Science For A Better Life

Annual Report 2014

» COVER PICTURE

ABOUT THIS REPORT
This Annual Report combines our financial and our sustainability reporting. On page 30-31 you can find further information about this report and learn how to use it.

For direct access to a chapter, simply click on its name.

Bayer is a global enterprise with core competencies in the fields of health care, agriculture and high-tech polymer materials.

As an innovation company, we set trends in research-intensive areas. Our products and services are designed to benefit people and improve their quality of life. At the same time we aim to create value through innovation, growth and high earning power.

We are committed to the principles of sustainable development and to our social and ethical responsibilities as a corporate citizen.

Cover picture

Employees at the research and development laboratory in Memphis, Tennessee, are working on formulations for non-prescription products. The laboratory now belongs to Bayer following the acquisition of the consumer care business of U.S. pharmaceutical company Merck & Co., Inc. Our cover picture shows Angie Robertson and Patrick Williams inspecting a sample.

You can read more about Bayer's range of non-prescription products in the magazine section of this Annual Report beginning on page 10.

Key Data

[Table 1.1]

	2013	2014	Change
	€ million	€ million	%
Bayer Group			
Sales	40,157	42,239	+5.2
EBIT[1]	4,934	5,506	+11.6
EBIT before special items[2]	5,773	5,944	+3.0
EBITDA[3]	7,830	8,442	+7.8
EBITDA before special items[2]	8,401	8,812	+4.9
EBITDA margin before special items[4]	20.9%	20.9%	
Income before income taxes	4,207	4,525	+7.6
Net income	3,189	3,426	+7.4
Earnings per share (€)[5]	3.86	4.14	+7.3
Core earnings per share (€)[6]	5.61	6.02	+7.3
Gross cash flow[7]	5,832	6,820	+16.9
Net cash flow[8]	5,171	5,810	+12.4
Net financial debt	6,731	19,612	.
Capital expenditures as per segment table	2,155	2,490	+15.5
Research and development expenses	3,406	3,574	+4.9
Dividend per Bayer AG share (€)	2.10	2.25	+7.1
HealthCare			
Sales	18,924	19,975	+5.6
EBIT	3,260	3,581	+9.8
EBIT before special items[2]	3,973	3,912	−1.5
EBITDA[3]	4,858	5,186	+6.8
EBITDA before special items[2]	5,334	5,484	+2.8
EBITDA margin before special items[4]	28.2%	27.5%	
Gross cash flow[7]	3,573	4,011	+12.3
Net cash flow[8]	2,980	4,444	+49.1
CropScience			
Sales	8,819	9,494	+7.7
EBIT	1,729	1,806	+4.5
EBIT before special items[2]	1,801	1,838	+2.1
EBITDA[3]	2,184	2,358	+8.0
EBITDA before special items[2]	2,248	2,360	+5.0
EBITDA margin before special items[4]	25.5%	24.9%	
Gross cash flow[7]	1,590	1,835	+15.4
Net cash flow[8]	682	950	+39.3
MaterialScience			
Sales	11,238	11,651	+3.7
EBIT	435	555	+27.6
EBIT before special items[2]	429	598	+39.4
EBITDA[3]	1,101	1,149	+4.4
EBITDA before special items[2]	1,072	1,187	+10.7
EBITDA margin before special items[4]	9.5%	10.2%	
Gross cash flow[7]	887	961	+8.3
Net cash flow[8]	977	880	−9.9

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[Table 1.1 (continued)]

	2013	2014	Change
			%
Employees			
Number of employees[9] (Dec. 31)	112,366	118,888	+5.8
Proportion of women in senior management (%)	25	26	
Number of nationalities in the Group Leadership Circle	31	35	+12.9
Proportion of employees with health insurance (%)	95	96	
Proportion of employees covered by collective agreements on pay and conditions (%)	54	52	
Safety[10]			
Recordable Incident Rate for Bayer employees (RIR)	0.47	0.43	−9.4
Lost Time Recordable Incident Rate for Bayer employees (LTRIR)	0.26	0.22	−13.2
Loss of Primary Containment Incident Rate (LoPC-IR)[11]	0.35	0.23	−33.1
Number of transport incidents	11	12	+9.1
Environmental Protection[10]			
Direct greenhouse gas emissions (CO_2 equivalents in million t)[12]	4.09	4.02	−1.7
Indirect greenhouse gas emissions (CO_2 equivalents in million t)[12]	4.29	4.70	+9.7
Volatile organic compounds (VOC)[13] (thousand t/a)	2.27	2.12	−6.5
Ozone-depleting substances (ODS) (t/a)[14]	15.65	14.79	−5.6
Total organic carbon (TOC) (thousand t/a)	1.53	1.20	−21.6
Total phosphorus in wastewater (thousand t/a)	0.11	0.10	−12.6
Total nitrogen in wastewater (thousand t/a)	0.69	0.76	+11.3
Hazardous waste generated (thousand t/a)	467	487	+4.4
Hazardous waste landfilled (thousand t/a)	53	65	+21.4
Water use (million m^3/a)	361	350	−3.1
Primary energy consumption (petajoules/a)[15]	47.58	45.57	−4.2
Secondary energy consumption (petajoules/a)[15]	33.27	39.74	+19.5
Energy efficiency (MWh/t)[16]	3.44	3.37	−2.3

2013 figures restated

[1] EBIT = earnings before financial result and taxes

[2] EBIT before special items and EBITDA before special items are not defined in the International Financial Reporting Standards and should therefore be regarded only as supplementary information. EBITDA before special items is a more suitable indicator of operating performance since it is not affected by depreciation, amortization, impairment losses, impairment loss reversals or special items. By reporting this indicator, the company aims to give readers a clear picture of the results of operations and ensure comparability of data over time. See also Combined Management Report, Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."

