.6 Biodiversity

Our Group-wide biodiversity position takes into account influences on biodiversity throughout the entire value chain. In this position, we commit ourselves to the United Nations Convention on Biological Diversity and its Nagoya Protocol, which regulates access to genetic resources and the fair and equitable sharing of the benefits arising from their utilization. Our CropScience subgroup passed an internal regulation in 2015 to ensure that the company only acquires and uses genetic resources in harmony with international and applicable national legislation.

ONLINE ANNEX: 3-10.6-1

Biodiversity is essential for successful agriculture, as it promotes the resilience of ecosystems. Various ecological enhancement measures are under discussion to support resilient ecosystems, such as planting flower strips to provide a refuge for animals or the more extensive cultivation of slopes to protect against erosion. These measures can help farmers improve soil fertility and water regulation in their fields, or boost the pollination activities of insects and thus increase their yields.

HealthCare also attaches great importance to maintaining biological diversity. As a member of the Association of Research-Based Pharmaceutical Companies, it supports the association's position on the U.N. Convention on Biological Diversity. Among other things, this policy, which applies to all HealthCare sites, takes into account that the subgroup concentrates on the chemical synthesis of substances using state-of-the-art technologies in medicinal, combinatorial and computational chemistry. Research into natural substances is not a focal point of its work, accounting for less than 5% of research projects. If such substances are used during research into new pharmaceuticals, they are first checked with respect to the Convention on Biological Diversity.

Group-wide directives stipulate that new production sites must not be set up in areas that are protected by statutory requirements of the countries concerned relating to natural characteristics, biodiversity or other factors.

ONLINE ANNEX: 3-10.6-2

In 2013, Bayer Real Estate, the Bayer Group's real estate service provider, used its global site register to compare the geographical coordinates of relevant production sites against those of internationally recognized protected areas (ASEAN Heritage, Barcelona Convention, UNESCO-MAB Biosphere Reserve, Wetlands and World Heritage Convention and Ramsar Convention). This comparison revealed three sites that are less than three kilometers from the protected areas Schorren van de Benenden Schelde, Belgium; the Wadden Sea of Lower Saxony, Germany; and Blesbokspruit, South Africa, respectively. Owing to major portfolio changes in the Group (separation of Covestro, formerly MaterialScience, sale of the Diabetes Care business and acquisition of the consumer care business of Merck & Co., Inc.) we are planning a new coordinate comparison with an updated range of production sites in 2016.

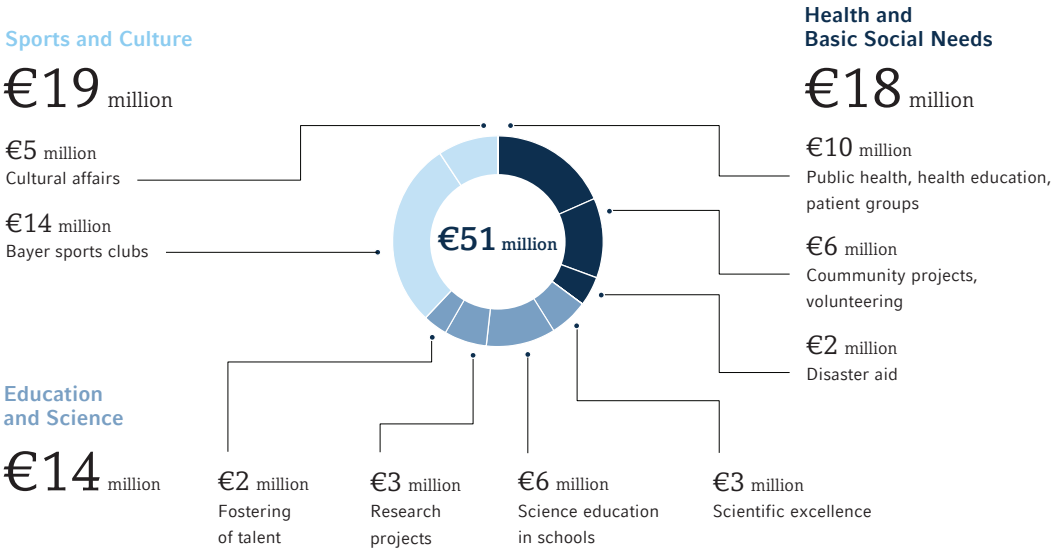
11. Social Commitment

Bayer's funding strategy focuses on people embarking on new approaches to problem-solving in the natural and life sciences and in the key areas of health, education and basic social needs, with the goal of sustainably improving living conditions. This also applies to a further focus area, sports and culture. With our support programs we see ourselves as investors, trendsetters and partners for initiatives and projects that have model character, a long-term effect and thus the potential to achieve systemic change.

The Foundation & Donations Management Department within the Corporate Office of Bayer AG is responsible for strategically aligning and coordinating our social commitment, as well as for monitoring and reporting activities. The Group-wide donation allocation and management regulations form the basis for this. The country companies, in collaboration with partner organizations such as nongovernmental organizations, bear responsibility for implementing a large number of the initiatives. An independent panel made up of internal and external judges generally decides how project funding is allocated.

In 2015, we invested a total of €51 million (2014: €49 million) in charitable activities worldwide. This was aimed at improving the quality of life at the company's various locations and contributing to solving social challenges.

Social Commitment in 2015 [Graphic 3.11.1]



Further information can be found in

ONLINE ANNEX: 3-11-1

HEALTH AND BASIC SOCIAL NEEDS

In 2015, the Bayer Cares Foundation awarded the Aspirin Social Award to the Jourvie charitable initiative. The first-place prize money of €15,000 will enable the already successful app for supporting the treatment of eating disorders to be further developed and disseminated. The foundation entered into a collaboration with the "Discovering Hands" initiative, which was a prize-winner in 2014. This will introduce this exemplary social medicine project, which is already established in Germany, to other countries. Blind women, trained as Medical Tactile Examiners, use their extraordinary sense of touch to help with the early diagnosis of breast cancer in women. Colombia is the first pilot country outside Germany. The Latin American Development Bank is another project partner.

Since the Bayer Volunteering Program began in Germany in 2007 and worldwide in 2013, the Bayer Cares Foundation has provided support for 550 volunteering projects in 65 countries. Through these projects, employees and citizens work toward improving living conditions in and around the company's sites. In 2015, the foundation brought 100 projects in 38 countries into the program, due primarily to their innovative approaches, providing them with a total of around €304,000 in funding.

Bayer is involved in an initiative aimed at eliminating or stemming the incidence of 10 neglected tropical diseases, which threaten the lives of 1.4 billion people, by 2020. We provide medication to tackle these diseases and participate in collaborations for developing new medicines. The World Health Organization (WHO), governments, nongovernmental organizations and other companies are partners in this global initiative. Focal points that fit in with Bayer's product portfolio are Chagas disease, African sleeping sickness, dengue and river blindness.

For more than 10 years, we have donated our active ingredients for the treatment of African sleeping sickness and Chagas disease, which is widespread in Latin America, to the WHO free of charge. In 2015, we again supplied one million Lampit™ tablets (active ingredient: nifurtimox 120 mg) to treat Chagas disease, as well as providing US$300,000 for logistics and distribution. We are also currently developing a nifurtimox tablet with a lower dosage that will make it easier to treat children with Chagas disease.

We are pleased to report that the number of patients affected by the type of African sleeping sickness primarily found in eastern and southern Africa is in steady decline. We were therefore able to reduce the amount of Germanin™ supplied to the WHO to 10,000 ampoules worth €114,000 in 2015. We again provided 300,000 tablets of the active ingredient nifurtimox to be used in a combination therapy with an active ingredient from another manufacturer to treat the most widespread, West African version of sleeping sickness. We also came to an agreement with the WHO to further expand support for patients in the Democratic Republic of Congo, which is the country most severely affected by sleeping sickness.

In a new product development partnership with the Drugs for Neglected Diseases Initiative, we are examining whether the active ingredient emodepside, which is currently used in veterinary medicine, could also be used to treat river blindness in humans and thus achieve a significant shortening of treatment time.

In 2015, Bayer was once again active in supporting people experiencing acute hardship as a result of natural disasters. For example, we donated medication and money with a total value of €400,000 for people affected by the earthquake in Nepal. We contributed money and water purification tablets with a total value of €25,000 to help victims of the floods in Myanmar.

We donated antibiotics with the total value of just under €1.9 million to the aid organization Health Partners International of Canada (HPIC) for the treatment of people in crisis areas and humanitarian emergencies.

We also made drugs with a market value of just under €1.5 million available free of charge to aid organizations and authorities in Turkey, Greece and Austria to treat refugees.

EDUCATION AND SCIENCE

The Bayer Science & Education Foundation again awarded prizes in 2015 with the primary goal of recognizing and raising the profile of pioneering work in life sciences and basic medical research.

Winner of the Hansen Family Award 2015 is the French infection researcher Professor Emmanuelle Charpentier from the Helmholtz Center in Braunschweig, Germany. She is responsible for key insights in the field of genome editing. In 2015, the Bayer Early Excellence in Science Award and the Bayer Thrombosis Research Award – the two prizes that promote young scientists – went to young researchers from Germany and the United States for their successes in the fields of medicine, biology and chemistry, and specifically in thrombosis research.

The company awarded 187 scholarships to talented students, postgraduates and trainees in the fields of natural, life and agricultural science and medicine, with the particular goal of enabling projects abroad. With regard to our support of schools, the "Making Science Make Sense" initiative in the United States celebrated its 20th anniversary. This program involves several hundred employees volunteering regularly to visit elementary schools and use everyday experiments to communicate the fascination and practical importance of science. Bayer implemented similar programs also aimed at young people in more than 20 countries in 2015.

GRI
G4-26

To this end, our country companies cooperated with museums, universities and other educational institutions, invited schoolchildren to the company's own student laboratories or took "research trucks" to the schools.

In Germany, the focus was on funding innovative teaching projects with a total of €500,000 for 63 specific measures at 57 schools and other educational institutions in 31 towns and cities, plus the awarding of travel scholarships and support of competitions for school students. In addition, the Humboldt Bayer Mobil, a research laboratory on wheels, regularly visited schools and the four Baylab student laboratories offered school classes a professional infrastructure. More than 20,000 schoolchildren used these facilities alone in 2015.

Given the huge influx of refugees into Germany, the Bayer Science & Education Foundation has expanded its range of scientific school education programs to also target refugee children. Along with the Berlin Senate and other educational organizations, the foundation launched a unique pilot project – the Science4Life Academy.

For the first time, teaching materials specifically for children with no knowledge of German are being developed and introduced into science lessons, and teachers are receiving targeted training. Our company also offers talented schoolchildren the chance of individualized support in the form of internships and mentoring. Our other activities to support refugees include a course preparing refugees aged between 18 and 26 for work, involving language training and careers advice.

SPORTS AND CULTURE

In 2015, Bayer further expanded its range of cultural activities. We continued to focus particularly on encouraging young talent, and brought new artists into the stART program. Another key point was to enable young people to have greater access to theater. Bayer Arts & Culture also intensified dialogue with the public. In total, Bayer staged around 120 events in the fields of music, dance, theater and the fine arts in 2015.

The "Versionale" competition for theater direction, for example, challenged creative theatrical and cultural minds for the first time to develop short stage works on the topic of "Science For A Better Life."

The Bayer clubs again made a key contribution to the broad range of sporting activities near the German sites in North Rhine-Westphalia. The major clubs also became more intensely involved as professional service providers for the company's occupational health management. In 2015, the company provided funding of some €14 million for recreational, disabled and competitive sports activities.

Bayer's involvement in professional soccer at Bayer 04 Leverkusen GmbH is not part of its social sports sponsorship activities because it belongs to the company's image advertising.

Report on Economic Position

FISCAL 2015:

Another record year for Bayer

// Focus on the Life Sciences following the successful stock market flotation of Covestro
// Substantial sales and earnings increases at HealthCare
// Good business development at CropScience despite a weaker market environment
// Covestro posts strong earnings improvement
// Group sales €46.3 billion (Fx & portfolio adj. +2.7%)
// EBIT €6.3 billion (+15.8%)
// EBITDA before special items €10.3 billion (+18.2%)
// Net income €4.1 billion (+20.0%)
// Core earnings per share €6.83 (+16.0%)
// Forecast for 2016: further growth in sales and earnings

12. Overview of Sales, Earnings and Financial Position

Group targets 2015: Profitable growth

See Chapter 1.4 for Group targets

TARGET ATTAINMENT 2015

	Forecast 2015[1]	Adjusted forecast 2015[2]	Target attainment
Group sales	Low-single-digit percentage increase[3]	Unchanged	2.7% increase[3]
	Approx. €46 billion	Unchanged	€46.3 billion
EBITDA before special items	Low- to mid-teens percentage increase	High-teens percentage increase	18.2% increase
Core earnings per share	Low-teens percentage increase	High-teens percentage increase	16.0% increase

[1] Issued in February 2015
[2] Issued in October 2015
[3] Currency- and portfolio-adjusted

FULL YEAR 2015

Bayer had a very successful year in 2015, both strategically and operationally. We achieved important milestones on the path to becoming a Life Science company: In October 2015, we floated our subsidiary Covestro (formerly MaterialScience) – in which we currently hold around 69% – on the stock exchange. With the new organizational structure and the realignment of the Board of Management, which took effect on January 1, 2016, we set the course for the company's further development. We also successfully continued integrating the recently acquired consumer care businesses in our Consumer Health segment and continued to invest heavily in our research and development pipeline.

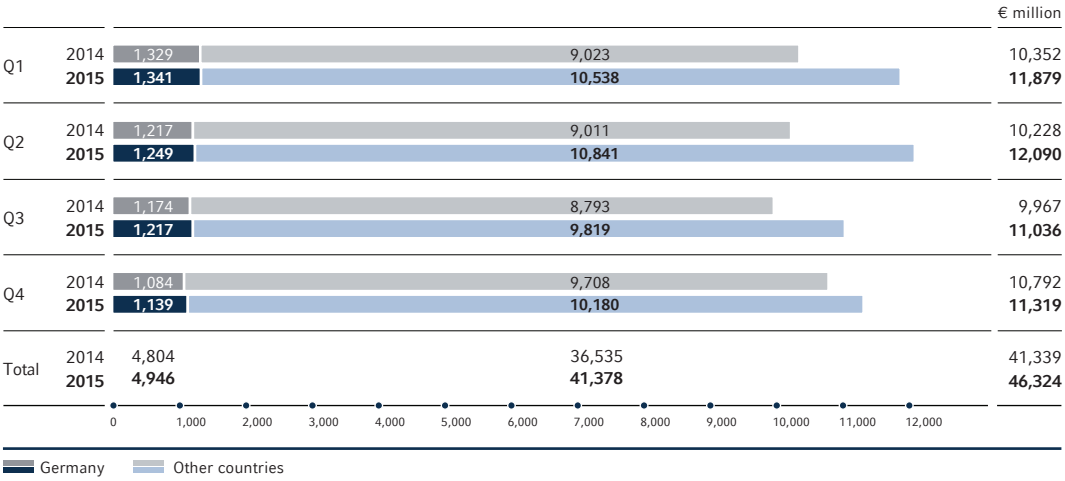
Our operating performance marked another new record in 2015. We registered higher sales and substantial earnings growth of around 18%, supported also by positive currency effects. HealthCare showed a convincing performance, with strong sales and earnings growth. This was chiefly attributable to the very good development of our recently launched pharmaceutical products and to expanded business in all Consumer Health divisions. In particular, the products added through the recent acquisitions contributed additionally to growth at Consumer Care. Despite a weaker market environment, sales at CropScience were up against the prior year. Earnings also rose. Covestro significantly raised earnings, due mainly to lower raw material costs, while sales receded as expected. Core earnings per share of the Bayer Group advanced by 16%.

Changes in Sales [Table 3.12.1]

	2014	2015
	%	%
Volume	+6.8	+4.4
Price	+0.4	−1.7
Currency	−2.8	+5.9
Portfolio	+0.8	+3.5
Total	**+5.2**	**+12.1**

Group **sales** advanced by 2.7% on a currency- and portfolio-adjusted basis (Fx & portfolio adj.) in 2015, to €46,324 million (reported: +12.1%; 2014: €41,339 million). Sales of HealthCare improved by 8.1% (Fx & portfolio adj.; reported: +19.9%). CropScience sales gained 1.7% (Fx & portfolio adj.; reported: +9.2%) against the prior year. Sales at Covestro declined by 5.1% (Fx & portfolio adj.; reported: +2.8%).

Bayer Group Quarterly Sales [Graphic 3.12.1]

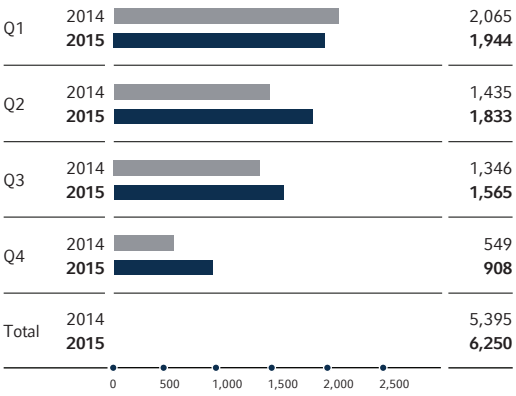


2014 figures restated

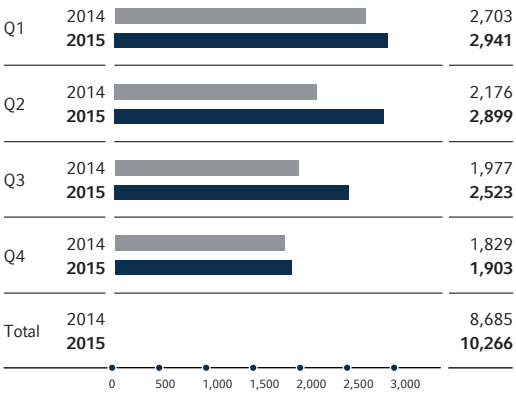
EBIT of the Bayer Group increased by 15.8% to €6,250 million (2014: €5,395 million) after net special charges of €819 million (2014: €438 million). The special charges mainly included €280 million in expenses for the consolidation of production sites, €227 million in integration costs for acquired businesses and €212 million in expenses connected with the carve-out and stock market flotation of Covestro. Further charges included €202 million in costs for efficiency improvements, €91 million for the revaluation of other receivables, and impairment losses of approximately €40 million in connection with a development project. These amounts were partly offset in EBIT by a special gain of around €300 million from a litigation in connection with a breach of contract and patent infringement by Dow AgroSciences (DAS). EBIT before special items rose by 21.2% to €7,069 million (2014: €5,833 million).

EBITDA before special items increased by 18.2% to €10,266 million (2014: €8,685 million). The good sales development was accompanied by higher R&D expenses (up by around €740 million on the prior year). Positive currency effects buoyed earnings by about €680 million. EBITDA before special items at HealthCare improved by 19.8% to €6,419 million (2014: €5,357 million). This increase was chiefly attributable to the very good development of business at Pharmaceuticals and Consumer Health – including particularly the contribution from the acquired businesses at Consumer Care – and currency effects of around €250 million. EBITDA before special items of CropScience rose by 2.4% to €2,416 million (2014: €2,360 million), mainly because of higher volumes and a positive currency effect of about €220 million. EBITDA before special items of Covestro rose by a substantial 39.8% to €1,659 million (2014: €1,187 million), primarily due to lower raw material and energy costs and positive currency effects of €240 million.

Bayer Group
Quarterly EBIT [Graphic 3.12.2]



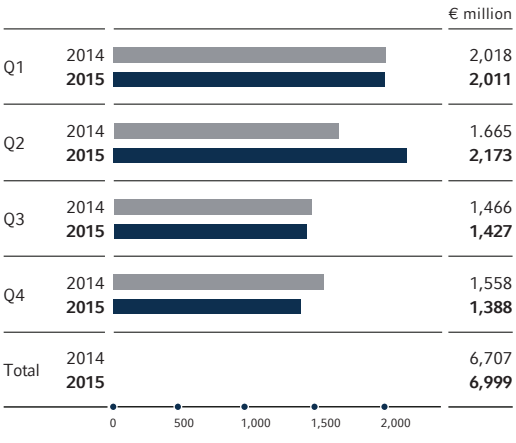
Bayer Group
Quarterly EBITDA Before Special Items [Graphic 3.12.3]



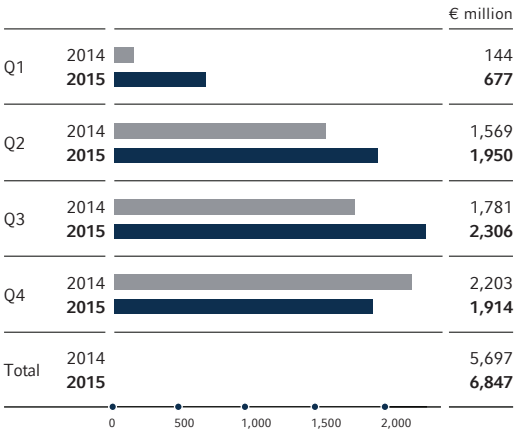
2014 figures restated

After a **financial result** of minus €1,005 million (2014: minus €981 million), **income before income taxes** was €5,245 million (2014: €4,414 million). After tax expense of €1,227 million (2014: €1,071 million), income from discontinued operations after taxes and noncontrolling interest, **net income** for 2015 came in at €4,110 million (2014: €3,426 million). Earnings per share were €4.97 (2014: €4.14). Core earnings per share from continuing operations advanced by 16.0% to €6.83 (2014: €5.89), calculated as explained in Chapter 14.3 "Core Earnings Per Share."

Gross Cash Flow by Quarter [Graphic 3.12.4]



Net Cash Flow by Quarter [Graphic 3.12.5]



2014 figures restated

Gross cash flow from continuing operations climbed by 4.4% in 2015 to €6,999 million (2014: €6,707 million), mainly because of the improvement in EBITDA. Net cash flow (total) rose by 18.6% to €6,890 million (2014: €5,810 million) due to a substantial decrease in additional cash tied up in working capital. In 2015, we paid income taxes amounting to €1,699 million (2014: €1,835 million). We reduced net financial debt by €2.2 billion against December 31, 2014, to €17.4 billion. The net defined benefit liability for post-employment benefits – the difference between benefit obligations and plan assets – decreased from €12.2 billion to €10.8 billion over the same period, mainly due to a rise in long-term capital market interest rates for high-quality corporate bonds.

Total assets as of December 31, 2015, increased by 5.2% to €73.9 billion. Noncurrent assets rose by 4.4% to €50.1 billion due mainly to currency effects. The carrying amount of current assets climbed to €23.8 billion, mainly driven by higher trade accounts receivable. Equity increased by €5.2 billion to €25.4 billion. This was primarily attributable to the net income of €4.1 billion, the €1.5 billion capital increase at Covestro due to the stock market flotation, the €0.8 billion decline – recognized outside profit or loss – in post-employment benefit obligations and the exchange differences of €0.7 billion. The dividend payment of €1.9 billion had an opposing effect. Liabilities decreased by €1.5 billion compared with December 31, 2014, to €48.5 billion.

Key Data by Subgroup and Segment [Table 3.12.2]

	Sales		EBIT		EBITDA before special items[1]	
	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	**19,075**	**22,874**	**3,470**	**4,050**	**5,357**	**6,419**
Pharmaceuticals	12,052	13,745	2,371	2,807	3,699	4,195
Consumer Health	7,023	9,129	1,099	1,243	1,658	2,224
CropScience	**9,494**	**10,367**	**1,806**	**2,103**	**2,360**	**2,416**
Covestro	**11,651**	**11,982**	**555**	**635**	**1,187**	**1,659**
Reconciliation	**1,119**	**1,101**	**(436)**	**(538)**	**(219)**	**(228)**
Group	**41,339**	**46,324**	**5,395**	**6,250**	**8,685**	**10,266**

2014 figures restated
[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."

FOURTH QUARTER OF 2015

Group **sales** in the fourth quarter of 2015 rose by 2.4% (Fx & portfolio adj.) to €11,319 million (reported: +4.9%). Sales of HealthCare gained 8.5% (Fx & portfolio adj.) to €5,811 million (reported: +8.6%). Business in the Pharmaceuticals segment expanded by 9.6% (Fx & portfolio adj.) to €3,571 million (reported: +9.2%), driven by the encouraging development of our recently launched products. Sales at Consumer Health came in 6.9% ahead of the prior-year quarter at €2,240 million (reported: +7.7%). CropScience sales rose by 5.3% (Fx & portfolio adj.) to €2,439 million (reported: +11.1%) due mainly to increases at Crop Protection/Seeds. Sales of Covestro fell by 10.6% (Fx & portfolio adj.) to €2,774 million (reported: –5.9%), primarily because of much lower selling prices. On the other hand, volumes increased slightly.

EBIT of the Bayer Group improved by a significant 65.4% in the fourth quarter of 2015 to €908 million (Q4 2014: €549 million), reflecting special charges of €116 million (Q4 2014: €442 million). The special charges mainly included €138 million in expenses for the consolidation of production sites, €114 million for efficiency improvement measures, €50 million in integration costs for acquired businesses and €49 million in expenses in connection with the carve-out and stock market flotation of Covestro. Further charges of approximately €40 million related to the impairment of a research project. These amounts were partly offset by a gain of around €300 million from a litigation. EBIT before special items increased by 3.3% to €1,024 million (Q4 2014: €991 million).

EBITDA before special items improved in the fourth quarter of 2015 by 4.0% to €1,903 million (Q4 2014: €1,829 million). This good business development, especially at HealthCare, was accompanied by higher R&D and selling expenses. Positive currency effects contributed €200 million to earnings. HealthCare registered a 7.2% improvement in EBITDA before special items to €1,511 million (Q4 2014: €1,409 million). At CropScience, EBITDA before special items fell by 9.5% to €334 million (Q4 2014: €369 million). Earnings of Covestro climbed by a substantial 18.4% to €257 million (Q4 2014: €217 million).

After a **financial result** of minus €164 million (Q4 2014: minus €347 million), **income before income taxes** was €744 million (Q4 2014: €202 million). The financial result mainly comprised interest cost of €67 million (Q4 2014: €111 million) for pension and other provisions, exchange losses of €67 million (Q4 2014: €66 million) and net interest expense of €46 million (Q4 2014: €148 million). The decline in net interest expense resulted primarily from interest income of €109 million related to a legal claim. After income tax expense of €163 million, income from discontinued operations after taxes and noncontrolling interest, **net income** in the fourth quarter of 2015 came to €613 million (Q4 2014: €224 million). Earnings per share improved to €0.74 (Q4 2014: €0.27). Core earnings per share from continuing operations fell to €1.07 (Q4 2014: €1.17). Tax income was recorded in the previous year.

See Chapter 14.3 for an explanation of the calculation

Gross cash flow from continuing operations of the Bayer Group receded by 10.9% to €1,388 million (Q4 2014: €1,558 million). Net cash flow (total) moved back by 15.8% to €1,877 million (Q4 2014: €2,230 million). The decline was mainly due to the deferred one-time payment of €793 million in the previous year in connection with the sGC collaboration with Merck & Co., Inc., United States. In the fourth quarter of 2015 we paid income taxes amounting to €482 million (Q4 2014: €415 million). Net financial debt fell by €1.9 billion in the fourth quarter of 2015 to €17.4 billion (September 30, 2015: €19.3 billion), largely as a result of cash inflows from operating activities and the stock market flotation of Covestro. The net defined benefit liability for post-employment benefits decreased by €0.8 billion against September 30, 2015, to €10.8 billion, mainly due to a rise in long-term capital market interest rates for high-quality corporate bonds.

Key Data by Subgroup and Segment [Table 3.12.3]

	Sales		EBIT		EBITDA before special items[1]	
	4th Quarter 2014	4th Quarter 2015	4th Quarter 2014	4th Quarter 2015	4th Quarter 2014	4th Quarter 2015
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	**5,351**	**5,811**	**550**	**777**	**1,409**	**1,511**
Pharmaceuticals	3,271	3,571	375	551	939	991
Consumer Health	2,080	2,240	175	226	470	520
CropScience	**2,195**	**2,439**	**191**	**478**	**369**	**334**
Covestro	**2,948**	**2,774**	**43**	**(79)**	**217**	**257**
Reconciliation	**298**	**295**	**(235)**	**(268)**	**(166)**	**(199)**
Group	**10,792**	**11,319**	**549**	**908**	**1,829**	**1,903**

2014 figures restated
[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."

13. Business Development by Subgroup, Segment and Region

13.1 HealthCare

Key Data – HealthCare [Table 3.13.1]

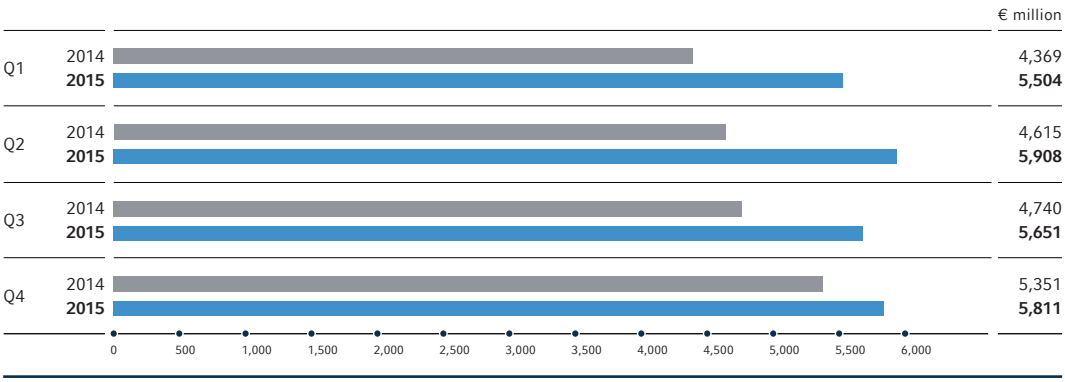
	4th Quarter 2014	4th Quarter 2015	Change		Full Year 2014	Full Year 2015	Change	
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%	Fx & p adj. %
Sales	**5,351**	**5,811**	**+8.6**	**+8.5**	**19,075**	**22,874**	**+19.9**	**+8.1**
Change in sales								
Volume	+5.8%	+8.1%			+6.4%	+7.4%		
Price	+2.0%	+0.4%			+1.1%	+0.7%		
Currency	0.0%	0.0%			−3.7%	+4.5%		
Portfolio	+5.5%	+0.1%			+1.8%	+7.3%		
Sales								
Pharmaceuticals	3,271	3,571	+9.2	+9.6	12,052	13,745	+14.0	+9.9
Consumer Health	2,080	2,240	+7.7	+6.9	7,023	9,129	+30.0	+5.1
	€ million	€ million	%	Fx. adj. %	€ million	€ million	%	Fx. adj. %
Sales by region								
Europe	1,832	1,923	+5.0	+5.9	6,870	7,404	+7.8	+8.8
North America	1,514	1,724	+13.9	+2.5	5,017	7,159	+42.7	+25.7
Asia/Pacific	1,215	1,376	+13.3	+6.3	4,427	5,342	+20.7	+10.3
Latin America/Africa/Middle East	790	788	−0.3	+29.9	2,761	2,969	+7.5	+21.5
EBIT	**550**	**777**	**+41.3**		**3,470**	**4,050**	**+16.7**	
Special items	*(376)*	*(264)*			*(331)*	*(600)*		
***EBIT before special items*[1]**	***926***	***1,041***	***+12.4***		***3,801***	***4,650***	***+22.3***	
EBITDA[1]	**1,062**	**1,315**	**+23.8**		**5,059**	**5,914**	**+16.9**	
Special items	*(347)*	*(196)*			*(298)*	*(505)*		
***EBITDA before special items*[1]**	***1,409***	***1,511***	***+7.2***		***5,357***	***6,419***	***+19.8***	
EBITDA margin before special items[1]	26.3%	26.0%			28.1%	28.1%		
Gross cash flow[2]	**1,217**	**820**	**−32.6**		**3,898**	**4,121**	**+5.7**	
Net cash flow[2]	**2,158**	**1,094**	**−49.3**		**4,331**	**4,321**	**−0.2**	

2014 figures restated
Fx & p adj. = currency- and portfolio-adjusted; Fx adj. = currency-adjusted
[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 14.5 "Liquidity and Capital Expenditures of the Bayer Group."

PHOTO // The picture above, taken with a scanning electron microscope, shows a blood clot – magnified about 7,500 times.

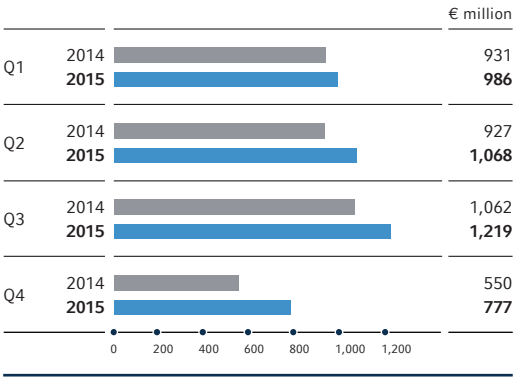
Sales of the **HealthCare** subgroup rose by 8.1% (Fx & portfolio adj.) in 2015, to €22,874 million (reported: +19.9%). This encouraging growth was driven by our recently launched pharmaceutical products. Business expanded in all divisions of the Consumer Health segment. The considerable reported sales increase was chiefly attributable to business with products acquired from Merck & Co., Inc., United States, and to currency effects.

HealthCare Quarterly Sales [Graphic 3.13.1]

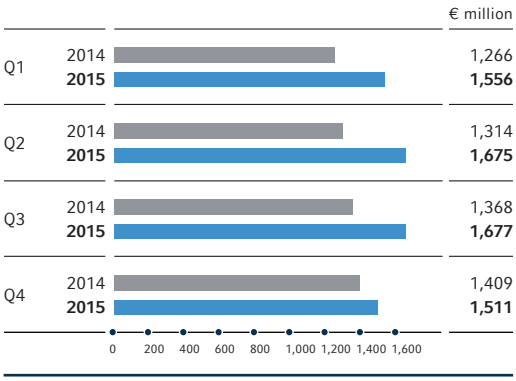


EBIT of HealthCare advanced by 16.7% in 2015 to €4,050 million. This figure reflected special charges of €600 million (2014: €331 million). EBIT before special items improved by a clear 22.3% to €4,650 million. We raised **EBITDA** before special items by a substantial 19.8% to €6,419 million. This earnings growth resulted mainly from the very favorable development of business at Pharmaceuticals and Consumer Health – at Consumer Health especially due to the contributions from the acquired businesses – and from positive currency effects of about €250 million. Earnings were diminished by increased investment in research and development at Pharmaceuticals and higher selling expenses at Consumer Health.

HealthCare Quarterly EBIT [Graphic 3.13.2]



HealthCare Quarterly EBITDA Before Special Items [Graphic 3.13.3]



PHARMACEUTICALS

Key Data – Pharmaceuticals [Table 3.13.2]

	4th Quarter 2014	4th Quarter 2015	Change		Full Year 2014	Full Year 2015	Change	
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%	Fx & p adj. %
Sales	**3,271**	**3,571**	**+9.2**	**+9.6**	**12,052**	**13,745**	**+14.0**	**+9.9**
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Sales by region								
Europe	1,176	1,294	+10.0	+10.0	4,396	4,869	+10.8	+11.0
North America	735	823	+12.0	+2.7	2,728	3,363	+23.3	+7.6
Asia/Pacific	884	1,002	+13.3	+6.0	3,278	3,868	+18.0	+7.2
Latin America/Africa/Middle East	476	452	−5.0	+25.6	1,650	1,645	−0.3	+15.9
EBIT	**375**	**551**	**+46.9**		**2,371**	**2,807**	**+18.4**	
Special items	*(290)*	*(149)*			*(286)*	*(254)*		
***EBIT before special items*[1]**	***665***	***700***	***+5.3***		***2,657***	***3,061***	***+15.2***	
EBITDA[1]	**678**	**884**	**+30.4**		**3,446**	**3,987**	**+15.7**	
Special items	*(261)*	*(107)*			*(253)*	*(208)*		
***EBITDA before special items*[1]**	***939***	***991***	***+5.5***		***3,699***	***4,195***	***+13.4***	
EBITDA margin before special items[1]	28.7%	27.8%			30.7%	30.5%		
Gross cash flow[2]	**843**	**546**	**−35.2**		**2,745**	**2,737**	**−0.3**	
Net cash flow[2]	**1,719**	**784**	**−54.4**		**3,266**	**2,863**	**−12.3**	

Fx & p adj. = currency- and portfolio-adjusted; Fx. adj. = currency-adjusted
[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 14.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Pharmaceuticals** segment climbed by a substantial 9.9% (Fx & portfolio adj.) to €13,745 million. This very good performance was driven by our recently launched products Xarelto™, Eylea™, Stivarga™, Xofigo™ and Adempas™, which posted combined sales of €4,231 million (2014: €2,908 million). Our Pharmaceuticals business registered encouraging growth in all regions on a currency-adjusted basis. Business developed especially well in Germany, Japan and the United States.

Best-Selling Pharmaceuticals Products [Table 3.13.3]

	4th Quarter 2014	4th Quarter 2015		Change	Full Year 2014	Full Year 2015		Change
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Xarelto™	516	650	+26.0	+27.6	1,679	2,252	+34.1	+34.2
Eylea™	219	354	+61.6	+58.0	759	1,228	+61.8	+57.4
Kogenate™	301	286	−5.0	−6.0	1,109	1,155	+4.1	−1.1
Mirena™ product family	225	226	+0.4	−5.2	819	968	+18.2	+5.7
Nexavar™	202	231	+14.4	+10.9	773	892	+15.4	+7.4
Betaferon™/Betaseron™	191	190	−0.5	−4.6	823	824	+0.1	−8.1
YAZ™/Yasmin™/Yasminelle™	198	168	−15.2	−3.8	768	706	−8.1	−4.7
Adalat™	153	152	−0.7	+2.2	588	633	+7.7	+1.2
Aspirin™ Cardio	130	131	+0.8	+2.3	486	524	+7.8	+2.3
Glucobay™	133	142	+6.8	−1.6	443	523	+18.1	+2.4
Avalox™/Avelox™	96	85	−11.5	+1.3	381	379	−0.5	−2.3
Stivarga™	63	77	+22.2	+12.4	224	313	+39.7	+24.5
Xofigo™	29	69	+137.9	+110.5	157	257	+63.7	+43.2
Levitra™	56	61	+8.9	+11.1	245	226	−7.8	−8.0
Cipro™/Ciprobay™	52	52	0.0	+6.8	191	182	−4.7	−3.2
Total	**2,564**	**2,874**	**+12.1**	**+11.8**	**9,445**	**11,062**	**+17.1**	**+11.8**
Proportion of Pharmaceuticals sales	78%	80%			78%	80%		

2014 figures restated
Fx adj. = currency-adjusted

Sales of our oral anticoagulant Xarelto™ were up substantially in 2015, mainly as a result of expanded volumes in Germany and Japan. We registered a strong sales gain in the United States, where Xarelto™ is marketed by a subsidiary of Johnson & Johnson. Following its approval in additional indications, sales of our eye medicine Eylea™ posted substantial gains, particularly in Europe and Japan. Our cancer drug Stivarga™ benefited from positive development in the United States and from the reversal of a rebate provision in France. An encouraging contribution to sales growth was made by our cancer drug Xofigo™, thanks primarily to the expansion of volumes in the United States. Sales of Adempas™ (2015: €181 million; 2014: €89 million) to treat various forms of pulmonary hypertension rose substantially, especially in the United States. This figure reflects the proportionate recognition of the one-time payment resulting from the sGC collaboration with Merck & Co., Inc., United States.

Growth in sales of the hormone-releasing intrauterine devices of the Mirena™ product family – Mirena™ and Jaydess™/Skyla™ – resulted especially from higher demand in the United States. The cancer drug Nexavar™ posted sales gains, particularly in the United States and Germany. Adalat™ for the treatment of hypertension and coronary heart disease, Aspirin™ Cardio for secondary prevention of heart attacks and our oral diabetes treatment Glucobay™ continued to benefit from strong demand in China.

Sales of our blood-clotting medicine Kogenate™ were down slightly year on year, receding by 1.1% (Fx adj.), due mainly to the temporary use of production capacities to develop our next-generation hemophilia medicines. Increased competition caused sales of our multiple sclerosis drug Betaferon™/Betaseron™ to decline in all regions, mainly Europe and the United States. Business with our YAZ™/Yasmin™/Yasminelle™ oral contraceptives was held back especially by generic competition in Europe and the United States. Sales of the antibiotic Avalox™/Avelox™ fell, particularly in Europe and the United States, following the expiration of patent protection during 2014. Sales of the erectile dysfunction treatment Levitra™ also receded.

EBIT of the **Pharmaceuticals** segment rose by a substantial 18.4% in 2015 to €2,807 million. Special charges of €254 million (2014: €286 million) mostly comprised €126 million for efficiency improvement measures, €67 million for the revaluation of other receivables and €43 million for the impairment loss on a research project. EBIT before special items increased by 15.2% to €3,061 million. **EBITDA** before special items improved by 13.4% to €4,195 million. This earnings increase was primarily attributable to the very good development of business, particularly for our recently launched products, and to positive currency effects of about €140 million. As expected, earnings were diminished by higher research and development expenses.

CONSUMER HEALTH

Key Data – Consumer Health [Table 3.13.4]

	4th Quarter 2014	4th Quarter 2015		Change	Full Year 2014	Full Year 2015		Change
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%	Fx & p adj. %
Sales	**2,080**	**2,240**	**+7.7**	**+6.9**	**7,023**	**9,129**	**+30.0**	**+5.1**
Consumer Care	1,384	1,506	+8.8	+9.8	4,245	6,076	+43.1	+6.1
Animal Health	300	319	+6.3	+3.0	1,318	1,490	+13.1	+4.5
Medical Care[1]	396	415	+4.8	0.0	1,460	1,563	+7.1	+2.9
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Sales by region								
Europe	656	629	−4.1	−1.4	2,474	2,535	+2.5	+4.9
North America	779	901	+15.7	+2.3	2,289	3,796	+65.8	+47.3
Asia/Pacific	331	374	+13.0	+7.3	1,149	1,474	+28.3	+19.3
Latin America/Africa/Middle East	314	336	+7.0	+36.3	1,111	1,324	+19.2	+29.8
EBIT	**175**	**226**	**+29.1**		**1,099**	**1,243**	**+13.1**	
Special items	*(86)*	*(115)*			*(45)*	*(346)*		
EBIT before special items[2]	***261***	***341***	***+30.7***		***1,144***	***1,589***	***+38.9***	
EBITDA	**384**	**431**	**+12.2**		**1,613**	**1,927**	**+19.5**	
Special items	*(86)*	*(89)*			*(45)*	*(297)*		
EBITDA before special items[2]	***470***	***520***	***+10.6***		***1,658***	***2,224***	***+34.1***	
EBITDA margin before special items[2]	22.6%	23.2%			23.6%	24.4%		
Gross cash flow[3]	**374**	**274**	**−26.7**		**1,153**	**1,384**	**+20.0**	
Net cash flow[3]	**439**	**310**	**−29.4**		**1,065**	**1,458**	**+36.9**	

2014 figures restated
Fx & p adj. = currency- and portfolio-adjusted; Fx adj. = currency-adjusted
[1] Includes the business with contrast agents and medical devices
[2] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."
[3] For definition see Chapter 14.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Consumer Health** segment advanced by 5.1% (Fx & portfolio adj.) in 2015 to €9,129 million. All divisions contributed to this growth. The significant reported increase in sales in the Consumer Care Division resulted from the products added through the recent acquisitions.

Best-Selling Consumer Health Products [Table 3.13.5]

	4th Quarter 2014	4th Quarter 2015	Change		Full Year 2014	Full Year 2015	Change	
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Claritin™ (Consumer Care)[1]	83	134	+61.4	+55.5	–	627	.	.
Advantage™ product family (Animal Health)	105	104	−1.0	−8.0	495	547	+10.5	−1.3
Aspirin™ (Consumer Care)[2]	125	128	+2.4	+0.3	441	473	+7.3	+1.3
Aleve™ (Consumer Care)	105	105	0.0	+5.8	357	413	+15.7	+4.8
Bepanthen™/Bepanthol™ (Consumer Care)	85	85	0.0	+10.1	346	355	+2.6	+11.5
Ultravist™ (Medical Care)	84	83	−1.2	+0.5	302	318	+5.3	+2.1
Gadovist™/Gadavist™ (Medical Care)	65	79	+21.5	+18.2	233	290	+24.5	+17.6
Canesten™ (Consumer Care)	60	66	+10.0	+44.1	253	267	+5.5	+17.3
Dr Scholl's™ (Consumer Care)[3]	47	62	+31.9	+19.0	–	253	.	.
Alka-Seltzer™ (Consumer Care)	74	81	+9.5	+0.5	225	251	+11.6	−1.7
Total	**833**	**927**	**+11.3**	**+12.1**	**2,652**	**3,794**	**+43.1**	**+5.4**
Proportion of Consumer Health sales	40%	41%			38%	42%		

Fx adj. = currency-adjusted
2014 figures restated
[1] Product acquired from Merck & Co., Inc.
[2] Total sales of Aspirin™, also including Aspirin™ Cardio, which is reflected in sales of the Pharmaceuticals segment, increased by 7.6% (Fx adj. 1.8%) in 2015 to €997 million (2014: €927 million). Total sales of this product in the fourth quarter of 2015 climbed by 2.0% (Fx adj. 1.3%) to €260 million (Q4 2014: €255 million).
[3] Product acquired from Merck & Co., Inc.; trademark rights and distribution only in certain countries outside the European Union

Business in the **Consumer Care** Division improved by 6.1% (Fx & portfolio adj.) to €6,076 million. Sales of our analgesic Aspirin™ were up slightly against the prior year, due particularly to gains in Latin America and Europe that more than offset the decline in the United States. We grew sales of our analgesic Aleve™, mainly because of price and volume increases in Latin America/Africa/Middle East. Our skincare product Bepanthen™/Bepanthol™ posted considerably higher sales, particularly in the Emerging Markets. Business with our antifungal product Canesten™ showed pleasing development thanks to expanded volumes in all regions. The Alka-Seltzer™ family of products to treat gastric complaints and cold symptoms registered a decline in demand particularly in the United States that was due partly to a weaker cold season.

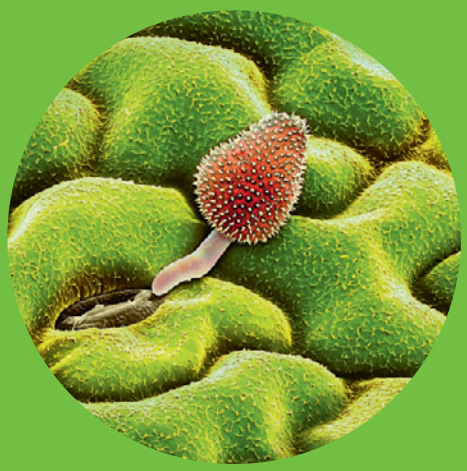
We achieved sales of €1,770 million in 2015 with the business acquired from Merck & Co., Inc., United States, including €380 million in the fourth quarter of 2015 (Q4 2014: €289 million). We substantially raised sales of our antihistamine Claritin™ compared with the fourth quarter of the previous year, thanks in part to an extended allergy season in the United States. Driven mainly by higher prices in the United States, business with our Dr. Scholl's™[2] foot care products also showed pleasing development.

Sales of the **Medical Care** Division increased by 2.9% (Fx & portfolio adj.) to €1,563 million, mainly as a result of positive development in the United States. Business with our MRI contrast agent Gadovist™ showed encouraging growth in all regions.

Sales of the **Animal Health** Division rose by 4.5% (Fx & portfolio adj.) to €1,490 million. Our Seresto™ flea and tick collar made a significant contribution to this development, particularly in the United States and Europe. Sales of the Advantage™ family of flea, tick and worm control products receded slightly, however, mainly due to increased competition.

EBIT of the **Consumer Health** segment improved by 13.1% in 2015 to €1,243 million. Special charges amounted to €346 million (2014: €45 million) and mainly comprised €225 million in integration costs for acquired businesses, €76 million for efficiency improvement measures and €41 million in costs associated with the relocation of a production facility. EBIT before special items significantly rose by 38.9% to €1,589 million. **EBITDA** before special items improved by a substantial 34.1% to €2,224 million. The earnings contributions from the expansion of business in all divisions and positive currency effects of €110 million were partly offset in particular by higher selling expenses associated especially with the newly acquired consumer care businesses.

[2] Only in certain countries outside the European Union



13.2 CropScience

Key Data – CropScience [Table 3.13.6]

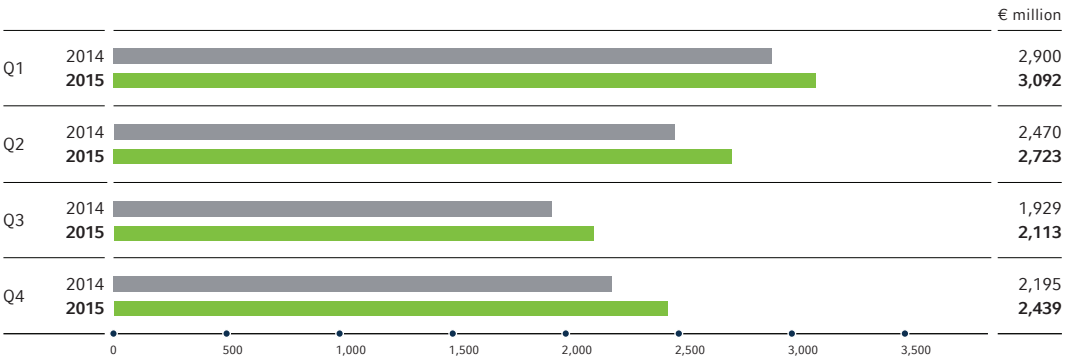
	4th Quarter 2014	4th Quarter 2015	Change		Full Year 2014	Full Year 2015	Change	
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%	Fx & p adj. %
Sales	**2,195**	**2,439**	**+11.1**	**+5.3**	**9,494**	**10,367**	**+9.2**	**+1.7**
Change in sales								
Volume	+7.6%	+5.7%			+9.1%	+1.3%		
Price	+0.7%	−0.4%			+2.1%	+0.4%		
Currency	+3.7%	+5.1%			−3.7%	+6.9%		
Portfolio	+0.5%	+0.7%			+0.2%	+0.6%		
Sales								
Crop Protection/Seeds	2,028	2,230	+10.0	+4.8	8,816	9,548	+8.3	+1.5
Environmental Science	167	209	+25.1	+11.4	678	819	+20.8	+4.1
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Sales by region								
Europe	377	386	+2.4	+2.7	2,957	3,123	+5.6	+8.2
North America	329	464	+41.0	+24.0	2,334	2,689	+15.2	−1.6
Asia/Pacific	356	365	+2.5	−2.5	1,374	1,531	+11.4	+1.3
Latin America/Africa/Middle East	1,133	1,224	+8.0	+4.4	2,829	3,024	+6.9	−0.5
EBIT	**191**	**478**	**+150.3**		**1,806**	**2,103**	**+16.4**	
Special items	*(32)*	*301*			*(32)*	*222*		
EBIT before special items [1]	***223***	***177***	***−20.6***		***1,838***	***1,881***	***+2.3***	
EBITDA [1]	**367**	**629**	**+71.4**		**2,358**	**2,638**	**+11.9**	
Special items	*(2)*	*295*			*(2)*	*222*		
EBITDA before special items [1]	***369***	***334***	***−9.5***		***2,360***	***2,416***	***+2.4***	
EBITDA margin before special items [1]	16.8%	13.7%			24.9%	23.3%		
Gross cash flow [2]	**382**	**493**	**+29.1**		**1,835**	**1,941**	**+5.8**	
Net cash flow [2]	**103**	**165**	**+60.2**		**950**	**761**	**−19.9**	

Fx & p adj. = currency- and portfolio-adjusted; Fx adj. = currency-adjusted
[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 14.5 "Liquidity and Capital Expenditures of the Bayer Group."

PHOTO // The scanning electron micrograph above shows part of the surface of a soybean plant leaf – magnified about 4,500 times.

CropScience raised **sales** by 1.7% (Fx & portfolio adj.) in 2015, to €10,367 million (reported: +9.2%). We registered growth at both Crop Protection/Seeds and Environmental Science. Fungicides played a major part in this sales increase. In regional terms, business in Europe saw particularly encouraging development.

CropScience Quarterly Sales [Graphic 3.13.4]



Sales in **Crop Protection/Seeds** increased by 1.5% (Fx & portfolio adj.), to €9,548 million. Crop Protection posted gratifying sales gains at Fungicides and Herbicides but a distinct decline at Insecticides and SeedGrowth. In the Seeds business, sales of soybean and canola seed developed particularly well.

Business in **Environmental Science** advanced by 4.1% (Fx & portfolio adj.) to €819 million. There was a sharp increase in business with products for professional users, while the consumer business came in at the prior-year level.

Sales by Business Unit [Table 3.13.7]

	4th Quarter 2014	4th Quarter 2015	Change		Full Year 2014	Full Year 2015	Change	
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%	Fx & p adj. %
Herbicides	517	650	+25.7	+19.6	2,549	2,830	+11.0	+5.4
Fungicides	568	677	+19.2	+11.3	2,490	2,911	+16.9	+9.5
Insecticides	482	430	−10.8	−16.6	1,695	1,596	−5.8	−14.0
SeedGrowth	254	252	−0.8	−7.9	978	934	−4.5	−10.6
Crop Protection	1,821	2,009	+10.3	+3.6	7,712	8,271	+7.2	+0.4
Seeds	207	221	+6.8	+15.4	1,104	1,277	+15.7	+8.8
Crop Protection/Seeds	**2,028**	**2,230**	**+10.0**	**+4.8**	**8,816**	**9,548**	**+8.3**	**+1.5**
Environmental Science	**167**	**209**	**+25.1**	**+11.4**	**678**	**819**	**+20.8**	**+4.1**

Fx & p adj. = currency- and portfolio-adjusted

The sales development of **CropScience** varied by region.

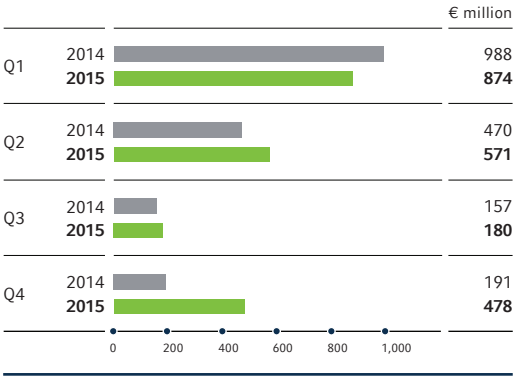
Sales in **Europe** rose by 8.2% (Fx adj.) to €3,123 million, driven by the positive development at Crop Protection/Seeds. Sales at Herbicides grew by a double-digit percentage, and business at Fungicides also expanded significantly due to low inventories at the beginning of the year. In addition, we achieved encouraging gains in our canola and vegetable seed businesses. Environmental Science performed positively due to strong business with products for professional users.

Sales in the **North America** region declined by 1.6% (Fx adj.) to €2,689 million. This decline was chiefly attributable to the negative development at Crop Protection, particularly at SeedGrowth, which in turn resulted from high inventories of already treated seed in the market. Business was also down for cotton seed, fungicides and herbicides. On the other hand, business with canola seed expanded briskly compared with the prior year. Our insecticides business also developed successfully. There was a very significant increase in sales at Environmental Science, especially due to the acquisition of parts of the DuPont land management business.

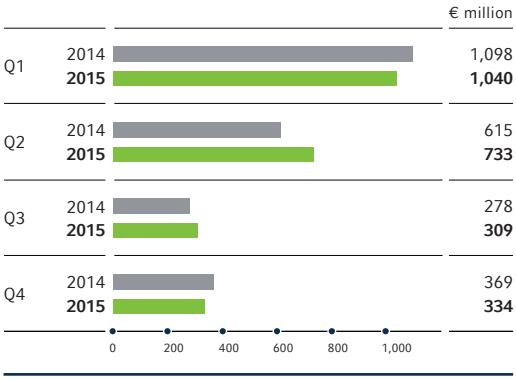
Sales in the **Asia/Pacific** region came in slightly above the prior year level at €1,531 million (Fx adj. +1.3%). Contributing to this increase in particular were our SeedGrowth and Herbicides businesses. Sales of cotton and vegetable seed improved by double-digit percentages. Sales at Insecticides declined slightly against the previous year. Sales at Environmental Science were down year on year.

Despite a weakened market environment, particularly in Brazil, sales in **Latin America/Africa/Middle East** were level year on year at €3,024 million (Fx adj. –0.5%). Sales at Insecticides receded sharply as a result of declining business in Latin America that was mainly attributable to lower infestation pressure in Brazil. Business was also down at SeedGrowth, an effect that could not be fully offset by double-digit-percentage growth in sales at Fungicides and a very gratifying performance of the Seeds business, especially for soybean and vegetable seed. Sales at Environmental Science also moved ahead by a double-digit percentage.

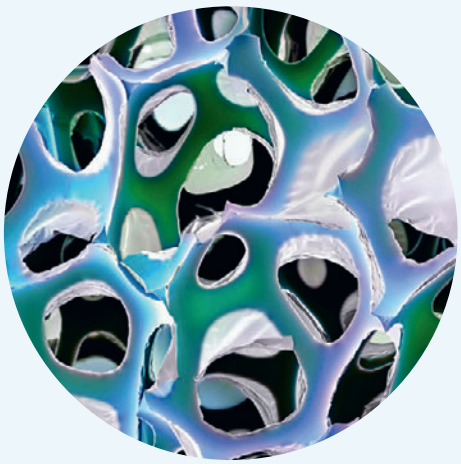
CropScience
Quarterly EBIT [Graphic 3.13.5]



CropScience
Quarterly EBITDA Before Special Items [Graphic 3.13.6]



EBIT of **CropScience** climbed by 16.4% in 2015, rising from €1,806 million to €2,103 million. There were net special gains of €222 million (2014: net special charges of €32 million), comprising mainly damage and license payments in connection with the infringement of Bayer's rights to the LibertyLink weed control system by Dow AgroSciences (DAS). EBIT before special items increased by 2.3% to €1,881 million. **EBITDA** before special items improved by 2.4% to €2,416 million. In addition to positive earnings effects due to the satisfactory business development, including higher volumes and slightly improved selling prices, there was a very positive currency effect of about €220 million. By contrast, there was an increase in the cost of goods sold and in research and development expenses.



13.3 Covestro

Key Data – Covestro [Table 3.13.8]

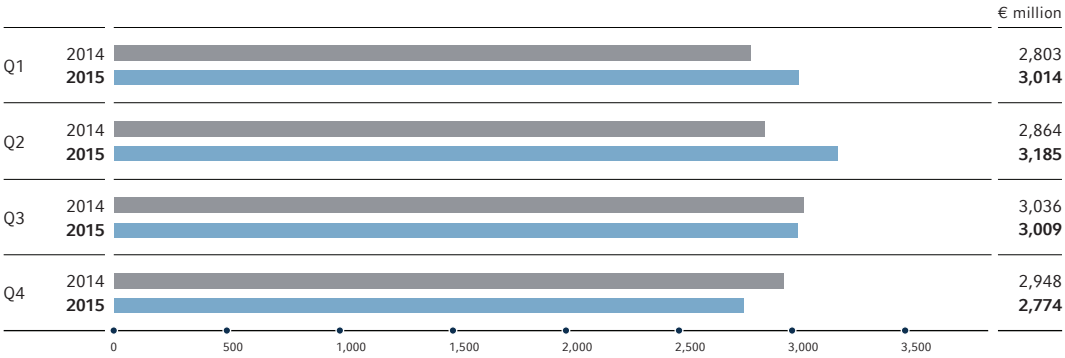
	4th Quarter 2014	4th Quarter 2015	Change		Full Year 2014	Full Year 2015	Change	
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%	Fx & p adj. %
Sales	**2,948**	**2,774**	**–5.9**	**–10.6**	**11,651**	**11,982**	**+2.8**	**–5.1**
Change in sales								
Volume	+5.7%	+1.8%			+6.3%	+2.6%		
Price	–0.2%	–12.4%			–1.5%	–7.7%		
Currency	+4.1%	+4.7%			–0.8%	+7.9%		
Portfolio	0.0%	0.0%			–0.3%	0.0%		
Sales								
Polyurethanes	1,591	1,382	–13.1	–17.3	6,285	6,084	–3.2	–10.5
Polycarbonates	741	759	+2.4	–3.9	2,820	3,169	+12.4	+2.0
Coatings, Adhesives, Specialties	460	477	+3.7	–1.3	1,915	2,092	+9.2	+1.5
Other Covestro business	156	156	0.0	–2.6	631	637	+1.0	–2.7
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Sales by region								
Europe	1,036	1,014	–2.1	–2.0	4,441	4,395	–1.0	–0.9
North America	673	672	–0.1	–12.5	2,593	2,885	+11.3	–7.0
Asia/Pacific	885	798	–9.8	–18.2	3,245	3,377	+4.1	–10.5
Latin America/Africa/Middle East	354	290	–18.1	–13.3	1,372	1,325	–3.4	–2.0
EBIT	**43**	**(79)**	**.**		**555**	**635**	**+14.4**	
Special items	*(22)*	*(144)*			*(43)*	*(332)*		
EBIT before special items [1]	***65***	***65***	***0.0***		***598***	***967***	***+61.7***	
EBITDA [1]	**196**	**129**	**–34.2**		**1,149**	**1,368**	**+19.1**	
Special items	*(21)*	*(128)*			*(38)*	*(291)*		
EBITDA before special items [1]	***217***	***257***	***+18.4***		***1,187***	***1,659***	***+39.8***	
EBITDA margin before special items [1]	7.4%	9.3%			10.2%	13.8%		
Gross cash flow [2]	**201**	**132**	**–34.3**		**961**	**1,113**	**+15.8**	
Net cash flow [2]	**517**	**603**	**+16.6**		**880**	**1,452**	**+65.0**	

Fx & p adj. = currency- and portfolio-adjusted; Fx adj. = currency-adjusted
[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 14.5 "Liquidity and Capital Expenditures of the Bayer Group."

PHOTO // The scanning electron micrograph above shows a cross-section through a flexible polyurethane foam – magnified about 85 times.

Covestro registered a 5.1% (Fx & portfolio adj.) decline in **sales** in **2015**, to €11,982 million (reported: +2.8%). This decline resulted from lower selling prices in all business units, particularly Polyurethanes. On the other hand, Covestro expanded volumes in all business units.

Covestro Quarterly Sales [Graphic 3.13.7]

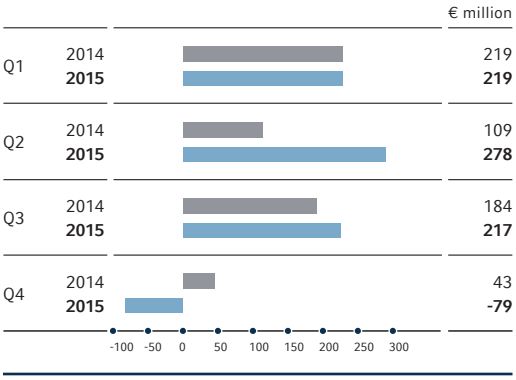


The **Polyurethanes** business unit saw sales fall by 10.5% (Fx & portfolio adj.) to €6,084 million. This decline resulted from much lower selling prices for the three product groups toluene diisocyanate (TDI), diphenylmethane diisocyanate (MDI) and polyether polyols (PET). Volumes came in slightly above the prior-year level overall.

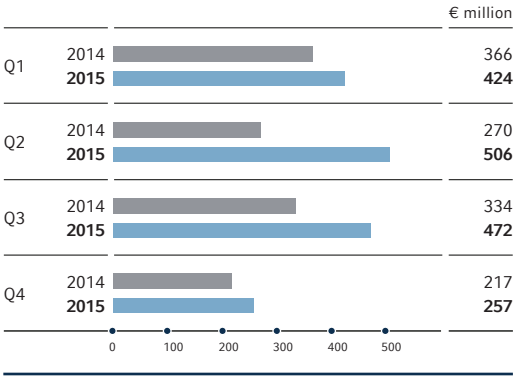
The **Polycarbonates** business unit raised sales by 2.0% (Fx & portfolio adj.) to €3,169 million. This growth was due to positive volume development, while selling prices were down only slightly.

Sales in the **Coatings, Adhesives, Specialties** business unit moved forward by 1.5% (Fx & portfolio adj.) to €2,092 million. Slightly higher volumes more than offset the effect of modestly lower selling prices.

Covestro
Quarterly EBIT [Graphic 3.13.8]



Covestro
Quarterly EBITDA Before Special Items [Graphic 3.13.9]



EBIT of **Covestro** climbed by 14.4% in 2015 to €635 million (2014: €555 million). This figure reflected special charges of €332 million (2014: €43 million) for restructuring measures, chiefly for the carve-out and stock market flotation of Covestro and for the consolidation of production sites. EBIT before special items climbed by a substantial 61.7% to €967 million. **EBITDA** before special items also clearly improved by 39.8% to €1,659 million. Considerably lower raw material prices more than offset the decline in selling prices. This was due to a more advantageous supply and demand situation, particularly at Polycarbonates. We also expanded volumes. Furthermore, earnings were buoyed by positive currency effects of about €240 million.

13.4 Business Development by Region

Sales by Region and Segment (by Market) [Table 3.13.9]

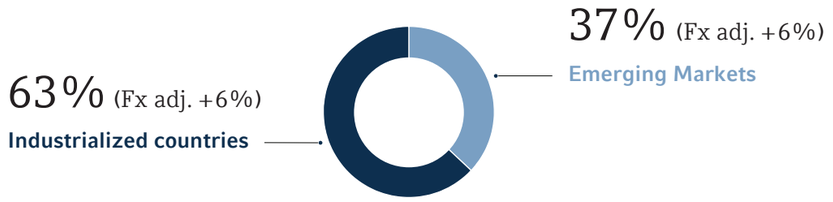
	Europe				North America				Asia/Pacific				Latin America/Africa/Middle East				Total			
	2014	2015		Change	2014	2015		Change	2014	2015		Change	2014	2015		Change	2014	2015		Change
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
HealthCare	**6,870**	**7,404**	**+7.8**	**+8.8**	**5,017**	**7,159**	**+42.7**	**+25.7**	**4,427**	**5,342**	**+20.7**	**+10.3**	**2,761**	**2,969**	**+7.5**	**+21.5**	**19,075**	**22,874**	**+19.9**	**+15.4**
Pharmaceuticals	4,396	4,869	+10.8	+11.0	2,728	3,363	+23.3	+7.6	3,278	3,868	+18.0	+7.2	1,650	1,645	−0.3	+15.9	12,052	13,745	+14.0	+9.9
Consumer Health	2,474	2,535	+2.5	+4.9	2,289	3,796	+65.8	+47.3	1,149	1,474	+28.3	+19.3	1,111	1,324	+19.2	+29.8	7,023	9,129	+30.0	+25.0
CropScience	**2,957**	**3,123**	**+5.6**	**+8.2**	**2,334**	**2,689**	**+15.2**	**−1.6**	**1,374**	**1,531**	**+11.4**	**+1.3**	**2,829**	**3,024**	**+6.9**	**−0.5**	**9,494**	**10,367**	**+9.2**	**+2.3**
Covestro	**4,441**	**4,395**	**−1.0**	**−0.9**	**2,593**	**2,885**	**+11.3**	**−7.0**	**3,245**	**3,377**	**+4.1**	**−10.5**	**1,372**	**1,325**	**−3.4**	**−2.0**	**11,651**	**11,982**	**+2.8**	**−5.1**
Group (incl. reconciliation)	**15,312**	**15,949**	**+4.2**	**+5.2**	**9,953**	**12,740**	**+28.0**	**+10.8**	**9,067**	**10,264**	**+13.2**	**+1.4**	**7,007**	**7,371**	**+5.2**	**+8.1**	**41,339**	**46,324**	**+12.1**	**+6.2**

2014 figures restated
Fx. adj. = currency-adjusted

13.5 Business Development in the Emerging Markets

Sales in the Emerging Markets[3] climbed by 6.1% (Fx adj.) in 2015 to €17,200 million (2014: €15,763 million). We posted encouraging growth rates in Eastern Europe and Latin America. The Emerging Markets' share of total sales was 37.1% (2014: 38.1%).

Sales Development in 2015 [Graphic 3.13.10]



Currency-adjusted changes in parentheses

HEALTHCARE

HealthCare considerably improved sales in the Emerging Markets by 16.4% (Fx adj.) in 2015, to €7,208 million (2014: €6,336 million). All regions contributed to this increase, with robust currency-adjusted gains in Latin America especially. In Asia, our business in China in particular developed very well. There, we especially benefited from the acquired consumer care businesses alongside the positive development of our pharmaceutical products. The Emerging Markets' share of total sales of HealthCare was 31.5% (2014: 33.2%).