[3] EBITDA = EBIT plus amortization and impairment losses on intangible assets, plus depreciation and impairment losses on property, plant and equipment, minus impairment loss reversals. See also Combined Management Report, Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."

[4] The EBITDA margin before special items is calculated by dividing EBITDA before special items by sales.

[5] 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.

[6] Core earnings per share are not defined in the International Financial Reporting Standards. By reporting this indicator, the company aims to give readers a clear picture of the results of operations and ensure comparability of data over time. The calculation of core earnings per share is explained in the Combined Management Report, Chapter 16.3 "Core Earnings Per Share."

[7] 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 non-cash components of EBIT. It also contains benefit payments during the year. For details see Combined Management Report, Chapter 16.5 "Liquidity and Capital Expenditures of the Bayer Group."

[8] Net cash flow = cash flow from operating activities according to IAS 7

[9] Full-time equivalents

[10] Percentage changes not based on rounded figures

[11] 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

[12] Portfolio-adjusted in accordance with the Greenhouse Gas Protocol

[13] Volatile organic compounds (VOC) excluding methane

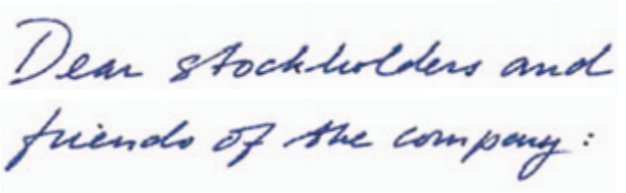
[14] Ozone-depleting substances (ODS) in CFC-11 equivalents

[15] 1 petajoule = 10^{15} joules

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

Chairman's Letter

Decisive step to create a pure Life Science company



In 2014, just a year after our 150th anniversary, Bayer opened up a new chapter in its history: we initiated the decisive step toward becoming a pure Life Science company. In the future we will focus our entire innovative capability on designing molecules and solutions that improve human health or nutrition. Never has our mission "Bayer: Science For A Better Life" more truly reflected who we are and what we do.

While we continued to harvest the fruits of our own science and research in 2014 with the global marketing of our recently launched pharmaceuticals as well as our crop protection products and seeds, we also successfully acquired the consumer care business of Merck & Co., Inc., United States – making us the global number two in consumer care. This largely stable business now helps us to compensate volatility in other businesses.

Bayer MaterialScience also performed well in 2014, successfully addressing previous challenges. Against this background, MaterialScience requested further significant investment in its organic growth along with financial headroom for possible future acquisitions.

In recent years, however, Bayer's strategy and strong performance have increasingly been driven by our success in the Life Sciences. This has meant that MaterialScience is competing for resources against businesses that we believe continue to promise significantly higher returns. Therefore we decided to demerge MaterialScience so that it will have independent access to the capital market, while Bayer focuses solely on the Life Sciences.

This is a turning point in Bayer's history. But our action is consistent with what our founders did and what the focus of our research has been for more than 150 years. The best way we can innovate is by inventing new molecules that ultimately lead to innovative applications. The only thing that has changed over time are the markets or fields of application in which our molecules deliver the largest value contribution. Today, the focus is on the Life Sciences. It is crucial for Bayer's long-term success that we continually adjust our business portfolio to market requirements and respond to the needs of customers and society.

In September 2014, the Supervisory Board unanimously approved the demerger of MaterialScience, which we intend to float on the stock market by mid-2016. We are all convinced that this strategic decision will bring great benefits and opportunities – for Bayer and for MaterialScience. The new, independent company is set to retain leadership positions in all of its business areas. We strongly believe in its future success.

Dialogue with physicians: Bayer CEO Dr. Marijn Dekkers and Associate Professor Dr. Jürgen Zumbé, Director of the Urology Department at Leverkusen Hospital

As a pure Life Science company, Bayer will have a unique research focus on the health of humans, animals and plants. And this research shows us today that the similarities between the different

species are far greater than was generally assumed just a few decades ago. This is especially true at the cellular biochemical level at which our active ingredients operate. While we are still at an early stage, we are in the best position to potentially leverage many synergies from species' common characteristics.

To continue innovating and help physicians to care for their patients, veterinarians to look after animals and farmers to feed the growing world population, we must increasingly invest in research and development (R&D). Our R&D budget for the Life Sciences in 2014 was €3.2 billion. Overall we expect the R&D-to-sales ratio to continue increasing in the coming years.

The success of our pharmaceutical products, in particular, has great significance in this regard. We are among the fastest-growing of the world's major pharmaceutical companies. Last year we lifted Pharmaceuticals sales by 11.2 percent on a currency- and portfolio-adjusted basis. The increase was driven by our recently launched products Xarelto™, Eylea™, Stivarga™, Xofigo™ and Adempas™.