CROPSCIENCE

CropScience improved sales in the Emerging Markets by 4.6% (Fx adj.) in 2015, to €4,836 million (2014: €4,409 million). We posted substantial gains in the Eastern Europe and Africa/Middle East regions. We also expanded business in Asia, while Latin America experienced a slight decline. The Emerging Markets' share of total CropScience sales in 2015 was 46.6% (2014: 46.4%).

COVESTRO

Sales of Covestro in the Emerging Markets declined by 5.7% (Fx adj.) in 2015 to €5,089 million (2014: €4,951 million). Sales in the Asia region remained well below the prior-year level on a currency-adjusted basis, and also declined in Latin America. We expanded sales in the Eastern Europe and Africa/Middle East regions. The Emerging Markets' share of total sales at Covestro was 42.5% (2014: 42.5%).

We additionally engage in some Emerging Markets through regional economic development projects, as shown by the examples contained in

ONLINE ANNEX: 3-13.5-1

CropScience aims to contribute to increased agricultural productivity in regions such as Africa and intends to expand its presence there. Our offerings are tailored to the needs of African farmers and range from integrated crop solutions based on improved seed varieties through modern crop protection technologies and training in good agricultural practice and environmental protection to product safety programs. We also engage locally in public-private partnerships (PPPs) to help increase the income of smallholder farmers through sustainable agriculture. Activities include expanding local value chains and training measures. This contributes to improving the living situation of the local population and enhancing the availability of staple foods in the project countries. In such PPPs, we cooperate with numerous partners including local governments, farmers' associations and cooperatives, nongovernmental organizations and agricultural input industries. CropScience is currently participating in PPPs associated with the value chains for rice and potatoes in Sub-Saharan Africa, India and Southeast Asia.

[3] For reporting purposes we have defined the Emerging Markets as Asia (excluding Japan), Latin America, Eastern Europe, Africa and the Middle East.

Together with representatives of GLOBALG.A.P., one of the world's leading quality assurance systems, CropScience has continued developing the BayG.A.P. program to provide smallholder farmers in developing countries and Emerging Markets, for example, with access to professional local and global food markets. In 2015, pilot projects were carried out with food chain partners in the Asia/Pacific and Latin America regions. The service program includes an intensive training course in good agricultural practice (G.A.P.), individual cultivation advice and subsequent support in meeting the respective local G.A.P. standard. The farmers can sell certified, high-quality produce at higher prices, thus raising their incomes.

In cooperation with external partners, Covestro is evolving and implementing technical solutions to help low-income people in developing countries and Emerging Markets gain improved access to high-quality, safe and easy-to-build yet affordable housing. These activities currently focus on Asia. The company is mainly contributing its expertise in the field of rigid polyurethane foam for the construction industry.

14. Earnings; Asset and Financial Position of the Bayer Group

14.1 Earnings Performance of the Bayer Group

Bayer Group Summary Income Statements [Table 3.14.1]

	2014	2015	Change
	€ million	€ million	%
Net sales	41,339	46,324	12.1
Cost of goods sold	19,909	21,158	6.3
Selling expenses	10,669	12,367	15.9
Research and development expenses	3,537	4,281	21.0
General administration expenses	1,703	2,098	23.2
Other operating income (+) and expenses (–)	(126)	(170)	(34.9)
EBIT[1]	**5,395**	**6,250**	**15.8**
Financial result	**(981)**	**(1,005)**	**(2.4)**
Income before income taxes	**4,414**	**5,245**	**18.8**
Income taxes	(1,071)	(1,227)	(14.6)
Income after income taxes (total)	**3,443**	**4,098**	**19.0**
of which attributable to noncontrolling interest	17	(12)	–
of which attributable to Bayer AG stockholders (net income)	**3,426**	**4,110**	**20.0**

2014 figures restated
[1] EBIT = income after income taxes, plus income taxes, plus financial result

Sales of the Bayer Group rose to €46,324 million (+12.1%). The increase after adjusting for currency and portfolio effects was 2.7%.

The cost of goods sold increased by 6.3% to €21,158 million, mainly due to currency and portfolio effects that drove up costs. Lower raw material costs at Covestro had an opposing effect. The ratio of the cost of goods sold to total sales was 45.7% (2014: 48.2%). The selling expenses of €12,367 million (+15.9%) amounted to 26.7% of sales (2014: 25.8%). Research and development (R&D) expenses rose in 2015 by 21.0% to €4,281 million, the increase being attributable above all to higher R&D investment at Pharmaceuticals. The ratio of R&D expenses to sales was 9.2% (2014: 8.6%). General administration

expenses climbed by 23.2% to €2,098 million. The ratio of general administration expenses to total sales therefore increased to 4.5% (2014: 4.1%). The increased other operating expenses of €170 million (2014: €126 million) resulted mainly from negative effects from derivatives to hedge planned sales that were partly offset by a special gain from damage and license payments in connection with the infringement by Dow AgroSciences of Bayer's rights to the Liberty Link™ weed control system.

EBIT climbed by 15.8% in 2015 to €6,250 million.

The financial result declined by 2.4% to minus €1,005 million. It comprised €455 million (2014: €356 million) in net interest expense, €287 million (2014: €322 million) in interest cost for pension and other provisions, and a €254 million (2014: €248 million) net exchange loss. The increase in net interest expense was primarily attributable to higher financing costs in connection with the acquired consumer care business of Merck & Co., Inc., United States.

Tax expense in 2015 increased to €1,227 million (2014: €1,071 million). Income after income taxes came in at €4,098 million. Income attributable to noncontrolling interest fell by €29 million to minus €12 million. Bayer Group net income for 2015 was €4,110 million (2014: €3,426 million).

14.2 Calculation of EBIT(DA) Before Special Items

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 and minus impairment loss reversals, recognized in profit or loss during 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.

Depreciation, amortization and impairment losses were 14.1% higher in 2015 at €3,333 million (2014: €2,920 million), comprising €1,802 million (2014: €1,581 million) in amortization and impairments on intangible assets and €1,531 million (2014: €1,339 million) in depreciation and impairments on property, plant and equipment. A total of €136 million (2014: €68 million) in impairments constituted special items.

In 2015, the following special effects were taken into account in calculating EBIT and EBITDA before special items:

Special Items Reconciliation [Table 3.14.2]

	EBIT 4th Quarter 2014	EBIT 4th Quarter 2015	EBIT Full Year 2014	EBIT Full Year 2015	EBITDA 4th Quarter 2014	EBITDA 4th Quarter 2015	EBITDA Full Year 2014	EBITDA Full Year 2015
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Before special items	**991**	**1,024**	**5,833**	**7,069**	**1,829**	**1,903**	**8,685**	**10,266**
HealthCare	**(376)**	**(264)**	**(331)**	**(600)**	**(347)**	**(196)**	**(298)**	**(505)**
Impairment losses/impairment loss reversals	(29)	(43)	(29)	(43)	–	(1)	–	(1)
Restructuring	–	(155)	–	(243)	–	(129)	–	(190)
Litigations	(88)	(2)	(88)	(16)	(88)	(2)	(88)	(16)
Integration costs	(86)	(50)	(153)	(227)	(86)	(50)	(149)	(227)
Settlement of pre-existing relationship	–	–	35	–	–	–	35	–
Divestitures	(173)	–	(96)	3	(173)	–	(96)	3
Revaluation of other receivables	–	(14)	–	(74)	–	(14)	–	(74)
CropScience	**(32)**	**301**	**(32)**	**222**	**(2)**	**295**	**(2)**	**222**
Litigations	(1)	303	(1)	285	(1)	303	(1)	285
Divestitures	(31)	–	(31)	(50)	(1)	(6)	(1)	(50)
Revaluation of other receivables	–	(2)	–	(13)	–	(2)	–	(13)
Covestro	**(22)**	**(144)**	**(43)**	**(332)**	**(21)**	**(128)**	**(38)**	**(291)**
Restructuring	(22)	(143)	(43)	(329)	(21)	(127)	(38)	(288)
Revaluation of other receivables	–	(1)	–	(3)	–	(1)	–	(3)
Reconciliation	**(12)**	**(9)**	**(32)**	**(109)**	**(12)**	**(9)**	**(32)**	**(109)**
Restructuring	(12)	(9)	(32)	(76)	(12)	(9)	(32)	(76)
Litigations	–	–	–	(32)	–	–	–	(32)
Revaluation of other receivables	–	–	–	(1)	–	–	–	(1)
Total special items	**(442)**	**(116)**	**(438)**	**(819)**	**(382)**	**(38)**	**(370)**	**(683)**
of which cost of goods sold	(68)	(169)	(80)	(440)	(37)	(144)	(49)	(363)
of which selling expenses	(50)	(118)	(63)	(198)	(21)	(107)	(34)	(183)
of which research and development expenses	1	(51)	(2)	(67)	1	(9)	(2)	(23)
of which general administration expenses	(23)	(43)	(55)	(203)	(23)	(43)	(51)	(203)
of which other operating income/expenses	(302)	265	(238)	89	(302)	265	(234)	89
After special items	**549**	**908**	**5,395**	**6,250**	**1,447**	**1,865**	**8,315**	**9,583**

2014 figures restated

14.3 Core Earnings per Share

Earnings per share according to IFRS are affected by the purchase price allocation for acquisitions and other special factors. To demonstrate the impact of these effects on earnings and facilitate the comparability of our performance over time, we determine additional indicators – core EBIT, core net income and core earnings per share – which are not defined in the International Financial Reporting Standards.

Core EBIT is determined by first eliminating from EBIT (income after income taxes, plus income taxes, plus financial result), which is not defined in the International Financial Reporting Standards, all amortization and impairment losses/impairment loss reversals on intangible assets, impairment losses/impairment loss reversals on property, plant and equipment, and special items (other than amortization and impairment losses/impairment loss reversals). This core EBIT is then used to calculate core net income, which comprises the financial result (as per income statements), income taxes (as per income statements), income after income taxes attributable to noncontrolling interest (as per income statements), special items in the financial result, special items in income taxes, tax effects related to amortization, impairment losses/impairment loss reversals and special items, and the above-mentioned adjustments attributable to noncontrolling interest.

From this core net income we calculate core earnings per share in the same way as earnings per share. Core earnings per share form the basis for our dividend policy. Core earnings per share are determined for both continuing and discontinued operations. In 2015, we improved core earnings per share from continuing operations by 16.0% to €6.83 (2014: €5.89).

Core Earnings per Share [Table 3.14.3]

	4th Quarter 2014	4th Quarter 2015	Full Year 2014	Full Year 2015
	€ million	€ million	€ million	€ million
EBIT (as per income statements)	**549**	**908**	**5,395**	**6,250**
Amortization and impairment losses/loss reversals on intangible assets	504	529	1,581	1,802
Impairment losses/loss reversals on property, plant and equipment	57	55	96	115
Special items (other than amortization and impairment losses/loss reversals)	382	38	370	683
Core EBIT	**1,492**	**1,530**	**7,442**	**8,850**
Financial result (as per income statements)	(347)	(164)	(981)	(1,005)
Special items in the financial result	13	(120)	23	(150)
Income taxes (as per income statements)	16	(163)	(1,071)	(1,227)
Special items in income taxes	48	(39)	48	(39)
Tax effects related to amortization, impairment losses/loss reversals and special items	(245)	(149)	(573)	(755)
Income after income taxes attributable to noncontrolling interest (as per income statements)	(6)	30	(17)	12
Above-mentioned adjustments attributable to noncontrolling interest	–	(39)	–	(39)
Core net income from continuing operations	**971**	**886**	**4,871**	**5,647**
	Shares	Shares	Shares	Shares
Number of issued ordinary shares	**826,947,808**	**826,947,808**	**826,947,808**	**826,947,808**
Core earnings per share from continuing operations (€)	**1.17**	**1.07**	**5.89**	**6.83**
Core earnings per share from discontinued operations (€)	0.02	0.01	0.13	0.12
Core earnings per share from continuing and discontinued operations (€)	1.19	1.08	6.02	6.95

2014 figures restated

The calculation of earnings per share in accordance with IFRS is explained in NOTE [16] to the consolidated financial statements.

Consolidated Financial Statements Note 16

14.4 Value Management

SYSTEM BASED ON CASH VALUE ADDED

The principal value-based steering parameters in the Bayer Group are the cash value added (CVA) and the cash flow return on investment (CFROI). If the CVA is positive, the respective company or business entity has exceeded the minimum requirements of the equity and debt capital providers and has created value. The CFROI is a ratio indicating the profitability of the Group or of individual business entities and must be compared to the cost of capital.

CALCULATING THE COST OF CAPITAL

Bayer calculates the cost of capital according to the debt/equity ratio at the beginning of the year using the weighted average cost of capital (WACC) formula. The cost of equity capital is the return expected by stockholders, computed from capital market information. The cost of debt capital used in calculating the WACC is based on the terms for ten-year Eurobonds issued by industrial companies with an "A–" rating.

7.6%
Cost of capital for the Bayer Group

To take into account the different risk and return profiles of our principal businesses, we calculate individual capital cost factors after income taxes for each of our subgroups. These were 7.9% for HealthCare, 7.3% for CropScience and 6.9% for Covestro. The capital cost factor for the Group as a whole in 2015 was 7.6%.

GROSS CASH FLOW, CASH VALUE ADDED AND CASH FLOW RETURN ON INVESTMENT AS PERFORMANCE YARDSTICKS

The gross cash flow is the measure of our internal financing capability. Bayer has chosen this parameter because it is relatively free of accounting influences and is therefore a more meaningful performance indicator.

Positive CVA = value created

Taking into account the costs of capital and of reproducing depletable assets, we determine the gross cash flow hurdle. If the gross cash flow hurdle is exceeded, the CVA is positive and thus the required return on equity and debt plus the cost of asset reproduction has been earned.

The CFROI is the difference between the gross cash flow and the cost of reproducing depletable assets, divided by the capital invested. The capital invested is calculated from the statement of financial position and basically comprises the property, plant and equipment and intangible assets required for operations – stated at the historical cost of acquisition or construction – plus working capital, less interest-free liabilities (such as current provisions). To mitigate the effect of fluctuations in the capital invested during the year, the CFROI is computed on the basis of the average capital invested for the respective year.

The gross cash flow hurdle for 2015 was €5,714 million.

Actual gross cash flow came in at €6,999 million, exceeding the hurdle by 22.5%. Thus the entire cost of capital and asset reproduction costs were earned in 2015. The positive CVA of €1,285 million shows that Bayer exceeded the minimum return and reproduction requirements and created value. A CFROI of 9.6% was achieved in 2015.

Despite negative impact from special items in some cases, all the subgroups exceeded their required returns (including asset reproduction), achieved a positive CVA and thus helped to increase the company's value.

Value Management Indicators by Subgroup [Table 3.14.4]

	HealthCare		CropScience		Covestro		Bayer Group	
	2014	2015	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Gross cash flow[1] (GCF)	3,898	4,121	1,835	1,941	961	1,113	6,707	6,999
Gross cash flow hurdle	2,369	3,378	902	1,058	1,025	1,092	4,421	5,714
Cash value added (CVA)	1,529	743	933	883	(64)	21	2,286	1,285
Cash flow return on investment (CFROI)	13.1%	9.7%	15.3%	14.8%	6.0%	7.0%	11.7%	9.6%
WACC	7.9%	7.9%	7.3%	7.3%	6.9%	6.9%	7.6%	7.6%
Average capital invested	26,634	37,919	10,841	11,813	10,524	11,156	48,784	61,699

2014 figures restated
[1] For definition see Chapter 14.5 "Liquidity and Capital Expenditures of the Bayer Group."

14.5 Liquidity and Capital Expenditures of the Bayer Group

Bayer Group Summary Statements of Cash Flows [Table 3.14.5]

	Full Year 2014	Full Year 2015
	€ million	€ million
Gross cash flow[1]	**6,707**	**6,999**
Changes in working capital/other noncash items	(1,010)	(152)
Net cash provided by (used in) operating activities (net cash flow), continuing operations	**5,697**	**6,847**
Net cash provided by (used in) operating activities (net cash flow), discontinued operations	113	43
Net cash provided by (used in) operating activities (net cash flow) (total)	**5,810**	**6,890**
Net cash provided by (used in) investing activities (total)	**(15,539)**	**(2,762)**
Net cash provided by (used in) financing activities (total)	**9,736**	**(3,974)**
Change in cash and cash equivalents due to business activities	**7**	**154**
Cash and cash equivalents at beginning of period	**1,662**	**1,853**
Change due to exchange rate movements and to changes in scope of consolidation	184	(148)
Cash and cash equivalents at end of period	**1,853**	**1,859**

2014 figures restated
[1] Gross cash flow = 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.

OPERATING CASH FLOW

Gross cash flow is not defined in the International Financial Reporting Standards.

Gross cash flow from continuing operations climbed by 4.4% in 2015 to €6,999 million (2014: €6,707 million), mainly because of the improvement in EBITDA. Net cash flow (total) rose by 18.6% to €6,890 million (2014: €5,810 million) due to a sharp decrease in additional cash tied up in working capital. Income taxes paid in 2015 amounted to €1,699 million (2014: €1,835 million).

INVESTING CASH FLOW

Net cash outflow for investing activities in 2015 amounted to €2,762 million. Cash outflows for property, plant and equipment and intangible assets were 6.2% higher at €2,517 million (2014: €2,371 million) and included €969 million (2014: €832 million) at HealthCare, €722 million (2014: €686 million) at CropScience and €508 million (2014: €605 million) at Covestro. The €176 million (2014: €13,545 million) in outflows for acquisitions mainly related to the purchase of SeedWorks India Pvt. Ltd., Hyderabad, India, and further payments in connection with the purchase of the consumer care business

of Merck & Co., Inc., United States. The latter was among the major acquisitions in 2014, alongside that of Algeta ASA, Norway. Cash outflows from noncurrent and current financial assets amounted to €370 million (2014: €177 million). Inflows from interest and dividends totaled €106 million (2014: €107 million).

The principal strategic capital expenditures for property, plant and equipment in the operating segments within the past two years are listed in the following table.

Capital Expenditures for Property, Plant and Equipment [Table 3.14.6]

Segment	Description
CAPITAL EXPENDITURES 2015	
Pharmaceuticals	Expansion of production capacities for new rFactor VIII therapies in Wuppertal, Germany
	Expansion of R&D laboratory capacities in Wuppertal, Germany
	Modernization of research facilities in Berlin, Germany
	Modernization of site infrastructure in Wuppertal and Leverkusen, Germany
	Expansion of production capacities in Beijing, China
	Expansion of Quality Control Biologics in Berkeley, California, United States
Consumer Health	–
CropScience	Capacity expansions for herbicides in the United States and Germany
	Construction of production facilities for insecticides in India and Germany
	Additional capacity expansions for fungicides in Germany
	Expansion of R&D facilities in Germany
	Establishment of breeding stations for various plant species worldwide
	Expansion of R&D facilities in North America
Covestro	Construction of a production line for CO_2 based polyols in Dormagen, Germany
	Continuation of projects started in 2014 for Polycarbonates and Coatings, Adhesives, Specialties
CAPITAL EXPENDITURES 2014	
Pharmaceuticals	Expansion of Xarelto™ production capacities in Wuppertal and Leverkusen, Germany
	Expansion of production capacities for new rFactor VIII therapies in Wuppertal, Germany
	Expansion of R&D laboratory capacities in Wuppertal, Germany
	Modernization of research facilities in Berlin, Germany
	Expansion of production capacities in Beijing, China
	Expansion of Quality Control Biologics in Berkeley, California, United States
Consumer Health	–
CropScience	Completion of capacity expansion for fungicides in Germany and Switzerland
	Completion of capacity expansion for herbicides in Germany
	Establishment of breeding stations for various plant species worldwide
Covestro	Doubling of production capacities for polycarbonates in Shanghai, China
	Doubling of production capacities for hexamethylene diisocyanate (HDI) in Shanghai, China
	Completion of capacity expansion for diphenylmethane diisocyanate (MDI) in Shanghai, China
	Construction of a world-scale production complex for toluene diisocyanate (TDI) based on gas-phase phosgenation technology in Dormagen, Germany

FINANCING CASH FLOW

Net cash outflow for financing activities in 2015 amounted to €3,974 million, including net loan repayments of €2,929 million (2014: net borrowings of €11,838 million). Net interest payments were 80% higher at €652 million (2014: €362 million). The cash outflow for dividends amounted to €1,869 million (2014: €1,739 million). The stock market flotation of Covestro led to an inflow of €1,490 million.

LIQUID ASSETS AND NET FINANCIAL DEBT

Net Financial Debt [Table 3.14.7]

	Dec. 31, 2014	Dec. 31, 2015
	€ million	€ million
Bonds and notes/promissory notes	14,964	15,547
of which hybrid bonds [1]	4,552	4,525
Liabilities to banks	3,835	2,779
Liabilities under finance leases	441	474
Negative fair values of hedges of recorded transactions	642	753
Other financial liabilities	1,976	369
Positive fair values of hedges of recorded transactions	(258)	(350)
Financial liabilities	**21,600**	**19,572**
Cash and cash equivalents	(1,853)	(1,859)
Current financial assets [2]	(135)	(264)
Net financial debt	**19,612**	**17,449**

[1] Classified as debt according to IFRS

[2] These include short-term loans and receivables with maturities between 3 and 12 months outstanding from banks and other companies as well as available-for-sale financial assets and held-to-maturity financial investments that were recorded as current on initial recognition.

Net financial debt is not defined in the International Financial Reporting Standards and is calculated as shown above.

In 2015, net financial debt of the Bayer Group decreased by 11.0% to €17.4 billion. Cash inflows from operating activities and the stock market flotation of Covestro were partly offset by cash outflows for dividends and negative currency effects. As of December 31, 2015, the Group had cash and cash equivalents of €1.9 billion (2014: €1.9 billion). Financial liabilities at the end of the reporting period amounted to €19.6 billion (2014: €21.6 billion), with three subordinated hybrid bonds reflected at €4.5 billion overall. Net financial debt should be viewed against the fact that Moody's and Standard & Poor's treat 50% of the hybrid bonds with nominal volumes of €1.75 billion and €1.5 billion issued in July 2014 and of the hybrid bond with a nominal volume of €1.3 billion issued in April 2015 as equity. The hybrid bonds thus have a more limited effect on the Group's rating-specific debt indicators than conventional borrowings. Our noncurrent financial liabilities declined in 2015 from €18.5 billion to €16.5 billion, while current financial liabilities remained unchanged at €3.4 billion.

14.6 Asset and Capital Structure of the Bayer Group

Bayer Group Summary Statements of Financial Position [Table 3.14.8]

	Dec. 31, 2014	Dec. 31, 2015	Change
	€ million	€ million	%
Noncurrent assets	48,007	50,096	+4.4
Current assets	22,227	23,624	+6.3
Assets held for sale	–	197	–
Total current assets	**22,227**	**23,821**	**+7.2**
Total assets	**70,234**	**73,917**	**+5.2**
Equity	**20,218**	**25,445**	**+25.9**
Noncurrent liabilities	34,513	31,492	−8.8
Current liabilities	15,503	16,868	+8.8
Provisions directly related to assets held for sale	–	112	–
Total current liabilities	15,503	16,980	+9.5
Liabilities	**50,016**	**48,472**	**−3.1**
Total equity and liabilities	**70,234**	**73,917**	**+5.2**

Total assets as of December 31, 2015, increased by 5.2% to €73.9 billion. Noncurrent assets rose by 4.4% to €50.1 billion due mainly to currency effects. The carrying amount of current assets climbed to €23.8 billion, due mainly to an increase in trade accounts receivable and other receivables.

Equity increased by €5.2 billion to €25.4 billion. The positive effects from the net income of €4.1 billion (2014: €3.4 billion), the exchange differences of €0.7 billion (2014: €1.4 billion) and the decline of €0.8 billion (2014: negative effect from the increase of €3.5 billion) – recognized outside profit or loss – in post-employment benefit obligations were offset by the dividend payment of €1.9 billion (2014: €1.7 billion). In addition, the capital increase at Covestro as a result of the successful stock market flotation increased equity by €1.5 billion. The equity ratio (equity coverage of total assets) as of December 31, 2015 was 34.4% (2014: 28.8%).

Liabilities decreased by €1.5 billion compared with December 31, 2014, to €48.5 billion. Decreases in provisions for pensions and other post-employment benefits and financial liabilities more than offset increases in other provisions, trade accounts payable and tax liabilities.

Net Defined Benefit Liability for Post-Employment Benefits [Table 3.14.9]

	Dec. 31, 2014	Dec. 31, 2015
	€ million	€ million
Provisions for pensions and other post-employment benefits	12,236	10,873
Net defined benefit asset	(41)	(30)
Net defined benefit liability for post-employment benefits	**12,195**	**10,843**

The net defined benefit liability for pensions and other post-employment benefits decreased from €12.2 billion to €10.8 billion in 2015 due to an increase in long-term capital market interest rates for high-quality corporate bonds.

Ratios [Table 3.14.10]

		2014	2015
Cost of sales ratio (%)	Cost of goods sold / Sales	48.2	45.7
R & D expense ratio (%)	Research and development expenses / Sales	8.6	9.2
Return on sales in (%)	Income after income taxes / Sales	8.3	8.8
EBIT margin (%)	EBIT / Sales	13.1	13.5
EBITDA margin before special items (%)	EBITDA before special items / Sales	21.0	22.2
Asset intensity (%)	Property, plant and equipment + intangible assets / Total assets	60.4	59.1
Reinvestment ratio (%)	Capital expenditures[1] / Depreciation[1]	165.1	153.1
Liability structure (%)	Current liabilities / Liabilities	31.0	35.0
Gearing	Net debt + pension provisions / Equity	1.6	1.1
Free operating cash flow (€ million)	Net operating cash flow less cash outflows for property, plant and equipment and intangible assets	3,332	4,334
Inventory turnover	Cost of goods sold / Inventories	2.3	2.5
Receivables turnover	Sales / Trade accounts receivable	4.5	4.7
Payables turnover	Cost of goods sold / Trade accounts payable	3.7	3.6
Equity ratio (%)	Equity / Total assets	28.8	34.4
Return on equity (%)	Income after income taxes / Average equity	16.8	17.9
Return on assets (%)	Income before income taxes and interest expense / Average total assets	8.4	8.4

2014 figures restated
[1] Property, plant and equipment

14.7 Financial Management of the Group

The financial management of the Bayer Group is conducted by Bayer AG. Capital is a global resource, generally procured centrally and distributed within the Group. The foremost objectives of our financial management are to help bring about a sustained increase in corporate value and to ensure the Group's liquidity and creditworthiness. This involves optimizing the capital structure and effectively managing risks. The management of currency, interest rate, raw material price and default risks helps to reduce the volatility of our earnings.

The contracted rating agencies assess Bayer as follows:

Rating [Table 3.14.11]

	Long-term rating	Outlook	Short-term rating
Standard & Poor's	A–	stable	A–2
Moody's	A3	stable	P–2

These credit ratings reflect the company's high solvency and ensure access to a broad investor base for financing purposes. It remains our goal to achieve and maintain financial ratios that support an "A" category rating in order to maintain our financial flexibility.

We pursue a prudent debt management strategy to ensure flexibility, drawing on a balanced financing portfolio. This is based on bonds – predominantly a multi-currency European Medium Term Notes program –, syndicated credit facilities, bilateral loan agreements and a global commercial paper program.

We use financial derivatives to hedge against risks arising from business operations or financial transactions, but do not employ contracts in the absence of an underlying transaction. It is our policy to diminish default risks by selecting trading partners with a high credit standing. We closely monitor the execution of all transactions, which are conducted in accordance with Group directives.

Further details of our risk management objectives and the ways in which we account for all the major types of hedged transactions – along with price, credit and liquidity risks as they relate to the use of financial instruments – are given in Chapter 18.3 "Opportunities and Risks Report."

15. Earnings; Asset and Financial Position of Bayer AG

Until the end of 2015, Bayer AG functioned solely as the management holding company for the Bayer Group. At the beginning of 2016, it assumed responsibility for the operations of its three divisions. As the parent company of the Bayer Group, Bayer AG – represented by its Board of Management – performs the principal management functions for the entire Group. These include strategic planning, resource allocation, executive management and financial management. The performance of Bayer AG is largely determined by the business performance of the Bayer Group.

The financial statements of Bayer AG are prepared in accordance with the German Commercial Code (HGB) and Stock Corporation Act (AktG).

15.1 Earnings Performance of Bayer AG

Bayer AG Summary Income Statements according to the German Commercial Code [Table 3.15.1]

	2014	2015
	€ million	€ million
Income from investments in affiliated companies – net	3,213	2,444
Interest expense – net	(341)	(484)
Other financial income – net	129	409
Other operating income	128	99
General administration expenses	(272)	(324)
Other operating expenses	(147)	(177)
Income before income taxes	**2,710**	**1,967**
Income taxes	(256)	(606)
Net income	**2,454**	**1,361**
Allocation to/Withdrawal from other retained earnings	(593)	706
Distributable profit	**1,861**	**2,067**

In fiscal 2015, the net income of Bayer AG was €1,361 million, down by €1,093 million against the previous year (2014: €2,454 million). Earnings were held back above all by lower income from investments in affiliated companies and higher tax expense.

The income from investments in affiliated companies declined year on year by €769 million to €2,444 million (2014: €3,213 million). Bayer Pharma AG posted income of €1,793 million (2014: €2,158 million), which, as in the previous years, was by far the largest contribution. Despite a substantial increase in business, however, earnings of that company fell by €365 million, due partly to higher R&D and selling expenses. Bayer CropScience AG contributed €964 million (2014: €787 million) to Bayer AG's income, an increase of €177 million. This was attributable to a slightly improved earnings contribution from business operations and to one-time gains from a litigation, among other factors. Bayer AG assumed a loss of €150 million from Covestro Deutschland AG, the former Bayer MaterialScience AG (BMS), from its abbreviated fiscal year ending in August 2015. That company had made a positive earnings contribution of €154 million in the previous year. The decline in earnings was mainly due to a payment of €217 million to clear compensation claims from Bayer AG for the pension expenses of former BMS employees. Other significant earnings contributions comprised €149 million (2014: €146 million) from a subsidiary that receives foreign dividend income. The service companies Bayer Business Services GmbH and Bayer Technology Services GmbH assumed losses of €118 million (2014: €75 million) and €12 million (2014: €18 million), respectively. The reported loss at Bayer HealthCare AG, the holding company for the global health care business, was €231 million (2014: €207 million).

Net interest expense was €484 million, an increase of €143 million compared with the previous year. After offsetting against gains from the fund assets, just the interest portion of the allocation to pension provisions led to additional expense of €142 million, and thus to total expense of €276 million (2014: €134 million). Of the remaining €208 million (2014: €207 million) balance of interest expenses and income, €179 million was attributable to transactions with third parties and €29 million to intra-Group transactions.

Other financial income and expenses yielded a positive balance of €409 million (2014: €129 million). This marked increase was due particularly to a payment of €217 million received from Covestro Deutschland AG to clear compensation claims from Bayer AG for the pension expenses of former BMS employees. Income from the subgroups and service companies to cover pension expenses for retirees remaining with Bayer AG following the hive-down of the operating business in 2002 and 2003 amounted to €178 million (2014: €180 million). If due to interest rates, pension expenses as such are recognized under interest income/expense; otherwise they are recognized under other financial income and expenses. There was income of €15 million in 2015 and expense of €19 million in the previous year. Further income of €6 million (2014: charges of €20 million) resulted from the translation of foreign currency receivables and payables and from currency derivatives.

General administration expenses relating to Bayer AG's performance of its functions as the parent company of the Bayer Group amounted to €324 million (2014: €272 million). Miscellaneous operating expenses relating to these functions, net of the respective miscellaneous operating income, came to €78 million (2014: €19 million). Of the higher expenses totaling €111 million, €83 million was in connection with the carve-out and stock market flotation of Covestro.

Pre-tax income decreased to €1,967 million (2014: €2,710 million). Tax expense nonetheless increased from €256 million to €606 million on account of effects associated with the formation of the Covestro Group and lower tax-free income from investments in affiliated companies. After deduction of taxes, net income was €1,361 million (2014: €2,454 million). A withdrawal of €706 million was made from other retained earnings, leaving a distributable profit of €2,067 million.

The Board of Management and Supervisory Board will propose to the Annual Stockholders' Meeting on April 29, 2016 that the distributable profit be used to pay a dividend of €2.50 per share (826,947,808 shares) on the capital stock of €2,117 million entitled to the dividend for 2015.

15.2 Asset and Financial Position of Bayer AG

Bayer AG Summary Statements of Financial Position according to the German Commercial Code [Table 3.15.2]

	Dec. 31,2014	Dec. 31,2015
	€ million	€ million
ASSETS		
Noncurrent assets		
Intangible assets, property, plant and equipment	18	31
Financial assets	40,919	43,737
	40,937	**43,768**
Current assets		
Receivables from subsidiaries	2,729	3,159
Remaining receivables, other assets	460	380
Cash and cash equivalents, marketable securities	1,243	629
	4,432	**4,168**
Total assets	**45,369**	**47,936**
EQUITY AND LIABILITIES		
Equity	**15,532**	**15,032**
Provisions	**2,406**	**2,356**
Other liabilities		
Bonds and notes, liabilities to banks	7,210	7,203
Payables to subsidiaries	18,204	22,752
Remaining liabilities	2,017	593
	27,431	**30,548**
Total equity and liabilities	**45,369**	**47,936**

The asset and liability structure of Bayer AG is dominated by its role in managing the subsidiaries and financing corporate activities as the parent company of the Bayer Group. This is primarily reflected in the high level of investments in affiliated companies and of the receivables from, and payables to, Group companies.

Total assets of Bayer AG as of December 31, 2015 were €48.0 billion, up from €45.4 billion at the start of the year because of the €2.8 billion increase in noncurrent assets. By contrast, current assets decreased by €0.3 billion in fiscal 2015.

Property, plant and equipment and intangible assets totaled €31 million (2014: €18 million) and were therefore of secondary importance. Financial assets increased by €2.8 billion to €43.7 billion (2014: €40.9 billion), principally as a result of capital increases at subsidiaries. Investments in affiliated companies continued to account for by far the largest item in total assets, amounting to 89.5% (2014: 88.3%).

Receivables from subsidiaries amounted to €3.2 billion (2014: €2.7 billion) while payables to subsidiaries totaled €22.8 billion (2014: €18.2 billion). These amounts accounted for 6.6% of total assets and 47.5% of total equity and liabilities, respectively.

Including the deferred charges, the other receivables reflected in current assets, at €380 million, were below the prior-year level of €460 million and were of only secondary importance in relation to total assets. Cash and cash equivalents were €614 million lower than in the previous year at €629 million (2014: €1,243 million) due to lower bank deposits.