CropScience, too, achieved a sales improvement of 11.2 percent on a currency- and portfolio-adjusted basis, gaining market share especially with the new products we brought to market in the past few years.

Spurred by these successes, our company's financial development has also been outstanding. We can look back at another record year for Bayer. Revenues increased in 2014 to over €42 billion, which means we saw more than 7 percent growth after adjusting for currency and portfolio effects. Our clean EBITDA amounted to €8.8 billion, up by nearly 5 percent compared with the prior year. Core earnings per share rose by 7.3 percent to €6.02.

Thanks to this successful development and the appreciation it has brought from investors, Bayer for the first time became the company with the highest market capitalization in the German share index DAX.

To continue strengthening our Life Science businesses, we need not only organic growth but also bolt-on acquisitions. These improve our regional positioning, round out our product portfolio and can give us access to major new technologies. In 2014 we spent a total of €13.5 billion for acquisitions.

The largest among these was Merck & Co., Inc.'s consumer care business. This significantly strengthens Bayer's business with non-prescription products across multiple therapeutic categories and geographies. We also acquired Dihon Pharmaceutical Group Co. Ltd., China, a consumer care company specializing in dermatology products. And we successfully completed the acquisition of Algeta ASA, Norway, with which we had already collaborated on the development and commercialization of the cancer drug Xofigo™ since 2009.

Acquisitions in CropScience include the Biagro group in Argentina. Biagro's portfolio comprises organic seed treatments as well as crop protection products based on bacterial and fungal strains. In addition, we acquired the seed business of Paraguayan company Granar, which specializes in the breeding, production and marketing of improved seeds, especially for soybeans.

I would like to emphasize at this point that our excellent employees are our core business asset. Our corporate values of Leadership, Integrity, Flexibility and Efficiency – represented by the acronym LIFE – remain the cornerstones of our behavior. Continuous learning is a fundamental part of our organizational and talent development. Building specific skills, removing organizational obstacles and making improvements every day remain important elements of Bayer's culture.

In the future we also intend to intensify the dialogue with our various stakeholders. We are convinced of what we do and of the value of our products. We will communicate even more effectively to customers, society and politicians how our products improve the lives of millions of people across the globe.

I am concerned by the growing number of critical stakeholders whose claims and demands are based on emotions and beliefs rather than on scientific facts. It is up to all of us to ensure that society creates the right framework for future innovations. In this context it is also important to us that economic growth be achieved in harmony with environmental and social responsibility. We adhere to the fundamentals of sustainable development and the ten principles of the Global Compact of the United Nations.

On behalf of the entire Bayer Group management team, I would like to thank our employees for their dedication, motivation and ingenuity. Bayer would not be the great company it is today without them.

We enter 2015 with continued optimism. Bayer's innovations have helped millions of people around the world and, in doing so, have strengthened our leadership position. In 2014 we added more innovative products to our portfolio and posted record financial results. We are committed to continue with this approach in 2015 and beyond as we finalize our transformation into a pure Life Science company and work to further improve people's lives.

Finally, I would like to thank you, our stockholders, for your ongoing support for our strategy and appreciation of our performance.

Sincerely,

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

MAGAZINE

Focus on Life Science businesses

LIFE SCIENCE

Bayer plans to focus entirely on the Life Science businesses – HealthCare and CropScience – in the future and to float MaterialScience on the stock market as a separate company. This will create a global leader in the Life Sciences with extensive experience in science and innovation and the ability to use this expertise to improve human, animal and plant health.

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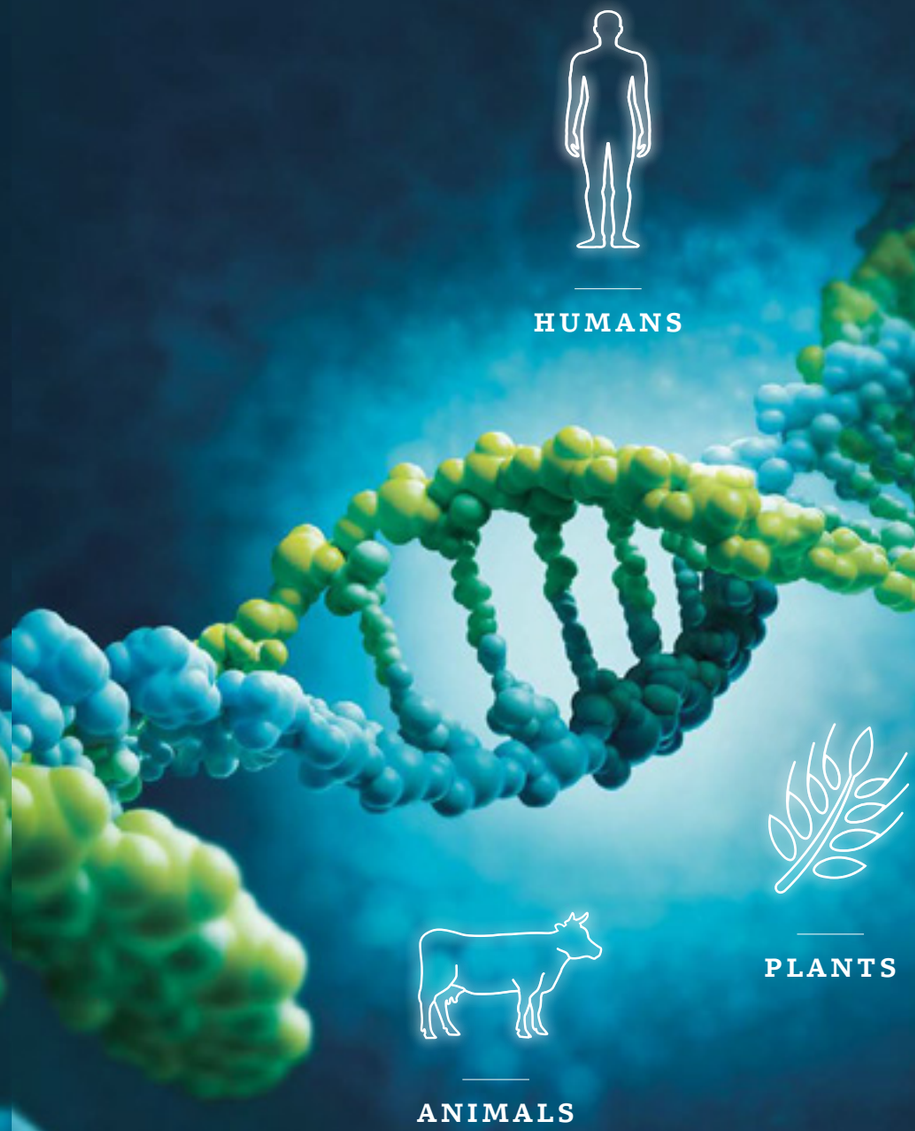

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In recent years the Bayer Group's focus has increasingly shifted towards the Life Science businesses. With our products, doctors can help patients, farmers can contribute to feeding people, and veterinarians can treat animals.

HEALTHCARE

PHARMACEUTICALS

Our Pharmaceuticals activities focus on the areas of cardiology, oncology, gynecology and hematology.

CONSUMER HEALTH

In Consumer Health, we combine the activities of the Consumer Care (including non-prescription medicines), Medical Care and Animal Health divisions.

CROPSCIENCE

CROP PROTECTION / SEEDS

In the area of Crop Protection/Seeds, we research and develop chemical and biological crop protection agents and seeds for wheat, soybeans, oilseed rape/canola, rice, cotton and vegetables.

ENVIRONMENTAL SCIENCE

At Environmental Science, we offer consumers and professional users a broad portfolio of products and services for controlling pests and weeds.

MATERIAL SCIENCE

MaterialScience will continue to develop its competitive position as a stand-alone company. The business has an outstanding starting position and is a market leader in many areas.

For a better life

Sabine Hoffmann, technical assistant at Cologne University Hospital, performs a lung function test on patient Christian Müller.

Pharmaceuticals // Across the globe, people continue to suffer from severe illnesses for which very few effective, well tolerated treatments are available. Research-driven pharmaceutical companies like Bayer are working on innovations intended to benefit these patients. Take pulmonary hypertension, for example. The treatment options for this condition have recently improved to a significant degree.

Exercise is out of the question for Noémi Baert. Even a staircase with 20 steps pushes her to the limit. A walk of just a few hundred meters is more than she can manage. The 13-year-old from Destelbergen in Belgium isn't even able to carry her own schoolbag. Since the age of six, Noémi has suffered from pulmonary hypertension. This life-threatening illness can affect people of any age.

It usually begins gradually. The patient tires more easily than before, and any exertion leads to shortness of breath. The symptoms remain non-specific as the condition progresses. They can include increasing shortness of breath, a decline in physical strength, chest pains, water retention in the legs, blue lips and fainting. These symptoms are caused by a narrowing of the pulmonary arteries, which can happen for a variety of reasons. As other, comparatively common conditions involve similar symptoms, it may be several years before a patient is diagnosed with pulmonary hypertension. This is the term physicians use to group together the various forms of the disease. Noémi was lucky in one respect, as a cardiologist quickly reached the correct diagnosis. "That helped my daughter to get the right treatment," says Noémi's mother, Danielle Verbrugghen.

However, Christian Müller from Arnsberg had to wait many years. His ordeal began in 2004 with a severe pulmonary embolism caused by a vein thrombosis. Müller, who was 36 at the time, spent several months in critical condition in the hospital. Even during his subsequent rehabilitation, he just wasn't recovering properly. "I wasn't able to do the exercise section of the program," recalls Müller, who is trained in wholesale and export trade. The doctors couldn't pinpoint the cause and, to alleviate the symptoms, they prescribed oxygen treatment. For the next three years, an oxygen machine was Müller's constant companion. "I couldn't work anymore and it was impossible to live an independent life," he says. His parents helped him with day-to-day tasks, but eventually he had to use a wheelchair. When Müller was admitted to the hospital in the spring of 2007

Dr. Olivier Brandicourt, Chairman of the Bayer HealthCare Executive Committee, on the subgroup's strategy

"Fueling growth through diversification and research"

The acquisition of Merck & Co., Inc.'s non-prescription business marked an important milestone for Bayer HealthCare. Alongside strengthening our Consumer Care division, this acquisition also reflects our commitment to Bayer HealthCare's diversification strategy. Whether it is human or animal health, innovative pharmaceutical products or self-medication, the breadth of our business and portfolio enables us to respond to a rapidly evolving environment. For example, the boundaries between "patients" and "consumers" are increasingly fading, with prevention and well-being becoming almost as important as the treatment of diseases. The know-how and expertise within and across our four divisions enable us to capture our customers' needs in what we think is the best possible way.