Bayer AG had equity of €15.0 billion (2014: €15.5 billion). The decline in equity, coupled with the increase in total assets, caused the equity ratio to fall to 31.4% (2014: 34.2%). Net income for 2015 was €1,361 million while equity was diminished by the €1,861 million dividend payment for 2014.

Provisions were level year on year at €2.4 billion. While pension provisions decreased by €306 million to €1,562 million, tax provisions were €265 million higher at €664 million. The other provisions were virtually unchanged at €130 million (2014: €139 million).

Other liabilities rose by €3.1 billion to €30.5 billion (net of deductible receivables; 2014: €27.4 billion), mainly due to the €2.1 billion increase in financial debt. In this connection, external debt of the Group was reduced at the expense of higher debt to Group companies. Internal financial debt rose by €3.2 billion. Bonds in the same amount of €1.3 billion were issued and repaid in fiscal 2015. The use of funds from the commercial paper program decreased by €1.1 billion. Total financial debt at year end 2015 was €30.3 billion (2014: €28.2 billion). After deduction of cash and cash equivalents of €0.6 billion, net debt was €2.7 billion higher than in the previous year at €29.7 billion (2014: €27.0 billion).

Corporate Governance

16. Corporate Governance Report

This Corporate Governance Report also constitutes the report pursuant to Section 3.10 of the German Corporate Governance Code.

16.1 Declaration Concerning the German Corporate Governance Code*

*not part of the audited management report

DECLARATION BY THE BOARD OF MANAGEMENT AND SUPERVISORY BOARD OF BAYER AG
concerning the German Corporate Governance Code (May 5, 2015 version) pursuant to Section 161 of the German Stock Corporation Act**

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 2014.

With respect to the past, the following declaration refers to the June 24, 2014 version of the Code. With respect to present and future corporate governance practices at Bayer AG, the following declaration refers to the recommendations in the May 5, 2015 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 2014.

2. All the recommendations of the Code are now being complied with in full.

Leverkusen, December 2015

For the Board of Management

DR. DEKKERS

DIETSCH

For the Supervisory Board

WENNING

** This is an English translation of a German document. The German document is the official and controlling version, and this English translation in no event modifies, interprets or limits the official German version.

16.2 Governance*

*not part of the audited management report

BAYER IN COMPLIANCE WITH THE RECOMMENDATIONS OF THE GERMAN CORPORATE GOVERNANCE CODE

Bayer has always placed great importance on responsible corporate governance. This will remain the case in the future. In 2015, the company was again able to issue a declaration that it had fully complied with the recommendations of the German Corporate Governance Code in the past and continued to do so.

In 2015, the Board of Management and Supervisory Board again addressed the question of compliance with the German Corporate Governance Code, including the Code amendments of May 5, 2015. The resulting declaration, which is reproduced on the previous page, was issued in December 2015 and posted on Bayer's website along with previous declarations.

DUTIES AND ACTIVITIES OF THE BOARD OF MANAGEMENT

The Board of Management runs the company on its own responsibility with the goal of sustainably increasing the company's enterprise value and achieving the defined corporate objectives. The Board of Management performs its tasks according to the law, the Articles of Incorporation and the Board's rules of procedure, and works with the company's other governance bodies in a spirit of trust.

The Board of Management of Bayer AG defines the long-term goals and strategies for the company and the Group and sets forth the principles and directives for the resulting corporate policies. It coordinates and monitors the most important activities, defines the portfolio, develops and deploys managerial staff, allocates resources and decides on the Group's financial steering and reporting.

The members of the Board of Management bear joint responsibility for running the business as a whole. However, the individual members manage the areas assigned to them on their own responsibility within the framework of the decisions made by the full Board. The allocation of functions among the members of the Board of Management is defined in a written schedule.

The full Board of Management makes decisions on all matters of fundamental importance and in cases where a decision of the full Board is prescribed by law or otherwise mandatory. The rules of procedure of the Board of Management contain a list of topics that must be dealt with and resolved by the full Board.

Meetings of the Board of Management are held regularly. They are convened by the Chairman of the Board of Management. Any member of the Board of Management may also demand that a meeting be convened. The Board of Management makes decisions by a simple majority of the votes cast, except where unanimity is required by law. In the event of a tie, the Chairman has the casting vote.

According to the Board of Management's rules of procedure and the functional responsibilities assigned to its members, the Chairman bears particular responsibility for leading and coordinating the Board's work. He represents the company and the Group in dealings with third parties and the workforce on matters relating to more than one part of the company or the Group. He also bears special responsibility for certain corporate functions.

In 2015 special responsibility was assigned to different members of the Board of Management for each of the following functions:

- Strategy and Portfolio Management
- Finance
- Human Resources, Technology & Sustainability (this member also serving as Labor Director)
- Innovation

In addition, three of the members of the Board of Management were each responsible for geographical regions.

Effective January 1, 2016, functional responsibilities were reallocated in light of the Bayer Group's sole focus on the Life Science business and the enlargement of the Board of Management by three members. In addition to the function of Board Chairman and the four other existing functions, three functions were created that each have special responsibility for one of the operating divisions. Responsibilities for the geographical regions were redistributed among four members.

See Chapter 4 for more about the Bayer Life Science Center

A Deal Committee was established within the Board of Management to make the final decisions on corporate acquisitions, divestments or licensing transactions above a defined medium size. The membership of this committee varies from case to case. The members responsible for Strategy and Portfolio Management and for Finance always participate in its decision-making. The third member of the Board of Management involved in the decisions of the Deal Committee is either the member responsible for the division to which the transaction relates or – in the case of a transaction of the Bayer Life Science Center – the member responsible for Innovation. There are no other committees within the Board of Management.

SUPERVISORY BOARD: OVERSIGHT AND CONTROL FUNCTIONS

The role of the 20-member Supervisory Board is to oversee and advise the Board of Management. Under the German Codetermination Act, half of the Supervisory Board's members are elected by the stockholders, and half by the company's employees. The Supervisory Board is directly involved in decisions on matters of fundamental importance to the company, regularly conferring with the Board of Management on the company's strategic alignment and the implementation status of the business strategy.

The Chairman of the Supervisory Board coordinates its work and presides over the meetings. Through regular discussions with the Board of Management, the Supervisory Board is kept constantly informed about business policy, corporate planning and strategy. The Supervisory Board approves the annual budget and financial framework. It also approves the financial statements of Bayer AG and the consolidated financial statements of the Bayer Group along with the combined management report, taking into account the reports by the auditor.

COMMITTEES OF THE SUPERVISORY BOARD

The Supervisory Board has the following committees:

Presidial Committee: This comprises the Chairman and Vice Chairman of the Supervisory Board along with a further stockholder representative and a further employee representative. The Presidial Committee serves primarily as the mediation committee pursuant to the German Codetermination Act. It has the task of submitting proposals to the Supervisory Board on the appointment of members of the Board of Management if the necessary two-thirds majority is not achieved in the first vote at a plenary meeting. Certain decision-making powers in connection with capital measures, including the power to amend the Articles of Incorporation accordingly, have also been delegated to this committee.

Audit Committee: The Audit Committee comprises three stockholder representatives and three employee representatives. The Chairman of the Audit Committee in 2015, Dr. Klaus Sturany, satisfies the statutory requirements concerning the independence and the expertise in the field of accounting or auditing that a member of the Supervisory Board and the Audit Committee is required to possess. The Audit Committee meets regularly four times a year. Its tasks include oversight of the company's financial reporting process, the effectiveness and ongoing development of the internal control system, the risk management system, the internal audit system, the compliance system and the audit of the financial statements. It prepares the decisions of the Supervisory Board pertaining to the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group, the combined management report, the proposal for the use of the distributable profit of Bayer AG, and the interim financial statements and management reports of the Bayer Group, all of which are prepared by the Board of Management. On the basis of the auditor's report on the audit of the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report, the Audit Committee develops proposals concerning the approval of both sets of financial statements by the full Supervisory

Board. The Audit Committee is also responsible for the company's relationship with the external auditor. The Audit Committee submits a proposal to the full Supervisory Board concerning the auditor's appointment, prepares the awarding of the audit contract to the audit firm appointed by the Annual Stockholders' Meeting, suggests areas of focus for the audit and determines the auditor's remuneration. It also monitors the independence, qualifications, rotation and efficiency of the auditor.

Human Resources Committee: On this committee, too, there is parity of representation between stockholders and employees. It consists of the Chairman of the Supervisory Board and three other Supervisory Board members. The Human Resources Committee prepares the personnel decisions of the full Supervisory Board, which resolves on appointments or revocations of appointments of members of the Board of Management. 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. The Human Resources Committee also discusses the long-term succession planning for the Board of Management.

Nominations Committee: This committee carries 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.

Innovation Committee: The Innovation Committee 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 research and development programs. Within its area of responsibility, the Committee advises and oversees the management and prepares any Supervisory Board decisions. The Committee comprises the Chairman of the Supervisory Board and five other members of the Supervisory Board, with parity of representation between stockholder and employee representatives.

Detailed information on the work of the Supervisory Board and its committees is provided in the Report of the Supervisory Board on page 34 of this Annual Report.

OBJECTIVES FOR THE COMPOSITION OF THE SUPERVISORY BOARD

The Supervisory Board should be composed in such a way that its members together possess the necessary expertise, skills and professional experience to properly perform their duties. In view of Bayer AG's global operations, the Supervisory Board has set itself the goal of always having several members with international business experience or an international background. A further objective concerning the composition of the Supervisory Board is 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. With a view to avoiding potential conflicts of interest, the Supervisory Board has set itself the goal that more than half of the stockholder representatives be independent and also that at least three quarters of the total Supervisory Board membership (stockholder and employee representatives) be independent. The Supervisory Board assesses the independence of its members according to the recommendation contained in Section 5.4.2 of the the German Corporate Governance Code. In assessing independence, the Supervisory Board also considers the criteria given in the recommendation of the European Commission of February 15, 2005.[4] Finally, the Supervisory Board has set a standard limit on the duration of any person's membership of the Supervisory Board in line with the recommendation in Section 5.4.1, Paragraph 2 (May 5, 2015 version of the Code). Absent special circumstances, no person should remain a member of the Supervisory Board for more than three full terms of office. For members of the Supervisory Board serving at the time the standard limit was introduced (September 2015) who have already

[4] Annex 2 to the recommendation of the European Commission of February 15, 2005, on the role of nonexecutive or supervisory directors of listed companies and on the committees of the (supervisory) board (2005/162/EC)

exceeded this limit or will exceed it by the end of their current term of office, the limit will be applied with effect from the conclusion of their current term of office.

The stated goals refer to the Supervisory Board as a whole unless specified otherwise. However, since the Supervisory Board can only nominate candidates for election as stockholder representatives, the goals can only be taken into account in these nominations.

Upon elections to the Supervisory Board to be held after January 1, 2016, it must be ensured that at least 30% of the members are women and at least 30% are men.

Implementation status of the objectives

The Supervisory Board has several members with international business experience and other international connections. The objective that a member should step down from the Supervisory Board at the Annual Stockholders' Meeting following his or her 72nd birthday – absent special circumstances – is being met. One member, Ernst-Ludwig Winnacker, who has been elected to serve until the Annual Stockholders' Meeting in 2016, had already reached 72 years of age at the time of the Annual Stockholders' Meeting in 2014. However, he was proposed for reelection at that Meeting so that the Supervisory Board would continue to have one member with particular expertise in research until one or more members with similar experience can be appointed. One member of the Supervisory Board, Werner Wenning, served as Chairman of the company's Board of Management until 2010. One member, Ernst-Ludwig Winnacker, has been a member of the Supervisory Board since 1997, and thus has served more than three terms of office. However, neither Werner Wenning nor Ernst-Ludwig Winnacker has any personal or business relationship with the company or a governance body of the company that in the opinion of the Supervisory Board gives rise to a material conflict of interest of a more than temporary nature. There are no indications of any possible lack of independence in the case of the other Supervisory Board members. Thus the Supervisory Board considers all of its members to be independent. The proportion of women on the Supervisory Board is currently 20%. It is planned to nominate a further female candidate for election to the Supervisory Board at the Annual Stockholders' Meeting in 2016. If this candidate is elected, the proportion of women among the stockholder representatives will rise to 30% and on the full Supervisory Board to 25%.

TARGETS REGARDING THE PROPORTION OF WOMEN ON THE BOARD OF MANAGEMENT AND THE FIRST TWO MANAGEMENT LEVELS

The Supervisory Board aims to ensure that there is at least one woman serving on the company's Board of Management. This corresponds to a share of 12.5% on the eight-member Board. The Board of Management has set targets of 20% women on the first management level and 28% women on the second management level. These targets are to be attained by June 30, 2017.

DISCLOSURE OF SECURITIES TRANSACTIONS BY MEMBERS OF THE BOARD OF MANAGEMENT OR SUPERVISORY BOARD

Members of the Board of Management or Supervisory Board and their close relatives are required by law to disclose all transactions involving the purchase or sale of Bayer stock where such transactions total €5,000 or more in a calendar year. Bayer publishes details of such transactions immediately on its website and also notifies the German Financial Supervisory Authority accordingly. This information is provided to the company register for archiving. The following transactions in 2015 were reported to Bayer AG:

Securities Transactions by Members of the Board of Management or Supervisory Board [Table 3.16.1]

Date/place	Name/function	Financial instrument	ISIN	Transaction	Price/currency	Quantity	Total transaction volume
March 3, 2015/ Xetra	Werner Wenning, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	678	EUR 89,992.16
March 3, 2015/ Xetra	Dr. Klaus Sturany, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	452	EUR 59,994.77
March 3, 2015/ Xetra	Dr. Paul Achleitner, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	339	EUR 44,996.08
March 3, 2015/ Xetra	Dr.Clemens Börsig, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	226	EUR 29,997.39
March 3, 2015/ Xetra	Thomas Ebeling, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	226	EUR 29,997.39
March 3, 2015/ Xetra	Dr. Helmut Panke, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	291	EUR 38,624.95
March 3, 2015/ Xetra	Prof. Dr. Ernst-Ludwig Winnacker, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	226	EUR 29,997.39
March 3, 2015/ Xetra	Prof. Dr.-Ing Thomas Fischer, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	339	EUR 44,996.08
March 3, 2015/ Xetra	Michael Schmidt-Kiessling, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	226	EUR 29,997.39
March 3, 2015/ Xetra	Dr. Simone Bagel-Trah, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 132.73	152	EUR 20,175.23
March 3, 2015/ Over the counter market (OTC)	Sue H. Rataj, Supervisory Board	Bayer AG American Depositary Receipts (ADR)	US072730302	Purchase	US$ 148.57	226	US$ 33,576,82

Information filed with the company by members of the Board of Management and Supervisory Board shows that, on the closing date for the financial statements, their total holdings of Bayer AG stock or its derivatives were equivalent to less than 1% of the issued stock.

COMMON VALUES AND LEADERSHIP PRINCIPLES

Bayer has committed itself to the values of Leadership, Integrity, Flexibility and Efficiency, or "LIFE" for short. These values provide guidance to all Bayer employees, both for business dealings and for their collaboration within the company. All employees are obligated to align their work to the LIFE values. This is taken into account in human resources development and the regular performance evaluations.

SYSTEMATIC RISK MANAGEMENT

Risk management forms an integral part of our control processes. It ensures that we are mindful of risks involved in our activities and can identify any financial or nonfinancial risks at an early stage. We attempt to avoid or mitigate risks by taking appropriate countermeasures, or to transfer them to third parties (such as insurers) to the extent possible and economically acceptable.

The internal control system (ICS) applied to our accounting processes enables timely risk monitoring. This ensures the accuracy of our financial reporting along with the prevention or, where necessary, rectification of errors in the processing of business transactions. It also ensures the availability of reliable data on the company's financial situation.

However, the control and risk management system cannot provide absolute protection against losses arising from business risks or fraudulent actions.

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DETAILED REPORTING

To maximize transparency, we provide regular and timely information on the Group's position and significant changes in business activities to stockholders, financial analysts, stockholders' associations, the media and the general public. Bayer complies with the recommendations of the Corporate Governance Code by publishing reports on business trends, financial position, results of operations and related risks four times a year.

In line with statutory requirements, the members of the company's Board of Management provide an assurance that, to the best of their knowledge, the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report provide a true and fair view.

The financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report are published within 90 days after the end of each fiscal year. In addition, stockholders and other interested parties are kept informed of developments during the fiscal year by means of financial reports issued for the half-year and the first and third quarters within 45 days after the end of the respective reporting period. The half-year financial report is voluntarily subjected to an audit review by the auditor, whose appointment by the Annual Stockholders' Meeting also relates specifically to this audit review.

In addition, Bayer provides information at news conferences and analysts' meetings. The company also uses the internet as a platform for the timely announcement of the issue dates of major publications, such as the annual report and the quarterly financial reports (interim reports), and the date of the Annual Stockholders' Meeting.

In line with the fair disclosure principle, all stockholders and the other main target groups are treated equally as regards the communication of valuation-relevant information. All significant new facts are disclosed immediately to the general public. Stockholders also have immediate access to the information Bayer publishes locally in compliance with the respective stock market regulations.

In addition to our regular reporting, we issue ad-hoc statements on developments that otherwise might not become publicly known but have the potential to materially affect the price of Bayer stock.

16.3 Compliance

Bayer manages its businesses responsibly and in accordance with the statutory requirements of the countries in which it operates.

We define compliance as legally and ethically impeccable conduct by all employees in their daily work, because the way they carry out their duties affects the company's reputation. Bayer does not tolerate any violation of applicable laws, relevant codes of conduct or internal regulations. Compliance is essential for our long-term economic success.

CORPORATE COMPLIANCE

The Board of Management is unreservedly committed to compliance, and Bayer will forgo any business transaction that would violate our compliance principles. These principles are enshrined in our Corporate Compliance Policy, which is available in 42 languages and sets out our commitment to:

- Fair competition
- Integrity in business dealings – including zero tolerance of corruption
- The principles of sustainability and product stewardship
- The upholding of foreign trade laws and insider trading laws
- The separation of business and personal interests
- Proper record-keeping and transparent financial reporting
- Fair and respectful working conditions and the avoidance of all forms of discrimination

Every employee is required to observe these rules and to immediately report any violation of the Corporate Compliance Policy. This general reporting requirement does not apply in France due to peculiarities of national law. Managerial employees have a vital role to play in implementing the Corporate Compliance Policy in the Bayer Group. As role models, they help to ensure this essential code of conduct is actively adhered to. Managers may lose their entitlement to variable compensation components and be subject to further disciplinary measures if systematic violations of applicable law have occurred in their sphere of responsibility. Compliant and lawful conduct factors into the performance evaluations of all managerial employees.

Adherence to the Corporate Compliance Policy is among the subjects covered in all audits conducted by Bayer's Internal Audit. Audits are planned using a function- and risk-based approach that also takes a corruption awareness index into consideration. Audits of the major companies, which together account for about 90% of Group sales, are planned to take place every three years. A total of 214 audits were conducted in 2015. These included 38 preventive or incident-related compliance audits. The head of Internal Audit regularly attends the meetings of the Audit Committee of the Supervisory Board, presenting a list of conducted audits and their outcomes at least once a year.

COMPLIANCE ORGANIZATION

The Bayer Group's compliance organization is headed by the Group Compliance Officer, who regularly reports directly to the Chairman of the Board of Management and to the Audit Committee of the Supervisory Board. A central compliance department supports the Group Compliance Officer in steering and implementing the Group-wide compliance activities. In 2015 each subgroup and service company had its own compliance officer, whose responsibilities included ensuring adherence to subgroup- or industry-specific standards. A central compliance officer – supported where necessary by further compliance functions – is available in every country or country group to answer questions from all employees regarding lawful and ethical behavior in business-related situations.

The compliance organization operates in accordance with international standards such as the OECD Recommendations of the Council for Further Combating Bribery of Foreign Public Officials in International Business Transactions.

The mission and the goals of the Bayer Group's compliance organization are set forth in our Compliance Charter, which forms the basis for proactive, risk-based, collaborative cooperation with the operational business aimed at early prevention of compliance violations. For compliance to continue developing as a permanent, active part of Bayer's corporate culture, it must be integrated into all operational business units and their work processes.

A Group-wide compliance management system serves the purpose of early prevention. This system is based on partnership with the operational business and features dialogue, transparency and continuous improvement. It also includes the punishment of compliance violations.

The preventive approach is driven by the Integrated Compliance Management (ICM) project. This promotes close, systematic cooperation between compliance experts and operational business managers. With the help of ICM, relevant business risks can be identified and minimized. A systematic process is in place involving roundtable meetings to discuss identified compliance risks and coordinate steps to mitigate them. The participants in these roundtables are the compliance functions and the operational business managers. The results of the roundtables are entered and tracked in a Group-wide compliance risk management database.

Group target 2015: conducting preventive risk assessments in all three subgroups

In line with our Group target, we had carried out comprehensive, preemptive risk assessments in the holding company, all three subgroups and the country organizations by the end of 2015. The project also includes regular self-monitoring by the operational business units based on appropriate auditing and inspection procedures. ICM is focused on the areas of antitrust law, anticorruption measures, export control, conflicts of interest, insider trading, antidiscrimination and privacy. At the beginning of 2016, the project was transferred to the company's compliance and privacy organization.

See also Chapter 1.4 for Group targets

Compliance violations can be reported – anonymously if desired – via a central, global compliance hotline, which was switched in 2015 to a new international provider offering additional services. In 2015 the compliance organization received a total of 185 reports via this compliance hotline (121 of these anonymous), which is also accessible to the general public. Of these reports, 10 came from Germany and 175 from other countries. As an alternative to the compliance hotline, suspected compliance violations may also be reported to the compliance officer for the respective country organization or to Internal Audit.

All suspected compliance violations in the Group are recorded according to uniform criteria and dealt with under the rules set forth in Bayer's Directive on the Management of Compliance Incidents.

ONLINE ANNEX: 3-16.3-1

Where an investigation confirms that a compliance violation has occurred, the company has a graduated set of measures at its disposal. These include a verbal or written warning, transfer to a different unit, cancellation of a planned promotion, a reduction in the short-term incentive payment, downgrading to a lower collectively agreed pay rate or managerial contract level, and ordinary or extraordinary termination. This does not preclude the company from asserting further claims against the employee concerned for cost reimbursement or damages or from initiating a criminal prosecution. The action taken in each case depends on the gravity of the compliance violation and on applicable law.

COMPLIANCE TRAINING AND COMMUNICATIONS

Group target 2015: annual compliance training for all Bayer managers (>99%)

Group-wide training programs tailored to requirements and target groups, along with extensive communications activities, help to further raise the employees' awareness for compliance issues and the risks involved. In 2015, 38,609 Bayer managers, or 96.6% of the global total, took a compliance training program. This was in line with the Group target.

ONLINE ANNEX: 3-16.3-2

See also Chapter 1.4 for Group targets

The aim of these targeted training programs is to ensure that employees do not overstep boundaries out of ignorance or uncertainty. Our compliance training programs reflect the focus areas of the ICM project and are available in various formats to meet the needs of different employee groups. Some take the form of web-based training (WBT) programs, while others involve face-to-face training sessions or workshops.

In 2015, we implemented a new global web-based training program in 83 countries on the subject of conflicts of interest. This program, initially available in 10 languages, has already been completed by 26,163 employees.

New hires and employees switching to different areas of responsibility within Bayer are regularly invited to participate in the training programs relevant to their functions. This ensures that all new employees receive the appropriate compliance training.

In view of the particularly strict compliance rules in the area of health care, we offer special training programs for the employees working in this field. Further details are given in Chapter 7 "Procurement, Products, Logistics, Distribution."

See Chapter 7.3

We again ran a broad-based communications campaign in 2015 to provide comprehensive information to all employees about compliance and the availability of advice from compliance staff under the new partnering concept, as well as to enhance their awareness for compliance-critical situations. The communications activities in 2015 focused on conflicts of interest and product-related communications. A wide range of internal media offerings was available on both topics. At the start of the year, a quiz provided the opportunity for employees to refresh their knowledge of various aspects of compliance.

16.4 Compensation Report

The Compensation Report describes the essential features of the compensation system for the members of the Board of Management and the Supervisory Board and explains the compensation of the individual members. The report conforms to the requirements of the German Commercial Code including the principles of German Accounting Standard No. 17 (DRS 17). It also complies with the recommendations of the German Corporate Governance Code and with the International Financial Reporting Standards (IFRS).

16.4.1 Compensation of the Board of Management

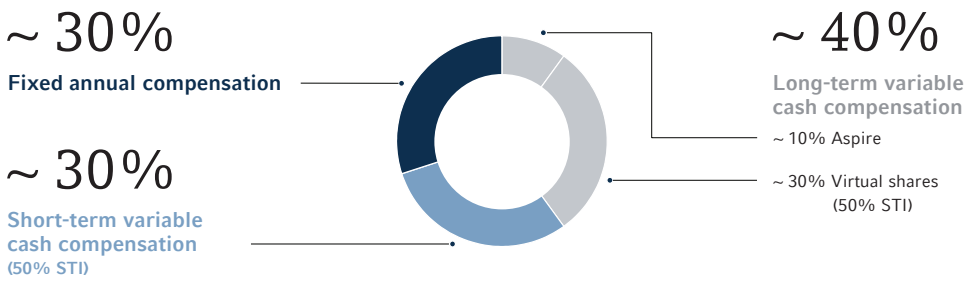
OBJECTIVES

The structure of the compensation system for the Board of Management of Bayer AG is aimed at ensuring performance-oriented corporate governance and a long-term increase in the company's value. The core elements of the system include fixed compensation, which takes into account the tasks and duties of the Board of Management members, and an incentivized component – the short-term incentive (STI) –, which depends on the attainment of the annual corporate performance targets. In addition to the compensation directly related to each year of service, there are two long-term stock-based components that are directly related to the development of Bayer's share price over time and thus are intended to create an incentive for a sustained commitment to the company. The system is also designed to enable the company to successfully compete for highly qualified executives and to ensure statutory and regulatory compliance. Board of Management compensation is in line with the basic principles of the compensation structure for managerial employees in the Bayer Group. The appropriateness of the system and the compensation level are regularly reviewed by the Supervisory Board, which then makes any necessary adjustments.

COMPENSATION STRUCTURE UNTIL DECEMBER 31, 2015

The compensation paid to the members of the Board of Management includes both non-performance-related and performance-related components. The compensation structure, based on average total annual compensation and 100% target attainment, is as follows:

Board of Management Compensation Structure (German Commercial Code)[1] [Graphic 3.16.1]



[1] Excluding fringe benefits and pension entitlements

The non-performance-related compensation comprises the fixed annual compensation along with fringe benefits. The performance-related compensation partly comprises a variable component (STI), of which 50% takes the form of short-term variable cash compensation and 50% consists of long-term cash compensation involving a grant of virtual Bayer shares that are retained for three years. The other performance-related compensation component serving as a long-term incentive is the stock-based cash compensation program Aspire, where a four-year retention period applies.

The individual performance-related components are capped at the grant date. The cap on the total compensation is 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.

Non-performance-related components

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 index and adjusted if necessary. It is paid out in twelve monthly installments.

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.

Performance-related components

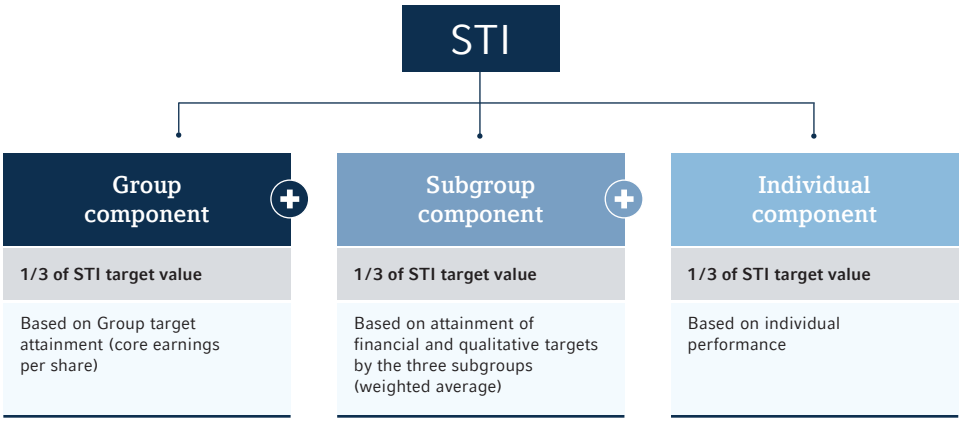
Short-term variable cash compensation

The short-term variable compensation (short-term incentive, or STI) is based on a set percentage of the fixed annual compensation (target value). This amount is adjusted according to the target attainments of the Bayer Group, the subgroups and the individual Board of Management member.

The Group component is determined in relation to core earnings per share of the Group, while the subgroup components are governed by the weighted average target attainments of the HealthCare, CropScience and Covestro subgroups. The annual subgroup targets are derived from the respective business strategies and operational priorities. The target attainment for HealthCare and CropScience is mainly based on the comparison of target and actual values for the EBITDA margin before special items and sales growth. At Covestro it is measured in terms of the cash flow return on investment (CFROI). Target attainment also takes into account qualitative objectives including safety, compliance and sustainability aspects.

The target attainment for the individual component of the variable compensation is determined by the Supervisory Board. One half of the STI for each year is paid out in the second quarter of the following year, while the other half is granted in the form of virtual Bayer shares.

Short-Term Variable Compensation (STI) Components [Graphic 3.16.2]



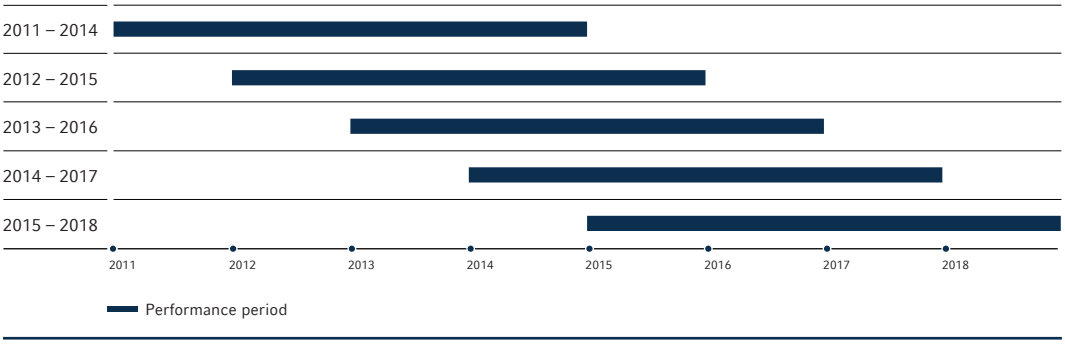
Long-term variable cash compensation based on virtual Bayer shares

Both the number of virtual shares granted and the amount of the payment at the end of the retention period are based on the average official closing prices of Bayer shares over the last 30 trading days of the respective year in the Xetra system of the Frankfurt Stock Exchange. A cash payment with respect to the number of virtual shares held is made at the end of the three-year period according to the market price of Bayer shares at that time. In addition, the members of the Board of Management receive an amount equal to the total dividends paid on the equivalent number of real shares during the period. Payment is made in January of the year following the end of the three-year retention period. This payment is capped at 200% of the amount converted into virtual shares at the beginning of the three-year period. No option exists for the Board of Management members to extend the retention period or defer the payout. When a member leaves the Board of Management, the retention period for two-thirds of each tranche is shortened to two years. If the member leaves during a fiscal year, payment is made immediately with respect to two-thirds of any tranche that has already been retained for more than two years. The remaining one-third of each tranche continues to be subject to the three-year retention period.

Long-term stock-based cash compensation (Aspire I)

Members of the Board of Management are eligible to participate in the annual tranches of the long-term stock-based compensation program Aspire I ("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 for as long as they continue in the service of the Bayer Group. The payments made under this program are based 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 performance period. The payout/performance matrix according to the absolute and relative development of Bayer's share price is explained at HTTP://WWW.INVESTOR.BAYER.COM/EN/STOCK/STOCK-PROGRAMS/ASPIRE/.

Tranches of the Aspire Program [Graphic 3.16.3]



When a member of the Board of Management retires, current tranches may be shortened, thus reducing their value. In this case, tranches up to the one issued in 2011 were shortened on a pro-rated basis according to the duration of the member's active service on the Board of Management during the period of the tranche; tranches issued in 2012 or later are shortened according to the duration of the member's active service on the Board of Management during the first year of the tranche.

Expanded Share Ownership Guidelines

On top of the requirement for participants in the Aspire program to make a personal investment in Bayer shares, the members of the Board of Management have undertaken to comply with expanded Share Ownership Guidelines. These require the Chairman of the Board of Management to build a position in Bayer shares to the value of 150% of his fixed annual compensation, and the other members to the value of 100% of their fixed annual salaries, within four years and to continue to hold them for as long as they remain Board of Management members. Half the number of virtual shares granted to them through conversion of 50% of the STI into virtual shares counts toward this position. The Board of Management members must provide documentary evidence of their compliance with this obligation for the first time at the end of the four-year position-building period and again yearly thereafter. In the event of significant changes in fixed annual compensation, the value to which shares must be held is adjusted accordingly.

Pension entitlements (retirement and surviving dependents' pensions)

The members of the Board of Management appointed prior to 2013 are generally entitled to receive a lifelong company pension after leaving the Bayer Group, though not before the age of 60. This pension is normally paid out in the form of a monthly life annuity. Dr. Marijn Dekkers has the option to receive a capital sum in place of an annuity.

The annual pension granted equals at least 15% of final fixed annual compensation. This percentage can increase with continuing service on the Board of Management up to a maximum of 60%. The arrangements for surviving dependents basically provide for a widow's pension amounting to 60% of the member's pension entitlement and an orphan's pension amounting to 15% of the member's pension entitlement for each child up to an age that has been contractually agreed or set out under insurance conditions.

Future pension payments are annually reviewed and adjusted based on the development of consumer prices. Pension rights are suspended if a member of the Board of Management works for a competitor of Bayer AG or of another Group company before the age of 65 without the prior written consent of the Supervisory Board.

The annual pension entitlement for members of the Board of Management appointed in 2013 or thereafter is based on contributions. Bayer provides a hypothetical contribution amounting to 33% of the respective fixed compensation each year. This percentage is comprised of a 6% basic contribution and a 27% matching contribution – three 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 (at 62 years of age at the earliest) 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. Kemal Malik has been granted, in addition, a vested entitlement to a fixed 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.

The ultimate pension entitlement cannot be precisely determined in advance. It depends on the development of the member's compensation, the number of years of service on the Board of Management and the return on the assets of the Rheinische Pensionskasse VVaG. We currently estimate the achievable total pension entitlement at approximately 45% of a member's annual fixed compensation immediately prior to retirement, with roughly 38% financed by the company and 7% by the member of the Board of Management.

Certain assets are administered by Bayer Pension Trust e.V. under a contractual trust arrangement (CTA), providing substantial additional security for pension obligations resulting from direct commitments for members of the Board of Management in Germany.

Benefits upon termination of service on the Board of Management

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. The post-contractual noncompete agreement with Dr. Marijn Dekkers was rescinded without compensation when his service contract was extended in June 2014 in line with previous practice in a similar case.

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 German Corporate Governance Code. Such payments do not exceed the compensation payable for the remaining term of the service contract.

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 has been continuously unfit for work for at least 18 months and is likely to be permanently incapable of fully performing his 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 the members appointed to the Board of Management prior to 2013, the disability pension, like the retirement pension, amounts to at least 15% of the final fixed compensation and can increase with continuing service on the Board of Management up to a maximum of 60%. For members of the Board of Management appointed in 2013 or thereafter, 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.

COMPENSATION OF THE BOARD OF MANAGEMENT IN 2015

The aggregate compensation for the members of the Board of Management in 2015 totaled €17,918 thousand (2014: €15,648 thousand), comprising €4,662 thousand (2014: €4,561 thousand) in non-performance-related components and €13,256 thousand (2014: €11,087 thousand) in performance-related components. The pension service cost amounted to €1,847 thousand (2014: €1,385 thousand).

There were no changes in the membership of the Board of Management or the terms of office of the members in 2015.

Effective January 1, 2016, the Board of Management of Bayer AG was enlarged to eight members. In addition to the existing functions, three further functions were created that bear special responsibility for the newly defined operating divisions of the Group. The following new members were appointed to the Board of Management:

- Dieter Weinand, responsible for the Pharmaceuticals Division
- Erica Mann, responsible for the Consumer Health Division
- Liam Condon, responsible for the Crop Science Division

Also effective January 1, 2016, Dr. Hartmut Klusik succeeded Michael König as the member of the Board of Management responsible for Human Resources, Technology and Sustainability.

The following table shows the total compensation of the individual members of the Board of Management who served in 2014 and/or 2015 according to the German Commercial Code:

Board of Management Compensation (German Commercial Code) [Table 3.16.2]

	Fixed annual compensation		Fringe benefits		Short-term variable cash compensation		Long-term variable cash compensation based on virtual Bayer shares [1]				Long-term stock-based cash compensation (Aspire) [2]		Aggregate compensation		Pension service cost [3]	
	2014	2015	2014	2015	2014	2015	2014	2014	2015	2015	2014	2015	2014	2015	2014	2015
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	No. of shares	€ thousand	No. of shares	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Serving members of the Board of Management as of December 31, 2015																
Dr. Marijn Dekkers (Chairman)	1,363	1,374	42	40	1,828	1,995	15,809	1,828	16,739	1,995	414	398	5,475	5,802	722	967
Werner Baumann [4]	899	906	67	47	1,051	1,237	9,088	1,051	10,377	1,237	273	262	3,341	3,689	204	227
Johannes Dietsch	240	725	22	44	280	917	2,424	280	7,698	917	–	210	822	2,813	65	220
Michael König	719	725	222	36	841	917	7,271	841	7,698	917	218	210	2,841	2,805	176	211
Kemal Malik	659	725	72	40	771	917	6,665	771	7,698	917	–	210	2,273	2,809	216	222
Former members																
Prof. Dr. Wolfgang Plischke [5]	238	–	18	–	280	–	2,485	287	–	–	73	–	896	–	2	–
Total	**4,118**	**4,455**	**443**	**207**	**5,051**	**5,983**	**43,742**	**5,058**	**50,210**	**5,983**	**978**	**1,290**	**15,648**	**17,918**	**1,385**	**1,847**

[1] Fair value at conversion date
[2] Fair value at grant date
[3] Including company contribution to Bayer-Pensionskasse VVaG or Rheinische Pensionskasse VVaG
[4] The increased variable compensation for Werner Baumann resulted mainly from his temporary duties as head of Bayer HealthCare in addition to his primary responsibilities as a member of the Board of Management.
[5] Prof. Dr. Plischke stepped down from the Board of Management as of midnight on April 29, 2014. In return for his acceptance of the early change made to the system of variable cash compensation in 2010, Prof. Dr. Plischke in 2014 received one additional virtual Bayer share resulting from the conversion of the STI into virtual Bayer shares.

Fixed annual compensation

The fixed compensation of the members of the Board of Management was adjusted in 2015. The total fixed compensation of all the members was €4,455 thousand (2014: €4,118 thousand).

Short-term variable cash compensation

The total short-term variable cash compensation (short-term portion of the STI) for all the members of the Board of Management in 2015 totaled €5,983 thousand (2014: €5,051 thousand) after deduction of the solidarity contribution. Provisions of €5,983 thousand (2014: €4,771 thousand) were established for payment of this compensation component to the members of the Board of Management serving as of December 31, 2015. 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 2015 it amounted to 0.20% (2014: 0.27%) of each member's total STI award.

Long-term variable cash compensation based on virtual Bayer shares

The conversion of 50% of the STI for 2015 into virtual Bayer shares was based on an average price of €119.17 (2014: €115.66).

The long-term variable cash compensation based on virtual Bayer shares that is included in the aggregate compensation according to the German Commercial Code was valued at €5,983 thousand (2014: €5,058 thousand). The aggregate compensation according to the IFRS also includes a change of €556 thousand (2014: €1,559 thousand) in the value of existing entitlements.

Provisions of €18,663 thousand (2014: €17,775 thousand) existed as of December 31, 2015, for the future cash disbursements to currently serving members of the Board of Management based on the virtual Bayer shares granted in the respective year. This amount also contains the dividend attributable to the respective prior year.

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 the German Commercial Code at its fair value of €1,290 thousand (2014: €978 thousand) at the respective grant date.

According to the IFRS, the aggregate compensation 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 aggregate compensation according to the IFRS also includes the change in the value of existing entitlements under ongoing Aspire tranches granted in prior years as stock-based compensation according to the IFRS.

Board of Management Compensation – Aspire Program (IFRS) [Table 3.16.3]

		Serving members of the Board of Management as of December 31, 2015					Former members	
		Dr. Marijn Dekkers (Chairman)	Werner Baumann	Johannes Dietsch[3]	Michael König[3]	Kemal Malik[3]	Prof. Dr. Wolfgang Plischke	Total
		€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Stock-based compensation entitlements earned in the respective year[1]	**2015**	**980**	**597**	**225**	**265**	**263**	**–**	**2,330**
	2014	1,186	684	78	246	247	1,161	3,602
Change in value of existing entitlements[2]	**2015**	**108**	**71**	**21**	**24**	**48**	**–**	**272**
	2014	272	154	18	43	56	144	687
Total	**2015**	**1,088**	**668**	**246**	**289**	**311**	**–**	**2,602**
	2014	1,458	838	96	289	303	1,305	4,289

[1] The newly earned entitlements are derived from the 2012 – 2015 (2014: 2011 – 2014) tranches of the Aspire program because this compensation was or is being earned over a four-year period. They are stated at their pro-rated fair values in 2014 and 2015, respectively.
[2] This line shows the change in the value of the entitlements already earned in 2012, 2013 and 2014 (2014: 2011, 2012 and 2013).
[3] The Aspire entitlements earned in 2014 and 2015 and the value changes for Johannes Dietsch, Michael König and Kemal Malik relate in part to Aspire tranches granted to them before they joined the Board of Management but not yet fully earned.

Provisions of €7,110 thousand (2014: €7,155 thousand) were established for the Aspire entitlements of the members of the Board of Management serving as of December 31, 2015.

Pension entitlements

The pension service cost recognized for the members of the Board of Management in 2015 according to the German Commercial Code was €1,847 thousand (2014: €1,385 thousand), while the current service cost for pension entitlements recognized according to the IFRS was €2,891 thousand (2014: €1,716 thousand).

The service cost and the settlement or present value of the pension obligations attributable to the individual members of the Board of Management are shown in the following table.

Pension Entitlements (German Commercial Code and IFRS) [Table 3.16.4]

	German Commercial Code				IFRS			
	Pension service cost[1]		Settlement value of pension obligation as of December 31		Service cost for pension entitlements		Present value of defined benefit pension obligation as of December 31	
	2014	2015	2014	2015	2014	2015	2014	2015
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Serving members of the Board of Management as of December 31, 2015								
Dr. Marijn Dekkers	722	967	8,256	11,014	877	1,418	12,812	14,106
Werner Baumann	204	227	5,738	7,022	259	385	10,701	10,131
Johannes Dietsch	65	220	2,160	2,681	85	355	4,133	3,995
Michael König	176	211	1,626	2,371	222	361	3,259	3,559
Kemal Malik	216	222	231	516	273	372	1,343	1,700
Former members								
Prof. Dr. Wolfgang Plischke[2]	2	–	–	–	–	–	–	–
Total	**1,385**	**1,847**	**18,011**	**23,604**	**1,716**	**2,891**	**32,248**	**33,491**

[1] Including company contribution to Bayer-Pensionskasse VVaG or Rheinische Pensionskasse VVaG
[2] Prof. Dr. Plischke stepped down from the Board of Management as of midnight on April 29, 2014.

The difference between the pension service cost according to the German Commercial Code 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 the German Commercial Code and the present value of the defined benefit pension obligation according to the IFRS.

Benefits upon termination of service on the Board of Management

It was agreed with Michael König that he be granted benefits of €1,131 thousand in connection with the mutually agreed early termination effective December 31, 2015, of his service contract, which originally ran until March 31, 2016. These benefits comprised fixed compensation, short-term variable compensation components (STI), Aspire and pension contributions – each for the period January 1 to March 31, 2016 –, along with the fair value of the accelerated vested portions of the existing Aspire tranches. The fixed compensation and short-term variable compensation component, together amounting to €375 thousand, will be paid during the first half of 2016. The payments from the Aspire tranches will be made upon expiration of each tranche based on the respective Aspire program parameters. In addition, a two-year non-compete agreement ending on December 31, 2017, exists with Michael König under his service contract. The resulting compensatory payment of €725 thousand per year will be made to him in monthly installments.

The aggregate compensation according to IFRS is shown in the following table:

Board of Management Compensation according to IFRS [Table 3.16.5]

	2014	2015
	€ thousand	€ thousand
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**

COMPENSATION STRUCTURE EFFECTIVE JANUARY 1, 2016

See Chapter 1.2 for details of Bayer's new corporate structure effective 2016.

The structure of the compensation package for the Board of Management of Bayer AG and the compensation level are intended to be sustainable, performance-based and appropriate. To ensure this, the Supervisory Board regularly reviews the compensation system and adjusts it as necessary. The most recent comprehensive review of the system, which the Supervisory Board performed in the third quarter of 2015, revealed a need for adjustments, mainly in view of the new divisional structure and the increase in the number of members of the Board of Management from five to eight. The review also showed that adjustments were necessary in light of the target positioning in relation to the other DAX companies. The review and the new compensation structure are based on an expert report from an independent compensation consultant.

The target percentages for the short- and long-term variable compensation are in the future the same for all the members of the Board of Management. The new structure featuring 100% fixed compensation, 100% target amount for the short-term variable compensation and 150% for the long-term variable compensation is intended to provide even greater encouragement for performance-oriented governance geared to long-term success.

In the future, the short-term variable compensation of the Board of Management will still be based on the attainment of targets set for three sub-components – a Group component, a segment component and an individual performance component – each of which will be given a weighting of one-third when evaluating the performance of each member of the Board. The Group component, which is based on the core earnings per share of the Group (including Covestro), and the individual performance sub-components based on the responsibilities of each member of the Board are basically unchanged. The segment component will be incentivized based on the average performance of the operating segments, with Pharmaceuticals having a 50% weighting, Consumer Health 20% and Crop Science (including Animal Health) 30%. In the case of the Board members responsible for an operating segment, however, this one-third is incentivized based on the profitability of the respective business only. In light of the legal and economic independence of Covestro and its stock market flotation in October 2015, it is no longer included in the evaluation of the segment-based component.

In addition, a new stock-based cash compensation program is being introduced from 2016. In the future the target amounts – expressed in numbers of virtual shares – will be derived from the contractually agreed target percentage and the individual STI payment factors of the Board members in the year prior to the issuance of the respective tranche. The cash payment amounts will be determined after four years based on the share price then applicable, the performance of the Bayer share relative to the EuroStoxx 50 and the dividends paid in the meantime. The cap on the payments to be made under this long-term compensation program newly introduced from 2016 is 250%, compared to 300% under the predecessor program. Thus the new compensation system maintains consistency between the Board of Management and other management levels. In the case of the Board of Management, however, an additional payment hurdle related to the EuroStoxx 50 has been introduced for the LTI plan.

To reduce complexity and enhance transparency, the long-term variable cash compensation component based on the conversion of part of the STI into virtual Bayer shares is now discontinued and the Share Ownership Guidelines have been simplified. Caps continue to apply to each variable cash compensation component and to the maximum total cash compensation for a given year in line with the recommendation in the German Corporate Governance Code.

The contribution-based pension has been adjusted in line with market conditions. Until now, Bayer has provided to the members of the Board of Management appointed in 2013 or thereafter a hypothetical contribution amounting to 33% of the respective fixed compensation each year. This hypothetical contribution has now been increased to 42% of the respective fixed compensation, and, as in the past, is converted into a pension module according to the annuity table for the applicable tariff of the Rheinische Pensionskasse VVaG pension fund.

16.4.2 Disclosures Pursuant to the Recommendations of the German Corporate Governance Code

In accordance with the recommendations of the German Corporate Governance Code, the following tables show the compensation – including fringe benefits – granted for 2015, indicating the target values and the maximum and minimum achievable values for the variable compensation components, along with the allocation of compensation.

Compensation and Benefits Granted for 2015 [Table 3.16.6]

	Serving members of the Board of Management as of December 31, 2015																				Former members			
	Dr. Marijn Dekkers (Chairman)				Werner Baumann (Strategy)				Johannes Dietsch[1] (Finance)								Michael König (Human Resources)				Kemal Malik[1] (Innovation)				Prof. Dr. Wolfgang Plischke			
	Joined Jan. 1, 2010				Joined Jan. 1, 2010				Joined Sept. 1, 2014								Joined April 1, 2013				Joined Feb. 1, 2014				Stepped down April 29, 2014			
	Target value 2014	Target value 2015	Min. 2015	Max.[2] 2015	Target value 2014	Target value 2015	Min. 2015	Max.[2] 2015	Target value 2014	Target value 2015	Min. 2015	Max.[2] 2015					Target value 2014	Target value 2015	Min. 2015	Max.[2] 2015	Target value 2014	Target value 2015	Min. 2015	Max.[2] 2015	Target value 2014	Target value 2015	Min. 2015	Max. 2015
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand					€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Fixed annual compensation	1,363	1,374	1,374	1,374	899	906	906	906	240	725	725	725					719	725	725	725	659	725	725	725	238	–	–	–
Fringe benefits	42	40	40	40	67	47	47	47	22	44	44	44					222	36	36	36	72	40	40	40	18	–	–	–
Total annual fixed compensation	**1,405**	**1,414**	**1,414**	**1,414**	**966**	**953**	**953**	**953**	**262**	**769**	**769**	**769**					**941**	**761**	**761**	**761**	**731**	**765**	**765**	**765**	**256**	**–**	**–**	**–**
Short-term variable cash compensation (50% of STI)	1,466	1,477	0	2,955	843	849	0	1,699	225	679	0	1,359					674	679	0	1,359	618	679	0	1,359	225	–	–	–
Long-term stock-based compensation (Aspire)[3]																												
2014 (Jan. 1, 2014 – Dec. 31, 2017)	545	–	–	–	359	–	–	–	107	–	–	–					288	–	–	–	135	–	–	–	96	–	–	–
2015 (Jan. 1, 2015 – Dec. 31, 2018)	–	550	0	1,649	–	362	0	1,087	–	290	0	870					–	290	0	870	–	290	0	870	–	–	–	–
Long-term variable cash compensation (virtual Bayer shares)[4]																												
2014 (Jan. 1, 2015 – Dec. 31, 2017)	1,466	–	–	–	843	–	–	–	225	–	–	–					674	–	–	–	618	–	–	–	230	–	–	–
2015 (Jan. 1, 2016 – Dec. 31, 2018)	–	1,477	0	5,909	–	849	0	3,397	–	679	0	2,718					–	679	0	2,718	–	679	0	2,718	–	–	–	–
Total	**4,882**	**4,918**	**1,414**	**11,927**	**3,011**	**3,013**	**953**	**7,136**	**819**	**2,417**	**769**	**5,716**					**2,577**	**2,409**	**761**	**5,708**	**2,102**	**2,413**	**765**	**5,712**	**807**	**–**	**–**	**–**
Service cost / benefit expense	722	967	967	967	204	227	227	227	65	220	220	220					176	211	211	211	216	222	222	222	2	–	–	–
Total compensation	**5,604**	**5,885**	**2,381**	**12,894**	**3,215**	**3,240**	**1,180**	**7,363**	**884**	**2,637**	**989**	**5,936**					**2,753**	**2,620**	**972**	**5,919**	**2,318**	**2,635**	**987**	**5,934**	**809**	**–**	**–**	**–**

[1] The compensation and fringe benefits paid to Johannes Dietsch and Kemal Malik in 2014 relate solely to their service on the Board of Management.
The 2014 Aspire tranche was granted to Johannes Dietsch and Kemal Malik prior to the dates on which they were appointed to the Board of Management. The vesting periods for these tranches extend past those dates.

[2] The maximum achievable variable compensation shown here does not yet take into account the caps applicable. Payments in a single year are limited to 1.8 times the target compensation (see "Compensation structure" in Chapter 16.4.1).

[3] Capped at 300%

[4] Capped at 200% of the maximum short-term variable cash compensation (50% of STI)

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Allocation of Compensation for 2014 and 2015

[Table 3.16.7]

	Serving members of the Board of Management as of December 31, 2015							Serving members of the Board of Management as of December 31, 2015				Former members	
	Dr. Marijn Dekkers (Chairman)		Werner Baumann (Strategy)		Johannes Dietsch (Finance)			Michael König (Human Resources)		Kemal Malik (Innovation)		Prof. Dr. Wolfgang Plischke	
	Joined Jan. 1, 2010		Joined Jan. 1, 2010		Joined Sept. 1, 2014			Joined April 1, 2013		Joined Feb. 1, 2014		Stepped down April 29, 2014	
	2014	2015	2014	2015	2014	2015		2014	2015	2014	2015	2014	2015
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand		€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Fixed annual compensation	1,363	1,374	899	906	240	725		719	725	659	725	238	–
Fringe benefits	42	40	67	47	22	44		222	36	72	40	18	–
Total	**1,405**	**1,414**	**966**	**953**	**262**	**769**		**941**	**761**	**731**	**765**	**256**	**–**
Short-term variable cash compensation													
for 2014	1,828	–	1,051	–	280	–		841	–	771	–	280	–
for 2015[1]	–	1,995	–	1,237	–	917		–	917	–	917	–	–
Long-term stock-based cash compensation (Aspire)													
2010 (Jan. 1, 2010 – Dec. 31, 2013)[2]	960	–	759	–	–	–		35	–	–	–	759	–
2011 (Jan. 1, 2011 – Dec. 31, 2014)	–	1,459	–	769	–	297		–	191	–	384	–	–
Long-term cash compensation (virtual Bayer shares)													
2010 (Jan. 1, 2011 – Dec. 31, 2013)	1,594	–	978	–	–	–		–	–	–	–	1,026	–
2011 (Jan. 1, 2012 – Dec. 31, 2014)	–	2,841	–	1,307	–	–		–	–	–	–	–	–
Advance payment of 2/3 of long-term cash compensation (virtual Bayer shares)													
2011 (Jan. 1, 2012 – Dec. 31, 2014)	–	–	–	–	–	–		–	–	–	–	915	–
Total	**5,787**	**7,709**	**3,754**	**4,266**	**542**	**1,983**		**1,817**	**1,869**	**1,502**	**2,066**	**3,236**	**–**
Service cost / benefit expense	722	967	204	227	65	220		176	211	216	222	2	–
Total compensation	**6,509**	**8,676**	**3,958**	**4,493**	**607**	**2,203**		**1,993**	**2,080**	**1,718**	**2,288**	**3,238**	**–**

[1] The increased variable compensation for Werner Baumann resulted mainly from his temporary duties as head of Bayer HealthCare in addition to his primary responsibilities as a member of the Board of Management.

[2] The payment to Michael König from the 2010 Aspire tranche and the payments to Johannes Dietsch, Michael König and Kemal Malik from the 2011 Aspire tranche related to vesting periods that began before they joined the Board of Management. The tranches were not yet fully vested at the dates on which they joined the Board of Management.

16.4.3 Compensation of the Supervisory Board

The Supervisory Board is compensated according to the relevant provisions of the Articles of Incorporation.

The members of the Supervisory Board receive fixed annual compensation of €120,000 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. The Chairman of the Supervisory Board receives fixed annual compensation of €360,000, the Vice Chairman €240,000. 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 €120,000, the other members of the Audit Committee €60,000 each. The chairmen of the remaining committees receive €60,000 each, the other members of those committees €30,000 each. 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 pro-rated basis. The members of the Supervisory Board also receive an attendance fee of €1,000 each time they personally attend a meeting of the Supervisory Board or a committee. The attendance fee is limited to €1,000 per day.

The members of the Supervisory Board have given a voluntary pledge that they will each purchase Bayer shares for 25% of their pre-tax 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. 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.

COMPENSATION OF THE SUPERVISORY BOARD IN 2015

The following table shows the components of each Supervisory Board member's compensation for 2015.

Compensation of the Members of the Supervisory Board of Bayer AG in 2015 [Table 3.16.8]

	Fixed compensation		Attendance fee		Total	
	2014	2015	2014	2015	2014	2015
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Members of the Supervisory Board as of December 31, 2015						
Dr. Paul Achleitner	180	180	5	5	185	185
Dr. Simone Bagel-Trah	81	120	3	4	84	124
Dr. Clemens Börsig	120	120	4	4	124	124
André van Broich	120	129	5	6	125	135
Thomas Ebeling	120	120	4	4	124	124
Dr. Thomas Fischer	180	180	9	9	189	189
Reiner Hoffmann	180	180	8	5	188	185
Yüksel Karaaslan	120	135	5	6	125	141
Petra Kronen	150	150	5	6	155	156
Frank Löllgen [1]	–	19	–	1	–	20
Dr. Helmut Panke	155	180	5	8	160	188
Sue H. Rataj	120	120	4	5	124	125
Petra Reinbold-Knape	120	130	4	5	124	135
Michael Schmidt-Kiessling	120	120	5	5	125	125
Dr. Klaus Sturany	240	240	8	9	248	249
Werner Wenning (Chairman)	360	360	10	11	370	371
Heinz Georg Webers [2]	–	60	–	3	–	63
Prof. Dr. Otmar D. Wiestler [3]	0	49	0	3	0	52
Prof. Dr. Dr. Ernst-Ludwig Winnacker	120	137	5	6	125	143
Oliver Zühlke (Vice Chairman) [4]	150	195	5	9	155	204
Members who left the Supervisory Board in 2014/2015						
Peter Hausmann [5]	150	125	4	5	154	130
Thomas de Win [6]	240	119	7	4	247	123
Prof. Dr. Ekkehard D. Schulz [7]	59	–	3	–	62	–
Dr. Klaus Kleinfeld [7]	90	–	3	–	93	–
Total	**3,175**	**3,168**	**111**	**123**	**3,286**	**3,291**

[1] Member of the Supervisory Board since November 3, 2015
[2] Member of the Supervisory Board since July 1, 2015
[3] Prof. Dr. Wiestler has received compensation for his membership of the Supervisory Board since September 1, 2015. Previously, his office as Chairman of the Management Board of the German Cancer Research Center precluded his acceptance of this compensation.
[4] Vice Chairman of the Supervisory Board since July 1, 2015
[5] Member of the Supervisory Board until October 31, 2015
[6] Member and Vice Chairman of the Supervisory Board until June 30, 2015
[7] Member of the Supervisory Board until 2014

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).

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.

16.4.4 Further Information

ADVANCES OR LOANS TO MEMBERS OF THE BOARD OF MANAGEMENT OR SUPERVISORY BOARD

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.

PENSION PAYMENTS TO FORMER MEMBERS OF THE BOARD OF MANAGEMENT OR THEIR SURVIVING DEPENDENTS

We currently pay retired members of the Board of Management a monthly pension equal to a maximum of 80% of the fixed compensation received immediately prior to retirement. The pensions paid to former members of the Board of Management or their surviving dependents are reassessed annually and adjusted, taking into account the development of consumer prices. The pensions paid to former members of the Board of Management or their surviving dependents in 2015 totaled €13,416 thousand (2014: €13,457 thousand). These benefits are paid in addition to any amounts they receive under previous employee pension arrangements. The present value of the defined benefit pension obligation for former members of the Board of Management and their surviving dependents according to the IFRS amounted to €172,767 thousand (2014: €187,759 thousand), while the settlement value of the pension obligation according to the German Commercial Code amounted to €148,632 thousand (2014: €146,341 thousand).

Events After the End of the Reporting Period

17. 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.

Report on Future Perspectives and on Opportunities and Risks

18. Future Perspectives

18.1 Economic Outlook

GLOBAL ECONOMY

Economic Outlook [Table 3.18.1]

	Growth[1] 2015	Growth forecast[1] 2016
World	+2.5%	+2.8%
European Union	+1.8%	+1.9%
of which Germany	+1.5%	+2.0%
United States	+2.4%	+2.7%
Emerging markets[2]	+3.7%	+4.0%

Growth 2015 restated
[1] Real growth of gross domestic product, source: IHS Global Insight
[2] Including about 50 countries defined by IHS Global Insight as emerging markets in line with the World Bank
As of February 2016

We anticipate somewhat accelerated growth for the global economy in 2016 compared with the previous year. Although further interest rate hikes by the U.S. Federal Reserve are expected following the first upward step in December 2015, interest rates will likely remain low overall worldwide, thus continuing to help stimulate the economy. A supporting effect will come from the low oil price, which will provide relief to consumers and strengthen private demand.

Impetus is expected above all from the United States, where employment and consumption will probably further increase. In Europe, too, we anticipate an ongoing recovery. While the pace of economic growth continues to be held back by high unemployment, particularly in a number of southern European countries, growth in Germany will presumably pick up further. In this connection, the eurozone countries will benefit especially from the favorable euro exchange rate.

In the Emerging Markets as well, we expect rising growth rates again overall following a relatively weak prior year. By contrast, we foresee a further slowdown in growth in China. Economic output in Russia and Brazil will likely decline in 2016, albeit less severely than in the previous year.

Economic Outlook for the Segments [Table 3.18.2]

	Growth[1] 2015	Growth forecast[1] 2016
Pharmaceuticals market	+9%	+5%
Consumer health market	+5%	+4%
Seeds and crop protection market	≤0%	0%
Animal health market	+5%	+4%

[1] Bayer's estimate, except pharmaceuticals. Source for pharmaceuticals market: IMS Health. IMS Market Prognosis. Copyright 2015. All rights reserved; currency-adjusted; 2015 data provisional
As of February 2016

We expect growth in the **pharmaceuticals market** to be slower in 2016 than in the previous year. In Europe we anticipate low-single-digit percentage growth that is below the prior-year level. The pace of growth is likely to slacken in the Emerging Markets, while the Japanese pharmaceuticals market will probably stagnate. We are expecting positive momentum from the United States, where persistent growth, supported above all by new product launches, is forecasted.

We anticipate that the **consumer health market** will grow somewhat more slowly in 2016 than in the previous year. We expect the cold season to be weaker than in 2015 and anticipate that fewer products will be reclassified as nonprescription products, particularly in the United States. Due to the economic development in Brazil, Russia and China, we are assuming a lower pace of growth in these countries than in the previous year.

Following a weak prior year, we predict that the global **seed and crop protection market** will stagnate overall in 2016 due to high inventories and low prices for agricultural commodities. As in the previous year, we expect positive growth impulses to come from Europe and the Asia/Pacific region. For Asia we anticipate a further expansion of agricultural production. By contrast, we predict a tight market situation in both North and South America, with growth slower than global development.

Following growth impetus in the **animal health market** over the past two years as a result of successful product launches, especially in the companion animals segment, we expect a slightly slower pace of growth for the market overall in 2016.

Covestro foresees an improved economic climate in 2016 for its **main customer industries** (automotive, construction, electrical and electronics, and furniture). The company believes that growth impetus in North America will come from an increase in private consumption and an increase in public spending. For the European Union Covestro anticipates a continuation of the economic recovery in view of the ongoing expansionary monetary policy and the weak euro. China will once again grow more slowly overall due to industrial overcapacities and a high debt level, while positive growth signals will come from India and Japan.

18.2 Forecast for Key Data

The following forecast is based on the business development described in this report, taking into account the potential risks and opportunities and assuming the inclusion of the Covestro business for the full year. It refers to the new organizational structure following the restructuring of the Bayer Group with effect from January 1, 2016 (for more information see Chapter 1.2 "Corporate Structure").

Pro Forma Key Data by New Segment [Table 3.18.3]

	Sales				EBITDA before special items[1]		
	2014	2015	Change		2014	2015	Change
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%
Pharmaceuticals	13,512	15,308	+13.3	+9.1	4,081	4,615	+13.1
Consumer Health	4,245	6,076	+43.1	+6.1	991	1,456	+46.9
Crop Science	9,494	10,367	+9.2	+1.7	2,360	2,416	+2.4
Animal Health	1,318	1,490	+13.1	+4.5	285	348	+22.1
Reconciliation[2]	1,119	1,101	−1.6	−1.1	(219)	(228)	−4.1
Total Life Sciences[3]	**29,688**	**34,342**	**+15.7**	**+5.7**	**7,498**	**8,607**	**+14.8**
Covestro	11,651	11,982	+2.8	−5.1	1,187	1,659	+39.8
Group	**41,339**	**46,324**	**+12.1**	**+2.7**	**8,685**	**10,266**	**+18.2**

[1] For definition see Chapter 14.2 "Calculation of EBIT(DA) Before Special Items."
[2] Reconciliation comprises the Business Services and Currenta service companies ("Other segments"), corporate functions and consolidation effects.
[3] Including the service companies

Our forecast for fiscal 2016 is based on the exchanges rates at the closing date on December 31, 2015, including rates of US$1.09 to the euro. A 1% appreciation (depreciation) of the euro against all other currencies would decrease (increase) sales on an annual basis by some €300 million and EBITDA before special items by about €90 million.

BAYER GROUP

In 2016, we are planning sales of more than €47 billion for the Bayer Group, including Covestro. This corresponds to a low-single-digit percentage increase on a currency- and portfolio-adjusted basis. We plan to increase EBITDA before special items by a mid-single-digit percentage. We aim to increase core earnings per share from continuing operations (calculated as explained in Chapter 14.3 "Core Earnings Per Share") by a mid-single-digit percentage as well. It should be borne in mind that only 69% of Covestro will be reflected for the full year 2016. From the sale of the Diabetes Care business, we expect core earnings per share of just under €0.40 for discontinued operations.

LIFE SCIENCES TOTAL

We plan sales of approximately €35 billion for the Life Science activities, i.e. the Bayer Group excluding Covestro. This corresponds to a mid-single-digit percentage increase on a currency- and portfolio-adjusted basis. We plan to increase EBITDA before special items by a mid-single-digit percentage. Our planning includes dissynergies of around €130 million from the legal independence of Covestro and from divestments.

PHARMACEUTICALS

Despite declining price developments in some areas, we expect sales of approximately €16 billion at Pharmaceuticals – including the Radiology business. This corresponds to a mid-single-digit percentage increase on a currency- and portfolio-adjusted basis. We plan to raise sales of our recently launched products to more than €5 billion. We expect a mid- to high-single-digit percentage increase in EBITDA before special items. Also, we aim to improve the EBITDA margin before special items.

CONSUMER HEALTH

In the Consumer Health Division, we expect sales to come in at more than €6 billion. We plan to grow sales by a mid-single-digit percentage on a currency- and portfolio-adjusted basis. We aim to improve EBITDA before special items by a mid-single-digit percentage.

CROP SCIENCE

At Crop Science we expect sales to be at the prior-year level. This corresponds to a low-single-digit percentage increase on a currency- and portfolio-adjusted basis. We plan to increase EBITDA before special items by a low-single-digit percentage.

ANIMAL HEALTH

At Animal Health we expect sales slightly above the prior-year level. We plan a currency- and portfolio-adjusted sales gain and an increase in EBITDA before special items, each by a low- to mid-single-digit percentage.

RECONCILIATION

For 2016, we expect sales to be level with the previous year. We are planning EBITDA before special items of roughly minus €0.2 billion.

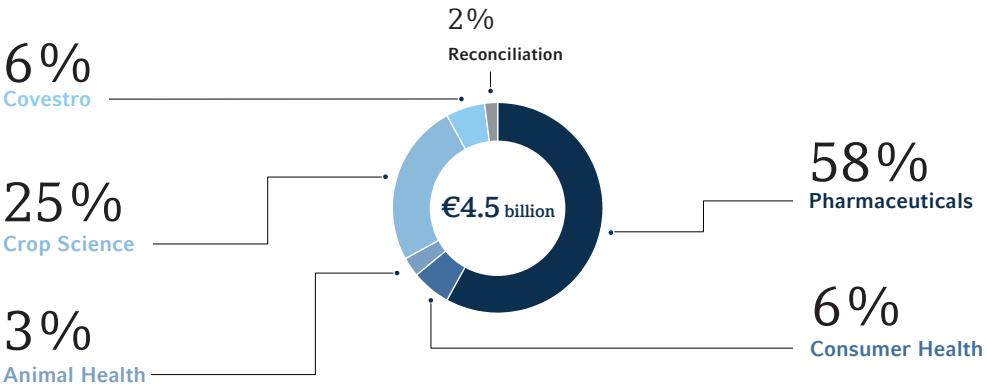
COVESTRO

For 2016, Covestro is budgeting sales at the prior-year level and a decline in EBITDA after adjustment for special items.