One of the key pillars of our long-term strategy is research and development (R&D) across our businesses, aimed at driving innovation beyond 2020. Some of our current and recently launched products will run out of patent between 2023 and 2025. It is therefore essential that the next wave of innovation follow seamlessly to safeguard growth. Our R&D efforts in this regard focus on the areas in which we excel and have a proven track record of success, for example in cardiology, women's health and some areas of oncology.

Our strengths throughout our diversified businesses coupled with the required investments will elevate our R&D activities to the next level and ultimately enable us to introduce customer-centric, innovative products to the market.

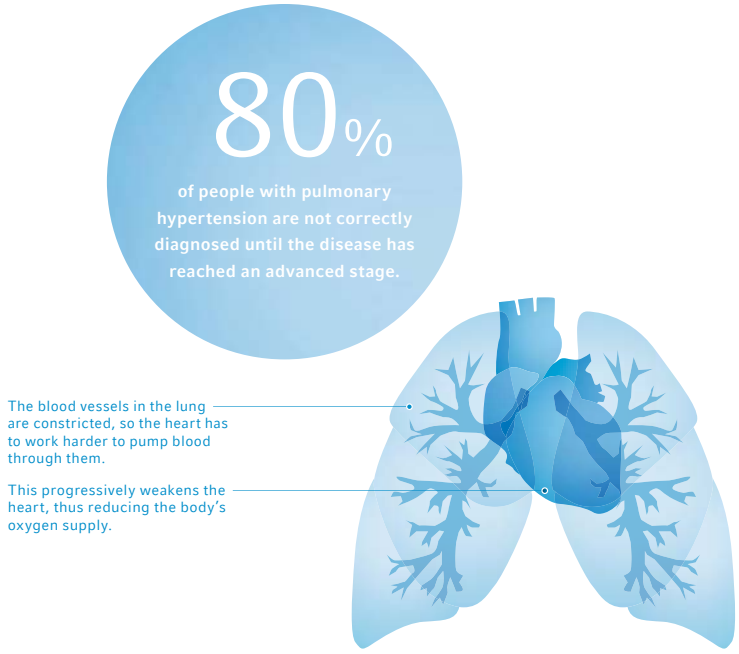
An operation at Cologne University Hospital: Professor Stephan Rosenkranz and surgical nurse Nina Küpper

13-year-old Noémi suffers from pulmonary hypertension. Here in the Wuppertal laboratory, Bayer researcher Professor Johannes-Peter Stasch talks to Noémi and her mother, Danielle Verbrugghen, about the disease.

Cardiologist Professor Stephan Rosenkranz and his colleague Dr. Joana Jesus during the morning rounds

following yet another pulmonary hemorrhage, a doctor there suspected he was suffering from pulmonary hypertension. "He sent me to the cardiac center at Cologne University Hospital for further tests," Müller explains.

The center is home to cardiologist Professor Stephan Rosenkranz, one of the few experts on pulmonary hypertension in Germany. He is in charge of the center's pulmonary hypertension outpatient clinic and knows from experience that it can still take a long time before a patient with the condition gets to see a specialist. "Early diagnosis is very important for treating this condition – and the treatment options have greatly increased over the past few years," he says. A complex diagnostic program has to be performed before treatment can begin. To confirm the diagnosis, it is essential to measure the blood pressure in the pulmonary arteries and examine the right ventricle of the heart using a catheter. Further tests are needed to determine the type of pulmonary hypertension affecting the patient. In Müller's case, it turned out that his illness was caused by the pulmonary embolism he had suffered back in 2004. In this form of the disease, known as chronic thromboembolic pulmonary hypertension (CTEPH), tiny blood clots in the small pulmonary arteries are responsible for the increased pressure and associated symptoms. CTEPH can occur as a rare complication of acute pulmonary embolism, but the pathogenesis is not completely understood. "In many cases, this form of pulmonary hy-



PULMONARY HYPERTENSION //
There are several types of pulmonary hypertension (PH), in which the blood pressure in the vessels of the lung is chronically elevated. Early diagnosis and clear identification of the form of the disease are essential to ensure the patient receives the best possible treatment at an early stage. A delay in starting treatment may greatly reduce life expectancy.

pertension is potentially curable with special surgery," says Rosenkranz. That was true for Müller, too. Although he still very much feels the effects of his disease, he can now live without an oxygen machine again.

This type of surgery is not possible for young Noémi, as she suffers from a different form of pulmonary hypertension called pulmonary arterial hypertension. She is helped by various medications that lower the pressure by expanding the pulmonary arteries and relieving the strain on her heart. "There are now several drugs that have this effect. The first member of a distinct substance class has become available in addition. It is also the first active ingredient that can significantly improve the condition of patients with inoperable CTEPH or persistent or recurrent CTEPH after surgery," Rosenkranz reports. Yet there remains a great need for further research. "We haven't achieved our goal yet," he points out, adding that universities and the research-driven pharmaceutical industry still have much work to do. "On the one hand, we must continue to improve existing treatment options. On the other, we need to identify new targets for active ingredients in order to develop new drugs that inhibit excessive cell growth. This cell growth is partly responsible for the narrowing of the pulmonary arteries."