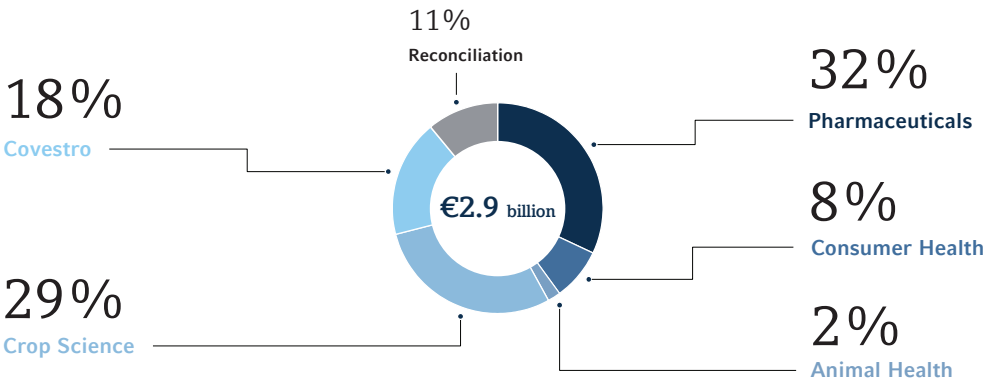
FURTHER INFORMATION AND BAYER GROUP KEY DATA

We expect to take special charges in the region of €0.5 billion in 2016, with the integration of the acquired consumer care businesses and charges in connection with the reorganization of the Bayer Group accounting for most of this amount.

Research and Development Budget 2016 [Graphic 3.18.1]



Capital Expenditure Budget 2016 [Graphic 3.18.2]



We intend to increase our research and development spending in 2016 to approximately €4.5 billion. We have budgeted capital expenditures of about €2.5 billion for property, plant and equipment and €0.4 billion for intangible assets. Depreciation and amortization are estimated at about €3.1 billion, including €1.6 billion in amortization of intangible assets.

We predict the financial result to come in at around minus €1.2 billion. The effective tax rate is likely to be about 24%. We expect net financial debt to be below €16 billion at the end of 2016.

BAYER AG

As the parent company of the Bayer Group, Bayer AG derives most of its income from its subsidiaries. The earnings of the major subsidiaries in Germany are transferred directly to Bayer AG under profit and loss transfer agreements. The earnings of Bayer AG are therefore expected to reflect the positive business development anticipated in the Bayer Group. A concerted dividend policy within the Group ensures the availability of sufficient distributable income. Based on these factors, we expect Bayer AG to report a distributable profit that will again enable our stockholders to adequately participate in the Bayer Group's earnings.

18.3 Opportunities and Risks Report

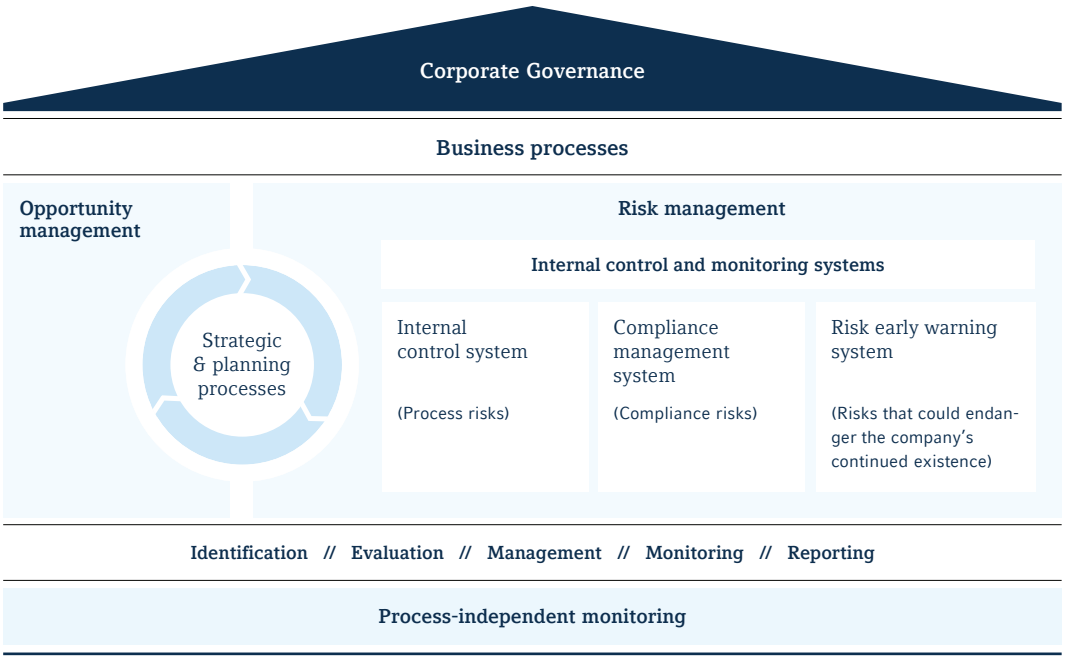
// **Opportunity and risk management is integral to Bayer's Group-wide corporate governance system.**

// **No risks that could endanger the Bayer Group's continued existence are currently identified.**

18.3.1 Group-wide Opportunity and Risk Management System

Responsible corporate governance forms the basis for sustainable growth and profitability. Key elements of corporate governance are the systematic identification and use of opportunities and the avoidance of risks to the company's success.

Corporate Governance [Graphic 3.18.3]



The entrepreneurial decisions we make daily in the course of business processes are based on balancing opportunities and risks. We therefore regard opportunity and risk management as an integral aspect of business management rather than the task of a specific organizational unit. Our opportunity and risk management is rooted in our strategy and planning processes. Based on these, we determine relevant external and internal opportunities along with economic, ecological and social challenges. Opportunities and risks are identified by observing and analyzing trends along with macroeconomic, industry-specific, regional and local developments. These opportunities and risks are then evaluated and incorporated into business-specific strategic and operational frameworks. We attempt to avoid or mitigate risks by taking appropriate countermeasures, or to transfer them to third parties (such as insurers) to the extent possible and economically acceptable. We consciously accept and bear manageable and controllable risks that stand in a reasonable relation to the anticipated opportunities. They are an aspect

of general entrepreneurial risk. Opportunities and risks are continuously monitored so that changes in the economic or legal environment, for example, can be identified at an early stage and suitable countermeasures can be initiated if necessary.

To enable the Board of Management and the Supervisory Board to monitor material business risks as legally required, the following systems are in place: an internal control system ensuring proper and effective financial reporting pursuant to Section 289, Paragraph 5 and Section 315, Paragraph 2, No. 5 of the German Commercial Code; a compliance management system; and a risk early warning system pursuant to Section 91, Paragraph 2 of the German Stock Corporation Act.

The various management systems are based on different risk types, risk levels and timelines. Different processes, methods and IT systems are therefore applied to identify, evaluate, manage, and monitor risks. The principles underlying the various systems are documented in Group directives that are contained in our Management Regulations (Margo) database and are accessible to all employees via the Bayer intranet. System owners and coordinators are named at the management level in the divisions, service companies, country companies and central functions of the Bayer Group. The overall responsibility for the effectiveness and appropriateness of the systems lies with the Chief Financial Officer.

The different systems are described below.

INTERNAL CONTROL SYSTEM FOR (GROUP) ACCOUNTING AND FINANCIAL REPORTING

(Report pursuant to Sections 289, Paragraph 5 and 315, Paragraph 2, No. 5 of the German Commercial Code)

Bayer has an internal control system (ICS) in place for the (Group) 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, Paragraph 5 and Section 315, Paragraph 2, No. 5 of the German Commercial Code.

The ICS is designed to guarantee timely, uniform and accurate accounting for all business processes and transactions based on applicable statutory regulations, accounting and financial reporting standards and the internal Group directives that are binding upon all consolidated companies.

The ICS is based on the COSO I (Committee of the Sponsoring Organizations of the Treadway Commission) and COBIT (Control Objectives for Information and Related Technology) frameworks and addresses misreporting risks in the consolidated financial statements. Risks are identified and evaluated, and steps are taken to counter them. 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 Accounting unit of Bayer AG.

The management of each Group company holds responsibility for implementing the ICS standards at the local level. Using Bayer's shared service centers, the Group companies prepare their financial statements locally and transmit them with the aid of a standard Group data model that is based on the Group accounting directive. This ensures the regulatory compliance of the consolidated financial statements.

The effectiveness of the ICS processes for accounting and financial reporting is evaluated on the basis of a cascaded self-assessment system that starts with the persons directly involved in the processes, then involves the principal responsible managers and ends with the Board of Management. The system also makes use of internal and external audits. An IT application in use throughout the Bayer Group ensures uniform and audit-proof documentation and transparent presentation of all ICS-relevant business processes, focusing especially on the relevant risks, controls and effectiveness evaluations.

The Board of Management has confirmed the effective functioning of the internal control system for accounting and financial reporting and the relevant criteria for the 2015 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 accounting will be avoided or identified.

COMPLIANCE MANAGEMENT SYSTEM

Our compliance management system is aimed at ensuring lawful, responsible and sustainable 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.

In light of the Bayer Group's diversified structure and international focus, we are active in different industry sectors, markets and geographical regions worldwide, each of which has its own local legislation and industry codes. Compliance risks are identified by performing a trend analysis based on cases reported from around the world. We embarked on the global implementation of an integrated compliance management system in 2014. This system enhances the systematic and preventive identification and assessment of risks. Risk identification is carried out both from the bottom up via the country organizations and from the top down via the global functions, taking global, local and business-specific aspects into account. In addition, compliance program audits are performed by Internal Audit. These audits proactively evaluate the implementation of the Corporate Compliance Policy in the country organizations. All the results are discussed by the local business units, the local compliance officers and representatives of the headquarters functions at a round table and are entered into a risk database.

RISK EARLY WARNING SYSTEM PURSUANT TO SECTION 91, PARAGRAPH 2 OF THE GERMAN STOCK CORPORATION ACT

A process known as BayRisk has been established to enable the early identification of any adverse developments that are material and/or could endanger the company's continued existence, thus satisfying the legal requirements regarding an early warning system for corporate risks pursuant to Section 91, Paragraph 2 of the German Stock Corporation Act. This process is steered by a central unit within the Corporate Center to ensure the implementation of a consistent framework and standards for Bayer's risk early warning system.

The BayRisk process follows a bottom-up approach in order to identify corporate risks as fully as possible. The early identification, evaluation, management and reporting of risks is the responsibility of the respective divisions, service companies and central functions. The process takes into account not only risks that could directly impact our financial targets, but also those that could affect the achievement of qualitative objectives such as the preservation of our reputation. Evaluation is based on both financial and nonfinancial criteria. Risk coordinators are appointed to evaluate, manage and monitor the identified risks.

This results in a multidimensional evaluation which estimates the probability of occurrence, potential damage and relevance for our external stakeholders. The following matrix illustrates the financial criteria for rating a risk as high, medium or low.

Risk Rating Matrix According to Financial Criteria [Table 3.18.4]

	Likelihood of occurrence		
	Low	Medium	High
Accumulated impact (€ million)			
> 1,250	H	H	H
500 – 1,250	M	M	H
< 500	L	L	L

H = high risk, M = medium risk, L = low risk

All risks that exceed defined and annually updated value thresholds, together with the respective countermeasures, are entered in a Group-wide database. The risk portfolio is reviewed three times a year. Significant changes are documented and reported to the Board of Management. The risk portfolio is also documented in a management information system and is thus accessible to the members of the Group Leadership Circle at all times. A report on the risk portfolio is submitted to the Audit Committee of the Supervisory Board once a year.

PROCESS-INDEPENDENT MONITORING

The effectiveness of our management systems is audited and evaluated at regular intervals by Internal Audit, which performs an independent and objective audit function focused on verifying compliance with laws and directives. Internal Audit also supports the company in achieving its goals by systematically evaluating the efficiency and effectiveness of governance, risk management and control processes and helping to improve them. The selection of audit targets follows a risk- and cycle-based approach. Internal Audit applies internationally recognized standards and performs reliable audit services. This is confirmed by a quality assessment undertaken in 2012 by the American Institute of Internal Auditors (IIA). A report on the internal control system and its effectiveness is presented annually to the Audit Committee of the Supervisory Board.

Risks in the areas of occupational health and safety, plant safety, environmental protection and product quality are assessed through specific HSEQ (health, safety, environment and quality) audits.

In addition, the external auditor, as part of its audit of the annual financial statements, assesses the basic suitability of the early warning system for identifying at an early stage any risks that could endanger the company's continued existence. The auditor regularly reports to the Board of Management and the Supervisory Board on the identification of any weaknesses in the internal control system.

Audit outcomes are taken into account in the continuous enhancement of our management processes.

18.3.2 Opportunities and Risks

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 our financial and nonfinancial objectives.

This chapter outlines the opportunities and risks which are classified in our risk matrix as "medium" or "high." Risks that occur in comparable forms in different parts of the company are described in general terms. The sequence in which the risks are listed does not imply any order of significance. The opportunities and risks described apply to all divisions unless otherwise indicated. Also outlined in the following are risks that are of high relevance for the company but may be impossible to quantify directly, accurately or in financial terms. The impact on the Bayer Group of risks attaching to the Covestro business is affected by the size of Bayer's shareholding in that company.

BUSINESS ENVIRONMENT

Ethical conduct is a matter of essential importance for society. Many stakeholders evaluate companies according to whether they conduct themselves not just "legally" but also "legitimately." The Bayer Group is dedicated to sustainable development in all areas of its commercial activity. This voluntary commitment is reflected in our responsible corporate governance, which is geared toward generating not only economic but also ecological and societal benefit.

In the Emerging Markets – particularly Asia and Latin America – we see growth opportunities, such as those arising out of increasing affluence and the associated rise in demand for pharmaceutical products. Bayer is therefore systematically expanding its business in these regions in particular.

At the same time, however, the risk exists that our growth could be impeded by increasing global cost pressure on health systems. Pharmaceutical products are subject to regulatory price controls and regulations in many markets, and government reimbursement systems often favor less expensive generic medicines over branded products. In addition, in some markets, major health care providers can exert substantial pressure on prices. Price controls and pricing pressure reduce earnings from our pharmaceutical products and may occasionally make the market launch of a new product unprofitable. As a result, it may be necessary to choose indirect marketing options in order to provide access to pharmaceuticals. We expect the current extent of regulatory controls and market pressures on pricing to persist or increase. Changes in the business conditions in our key markets are continuously monitored. Depending on the intensity of such price controls and the pressure on prices, it could be necessary to adjust our business model.

In some countries the marketing rights for certain pharmaceutical products are held by third parties. An inadequate performance by collaboration partners could adversely affect the development of our sales and costs. Therefore, we have established an Alliance Management unit to monitor the most important collaborations and provide relevant support to the operational functions.

Further opportunities and risks may arise if actual market developments vary from those we predict in Chapter 18.1 "Economic Outlook." Where macroeconomic developments deviate from forecasts, this may either positively or negatively impact our sales and earnings expectations.

For Covestro, an economic downturn, changes in competitors' behavior or the market entry of new competitors may lead to more intense competition and thus to overcapacities or increased pressure on prices.

Continuous analysis of the economic environment and of economic forecasts enables us to pursue the identified opportunities and to mitigate risks by adjusting our business strategy.

INNOVATION

We analyze global trends and develop innovative solutions to address them, thereby mastering the challenges and taking advantage of the opportunities they provide.

Increase in life expectancy

Certain diseases, such as cancer or chronic cardiovascular disorders, are on the rise as a consequence of higher life expectancy. In response to the growing demand for innovative health care products to treat age-related diseases, Bayer's Pharmaceuticals Division is focusing its R&D activities on relevant therapeutic areas such as oncology and cardiology.

Shortage of arable land and increasing demand for food

The challenges associated with ensuring an adequate food supply worldwide continue to increase, driven by global population growth, the reduction in available arable land and the consequences of climate change. In addition, the anticipated increase in affluence in the emerging countries is boosting the demand for animal-based food products. We expect there to be an increasing need for high-value seed and crop protection products to allow sufficient food and animal feed to be produced to satisfy rising demand despite limited acreages. The Crop Science Division is therefore developing processes to more effectively protect plants against climate and environmental stresses and increase crop yields, for example.

Conserving natural resources and protecting the climate

The finite nature of certain natural resources and efforts to protect the climate are boosting the demand for innovative products and technologies that reduce resource consumption and lead to lower emissions. This trend is being reinforced by increasingly stringent regulatory requirements and growing consumer awareness for the need to use resources sustainably. In this context, Covestro is developing new materials that help to raise energy efficiency and reduce emissions. For example, polyurethane from Covestro is used in the construction industry for thermal insulation, giving a positive energy balance, while the company's polycarbonate is used in the automotive industry to reduce vehicle weight.

To enhance our innovation strength, we attach special importance to networking and cooperation both within and outside of our company. One example is interdisciplinary research at the interface between human, animal and plant health, which is being driven forward by our Life Sciences Fund. This enables us to achieve research synergies and investigate new mechanisms of action that in the long term may provide new impetus to product development. Our strategy also encompasses research projects with outside partners from science and industry that give us access to complementary technologies and external innovation potential.

For further information, see Chapter 4 "Research, Development, Innovation" and Chapter 2 "Strategies of the Divisions."

Despite all our efforts, we cannot assure that all of the products we are currently developing or will develop in the future will achieve planned approval/registration or commercial success. For example, a drug candidate may fail to meet trial endpoints. The Bayer Group pursues a holistic portfolio management strategy in order to estimate the probability of success and prioritize its development projects. Furthermore, the expectations of the public and the regulatory authorities with regard to the safety and efficacy of chemical and pharmaceutical products are constantly rising. Against this background, we continue to anticipate increasing regulatory requirements for clinical or (eco)toxicological studies, for example. This increases product development costs and the time it takes to obtain registration or marketing approval. Special projects are set up to coordinate and ensure the successful implementation of new regulations.

ACQUISITIONS

Where it appears strategically advantageous, we supplement our organic growth by acquiring companies or parts of companies. Failure to successfully integrate a newly acquired business or unexpectedly high integration costs could jeopardize the achievement of qualitative or quantitative targets and adversely impact earnings. Teams of experts therefore manage both the due diligence process and the subsequent integration of acquired companies. Due diligence includes reviewing risk-relevant factors such as compliance with applicable environmental regulations and occupational health and safety standards at production sites.

PATENT PROTECTION

Patents protect our intellectual property. When our products are successfully commercialized, some of the profits can be used to continue investing in research and development. 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.

Most of our products, primarily in the Life Sciences, are covered by patents. Generic manufacturers, in particular, 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. We are currently involved in legal proceedings to enforce patent protection for our products. Details of the risks arising from these proceedings are given in NOTE [32] to the consolidated financial statements. When a patent defense is unsuccessful, or if one of our patents expires, our prices are likely to come under pressure because of increased competition from generic products entering the market. Legal action by third parties for alleged infringement of patent or proprietary rights by Bayer may impede or even halt the development or manufacturing of certain products or require us to pay monetary damages or royalties to third parties. 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.

PRODUCTS AND PRODUCT STEWARDSHIP

Bayer systematically and continuously evaluates the potential health and environmental risks of a product along the entire value chain – from research and development, production, commercialization and use by the customer to disposal.

Despite extensive studies prior to approval or registration, it is possible that products could be partially or completely withdrawn from the market due to the occurrence of unexpected side effects or other factors. Such a withdrawal may be voluntary or result from legal or regulatory measures. Furthermore, the presence of traces of unwanted genetically modified organisms in agricultural products and/or foodstuffs cannot be entirely excluded. Potential payments of damages in connection with the above risks may have a substantial negative impact on our earnings.

Our Life Science businesses counter these risks through a holistic organizational structure and process organization in the areas of pharmaceutical and crop protection product safety and testing. In addition, a comprehensive product stewardship program is in place in the Crop Science Division. For further information, see Chapter 8 "Product Stewardship."

Another risk we face is that of illegal trading of counterfeit medicines and crop protection products by criminal third parties. In most cases, the composition and/or the quality of counterfeit products do not correspond to those of the original products. In addition, the fact that no local regulatory authority is involved in assuring the quality of the manufacturing or distribution process precludes any official product recall. Products originating from illegal third-party manufacturing not only endanger patients, users, animals and the environment, but also jeopardize the good reputation of our company and products and undermine our competitive position.

Bayer actively assists authorities' efforts to combat product counterfeiting by adopting preventive measures and prosecuting offenders.

PROCUREMENT AND PRODUCTION

To ensure the sustainability of our activities along the entire value chain, Bayer has introduced a Supplier Code of Conduct. This sets forth our sustainability principles, explains what we expect from our partners and requires them to observe our standards in areas including environmental protection and occupational safety. A further essential element is the respect of human rights. This means, for example, that no form of child labor may be employed. Violations of the Code may harm our company's reputation. Through supplier assessments and audits, we verify whether our partners along the supply chain actually implement and comply with our Code of Conduct (see Chapter 7 "Procurement, Production, Logistics and Distribution").

Despite its modern facilities and optimized manufacturing processes, Bayer requires significant quantities of energy and petrochemical feedstocks for the production of chemicals. Procurement prices for energy and raw materials may fluctuate significantly. This can provide opportunities but may also put our product margins at risk when oil prices are low, for example. Experience has shown that higher production costs cannot always be passed on to our customers through price adjustments. This applies especially to Covestro.

We attach great importance not only to product safety but also to protecting our employees and the environment. Risks associated with the manufacturing, filling, storage or shipping of products are mitigated by means of integrated quality, health, environmental protection and safety management. The materialization of such risks may result in personal injury, property and environmental damage, loss of production, business interruptions and/or liability for compensation payments.

Operations at our sites may be disrupted by natural disasters, fires or explosions, sabotage or supply shortages for our principal raw materials or intermediates. Disruption may also result from possible regulatory or legislative changes in the respective countries. The complexity of multistage manufacturing processes for active ingredients or biotechnology products strengthens the potential for disruption and may limit product availability. If we are unable to meet demand, sales may undergo a structural decline. We counter this risk by distributing production for certain products among multiple sites or by building up safety stocks. Furthermore, an emergency response system has been implemented for all our production sites as a mandatory component of our HSEQ management. It is aimed at protecting employees, neighbors, the environment and production facilities from the risks described. The Group Regulation "Safety and Crisis Management" forms the basis for this.

Increased ecological awareness creates opportunities for Covestro in two ways. On the one hand, the development of innovative materials for our customers (see Chapter 4 "Research, Development, Innovation") opens up market potential. On the other hand, if we succeed in increasing the energy efficiency of our own production processes, we can mitigate environmental impacts and achieve cost savings at the same time. By developing new production technologies and applying internationally recognized energy management systems, we aim to help meet increasing environmental requirements, further reduce emissions and waste, and increase energy efficiency. In this way we not only contribute to sustainable climate protection and the conservation of natural resources, but also achieve cost and competitive advantages.

EMPLOYEES

Skilled and dedicated employees are essential for the company's success. There is keen competition among companies for highly qualified personnel, particularly in countries with full employment and in the emerging economies of Asia and Latin America. If we are unable to recruit a sufficient number of employees in these countries and retain them within Bayer, this could have significant adverse consequences for the company's future development.

Based on our analysis of future requirements, we design appropriate employee recruitment and development measures. These include extensive employer marketing activities, such as our employer branding campaign, aimed at convincing our target groups of the advantages of working for Bayer. Competitive compensation containing performance-related components as well as an extensive range of training and development opportunities are among the essential elements of our human resources policies, which are based on the principles enshrined in our Human Rights Position, our corporate values and our Corporate Compliance Policy. In addition, our focus on diversity enables us to tap the full potential of the employment market. In times of considerable strategic and organizational transition at Bayer, deliberate and transparent change management forms an integral part of our human resources management, enabling us to motivate our employees for the long term and alleviate uncertainties.

For more information, see Chapter 6 "Employees."

INFORMATION TECHNOLOGY

Business and production processes and the internal and external communications of the Bayer Group are increasingly dependent on global IT systems.

A significant technical disruption or failure of IT systems could severely impair our business and production processes. Technical precautions such as data recovery and continuity plans are defined and continuously evolved in close cooperation with our internal IT organization.

The confidentiality of internal and external data is of fundamental importance to us. A loss of data confidentiality, integrity or authenticity could lead to manipulation and/or the uncontrolled outflow of data and know-how. We have measures in place to counter this risk, including an authorization system.

Furthermore, a committee has been established to determine the fundamental strategy, architecture and safety measures for the Bayer Group. These measures are designed to provide optimum protection based on state-of-the-art technology.

LAW AND COMPLIANCE

The Bayer Group is exposed to risks from legal disputes or proceedings to which we are currently a party or which could arise in the future, particularly in the areas of product liability, competition and antitrust law, patent law, tax law and environmental protection.

Investigations of possible legal or regulatory violations, such as potential infringements of antitrust law or certain marketing and/or distribution methods, may result in the imposition of civil or criminal penalties – including substantial monetary fines – and/or other adverse financial consequences, harm Bayer's reputation and ultimately hamper our commercial success.

Bayer has established a global compliance management system to ensure the sustainable observance of laws and regulations (see Chapter 16.3 "Compliance").

Legal proceedings currently considered to involve material risks are described in NOTE [32] to the consolidated financial statements.

FINANCIAL OPPORTUNITIES AND RISKS

The Bayer Group has financial opportunities at its disposal in the form of 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.

The following paragraphs provide details of these and other financial opportunities and risks and how they are managed.

The management of financial opportunities and risks takes place using established, documented processes. One component is financial planning, which serves as the basis for determining the liquidity risk and the future foreign currency and interest-rate risks and covers all Group companies that are relevant from a cash-flow perspective. Financial planning comprises a planning horizon of 12 months and is regularly updated.

Further information is provided in Chapter 14.7 "Financial Management of the Group."

See Chapter 14.7

Liquidity risk

Liquidity risks result from the possible inability of the Bayer Group to meet current or future payment obligations due to a lack of cash or cash equivalents. The liquidity risk is determined and managed by the Finance department as part of our same-day and medium-term liquidity planning.

Payment obligations from financial instruments are explained according to their maturity in NOTE [30.2] to the consolidated financial statements.

Consolidated Financial Statements Note 30.2

The Bayer Group holds sufficient liquidity to ensure the fulfillment of all planned payment obligations at maturity. In addition, a reserve is maintained for unbudgeted shortfalls in cash receipts or unexpected disbursements. The amount of this liquidity reserve is regularly reviewed and adjusted as necessary according to circumstances.

Liquid assets are held mainly in the form of overnight and term deposits. Credit facilities also exist with banks. These include, in particular, an undrawn €3.5 billion syndicated credit facility. Additionally, credit facilities totaling €2.7 billion are available to the Covestro Group.

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 Bayer Group does not conclude master netting arrangements with its customers for nonderivative financial instruments. Here, the total value of the financial assets represents the maximum credit risk exposure. In the case of derivatives, positive and negative market values may be netted under certain conditions.

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. It includes credit insurance, advance payments, letters of credit and guarantees. Reservation of title is generally agreed with our customers. Credit limits are set for all customers. All credit limits for debtors where total exposure is €10 million or more are evaluated by local credit management and submitted to the Bayer Group's Financial Risk Committee.

Credit risks from financial transactions are managed centrally in the finance department. To minimize risks, financial transactions are only conducted within predefined exposure limits and with banks and other partners that preferably have investment-grade ratings. All risk limits are based on methodical models. Adherence to the risk limits is continuously monitored.

Opportunities and risks resulting from market price changes

Consolidated Financial Statements Note 30.3

Opportunities and risks resulting from changes in market currency and interest rates are managed by the central finance department. Risks are eliminated or mitigated through the use of derivative financial instruments. Further details on derivatives are given in NOTE [30.3] to the consolidated financial statements.

The type and level of currency and interest-rate risks are explained in the following paragraphs 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 our 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 currencies

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 forward exchange contracts and cross-currency interest-rate swaps.

Anticipated exposure from planned payment receipts and disbursement in the future is hedged according to the rules agreed between the Board of Management, the finance department and the operating units. Hedging takes place through forward exchange contracts and currency options.

Sensitivities were determined on the basis of a hypothetical adverse scenario in which the euro depreciates by 10% against all other currencies compared with the year-end exchange rates. In this scenario, the estimated hypothetical loss of cash flows from derivative and nonderivative financial instruments would have diminished earnings and equity (other comprehensive income) as of December 31, 2015 by €303 million (December 31, 2014: €295 million). Of this amount, €108 million is related to the U.S. dollar, €66 million to the Chinese renminbi, €41 million to the Japanese yen and €28 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 other comprehensive income by €313 million.

Interest rates

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. This target duration is subject to regular review. Interest-rate swaps are concluded to achieve the target structure for Bayer Group debt.

A sensitivity analysis based on our net floating-rate receivables and payables position at year end 2015, taking into account the interest rates relevant for our receivables and payables in all principal currencies, produced the following result: a hypothetical increase of 1 percentage point in these interest rates (assuming constant currency exchange rates) as of January 1, 2015 would have raised our interest expense for the year ended December 31, 2015 by €29 million (December 31, 2014: €53 million).

Financial risks associated with pension obligations

Consolidated Financial Statements Note 25

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 our 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 our 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 the company's earnings and/or may necessitate additional payments by the company. Further details are given in NOTE [25] to the consolidated financial statements.

We address the risk of market-related fluctuations in the fair value of our plan assets through balanced strategic investment, and we constantly monitor investment risks in regard to our global pension obligations.

OVERALL ASSESSMENT OF OPPORTUNITIES AND RISKS

The risks reported above do not endanger the company's continued existence. Nor could we identify any risk interdependencies that could combine to endanger the company's continued existence.

Risks rated as "medium" or "high" did not change significantly compared with the previous year.

Based on our product portfolio, our know-how and our innovation strength, we are convinced that we can take advantage of the opportunities resulting from our entrepreneurial activity and successfully master the challenges resulting from the risks stated above.

19. Takeover-Relevant Information

Explanatory report pursuant to Sections 289, Paragraph 4 and 315, Paragraph 4 of the German Commercial Code (HGB)

The capital stock of Bayer AG amounted as of December 31, 2015 to €2,117 million, divided into 826,947,808 no-par registered shares. The capital stock and the number of shares were thus unchanged from the end of the previous year. Each share confers one voting right.

A small number of shares may be subject to temporary trading restrictions, such as retention periods, in connection with employee stock participation programs.

We received no notifications in 2015 of direct or indirect holdings of shares in Bayer AG that exceed 10% of the capital stock. The company thus is not in possession of any notifications of holdings that exceed 10% of the capital stock.

www.bayer.com/ownership-structure

The appointment and dismissal of members of the Board of Management are subject to the provisions of Sections 84 and 85 of the German Stock Corporation Act, Section 31 of the German Codetermination Act and Section 6 of the company's Articles of Incorporation. Pursuant to Section 84, Paragraph 1 of the German Stock Corporation Act, the members of the Board of Management are appointed and dismissed by the Supervisory Board. Since Bayer AG falls within the scope of the German Codetermination Act, the appointment or dismissal of members of the Board of Management requires a majority of two thirds of the votes of the members of the Supervisory Board on the first ballot pursuant to Section 31, Paragraph 2 of that act. If no such majority is achieved, the appointment is resolved pursuant to Section 31, Paragraph 3 of the Codetermination Act on a second ballot by a simple majority of the votes of the members of the Supervisory Board. If the required majority still is not achieved, a third ballot is held. Here again, a simple majority of the votes of the members suffices, but in this ballot the Chairman of the Supervisory Board has two votes pursuant to Section 31, Paragraph 4 of the Codetermination Act. Under Section 6, Paragraph 1 of the Articles of Incorporation of Bayer AG, the number of members of the Board of Management is determined by the Supervisory Board but must be at least two. The Supervisory Board may appoint one member of the Board of Management to be the Chairman of the Board of Management pursuant to Section 84, Paragraph 2 of the German Stock Corporation Act and Section 6, Paragraph 1 of the Articles of Incorporation.

Any amendments to the Articles of Incorporation are made pursuant to Section 179 of the German Stock Corporation Act and Sections 10 and 17 of the Articles of Incorporation. Under Section 179, Paragraph 1 of the German Stock Corporation Act, amendments to the Articles of Incorporation require a resolution of the Stockholders' Meeting. Pursuant to Section 179, Paragraph 2 of the German Stock Corporation Act, this resolution must be passed by a majority of three quarters of the voting capital represented at the meeting, unless the Articles of Incorporation provide for a different majority. However, where an amendment relates to a change in the object of the company, the Articles of Incorporation may only specify a larger majority. Section 17, Paragraph 2 of the Articles of Incorporation of Bayer AG utilizes the scope for deviation pursuant to Section 179, Paragraph 2 of the German Stock Corporation Act and provides that resolutions may be passed by a simple majority of the votes cast or, where a capital majority is required, by a simple majority of the capital represented. Pursuant to Section 10, Paragraph 6 of the Articles of Incorporation, the Supervisory Board may resolve on amendments to the Articles of Incorporation that relate solely to their wording.

Provisions of the Articles of Incorporation concerning Authorized Capital I and Authorized Capital II are entered in the commercial register of Bayer AG. With the approval of the Supervisory Board and until April 28, 2019, the Board of Management may use the Authorized Capital I to increase the capital stock by up to a total of €530 million. New shares may be issued against cash contributions and/or contributions in kind, but capital increases against contributions in kind may not exceed a total of €423 million. If the Authorized Capital I is used to issue shares in return for cash contributions, stockholders must normally be granted subscription rights. The Board of Management may only exclude stockholders' subscription rights to a volume of shares issued out of the Authorized Capital I that did not represent more than 20% of the existing capital stock at the time the respective resolution was adopted by the Annual Stockholders' Meeting on April 29, 2014. Absent a further resolution on the exclusion of stock-

holders' subscription rights, the Board of Management also may only exclude stockholders' subscription rights to a volume of shares issued under other authorizations regarding capital measures (Authorized Capital II, bonds with warrants or convertible bonds, purchase and disposal of own shares) that did not represent more than 20% of the existing capital stock at the time the respective resolution was adopted by the Annual Stockholders' Meeting on April 29, 2014.

With the approval of the Supervisory Board and until April 28, 2019, the Board of Management is authorized to increase the capital stock by up to €212 million in one or more installments by issuing shares out of the Authorized Capital II against cash contributions. The stockholders must normally be granted subscription rights. However, the Board of Management is authorized, with the approval of the Supervisory Board, to exclude subscription rights for stockholders provided the volume of shares issued out of the Authorized Capital II against cash contributions does not exceed 10% of the capital stock existing at the time this authorization is registered or at the time the new shares are issued and the issue price of the new shares is not significantly below the market price of the already listed shares.

Conditional capital of €212 million exists in connection with an authorization – valid through April 28, 2019 – to issue bonds with warrants or convertible bonds, profit-sharing rights or profit participation bonds (collectively referred to as "bonds") with a total face value of €6 billion. The Board of Management may, with the consent of the Supervisory Board and under certain conditions, exclude the bond subscription rights that would otherwise be granted to stockholders. One of the conditions is that the total volume of shares required to service the bonds exceed neither 10% of the capital stock that existed at the time the respective resolution was adopted by the Annual Stockholders' Meeting on April 29, 2014 nor 10% of the capital stock existing at the time this authorization is exercised. Any other shares issued without granting subscription rights to the stockholders in direct or analogous application of Section 186, Paragraph 3, Sentence 4 of the German Stock Corporation Act shall be credited against this 10% limit. Further, by resolution of the Annual Stockholders' Meeting on April 29, 2014, the Board of Management is authorized to purchase and dispose of own shares representing up to 10% of the capital stock existing at the time the resolution was adopted. The authorization to purchase own shares also includes the purchase of own shares using put or call options (derivatives) up to a volume of 5% of the capital stock existing at the time the resolution was adopted or at the time the authorization is exercised. This authorization also expires on April 28, 2019.

A material agreement that is subject to the condition precedent of a change of control pertains to the undrawn €3.5 billion syndicated credit facility arranged by Bayer AG and its U.S. subsidiary Bayer Corporation. This 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. A similar clause is contained in the agreement on a syndicated credit facility granted to Bayer subsidiary Bayer World Investments B.V., Netherlands, in 2014 and guaranteed by Bayer AG. The facility still amounts to US$900 million (as of December 31, 2015) and matures in May 2018.

The terms of the nominal €4.2 billion (as of December 31, 2015) in notes issued by Bayer in the years 2006 to 2014 under its multi-currency European Medium Term Notes program also contain a change-of-control clause. Holders of these notes have the right to demand the redemption of their notes by Bayer AG in the event of a change of control if Bayer AG's credit rating is downgraded within 120 days after such change of control becomes effective. The terms of the US$7 billion bond in 144A/Reg S format issued in October 2014 also contain a clause to this effect.

Agreements exist for the members of the Board of Management in compliance with Section 4.2.3 of the German Corporate Governance Code to cover the eventuality of a takeover offer being made for Bayer AG. Under these agreements, payments promised in the event of early termination of the service contract of a Board of Management member due to a change of control are limited to the value of three years' compensation and may not compensate more than the remaining term of the contract.

02

Consolidated Financial Statements

Notes to the Statements of Cash Flows

Other Information

Bayer Group Consolidated Income Statements

[Table 4.1]

	Note	2014	2015
		€ million	€ million
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]

	Note	2014	2015
		€ million	€ million
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]

	Note	Dec. 31, 2014	Dec. 31, 2015
		€ million	€ million
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]

	Note	2014	2015
		€ million	€ million
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

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Bayer Group Consolidated Statements of Changes in Equity

[Table 4.5]

					Accumulated total comprehensive income						
	Capital stock of Bayer AG	Capital reserves of Bayer AG	Retained earnings including net income	Exchange differences		Fair-value measurement of securities	Cash flow hedges	Revaluation surplus	Equity attributable to Bayer AG stockholders	Equity attributable to noncontrolling interest	Equity
	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million	€ million	€ million
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**

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Notes to the Consolidated Financial Statements of the Bayer Group

1. Key data by segment and region

Key Data by Segment [Table 4.6]

	HealthCare					CropScience		Covestro		Reconciliation					
	Pharmaceuticals		Consumer Health			CropScience		Covestro		All Other Segments		Corporate Center and Consolidation		Group	
	2014	2015	2014	2015		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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

Key Data by Region [Table 4.7]

	Europe		North America			Asia/Pacific		Latin America/ Africa/Middle East		Reconciliation		Total	
	2014	2015	2014	2015		2014	2015	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Exchange Rates for Major Currencies [Table 4.8]

		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:

Useful Life of Property, Plant and Equipment [Table 4.9]

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:

Impairment Testing Parameters [Table 4.10]

	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:

Activities of the Segments [Table 4.11]

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:

Reconciliation of Segments' EBITDA Before Special Items to Group Income Before Income Taxes [Table 4.12]

	2014	2015
	€ million	€ million
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

Reconciliation of Segments' Assets to Group Assets [Table 4.13]

	2014	2015
	€ million	€ million
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

Reconciliation of Segments' Liabilities to Group Liabilities [Table 4.14]

	2014	2015
	€ million	€ million
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:

Information on Geographical Areas [Table 4.15]

	Net sales (external) – by market		Intangible assets and property, plant and equipment	
	2014	2015	2014	2015
	€ million	€ million	€ million	€ million
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:

Activities of the Segments [Table 4.16]

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

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If the new organizational structure had already been in place as of December 31, 2015, selected segment reporting items would appear as follows:

Selected Key Data by Segment [Table 4.17]

	Pharmaceuticals		Consumer Health		Crop Science		Animal Health		Reconciliation									
											All Other Segments		Corporate Center and Consolidation		Life Sciences*		Covestro		Group	
	2014	2015	2014	2015	2014	2015	2014	2015			2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million			€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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

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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:

Change in Number of Consolidated Companies [Table 4.18]

	Germany	Other countries	Total
Bayer AG and consolidated companies			
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).

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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.

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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:

German Exempt Subsidiaries [Table 4.19]

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

German Exempt Subsidiaries [Table 4.19] continued

Company Name	Place of Business	Bayer's interest
		%
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
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.

Change in Purchase Price Allocation [Table 4.20]

	Dec. 31, 2014		
	Before change in purchase price allocation	Change in purchase price allocation	After change in purchase price allocation
	€ million	€ million	€ million
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:

Acquired Assets and Assumed Liabilities (Fair Values at the Respective Acquisition Dates) [Table 4.21]

	2014	Of which Merck CC	Of which Dihon	2015	Of which Merck CC	Of which Merck Canada	Of which Dihon
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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.

Divested Assets and Liabilities [Table 4.22]

	2014	2015
	€ million	€ million
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:

Income Statements for Discontinued Operations [Table 4.23]

	2014	2015
	€ million	€ million
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:

Assets and Liabilities of Discontinued Operations [Table 4.24]

	Dec. 31, 2015
	€ million
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:

Cash Flows of Discontinued Operations [Table 4.25]

	2014	2015
	€ million	€ million
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:

Factors in Sales Development [Table 4.26]

	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:

Selling Expenses [Table 4.27]

	2014	2015
	€ million	€ million
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:

Other Operating Income [Table 4.28]

	2014	2015
	€ million	€ million
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:

Other Operating Expenses [Table 4.29]

	2014	2015
	€ million	€ million
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.

Personnel Expenses [Table 4.30]

	2014	2015
	€ million	€ million
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:

Employees [Table 4.31]

	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:

Income (Loss) from Investments in Affiliated Companies [Table 4.32]

	2014	2015
	€ million	€ million
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:

Net Interest Expense [Table 4.33]

	2014	2015
	€ million	€ million
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:

Other Financial Income and Expenses [Table 4.34]

	2014	2015
	€ million	€ million
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 unwinding 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:

Tax Expense by Origin [Table 4.35]

	2014		2015	
		Of which income taxes		Of which income taxes
	€ million	€ million	€ million	€ million
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:

Deferred Tax Assets and Liabilities [Table 4.36]

	Dec. 31, 2014		Dec. 31, 2015	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
	€ million	€ million	€ million	€ million
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:

Expiration of Unusable Tax Credits and Tax Loss Carryforwards [Table 4.37]

	Tax credits		Tax loss carryforwards	
	Dec. 31, 2014	Dec. 31, 2015	Dec. 31, 2014	Dec. 31, 2015
	€ million	€ million	€ million	€ million
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:

Reconciliation of Expected to Actual Income Tax Expense [Table 4.38]

	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.

Earnings per Share [Table 4.39]

	2014	2015
	€ million	€ million
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:

Changes in Intangible Assets [Table 4.40]

	Acquired goodwill	Patents and technologies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Changes in Intangible Assets (Previous Year) [Table 4.41]

	Acquired goodwill	Patents and technologies	Trademarks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Goodwill by Reporting Segment [Table 4.42]

	Pharma-ceuticals	Consumer Health	HealthCare	CropScience	Covestro	Bayer Group
	€ million	€ million	€ million	€ million	€ million	€ million
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:

Intangible Assets with an Indefinite Useful Life [Table 4.43]

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™:

Patent Expiration Dates [Table 4.44]

	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[i]	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:

Changes in Property, Plant and Equipment [Table 4.45]

	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
	€ million	€ million	€ million	€ million	€ million
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:

Changes in Property, Plant and Equipment (Previous Year) [Table 4.46]

	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
	€ million	€ million	€ million	€ million	€ million
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.

Associates and Joint Ventures Accounted for Using the Equity Method [Table 4.47]

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.

Income Statement Data of PO JV, LP, Accounted for Using the Equity Method [Table 4.48]

	2014	2015
	€ million	€ million
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)**

Data from the Statements of Financial Position of PO JV, LP, Accounted for Using the Equity Method [Table 4.49]

	Dec. 31, 2014	Dec. 31, 2015
	€ million	€ million
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.

Income Statement Data and Carrying Amount of Associates Accounted for Using the Equity Method [Table 4.50]

	2014	2015
	€ million	€ million
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.

Income Statement Data and Carrying Amount of Joint Ventures Accounted for Using the Equity Method [Table 4.51]

	2014	2015
	€ million	€ million
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:

Other Financial Assets [Table 4.52]

	Dec. 31, 2014		Dec. 31, 2015	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
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 capital of €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:

Inventories [Table 4.53]

	Dec. 31, 2014	Dec. 31, 2015
	€ million	€ million
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:

Impairments of Inventories [Table 4.54]

	2014	2015
	€ million	€ million
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:

Trade Accounts Receivable [Table 4.55]

	2014	2015
	€ million	€ million
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:

Impairments of Trade Accounts Receivable [Table 4.56]

	2014	2015
	€ million	€ million
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:

Impaired and Past-Due Trade Accounts Receivable [Table 4.57]

		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		up to 3 months	3 – 6 months	6 – 12 months	more than 12 months	
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Other Receivables [Table 4.58]

	Dec. 31, 2014		Dec. 31, 2015	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
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:

Impaired and Past-Due Other Financial Receivables [Table 4.59]

	Carrying amount	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	
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Rating [Table 4.60]

	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' sub-

scription 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:

Components of Noncontrolling Interest in Equity [Table 4.61]

	2014	2015
	€ million	€ million
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:

Material Noncontrolling Interests [Table 4.62]

		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:

Net Defined Benefit Liability Reflected in the Statement of Financial Position [Table 4.63]

	Pensions		Other post-employment benefits		Total	
	Dec. 31, 2014	Dec. 31, 2015	Dec. 31, 2014	Dec. 31, 2015	Dec. 31, 2014	Dec. 31, 2015
	€ million	€ million	€ million	€ million	€ million	€ million
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:

Expenses for Defined Benefit Plans [Table 4.64]

	Pension plans						Other post-employment benefit plans	
	Germany		Other countries		Total		Other countries	
	2014	2015	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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.

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The net defined benefit liability developed as follows:

Changes in Net Defined Benefit Liability [Table 4.65]

	Defined benefit obligation		Fair value of plan assets			Effects of the asset ceiling		Net defined benefit liability	
	2014	2015	2014	2015		2014	2015	2014	2015
	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million
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.

Defined Benefit Obligation and Funded Status [Table 4.66]

	Pension obligation		Other post-employment benefit obligation		Total	
	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	€ million	€ million
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:

Fair Value of Plan Assets as of December 31 [Table 4.67]

	Pension obligations				Other post-employment obligations	
	Germany		Other countries		Other countries	
	2014	2015	2014	2015	2014	2015
	€ million	€ million	€ million	€ million	€ million	€ million
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:

Parameters for Benefit Obligations [Table 4.68]

	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:

Parameters for Benefit Expense [Table 4.69]

	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:

Sensitivity of Benefit Obligations [Table 4.70]

	Germany		Other countries		Total	
	Increase	Decrease	Increase	Decrease	Increase	Decrease
	€ million	€ million	€ million	€ million	€ million	€ million
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

Sensitivity of Benefit Obligations (prior year) [Table 4.71]

	Germany		Other countries		Total	
	Increase	Decrease	Increase	Decrease	Increase	Decrease
	€ million	€ million	€ million	€ million	€ million	€ million
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:

Sensitivity to Health Care Cost Increases [Table 4.72]

	Increase of one percentage point		Decrease of one percentage point	
	2014	2015	2014	2015
	€ million	€ million	€ million	€ million
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:

Employer Contributions Paid or Expected [Table 4.73]

	Germany			Other countries		
	2014	2015	2016 expected	2014	2015	2016 expected
	€ million	€ million	€ million	€ million	€ million	€ million
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:

Future Benefit Payments [Table 4.74]

	Payments out of plan assets				Payments by the company			
	Pensions		Other post-employment benefits		Pensions		Other post-employment benefits	
	Germany	Other countries	Other countries	Total	Germany	Other countries	Other countries	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Changes in Other Provisions [Table 4.75]

	Other Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Expected Utilization of Other Provisions [Table 4.76]

	Other Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Changes in Provisions for Stock-Based Compensation Programs [Table 4.77]

	Aspire I Four-Year Program	Aspire II Four-Year Program	Aspire I Four-Year Program Covestro	Aspire II Four-Year Program Covestro	Total
	€ million	€ million	€ million	€ million	€ million
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:

Parameters for Monte Carlo Simulation [Table 4.78]

	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:

Financial Liabilities [Table 4.79]

	Dec. 31, 2014		Dec. 31, 2015	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
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:

Maturities of Financial Liabilities [Table 4.80]

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:

Bonds and Notes [Table 4.81]

Effective interest rate	Stated rate		Nominal volume	Dec. 31, 2014	Dec. 31, 2015
				€ million	€ 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:

Lease Liabilities [Table 4.82]

	Dec. 31, 2014				Dec. 31, 2015		
Maturity	Lease payments	Interest component	Liabilities under finance leases	Maturity	Lease payments	Interest component	Liabilities under finance leases
	€ million	€ million	€ million		€ million	€ million	€ million
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:

Other Liabilities [Table 4.83]

	Dec. 31, 2014		Dec. 31, 2015	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
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]]			Nonfinancial assets/ liabilities			Carried at amortized cost	Carried at fair value [Fair value for information[1]]			Nonfinancial assets / liabilities	
	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
	€ million	€ million	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million	€ million	€ million
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:

Changes in the Amount of Financial Assets and Liabilities Recognized at Fair Value Based on Unobservable Inputs [Table 4.85]

	2014				2015			
	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
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Income, Expense, Gains and Losses on Financial Instruments [Table 4.86]

	2015					
	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Total
	€ million	€ million	€ million	€ million	€ million	€ million
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)**

Income, Expense, Gains and Losses on Financial Instruments (Previous Year) [Table 4.87]

	2014					
	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Total
	€ million	€ million	€ million	€ million	€ million	€ million
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.

Maturity Analysis of Financial Instruments

[Table 4.88]

	Dec. 31, 2015	Cash flows 2016	Cash flows 2017		Cash flows 2018	Cash flows 2019	Cash flows 2020	Cash flows after 2020
	Carrying amount	Interest and repayment	Interest and repayment		Interest and repayment	Interest and repayment	Interest and repayment	Interest and repayment
	€ million	€ million	€ million		€ million	€ million	€ million	€ million
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

	Dec. 31, 2014	Cash flows 2015	Cash flows 2016		Cash flows 2017	Cash flows 2018	Cash flows 2019	Cash flows after 2019
	Carrying amount	Interest and repayment	Interest and repayment		Interest and repayment	Interest and repayment	Interest and repayment	Interest and repayment
	€ million	€ million	€ million		€ million	€ million	€ million	€ million
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.

Fair Values of Derivatives [Table 4.89]

	Dec. 31, 2014			Dec. 31, 2015		
	Notional amount[1]	Positive fair value	Negative fair value	Notional amount[1]	Positive fair value	Negative fair value
	€ million	€ million	€ million	€ million	€ million	€ million
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:

Contingent Liabilities [Table 4.90]

	Dec. 31, 2014	Dec. 31, 2015
	€ million	€ million
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:

Other Financial Commitments [Table 4.91]

	Dec. 31, 2014	Dec. 31, 2015
	€ million	€ million
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:

Operating Leases [Table 4.92]

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.

Potential Payment Obligations Under R&D Collaboration Agreements [Table 4.93]

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 multi-district 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:

Audit Fees [Table 4.94]

	PwC		of which PwC AG WPG	
	2014	2015	2014	2015
	€ million	€ million	€ million	€ million
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:

Related Parties [Table 4.95]

	2014				2015			
	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
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:

Board of Management Compensation according to IFRS [Table 4.96]

	2014	2015
	€ thousand	€ thousand
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

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles for financial reporting, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Bayer Group, and the combined management report includes a fair review of the development and performance of the business and the position of the Bayer Group and Bayer AG, together with a description of the principal opportunities and risks associated with the expected development of the Bayer Group and Bayer AG.

Leverkusen, February 16, 2016
Bayer Aktiengesellschaft

The Board of Management

Dr. Marijn Dekkers
Chairman

Liam Condon

Werner Baumann

Johannes Dietsch

Dr. Hartmut Klusik

Erica Mann

Kemal Malik

Dieter Weinand

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 appropriate-

ness 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
Wirtschaftsprüfer

Eckhard Sprinkmeier
Wirtschaftsprüfer

Independent Practitioner's Limited Assurance Report on the sustainability information in the online annexes of the augmented online version of the Annual Report of Bayer AG 2015

To Bayer AG, Leverkusen

We have been engaged to perform a limited assurance engagement on the sustainability information marked with „limited assurance" in the online annexes of the augmented online version of the Annual Report of Bayer AG, Leverkusen, (hereinafter: the "Company") for the period January 1, 2015 to December 31, 2015 ("Annual Report 2015 – Augmented Version"; hereinafter: "Online Version").

MANAGEMENT'S RESPONSIBILITY

Company's Management is responsible for the preparation and presentation of the Online Version in accordance with the criteria as set out in the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) (hereafter the "GRI-Criteria") and for the selection of the information to be assessed.

This responsibility includes the selection and application of appropriate methods to prepare the Online Version as well as the use of assumptions and estimates for individual sustainability disclosures which are reasonable in the circumstances. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Online Version, which is free of material misstatements due to intentional or unintentional errors.

AUDIT FIRM'S INDEPENDENCE AND QUALITY CONTROL

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

The audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the joint opinion of the Wirtschaftsprüferkammer (Chamber of German Public Auditors; WPK) and the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW): Requirements to quality control for audit firms ("Gemeinsamen Stellungnahme der WPK und des IDW: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis": "VO 1/2006") – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

PRACTITIONER'S RESPONSIBILITY

Our responsibility is to express an opinion on the sustainability information marked with „limited assurance" in the Online Version based on our work performed.

Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions, referred to in the Online Version.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance whether any matters have come to our attention that cause us to believe that the sustainability information marked with „ limited assurance" in the Online Version has not been prepared, in all material respects, in accordance with the GRI-Criteria.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on the practitioner's judgement. This includes the assessment of the risks of material misstatements of the sustainability information marked with „ limited assurance“in the Online Version with regard to the GRI-Criteria.

Within the scope of our work, we performed amongst others the following procedures:
- Obtaining an understanding of the structure of the sustainability organization and of the stakeholder engagement;
- Inquiries of personnel involved in the preparation of the Report regarding the preparation process and the underlying internal control system;
- Documentation of the processes and inspection of the systems and processes regarding the collection of the sustainability information as well as sample testing;
- Site visits as part of the inspection of processes and analysis of selected data at the following sites:
  – Bayer HealthCare, Berkeley, USA
  – Bayer CropScience, Muskegon, USA
  – Covestro, Maasvlakte, Niederlande
  – Covestro, Map Ta Phut, Thailand
  – Sites on the Lower Rhine, Germany;
- Analytical procedures on selected sustainability information of the Online Version;
- Inspection of internal documents, contracts and invoices as well as reports.

CONCLUSION
Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the sustainability information marked with „ limited assurance“ in the Online Version of the Company for the period January 1, 2015 to December 31, 2015 has not been prepared, in all material respects, in accordance with the GRI-Criteria.

EMPHASIS OF MATTER – RECOMMENDATIONS
Without qualifying our conclusion above, we make the following recommendations for the further development of the Company's sustainability management and sustainability reporting:

- Further alignment of the sustainability reporting in consideration of the changing focus topics of a life science company:
- Further development of the management approaches and their presentation in the integrated reporting;
- Further focusing, improving and formalizing internal control systems at central level and at the level of individual sites.

RESTRICTION ON USE AND DISTRIBUTION
We issue this report on the basis of the engagement agreed with Bayer AG. The audit has been performed for purposes of Bayer AG and is solely intended to inform Bayer AG about the results of the audit. The report is not intended for any third parties to base any (financial) decision thereon.
We do not assume any responsibility towards third parties.

Munich, February 25, 2016

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Hendrik Fink ppa. Pia Schnück

Wirtschaftsprüfer
(German Public Auditor)

03

Further Information

Governance Bodies

Supervisory Board

Members of the Supervisory Board held offices as members of the supervisory board or a comparable supervising body of the corporations listed (as at December 31, 2015 or the date on which they ceased to be members of the Supervisory Board of Bayer AG):

WERNER WENNING
Leverkusen, Germany
(born October 21, 1946)

Chairman of the Supervisory Board effective October 2012

Chairman of the Supervisory Board of Bayer AG and Chairman of the Supervisory Board of E.ON SE

Memberships on other supervisory boards:

- E.ON SE (Chairman)
- Henkel Management AG
- Siemens AG (Vice Chairman)

Memberships in comparable supervising bodies of German or foreign corporations:

- Henkel AG & Co. KGaA (Member of the Shareholders' Committee)

OLIVER ZÜHLKE
Solingen, Germany
(born December 11, 1968)

Vice Chairman of the Supervisory Board effective July 2015

Member of the Supervisory Board effective April 2007

Chairman of the Bayer Central Works Council

Memberships on other supervisory boards:

- Bayer Pharma AG

THOMAS DE WIN
Cologne, Germany
(born November 21, 1958)

Vice Chairman of the Supervisory Board until June 2015

Memberships on other supervisory boards:

- Covestro Deutschland AG (formerly Bayer MaterialScience AG) (until June 2015)

DR. PAUL ACHLEITNER
Munich, Germany
(born September 28, 1956)

Member of the Supervisory Board effective April 2002

Chairman of the Supervisory Board of Deutsche Bank AG

Memberships on other supervisory boards:

- Daimler AG
- Deutsche Bank AG (Chairman)

Memberships in comparable supervising bodies of German or foreign corporations:

- Henkel AG & Co. KGaA (Member of the Shareholders' Committee)

DR. RER. NAT. SIMONE BAGEL-TRAH
Düsseldorf, Germany
(born January 10, 1969)

Member of the Supervisory Board effective April 2014

Chairwoman of the Supervisory Board of Henkel AG & Co. KGaA and Henkel Management AG and Shareholders' Committee of Henkel AG & Co. KGaA

Memberships on other supervisory boards:

- Henkel AG & Co. KGaA (Chairwoman)
- Heraeus Holding GmbH

Memberships in comparable supervising bodies of German or foreign corporations:

- Henkel AG & Co. KGaA (Chairwoman of the Shareholders' Committee)

DR. CLEMENS BÖRSIG
Frankfurt am Main, Germany
(born July 27, 1948)

Member of the Supervisory Board effective April 2007

Member of various supervisory boards

Memberships on other supervisory boards:

- Daimler AG
- Linde AG

Memberships in comparable supervising bodies of German or foreign corporations:

- Emerson Electric Co.
- Istituto per le Opere di Religione (Member of the Board of Superintendence)

ANDRÉ VAN BROICH
Dormagen, Germany
(born June 19, 1970)

Member of the Supervisory Board effective April 2012

Chairman of the Works Council of the Dormagen site

Memberships on other supervisory boards:

- Bayer CropScience AG

THOMAS EBELING
Muri bei Bern, Switzerland
(born February 9, 1959)

Member of the Supervisory Board effective April 2012

Chief Executive Officer of ProSiebenSat.1 Media AG

Memberships in comparable supervising bodies of German or foreign corporations:

- Lonza Group AG

DR.-ING. THOMAS FISCHER
Krefeld, Germany
(born August 27, 1955)

Member of the Supervisory Board effective October 2005

Chairman of the Managerial Employees' Committee of Covestro Deutschland AG (formerly Bayer MaterialScience AG)

Memberships on other supervisory boards:

- Covestro AG (effective October 2015)
- Covestro Deutschland AG (formerly Bayer MaterialScience AG)

PETER HAUSMANN
Winsen/Aller, Germany
(born February 13, 1954)

Member of the Supervisory Board until October 2015

Member of the Executive Committee of the German Mining, Chemical and Energy Industrial Union

Memberships on other supervisory boards:

- Covestro AG (effective October 2015)
- Covestro Deutschland AG (formerly Bayer MaterialScience AG) (effective September 2015)
- Continental AG
- Henkel AG & Co. KGaA
- 50Hertz Transmission GmbH
- Vivawest Wohnen GmbH

REINER HOFFMANN
Wuppertal, Germany
(born May 30, 1955)

Member of the Supervisory Board effective October 2006

Chairman of the German Trade Union Confederation

YÜKSEL KARAASLAN
Hohen Neuendorf, Germany
(born March 1, 1968)

Member of the Supervisory Board effective April 2012

Chairman of the Bayer Group Works Council

Vice Chairman of the Bayer Central Works Council

Chairman of the Works Council of the Berlin site

Memberships on other supervisory boards:

- Bayer Pharma AG

PETRA KRONEN
Krefeld, Germany
(born August 22, 1964)

Member of the Supervisory Board effective July 2000

Chairwoman of the Works Council of the Uerdingen site

Memberships on other supervisory boards:

- Covestro AG (Vice Chairwoman) (effective October 2015)
- Covestro Deutschland AG (formerly Bayer MaterialScience AG) (Vice Chairwoman)

FRANK LÖLLGEN
Cologne, Germany

(born June 14, 1961)

Member of the Supervisory Board effective November 2015

North Rhine District Secretary of the German Mining, Chemical and Energy Industrial Union

Memberships on other supervisory boards:

- Evonik Industries AG
- IRR-Innovationsregion Rheinisches Revier GmbH

DR. RER. NAT. HELMUT PANKE
Munich, Germany
(born August 31, 1946)

Member of the Supervisory Board effective April 2007

Member of various supervisory boards

Memberships in comparable supervising bodies of German or foreign corporations:

- Microsoft Corporation
- Singapore Airlines Limited
- UBS AG (until May 2015)

SUE H. RATAJ
Sebastopol, U.S.A.

(born January 8, 1957)

Member of the Supervisory Board effective April 2012

Member of the Board of Directors of Cabot Corporation, Boston, U.S.A.

Member of the Board of Directors of Agilent Technologies Inc., Santa Clara, U.S.A.

PETRA REINBOLD-KNAPE
Berlin, Germany
(born April 16, 1959)

Member of the Supervisory Board effective April 2012

Member of the Executive Committee of the German Mining, Chemical and Energy Industrial Union

Memberships on other supervisory boards:

- envia Mitteldeutsche Energie AG
- Vattenfall Europe Generation AG
- Vattenfall Europe Mining AG (Vice Chairwoman) (effective June 2015)

Memberships in comparable supervising bodies of German or foreign corporations:

- MDSE Mitteldeutsche Sanierungs- und Entsorgungsgesellschaft mbH

MICHAEL SCHMIDT-KIESSLING
Schwelm, Germany
(born March 24, 1959)

Member of the Supervisory Board effective April 2012

Chairman of the Works Council of the Elberfeld site

DR. KLAUS STURANY*
Ascona, Switzerland
(born October 23, 1946)

Member of the Supervisory Board effective April 2007

Member of various supervisory boards

Memberships on other supervisory boards:

- Hannover Rück SE (Vice Chairman)

Memberships in comparable supervising bodies of German or foreign corporations:

- Sulzer AG

HEINZ GEORG WEBERS
Bergkamen, Germany
(born December 27, 1959)

Member of the Supervisory Board effective July 2015

Chairman of the Bayer European Forum

Chairman of the Works Council of the Bergkamen site

Memberships on other supervisory boards:

- Bayer Pharma AG

PROF. DR. DR. H.C. OTMAR D. WIESTLER
Berlin, Germany
(born November 6, 1956)

Member of the Supervisory Board effective October 2014

President of the Helmholtz Association of German Research Centers

PROF. DR. DR. H.C. MULT. ERNST-LUDWIG WINNACKER
Munich, Germany
(born July 26, 1941)

Member of the Supervisory Board effective April 1997

Professor-Emeritus of Ludwig-Maximilians University Munich

Memberships on other supervisory boards:

- Wacker Chemie AG

Standing committees of the Supervisory Board of Bayer AG
(as at December 31, 2015)

PRESIDIAL COMMITTEE/ MEDIATION COMMITTEE
Wenning (Chairman), Achleitner, Reinbold-Knape, Zühlke

AUDIT COMMITTEE
Sturany* (Chairman), Fischer, Hoffmann, Panke, Wenning, Zühlke

HUMAN RESOURCES COMMITTEE
Wenning (Chairman), Achleitner, Karaaslan, Kronen

NOMINATIONS COMMITTEE
Wenning (Chairman), Achleitner

INNOVATION COMMITTEE
Winnacker (Chairman), van Broich, Reinbold-Knape, Wenning, Wiestler, Zühlke

* Independent expert member pursuant to Section 100 Paragraph 5 of the German Stock Corporation Act (AktG)

Board of Management

Members of the Board of Management held offices as members of the supervisory board or a comparable supervising body of the corporations listed (as at December 31, 2015):

DR. MARIJN DEKKERS
(born September 22, 1957)

Chairman
(effective October 1, 2010)

Member of the Board of Management effective January 1, 2010, appointed until December 31, 2016

- Board of Directors of General Electric Company

WERNER BAUMANN
(born October 6, 1962)

Member of the Board of Management effective January 1, 2010, appointed until December 31, 2017

- Bayer CropScience AG (Chairman)
- Covestro Deutschland AG (formerly Bayer MaterialScience AG) (Chairman) (until March 2015)
- Bayer Pharma AG (effective March 2015)

LIAM CONDON
(born February 27, 1968)

Member of the Board of Management effective January 1, 2016, appointed until December 31, 2018

JOHANNES DIETSCH
(born January 2, 1962)

Member of the Board of Management effective September 1, 2014, appointed until August 31, 2017

- Bayer Business Services GmbH (Chairman)
- Covestro AG (effective August 2015)
- Covestro Deutschland AG (formerly Bayer MaterialScience AG) (effective June 2015)

DR. HARTMUT KLUSIK
(born July 30, 1956)

Member of the Board of Management effective January 1, 2016, appointed until December 31, 2018

Labor Director
(effective January 2016)

- Bayer HealthCare AG (Chairman) (effective January 2016)
- Bayer Pharma AG (Chairman) (effective January 2016)
- Bayer Technology Services GmbH (Chairman) (effective January 2016)
- Currenta Geschäftsführungs-GmbH (Chairman) (effective January 2016)

KEMAL MALIK
(born September 29, 1962)

Member of the Board of Management effective February 1, 2014, appointed until January 31, 2017

ERICA MANN
(born October 11, 1958)

Member of the Board of Management effective January 1, 2016, appointed until December 31, 2018

DIETER WEINAND
(born August 16, 1960)

Member of the Board of Management effective January 1, 2016, appointed until December 31, 2018

- Board of Directors of HealthPrize Technologies LLC

MICHAEL KÖNIG
(born September 3, 1963)

Member of the Board of Management until December 31, 2015

Labor Director

- Bayer HealthCare AG (Chairman)
- Bayer Pharma AG (Chairman)
- Bayer Technology Services GmbH (Chairman)
- Currenta Geschäftsführungs-GmbH (Chairman)

Organization Chart

MARIJN DEKKERS[1]
Chairman

M. Arnold
Corporate Office

H. Heitmann
Communications, Government Relations and Corporate Brand

A. Rosar
Investor Relations

R. Schwarz
Internal Audit

JOHANNES DIETSCH
Finance

P. Müller
Finance

U. Rahenbrock[2]
Accounting

G. Schildmeyer
Corporate Controlling

B.-P. Bier
Taxes

R. Hartwig
Law, Patents & Compliance

T. Udesen
Procurement

V. Hahn
Regional Coordination

D. Hartert
Business Services

WERNER BAUMANN[1]
Strategy & Portfolio Management

T.-P. Hausner
Strategy

F. Rittgen
Mergers & Acquisitions

M. Vehreschild
Country & Functional Excellence

HARTMUT KLUSIK*
Human Resources, Technology & Sustainability

H.-U. Groh
Human Resources & Organization

C. Pörtner
Corporate Technology & Manufacturing

A. Knors
Technology Services

W. Große Entrup[3]
Environment & Sustainability

H. Klusik
Product Supply[4]

G. Hilken
Currenta

* Labor Director

[1] Effective May 1, 2016, Werner Baumann will become the new Chairman of the Board of Management of Bayer AG. Dr. Marijn Dekkers will leave the company at his own request on April 30, 2016.
[2] Until March 31, 2016; B.-P Bier from April 1, 2016
[3] From July 1, 2016 part of the Corporate Health, Safety & Sustainability function headed by K. van Laak
[4] Hartmut Klusik will remain in charge of the current Product Supply function for Pharmaceuticals, Consumer Health and Animal Health during the transitional phase until the corresponding units have been set up in the Pharmaceuticals and Consumer Health divisions and at Animal Health and are fully operational.
[5] Europe/Middle East/Africa
[6] Asia/Pacific

As of February 1, 2016

[Graphic 5.1]

KEMAL MALIK
Innovation

A. Bouchon
Bayer Life Science Center

M. Lessl
Corporate Innovation and Research & Development

J. Federer
Digital Development

DIETER WEINAND
Pharmaceuticals

J. Triana
Finance

S. Guth
Strategic Marketing

A. Busch
Drug Discovery

J. Möller
Development

M. Devoy
Chief Medical Officer

R. Franzen
Commercial Operations EMEA[5]

P. Blake
Commercial Operations Americas

W. Jiang
Commercial Operations China & APAC[6]

C. Brunn
Commercial Operations Japan

ERICA MANN
Consumer Health

O. Mauroy-Bressier
Finance

N. N.
Strategic Marketing

J. O'Mullane
Innovation & Development

J. Ohle
Commercial Operations International

N. Bartner
Commercial Operations North America

L. Yuen
Commercial Operations China

N. N.
Division Operations

T. Hayes
Integration

LIAM CONDON
Crop Science

M. A. Schulz
Finance

D. Backhaus
Product Supply

M. Reichardt
Agricultural Commercial Operations

A. Percy
Research & Development

M. Kremer
Crop Strategies & Portfolio Management

B. Naaf
Business Affairs & Communications

T. Menne
Digital Farming

J. Applegate
Environmental Science

D. Ehle
Animal Health

G4 Content Index of the Global Reporting Initiative (GRI) with the 10 Principles of the U.N. Global Compact

For fiscal 2015, we are applying the GRI G4 Guidelines in compliance with the "comprehensive" option for the first time. Where there is insufficient information for a particular GRI indicator, we have explained this. In addition, the detailed GRI Content Index includes the corresponding principles of the UNGC and the assignment of our areas of activity to the GRI aspects. Moreover, we indicate whether our scope to exercise influence lies within or outside the company (GRI G4-19, G4-20, G4-21).