Developing drugs that can dilate arteries or address the remodeling or increased formation of tissue in the inner lining of the arteries is a core area of research at Bayer HealthCare. Under a co-development and co-commercialization agreement concluded last year, Bayer HealthCare is collaborating with U.S. pharmaceutical company Merck & Co., Inc. (known as MSD outside the U.S. and Canada) in this field.

Bayer scientists are also working on other important approaches to therapy. These include active ingredients for the specific treatment of various cancers, serious cardiovascular conditions such as stroke and heart failure, and certain renal function disorders. A further focus is on the development of novel medicines to treat gynecological diseases. "We are concentrating on innovative active ingredients that represent real breakthroughs in the treatment of a range of illnesses and that address high unmet medical needs. The needs of patients who urgently require new treatment options are always at the forefront of our work. The successful launch of numerous products over the past few years is the result of this long-term focus on innovation," says Dr. Jörg Möller, head of Global Development at Bayer HealthCare.

The Bayer scientists are currently working to seamlessly maintain this innovation flow. This year, the decision could be made to transition five further candidates to Phase III of clinical development. These active ingredients are intended to expand treatment options for various serious illnesses, including a specific form of lymphoma; anemia caused by certain renal disorders; different forms of severe heart failure; and benign tumors of the uterus (myomas). A number of early-stage research projects are proceeding in parallel. "Our work in the field of cardiology, for example, includes new approaches to treating the causes of various vascular diseases, such as pulmonary hypertension," Bayer scientist Professor Johannes-Peter Stasch reports. In carrying out this work, he and his colleagues are fulfilling one of the greatest desires of Noémi and her mother: "We very much hope that the researchers will continue looking for treatments that will help to stabilize Noémi's condition." //

Promoting health and well-being

Shamim Al-Mamoon at the laboratory in Memphis, Tennessee, which now belongs to Bayer following the acquisition of the consumer care business of U.S. pharmaceuticals company Merck & Co., Inc.

Consumer Care // With its range of non-prescription and nutritional products, Bayer aims to help people do more for their health and well-being. This not only increases personal quality of life but can also greatly reduce health care costs.

Human life expectancy is increasing. At the same time, more and more people are making their own choice of medicines for the prevention or treatment of day-to-day ailments. And many people get information from the internet. "It has never been easier – or so important – to actively improve your own health," says Erica Mann, spokesperson for the World Self-Medication Industry (WSMI) and Head of the Consumer Care Division of Bayer HealthCare.

According to forecasts by the U.S. Department of Health and Human Services' National Institute on Aging, the over-65s are the fastest-growing section of the population. That is causing health care costs to rise, and the strain on physicians and care givers is growing. Companies in the health care industry have an important contribution to make: "We need a new, innovative approach to health care," says Mann. "Instead of waiting until people become ill before we treat them, we should be giving them the products and the information they need to help them stay healthy." Non-prescription medicines – also known as over-the-counter (OTC) products – and nutritional supplements play a key role in this, as do opportunities to find out about various health-related topics.

Microbiologist Aldia Wims-Jones carries out a test in Bayer's new research and development laboratory in Memphis, Tennessee.

No. 2

Bayer is the second-leading supplier of non-prescription products worldwide – and the number one in the United States, the world's largest OTC market.

Pollen dispersal can be simulated in the allergy room at the Consumer Center in Memphis, Tennessee. Venkat Venkatakrishnan (right) monitors the pollen concentration in the room, which is designed for up to 12 people.

As a global leader in the OTC and nutritionals sector, Bayer is in a good position to provide access to non-prescription products worldwide. After all, the company can look back on a tradition extending over one hundred years, starting with probably the best-known painkiller of them all – Aspirin™. Over the decades, the OTC portfolio has been expanded to include everything from products to treat skin problems, gastrointestinal conditions or colds to nutritional supplements.

The company's recent purchase of the consumer care business of U.S. pharmaceuticals group Merck & Co., Inc. – the second largest acquisition in Bayer's history – has added numerous leading products to this list, mostly in the cold, allergy, sinus & flu, dermatology (including sun care), foot health and gastrointestinal categories. "The expansion of our portfolio makes us an even better partner for consumers worldwide," comments Bayer HealthCare CEO Dr. Olivier Brandicourt.

Bayer is now the second-leading supplier of non-prescription products globally and has risen to number one in the U.S., the largest OTC market in the world. Following the takeover of Steigerwald Arzneimittelwerk GmbH in Germany, Bayer is now active in the area of herbal medicines as well, while the acquisition of Dihon Pharmaceutical, a leading company in the manufacture and marketing of OTC products in China, opens the door to the field of traditional Chinese medicine.

KNOWLEDGE IMPROVES HEALTH

Bayer HealthCare doesn't only help people through its products, but offers extensive information on improving and maintaining health. "As standards of living improve around the world, health awareness is growing along with people's desire to boost their knowledge of health issues," explains Dr. Felix Reiff, a member of Consumer Care's global management team.