For the implementation of the GRI Materiality Disclosure Service the GRI had access to the "Annual Report 2015 – Augmented Version." The correct positioning of the "G4 materiality disclosures" (G4-17 – G4-27) was confirmed by the GRI.

GRI G4 Content Index

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20 within	GRI aspect limitation G4-21 outside
	General Standard Disclosures						
	Strategy and Analysis						
	G4–1	Statement from the most senior decision-maker	1–7				
	G4–2	Key impacts, risks, and opportunities concerning sustainability	48, 51–55, 57, 59–61, 79–82, 100, 104, 218				
	Organizational Profile						
	G4–3	Name of the organization	49				
	G4–4	Primary brands, products, and services	48, 51				
	G4–5	Location of the organization's headquarters	49				
	G4–6	Countries with significant operations	46–47, 49				
	G4–7	Nature of ownership and legal form	42–43, 49				
	G4–8	Markets served	46–47, 108, 110–112				
	G4–9	Scale of the organization	46–47, 86, 104, 230, 232				
6	G4–10	Employees by employment type, gender and region	46–47, 86, 88–89, 91				
3	G4–11	Percentage of employees covered by collective bargaining agreements	96				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20	G4-21
	General Standard Disclosures					within	outside
	G4–12	Description of the supply chain	97–98				
	G4–13	Significant changes during the reporting period	48–50, 76, 98, 263, 268–269				
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	G4–16	Significant memberships in industry and business associations	83, 93, 100, 113, 115–116, 119, 127				
	Identified Material Aspects and Boundaries						
	G4–17	Entities included in the consolidated financial statements	30, 260–263				
	G4–18	Process for defining the report content	80				
	G4–19	Material Aspects identified	348, 352–361; GRI Index; www.bayer.com/key-areas-of-activity				
	G4–20	Aspect Boundaries within the organization	348–361; GRI Index; www.bayer.com/key-areas-of-activity				
	G4–21	Aspect Boundaries outside the organization	348–361, GRI Index; www.bayer.com/key-areas-of-activity				
	G4–22	Restatements of information provided in previous reports	30				
	G4–23	Significant changes in the Scope and Aspect Boundaries	30				
	Stakeholder Engagement						
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	G4–25	Identification and selection of stakeholders	57, 81–82				
	G4–26	Approach to stakeholder engagement and frequency	42, 57, 64, 80, 82–85, 92, 103, 110–111, 146, 188				
	G4–27	Key topics and concerns raised through stakeholder engagement and response	57, 80, 82–85				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20 within	GRI aspect limitation G4-21 outside
	General Standard Disclosures						
	Report Profile						
	G4–28	Reporting period	30				
	G4–29	Date of most recent previous report	Annual Report: 2015-02-25				
	G4–30	Reporting cycle	Annually				
	G4–31	Contact point for questions regarding the report	367 (back inside cover)				
	G4–32	"In accordance" option with GRI and Content Index chosen	30, 348–361				
	G4–33	External verification of the report	31, 338–341				
	Governance						
	G4–34	Governance structure, incl. committees of the highest governance body	32–37, 183–185				
	G4–35	Process for delegating authority for economic, environmental and social topics	79–80, 183, 189				
	G4–36	Executive-level position with responsibility for economic, environ-mental and social topics	38, 79–80, 86, 183–184, 215				
	G4–37	Processes for consultation between stakeholders and the highest governance body	43, 188, 366				
	G4–38	Composition of the highest governance body and its committees	184–186				
	G4–39	Independence of the Chair of the highest governance body	34–38, 184				
	G4–40	Nomination and selection processes for the highest governance body and its committees	184–186				
	G4–41	Process for avoiding conflicts of interest	185–186				
	G4–42	Highest governance body's role concerning strategy and goals	183–184				
	G4–43	Measures taken concerning the highest governance body's knowledge in sustainability issues	36				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20	G4-21
	General Standard Disclosures					within	outside
	G4–44	Evaluation of the highest governance body's performance concerning sustainability	35				
	G4–45	Highest governance body's role concerning sustainability impacts, risks, and opportunities	184, 189				
	G4–46	Highest governance body's role concerning the effectiveness of the risk management	35–37, 184, 215–216				
	G4–47	Frequency of the highest governance body's review of sustainability impacts, risks, and opportunities	35, 37, 217				
	G4–48	Highest committee that formally reviews and approves the sustainability report	80				
	G4–49	Process for communicating critical concerns to the highest governance body	35–36, 43, 189–190, 214–223; www.bayer.com/stockholders-meeting				
	G4–50	Critical concerns that were communicated to the highest governance body	35–36; www.bayer.com/stockholders-meeting				
	G4–51	Remuneration policies for the highest governance body and senior executives	189, 192–196, 200–201, 206, 208				
	G4–52	Process for determining remuneration	192–194, 200–201, 206				
	G4–53	Stakeholders' views regarding remuneration	200, 206; www.bayer.com/stockholders-meeting				
	G4–54	Ratio of the highest annual total compensation to the median annual total compensation		Not available: we do not consider this compensation detail to be of informative value for the evaluation of the appropriateness of our compensation structures. We report on these in detail in Chapter 6.3 "Employee Compensation and Variable Pay" and in our Compensation Report.			
	G4–55	Ratio of percentage increase in the highest annual total compensation		Not available: we do not consider this compensation detail to be of informative value for the evaluation of the appropriateness of our compensation structures. We report on these in detail in Chapter 6.3 "Employee Compensation and Variable Pay" and in our Compensation Report.			

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20 within	GRI aspect limitation G4-21 outside
	General Standard Disclosures						
	Ethics and Integrity						
10	G4–56	Values, principles, standards and norms of behavior	48, 80, 90, 95, 187, 189				
10	G4–57	Mechanisms for seeking advice on ethical and lawful behavior	189				
10	G4–58	Mechanisms for reporting concerns about unethical or unlawful behavior	95, 189–190				
	Specific Standard Disclosures G4-19						
	Economic						
					Human capital	X	
					Product and process innovation	X	X
7	Aspect: Economic Performance – Management Approach		56, 143–144		Environmental protection	X	X
	G4-EC1	Direct economic value created and distributed	56, 94–95, 143–144, 276–279				
7	G4-EC2	Financial implications and other risks and opportunities due to climate change	219, 221–222; www.bayer.com/CDP-climate				
	G4-EC3	Coverage of benefit plan obligations	94–96, 297–306				
	G4-EC4	Financial assistance received from government	64				
6	Aspect: Market Presence – Management Approach		93–94		Human capital	X	
6	G4-EC5	Ratios of standard entry level wage compared to local minimum wage		We align our compensation with local market conditions in Emerging Markets and developing countries. Furthermore, in keeping with our human rights position, we pursue the goal of paying adequate salaries that ensure a suitable standard of living for our employees and their families. In all Emerging Markets where we are active, the lowest salary paid by Bayer is at least in line with the applicable minimum wage and in most cases higher. We are not currently reporting on the margin between standard entry salary and minimum wage. We intend to perform a new survey on this aspect.			
6	G4-EC6	Proportion of senior management hired from the local community	93				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20 within	G4-21 outside
	Specific Standard Disclosures G4-19						
					Sustainable food supply		X
	Aspect: Indirect Economic Impacts – Management Approach		56, 143–145		Access to health care		X
	G4-EC7	Infrastructure investments and services provided	59, 102, 144–146, 167–168				
	G4-EC8	Indirect economic impacts	56, 167–168				
	Aspect: Procurement Practices – Management Approach		97–98		Supplier management		X
	G4-EC9	Proportion of spending on local suppliers	98, 365	For a declaration on the main business locations see the precise page in the glossary.			
	Environmental						
7, 8	Aspect: Materials – Management Approach		55, 104, 131–132		Environmental protection	X	X
7, 8	G4-EN1	Materials used by weight or volume	99	We do not report on the weight and volume of the materials used. This information constitutes a business secret.			
8	G4-EN2	Percentage of materials used that are recycled input materials	141–142	We do not provide any information on volumes relating to the total material use of secondary raw materials since this also constitutes a business secret. We do provide information on production-, material- and, where possible, product-related recycling.			
7, 8, 9	Aspect: Energy – Management Approach		54–55, 104, 131–134		Environmental protection	X	X
7, 8	G4-EN3	Energy consumption within the organization	132–134				
	G4-EN4	Energy consumption outside of the organization		Such energy consumption is contained in the details of greenhouse gas emissions for Scope 3, which we publish in the CDP Report.			
8	G4-EN5	Energy intensity	133				
8, 9	G4-EN6	Reduction of energy consumption	133–134				
8, 9	G4-EN7	Reductions in energy requirements of products and services		We do not consider this indicator to be applicable to our product portfolio as a Life Science company. Data are therefore not available.			
7, 8	Aspect: Water – Management Approach		54–55, 104, 131–132, 138		Environmental protection	X	X
7, 8	G4-EN8	Total water with drawal by source	138–139				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20	G4-21
	Specific Standard Disclosures G4-19					within	outside
8	G4-EN9	Water resources significantly affected	138; www.bayer.com/CDP-water				
8	G4-EN10	Water recycled and reused	138–139				
7, 8, 9	Aspect: Emissions – Management Approach		54–55, 104, 131–132, 134–136		Environmental protection	X	X
7, 8	G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	135–136				
7, 8	G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	135–136				
7, 8	G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	134, 136; www.bayer.com/CDP-climate				
8	G4-EN18	Greenhouse gas (GHG) emissions intensity	135				
8, 9	G4-EN19	Reduction of greenhouse gas (GHG) emissions	136				
7;8	G4-EN20	Emissions of ozone-depleting substances (ODS)	137				
7, 8	G4-EN21	NOx, SOx and other significant air emissions	137				
8	Aspect: Effluents and Waste – Management Approach		55, 104, 131–132, 138, 140		Environmental protection	X	X
8	G4-EN22	Total water discharge by quality and destination	138–140				
8	G4-EN23	Total weight of waste by type and disposal method	140–141				
8	G4-EN24	Total number and volume of significant spills	129–130				
8	G4-EN25	Handling of hazardous waste	140–142				
8	G4-EN26	Water bodies significantly affected by discharges of water and runoff	131	We give detailed information on all water-related issues in our CDP Water Report www.bayer.com/CDP-water			
7, 8, 9	Aspect: Products and Services – Management Approach		118–121, 131– 132, 134, 142		Product and process innovation	X	X
					Product stewardship	X	X
					Environmental protection	X	X
7, 8, 9	G4-EN27	Mitigation of environmental impacts of products and services	61, 119, 121–122, 134				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20	G4-21
	Specific Standard Disclosures G4-19					within	outside
8	G4-EN28	Reclaimed products and packaging	142				
8	Aspect: Compliance – Management Approach		54, 188–191, 216, 223		Business ethics	X	X
8	G4-EN29	Fines and sanctions for non-compliance with environmental regulations	307, 327, 330–331		Safety	X	X
8	Aspect: Transport – Management Approach		55, 107, 131–132, 134		Environmental protection	X	X
8	G4-EN30	Significant environmental impacts of transporting products	107–108, 134				
8	Aspect: Supplier Environmental Assessment – Management Approach		53, 55, 97, 100, 102–103, 221		Supplier management		X
8	G4-EN32	Percentage of new suppliers that were screened using environmental criteria	102–103	We do not report on the percentage of new suppliers screened using environmental criteria because these data are not available. We report on the procedure used for assessment.			
8	G4-EN33	Significant environmental impacts in the supply chain	102–103	We do not report in detail on the negative environmental impact determined during supplier evaluation. We give details on the areas in which corrective measures were defined.			
8	Aspect: Environmental Grievance Mechanisms – Management Approach		189–190		Business ethics	X	X
8	G4-EN34	Grievances about environmental impacts	112, 120,190	We do not report on the number of grievances with respect to negative environmental impact. We report on the total number of notifications registered with the compliance hotline. We internally record the precise reason for the grievance, track how it is followed up and take corresponding action in line with our Group regulation. More detailed information on this would constitute a business secret.			
	Labor Practices and Decent Work						
6	Aspect: Employment – Management Approach		52, 86, 91, 222		Human capital	X	
6	G4-LA1	New employee hires and employee turnover	87–89	We are currently not reporting on new hires by age group. We plan to start reporting on this from 2018.			
	G4-LA2	Benefits provided to full-time employees	94, 96				
6	G4-LA3	Return to work and retention rates after parental leave	91–92				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20	G4-21
	Specific Standard Disclosures G4-19					within	outside
3	Aspect: Labor/Management Relations – Management Approach		92		Human capital	X	
3	G4-LA4	Minimum notice period(s) regarding operational changes	92				
1, 6	Aspect: Occupational Health and Safety – Management Approach		54, 55, 96–97, 104, 123–126, 221		Safety	X	X
	G4-LA5	Percentage of total workforce represented in health and safety committees		We do not report on the percentage of the total workforce represented in health and safety committees as these data are not available. We plan to record these data in the future.			
	G4-LA6	Injuries, occupational diseases, lost days, and work-related fatalities	124–125	We do not report on occupational injuries by gender, as these data have to be collected in certain regions anonymously. It is important for us to have classification by incident type and a detailed analysis of the causes of the individual incidents.			
	G4-LA7	Workers with high incidence or risk of diseases	125				
	G4-LA8	Health and safety topics covered in formal agreements with trade unions	126				
6	Aspect: Training and Education – Management Approach		52, 86–87, 89–91, 222		Human capital	X	
6	G4-LA9	Average hours of training	90				
	G4-LA10	Programs that support the continued employability of employees	90, 126				
6	G4-LA11	Percentage of employees receiving regular performance and career development reviews	89–91				
1, 6	Aspect: Diversity and Equal Opportunity – Management Approach		52, 54, 92–93, 222		Human capital	X	
6	G4-LA12	Composition of governance bodies and breakdown of employees by aspects of diversity	88, 93, 96, 186, 343–345	We do not report on minorities, as these data may not be recorded in some countries on grounds of protection of personal rights.			
6	Aspect: Equal Remuneration for Women and Men – Management Approach		93–94		Human capital	X	
6	G4-LA13	Ratio of basic salary and remuneration of women to men	93–94	We do not report quantitatively on the ratio of the basic salary and compensation of women to men. Male and female employees at Bayer receive equal compensation. It is awarded on the basis of qualifications and responsibility.			
	Aspect: Supplier Assessment for Labor Practices – Management Approach		53, 55, 97, 100, 102–103, 221		Supplier management		X

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20 within	G4-21 outside
	Specific Standard Disclosures G4-19						
	G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	102–103	We do not report on the percentage of new suppliers screened using labor practices criteria because these data are not available. We report on the procedure used for assessment.			
	G4-LA15	Significant impacts for labor practices in the supply chain	102–103	We do not report in detail on the negative impact on labor practices determined during supplier assessment. We give details on the areas in which corrective measures were defined.			
	Aspect: Labor Practices Grievance Mechanisms – Management Approach		95, 189–190		Business ethics	X	X
	G4-LA16	Grievances about labor practices	190	We do not report on the number of grievances with respect to the negative impact on labor practices. We report on the total number of notifications registered with the compliance hotline. We internally record the precise reason for the grievance, track how it is followed up and take corresponding action in line with our Group regulation. More detailed information on this would constitute a business secret.			
	Human Rights						
6	Aspect: Non-discrimination – Management Approach		90, 95, 189–190		Business ethics	X	X
6	G4-HR3	Incidents of discrimination and corrective actions taken	190	We do not report on the number of incidents of discrimination. We report on the total number of notifications registered with the compliance hotline. We internally record the precise reason for the grievance, track how it is followed up and take corresponding action in line with our Group regulation. More detailed information on this would constitute a business secret.			
2, 3	Aspect: Freedom of Association and Collective Bargaining – Management Approach		95–96, 100, 102, 189		Human capital Supplier management	X X	 X
2, 3	G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association may be violated or at risk, and measures taken	95–96, 100, 102				
2, 5	Aspect: Child Labor – Management Approach		95, 100, 189		Human capital Supplier management	X X	 X
2, 5	G4-HR5	Operations and suppliers having significant risk for incidents of child labor, and measures taken	95, 100–102				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20	G4-21
	Specific Standard Disclosures G4-19					within	outside
					Human capital	X	
2, 4	Aspect: Forced or Compulsory Labor – Management Approach		95, 100, 102, 189		Supplier management	X	X
2, 4	G4-HR6	Operations and suppliers having significant risk for incidents of forced or compulsory labor, and measures taken	95, 100, 102				
1	Aspect: Security Practices – Management Approach		95		Human capital	X	
1	G4-HR7	Percentage of security personnel trained in the field of human rights	95				
2	Aspect: Supplier Human Rights Assessment – Management Approach		53, 55, 97, 100, 102–103, 221		Supplier management		X
2	G4-HR10	Percentage of new suppliers that were screened using human rights criteria	102–103	We do not report on the percentage of new suppliers screened using human rights criteria because these data are not available. We report on the procedure used for assessment.			
2	G4-HR11	Significant human rights impacts in the supply chain	102–103	We do not report in detail on the negative impact on human rights determined during supplier evaluation. We give details on the areas in which corrective measures were defined.			
1	Aspect: Human Rights Grievance Mechanisms – Management Approach		95, 189–190		Business ethics	X	X
1	G4-HR12	Grievances about human rights impacts	190	We do not report on the number of formal grievances with respect to human rights violations. We report on the total number of notifications registered with the compliance hotline. We internally record the precise reason for the grievance, track how it is followed up and take corresponding action in line with our Group regulation. More detailed information on this would constitute a business secret.			
	Society						
					Safety	X	X
					Stakeholder engagement / partnering	X	X
1	Aspect: Local Communities – Management Approach		54, 85, 104, 107, 123, 126–128, 138, 221		Societal engagement	X	X
1	G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	81–82				
1	G4-SO2	Operations with actual and potential negative impacts on local communities	126–127, 129, 138				

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20	G4-21
	Specific Standard Disclosures G4-19					within	outside
10	Aspect: Anti-corruption – Management Approach		54, 109, 112, 188–191, 216		Business ethics	X	X
10	G4-SO3	Percentage of operations assessed for risks related to corruption and risks identified	189–190	We do not report such risks in relation to operations but in relation to sales. Complete coverage across business units and subgroups is key in compliance/anti-corruption in the first instance. Areas at risk are monitored more frequently than others.			
10	G4-SO4	Communication and training on anti-corruption	191	We do not report quantitatively on training for the Board of Management, Supervisory Board and business partners. Anti-corruption training is performed globally, we therefore do not disclose such information explicitly according to region.			
10	G4-SO5	Confirmed incidents of corruption and actions taken	190	We do not report on the number of confirmed incidents of corruption. We report on the total number of notifications registered with the compliance hotline. We internally record the precise reason for the grievance, track how it is followed up and take corresponding action in line with our Group regulation. More detailed information on this would constitute a business secret.			
10	Aspect: Public Policy – Management Approach		65, 83–84		Business ethics	X	X
10	G4-SO6	Total value of political contributions	84				
	Aspect: Anti-competitive Behavior – Management Approach		54, 112, 188–190, 216, 223		Business ethics	X	X
	G4-SO7	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	307, 327, 329				
	Aspect: Compliance – Management Approach		54, 188–191, 216, 223		Business ethics	X	X
	G4-SO8	Fines and sanctions for non-compliance with laws and regulations	307, 327, 329–331				
2	Aspect: Supplier Assessment for Impacts on Society – Management Approach		53, 55, 97, 100, 102–103, 128, 221		Supplier management		X
	G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	102–103, 128	We do not report on the percentage of new suppliers screened using criteria for impact on society because these data are not available. We report on the procedure used for assessment.			
2	G4-SO10	Negative impacts on society in the supply chain and actions taken	102–103, 128	We do not report in detail on the negative impact on society determined during supplier evaluation. We give details on the areas in which corrective measures were defined.			
2, 3	Aspect: Grievance Mechanisms for Impacts on Society – Management Approach		82, 85, 189–190		Business ethics	X	X

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20 within	GRI aspect limitation G4-21 outside
	Specific Standard Disclosures G4-19						
2, 3	G4-SO11	Number of grievances about impacts on society	190	We do not report on the number of formal grievances with respect to the negative impact on society. We report on the total number of notifications registered with the compliance hotline. We internally record the precise reason for the grievance, track how it is followed up and take corresponding action in line with our Group regulation. More detailed information on this would constitute a business secret.			
	Product Responsibility						
	Aspect: Customer Health and Safety – Management Approach		54, 55, 112–115, 117–119, 121–123, 220–221		Sustainable food supply Product stewardship	 X	X X
	G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed	67, 112–114, 117–119, 121–123				
	G4-PR2	Incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services	307, 327–329	We do not report on the number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impact of products and services. Any proceedings on account of violations would be reported in the Chapter "Legal Risks."			
7	Aspect: Product and Service Labelling – Management Approach		55, 108–114, 120		Product stewardship	X	X
7	G4-PR3	Principles/procedures for product and service information and labelling	113–114, 117, 120, 122–123				
	G4-PR4	Incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling	327–329	We do not report on the number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling. Any proceedings on account of violations would be reported in the Chapter "Legal Risks."			
	G4-PR5	Results of surveys measuring customer satisfaction	110–112				
7	Aspect: Marketing Communications – Management Approach		108–109, 111–112		Product stewardship	X	X
7	G4-PR6	Sale of banned or disputed products	115, 122, 123				
	G4-PR7	Incidents of non-compliance with regulations and voluntary codes concerning marketing communications	327–329	We do not report on the number of incidents of noncompliance with regulations and voluntary codes concerning marketing communications. Any proceedings on account of violations would be reported in the Chapter "Legal Risks."			
	Aspect: Compliance – Management Approach		54, 188–191, 216, 223		Business ethics	X	X

UNGC Principles	G4 Standard Disclosures		Page	Comments	Bayer area of acticivity	GRI aspect limitation G4-20	G4-21
	Specific Standard Disclosures G4-19					within	outside
	G4-PR9	Significant fines concerning the provision and use of products and services	307, 327–329				
Further G4 Standard Disclosures							
8	Aspect: Biodiversity – Management Approach		55, 104, 131–132, 142–143				
8	G4-EN11	Operational sites in protected areas	143	We use our site register to record all site-related data (including size). For confidentiality reasons, we do not publish any size data on our sites, for example.			
8	G4-EN12	Impacts on protected areas or areas of high biodiversity value	142–143				
2	G4-HR1	Significant investment agreements and contracts that include human rights clauses or screening	131				
1	G4-HR2	Employee training on human rights issues	95				
	Aspect: Customer Privacy – Management Approach		222				
	G4-PR8	Substantiated complaints regarding breaches of customer privacy	222				

Glossary

B

Biocides are substances and products that control pests such as insects, mice and rats, as well as algae, fungi and bacteria.

C

CAGR Abbreviation for compound annual growth rate

Capital invested (CI) Capital invested comprises the assets on which the company must obtain a return by generating an appropriate cash inflow; in some cases, the cost of ultimately reproducing the assets must be earned in addition.

Cash flow Key indicator for assessing a company's financial strength; in addition to gross cash flow, the statement of cash flows also reports the cash flow from operating activities (net cash flow), which shows the amount of funds available from operating activities for financing investments, repaying debts or distributing dividends. The cash flows from investing and financing activities are also reported.

Cash flow return on investment (CFROI) The CFROI is the difference between the gross cash flow in the reporting period and the cost of reproducing depletable assets, divided by the capital invested. The CFROI is thus a measure of the return on capital employed in the reporting period.

Cash value added (CVA) This is the difference between the gross cash flow and the gross cash flow hurdle. It is therefore the amount by which the gross cash flow exceeds the return and reproduction requirements. If CVA is positive, the investors' return and reproduction requirements have been satisfied and value has been created for the company.

CDP (formerly Carbon Disclosure Project) is an independent, not-for-profit organization that works on behalf of analysts and investors to promote the transparent reporting of greenhouse gas emissions and water use (Water Disclosure Report) by companies. CDP publishes two climate rankings each year: the Climate Disclosure Leadership Index (CDLI) rates the extent and quality of the disclosure of climate-relevant data, while the best-rated companies are additionally listed in the Climate Performance Leadership Index (CPLI).

Compounding Tailored optimization of plastic properties through admixture of fillers and additives

Conflict minerals are those mined in conflict regions. They include tin, tungsten and tantalum ores, gold or their derivatives. Among the regions in which armed conflicts over the control of these resources occur are the eastern part of the Democratic Republic of Congo and neighboring countries.

Continuing operations Revenue and earnings reporting for continuing operations pertains only to business operations that are expected to remain in the company's portfolio for the foreseeable future; opposite of discontinued operations.

Core earnings per share Earnings per share, plus/minus amortization and impairment losses/impairment loss reversals of intangible assets and impairment losses/impairment loss reversals on property, plant and equipment, plus special charges, minus special gains (other than amortization and impairment losses/impairment loss reversals), plus/minus the related tax effects and the share of the adjustments attributable to noncontrolling interest; this indicator facilitates the comparability of performance over time. It is not defined in the International Financial Reporting Standards.

(Corporate) compliance comprises the observance of statutory and company regulations on lawful and responsible conduct.

Corporate governance comprises the long-term management and oversight of the company in accordance with the principles of responsibility and transparency. The German Corporate Governance Code sets out basic principles for the management and oversight of listed companies.

Credit default swaps (CDS) are tradable insurance contracts used to hedge against the default of a borrower.

D

Denitrification is the bacterial breakdown of nitrate into nitrogen and oxygen through certain microorganisms known as denitrifiers. The process is used in biological wastewater treatment to break down nitrogen compounds.

Discontinued operations Business operations already divested or earmarked for divestiture in the near future; opposite of continuing operations

Diversity designates the variation within the workforce in terms of gender, origin, nationality, age, religion and physical capability.

E

EBIT Income after income taxes, plus income taxes, plus financial result; EBIT is not defined in the International Financial Reporting Standards.

EBIT before special items EBIT plus special charges, minus special gains; this indicator is 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 and minus impairment loss reversals, recognized in profit or loss during the reporting period; this indicator is not defined in the International Financial Reporting Standards.

EBITDA before special items EBITDA plus special charges, minus special gains; this indicator is not defined in the International Financial Reporting Standards.

EBITDA margin before special items The EBITDA margin before special items is calculated by dividing EBITDA before special items by sales. This indicator is not defined in the International Financial Reporting Standards.

EMTN program The multicurrency European Medium Term Notes (EMTN) program is a documentation platform that enables Bayer to raise capital by quickly issuing debt on the global capital market. Maturities, currencies and conditions can be very flexibly designed.

F

FGD gypsum is a by-product of flue-gas desulfurization (FGD).

Foreign exchange Claims for payments in foreign currencies traded on foreign stock exchanges, usually in the form of assets held in foreign banks or bills of exchange or checks payable abroad; banknotes and coins denominated in foreign currencies are not considered to be foreign exchange.

Fx & p adj. Abbreviation for currency- and portfolio-adjusted

G

GHG protocol The Greenhouse Gas Protocol Corporate Standard is an internationally recognized standard for the recording and reporting of greenhouse gas emissions. It covers direct (Scope 1) and indirect (Scope 2) greenhouse gas emissions relating to a company's value-added chain, as well as emissions resulting from third-party and acquired upstream services (Scope 3). Dual reporting was introduced in 2015 with the updating of the GHG guidelines for Scope 2. Indirect emissions have now to be reported using both the location-based and the market-based methods. The location-based method uses regional or national average emissions factors, while the market-based method applies provider- or product-specific emissions factors based on contractual instruments.

Global commercial paper program Commercial paper (CP) issued under Bayer's program is a short-term, unsecured debt instrument normally issued at a discount and redeemed at nominal value. It is a flexible way of obtaining short-term funding on the capital market. Bayer's commercial paper program allows the company to issue commercial paper on both the U.S. and European markets.

GLOBALG.A.P is a globally recognized quality assurance system in the agriculture industry that is focused on food safety and good agricultural practice. It employs modular and customer-specific solutions for the certification and inspection of agricultural enterprises and the establishment of training programs. GLOBALG.A.P standards focus on product safety, environmental compatibility and the health, safety and well-being of people and animals.

GRI (Global Reporting Initiative) is a nonprofit organization that works to promote the dissemination and optimization of sustainability reporting. The GRI guidelines are considered the most frequently used and internationally most recognized standard for sustainability reporting. These guidelines are evolved in a multi-stakeholder process. GRI was established in 1997 by CERES (Coalition for Environmentally Responsible Economies) and UNEP (United Nations Environment Programme).

Gross cash flow 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. This indicator is not defined in the International Financial Reporting Standards.

Gross cash flow (GCF) hurdle The GCF hurdle is the gross cash flow that needs to be generated to satisfy investors' return and reproduction requirements.

GxP is a collective term for all guidelines that govern "good working practice" and are particularly relevant for the fields of medicine, pharmacy and pharmaceutical chemistry. The "G" stands for "Good" and the "P" for "Practice," while the "x" in the middle is replaced by the respective abbreviation for the specific area of application – such as Good Manufacturing Practice (GMP), Good Laboratory Practice (GLP), Good Clinical Practice (GCP) or Good Agricultural Practice (GAP). These guidelines are established by institutions such as the European Medicines Agency or the U.S. Food and Drug Administration.

H

HSEQ stands for health, safety, environment and quality.

Hybrid bond A hybrid bond is a corporate bond with equity-equivalent properties, usually with either no maturity date or a very long maturity. Due to its subordination, it has a lower likelihood of repayment than a normal bond in the event of issuer bankruptcy.

I

ILO core labor standards The eight core labor standards of the ILO (International Labour Organization) that define the minimum requirements for humane working conditions are internationally recognized "qualitative social standards." They represent universal human rights that are deemed valid in all countries regardless of their economic development status.

Innovative Medicine Initiative (IMI) is a public-private partnership developed by the European Commission and the European Federation of Pharmaceutical Industries and Associations (EFPIA) with the goal of promoting biomedical research in Europe. IMI finances research projects aimed at overcoming the major bottlenecks in the research and development of new pharmaceuticals. The partnership provides funding to project participants from academic institutes, small and medium-sized businesses, patient organizations and other institutions. The pharmaceutical industry contributes to these projects by donating capacities and resources.

L

Life Sciences Field of activities comprising particularly health care and agriculture; at Bayer this refers to the activities of the Pharmaceuticals, Consumer Health and Crop Science divisions and the Animal Health business unit.

N

Neonicotinoids Chemical class of systemic insecticides

O

OTC At Bayer, OTC (over-the-counter) medicines are those obtainable without a prescription. In finance, OTC represents trade between financial market participants outside of an organized exchange. OTC transactions are nevertheless subject to securities trading laws.

P

Pharmacovigilance is defined as the science of, and activities related to, the identification, assessment, comprehension and prevention of side effects or other problems associated with pharmaceutical products.

Phase I–IV studies are clinical phases in the development of a drug product. The active ingredient candidate is generally tested in healthy subjects in Phase I, and in patients in Phases II and III. The studies test the therapeutic tolerability and efficacy of active ingredients in a specific indication. Phase IV studies are conducted following the approval of a new drug product to monitor its safety and efficacy over an extended period of time. The studies are subject to strict legal requirements and documentation procedures.

Price/cash flow ratio The price/cash flow ratio is the ratio of the share price to gross cash flow per share. It shows how long it would take for the company's cash flow to cover the share price.

Price/earnings ratio This is the ratio of the current share price to earnings per share (EPS). A high price/earnings ratio indicates that the market assigns a high value to the stock in the expectation of future earnings growth.

R

3Rs principle (replace, reduce, refine) Replace: prior to each project, Bayer checks whether an approved method is available that does not rely on animal studies and then applies it. Reduce: in case no alternative method exists, only as many animals are used as are needed to achieve scientifically meaningful results based on statutory requirements. Refine: Bayer ensures that animal studies are performed in a way that minimizes the animals' suffering.

RE-DISS (Reliable Disclosure Systems for Europe) is a project aimed at the Europe-wide coordination of electricity disclosure information to avoid double counting.

S

Short-Term Incentive program (STI program) is a variable income component for all managerial staff.

Significant locations of operation A selection of countries that account for about 68% of total Bayer Group sales (United States, Puerto Rico, Germany, China, Brazil, Japan, Canada, Italy, U.K., Ireland, Mexico, Poland, Czech Republic, Slovakia, Hungary, Spain, Portugal)

Syndicated credit facility Credit line agreed with a group of banks; generally used for extensive financing requirements, such as when making an acquisition, to increase available liquidity or as security for the issuance of debt instruments. The credit facility can be utilized and repaid flexibly, either in full or in portions, during its term.

U

UNGC (United Nations Global Compact) The UN Global Compact is a strategic policy initiative for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labor, environment and anticorruption. By doing so, business – as a primary driver of globalization – can help ensure that markets, commerce, technology and finance advance in ways that benefit economies and societies everywhere. By committing to the UNGC, companies agree to document each year their efforts to uphold the ten principles.

W

Weighted average cost of capital (WACC) The weighted average cost of capital (WACC) represents the return expected by investors on the capital invested in the company. It is computed as a weighted average of the cost of equity and debt. The cost of equity is derived from capital market information and represents the return expected by stockholders, while the cost of debt represents the conditions at which the company can borrow money over the long term.

Working capital is the difference between short-term current assets and short-term liabilities; it is calculated by deducting short-term liabilities from current assets (excluding cash and cash equivalents). In financial accounting, the change in working capital is one of the variables used to assess a company's financial health. The objective of working capital management is to reduce working capital by minimizing the "financing gap" caused by the time lapse between the disbursement of funds (= payment for necessary raw materials) and the receipt of funds for the finished product.

Financial Calendar

Q1 2016 Interim Report	**April 26, 2016**
Annual Stockholders' Meeting 2016	**April 29, 2016**
Planned dividend payment date	**May 2, 2016**
Q2 2016 Interim Report	**July 27, 2016**
Q3 2016 Interim Report	**October 26, 2016**
2016 Annual Report	**February 22, 2017**
Q1 2017 Interim Report	**April 27, 2017**
Annual Stockholders' Meeting 2017	**April 28, 2017**

Masthead

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This Annual Report may contain forward-looking statements based on current assumptions and forecasts made by Bayer management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Bayer's public reports which are available on the Bayer website at http://www.bayer.com/. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.