Bayer supports consumers with a wide range of services. For example, the company works with the American Heart Association to provide online information about how people can lower their blood pressure by changing their habits. Another website gives professional advice on wound healing and baby care, and the "Skin Peace" app helps people to calculate appropriate topical medicine doses. Bayer is also actively involved in local, regional and global industry associations to help ensure the creation of a secure, reliable legal framework for the non-prescription sector. Says division head Mann: "Credible information is the foundation for building consumer trust in personal health care." //

Bayer Annual Report 2014

Food for the world

Bayer researchers Céline Zimmerli (left) and Dr. Catherine Baillon check on the progress of young wheat plants at Bayer's wheat breeding station in Milly-la-Forêt, south of Paris.

CropScience // Bayer CropScience has an ambitious goal: to find innovative answers to the challenges of the future. In pursuit of that aim, the company spends some €1 billion a year on agricultural research and development designed to help feed the growing global population.

At the wheat breeding station in Milly-la-Forêt, France, researcher Dr. Catherine Baillon checks on the well-being of her charges – hundreds of tiny seedlings, which she developed from plant embryos less than a millimeter in size. "Any one of them could be a bull's eye, with the potential to help shape the future of farming," Baillon explains. To find this special seed, the research team in Milly-la-Forêt works with high-yielding, elite varieties that are well adapted to the climatic conditions in France. The mission now is to upgrade these premium varieties. To that end, the Bayer CropScience researchers are looking all over the world for exotic types of wheat with special genes. Through cross-breeding and selection, they create new varieties boasting increased resistance to heat, drought, low temperatures, excessive precipitation, diseases and pests.

"Today, wheat provides about 20 percent of human calorie requirements."

Bayer CropScience CEO
Liam Condon

"This kind of process normally takes eight to ten years," Baillon says. "Here in Milly-la-Forêt, we use the latest methods to speed it up, such as molecular markers that show us at a very early growth stage whether a seedling possesses the target gene; or a new technology that helps us to firmly anchor an exotic gene in a plant in a single step, without time-consuming cross-breeding over several generations." This allows Bayer CropScience researchers to develop wheat varieties that deliver excellent yields even under increasingly adverse climatic conditions.

And their work is of critical importance because wheat has a major role to play in feeding the more than 9 billion people who are expected to be living on the planet by 2050. "Today, wheat provides about 20 percent of human calorie requirements: from New York to São Paulo, from Paris to Johannesburg," says Bayer CropScience CEO Liam Condon. Even in traditional rice-eating countries like China and India, this grain is an important part of people's diets. However, long-term trends currently indicate a widening gap between demand and productivity. "Plant stress factors such as heat are intensifying worldwide with the result that over the next few decades, yields will fall below today's level of three tons per hectare, while the Food and Agriculture Organization of the United Nations (FAO) estimates that the demand will rise to 5.5 tons per hectare by 2050," Condon explains.

To close this gap, Bayer CropScience operates wheat breeding stations in France and the major wheat-growing areas of Australia, Canada, Germany, Ukraine and the United States. "Our goal is to build a world-leading wheat seed business based on high-yielding, robust varieties," says Steve Patterson, Cereals Crop Manager at Bayer CropScience. "Our strategically located breeding stations adapt highly efficient wheat varieties to local growing and environmental conditions while also fulfilling the regional and global needs of mills and bakeries." The first Bayer wheat seed is scheduled for commercialization in Eastern Europe as of 2015.

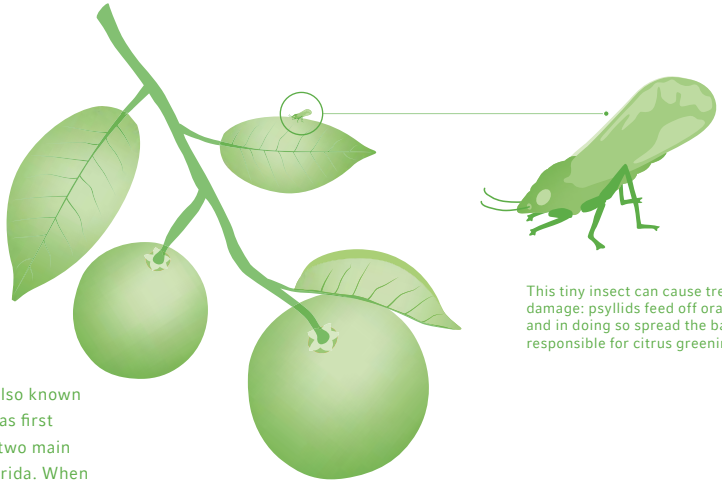
The company has been a market leader in the global cereals business for decades, supplying know-how and integrated farming solutions tailored to local needs. The crop protection portfolio for wheat includes herbicides, seed treatments, insecticides and fungicides. Bayer CropScience's products also protect wheat immediately post-harvest and during storage in grain silos against losses due to diseases or pests.

Bayer researchers Dr. Catherine Baillon (left) and Ombeline Gouhier inspect new seedlings at the wheat breeding station in Milly-la-Forêt before they are planted out.

Inspection of a wheat plant in the Bayer laboratory

3 t/ha

Increasing stress factors, such as heat, affecting plants worldwide will push crop yields down below today's average of 3 tons per hectare, whereas the Food and Agriculture Organization of the United Nations (FAO) estimates that yields of 5.5 tons per hectare will be needed by 2050.



This tiny insect can cause tremendous damage: psyllids feed off orange trees and in doing so spread the bacterium responsible for citrus greening.

CITRUS GREENING // Citrus greening, also known as Huanglongbing or yellow dragon disease, was first observed in China and has since spread to the two main growing areas for juice oranges, Brazil and Florida. When a citrus grove is infected, the quality of the fruit declines and the trees die within three to five years.

Citrus grower David Evans (left) inspects the damage to a grove in Florida together with Dr. Dennis Warkentin from Bayer CropScience.

NEW DISEASES CALL FOR NEW METHODS

When new challenges arise in farming, ready solutions are not always at hand. Take citrus greening, for example, a bacterial disease that prevents citrus fruits from ripening. "If a mature orange grove is infected, the trees decline and lose productivity. Younger infected trees never reach full production and may die within a few years," says Dr. Dennis Warkentin, a Technical Service Representative for Bayer CropScience in Florida. Citrus greening, or Huanglongbing (HLB or "yellow dragon disease"), originated in China but has now spread to the two largest producer regions for juice oranges: Brazil and Florida. In Florida, 80 percent of all citrus trees are already infected, and so far, there is no product to treat the disease. "The very future of the orange juice industry is at stake here," says citrus grower David Evans, whose grandfather

founded his family business over 100 years ago. But Evans and his fellow farmers in the Florida Citrus Mutual growers' association are determined to fight for Florida's future as the "Orange State." Explains Evans: "We have weathered many crises in the past, and we won't give up this time either, because we believe that companies like Bayer – with their global commitment to research – will find solutions for us."

Researchers at Bayer CropScience are focusing their efforts on the development of products to fight the "yellow dragon." To bridge the time to market, the specialists are implementing different approaches, such as controlling the disease vector – pinhead-sized insects called psyllids. In cooperation with growers' associations, universities and the beverage industry, Bayer is currently developing a combination of biological and chemical solutions to combat this pest. "In early 2015, we plan to launch a first systemic insecticide that controls psyllids but protects beneficial insects in citrus groves. After that we also plan to introduce purely biological solutions," explains Kai Wirtz, who is responsible for the global fruit crop strategy at Bayer CropScience.

At the same time, Bayer CropScience is developing a set of emergency measures for citrus growers like David Evans. These measures include strengthening plant health in the groves, monitoring psyllids and impeding their spread by phytosanitary means. Growers in Florida are determined to defy the "dragon" and are confidently planting new citrus groves. "In the past, we've had annual orange harvests totaling some 240 million boxes here in Florida. Today we're down to just 105 million. But with the help of companies like Bayer, we intend to restore the Florida citrus industry to its former health and size," says Evans.

DIGITAL TECHNOLOGY IN AGRICULTURE

Bayer CropScience's commitment to shaping the future of farming does not stop at developing innovative seeds and protecting crops. Together with partners, the company is promoting the use of new digital technologies such as high-resolution remote sensing. The growth of field crops, for example, can be monitored with high precision from space. Infrared images indicate which areas of a field are suffering from stress factors – even before the human eye can detect any external damage to the plants. "The technology was used in 2014 in the American Midwest to compare new soybean varieties," explains Tobias Menne, who is working to advance this new area of activity at Bayer CropScience. "At any given moment, farmers would know where remedial action was needed without having to check the crops on-site in the field." That opens up entirely new opportunities. "Technologies like this can optimize the application of crop protection products and fertilizers in industrialized nations – and can also bring highly specialized expertise to the world's poorest countries," Menne says.

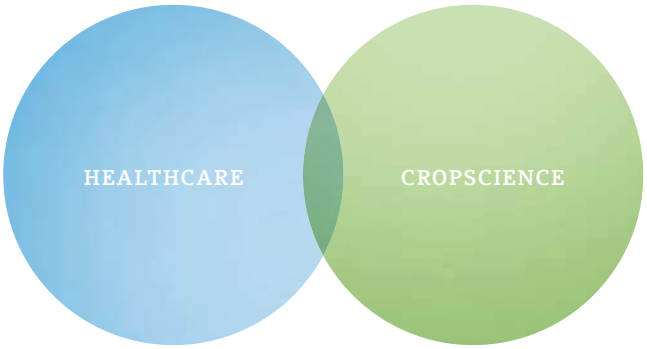
Providing innovations in many different areas, Bayer CropScience is shaping the future of farming. The company develops solutions both for large agribusinesses and for the millions of small-holders around the globe, to help achieve the aim of sustainably producing enough food for the world. //

Liam Condon, Chairman of the Executive Committee of Bayer CropScience, on the future of crop protection

"Committing to research to ensure abundant harvests"

The example of citrus greening shows only too clearly how serious the situation can become if devastating plant diseases spread unchecked. That's why research-based companies like Bayer CropScience are committed to the development of innovative solutions to protect harvests throughout the world. Together with partners from industry and academia, we search for new, groundbreaking technologies that protect people and the environment and enable farmers and growers to produce safe food. The high level of investment this involves means we have to be able to rely on the regulatory framework.

So decisions about crop protection must not be politicized. To overcome the challenges facing global agriculture, we need decision-making to be based on scientific data and cost-benefit analyses. Because farmers are relying on us to deliver.



Research at the interface

Collaboration // Scientists at Bayer HealthCare and Bayer CropScience are working on various joint research projects aimed at finding solutions in the fields of health care and nutrition as part of a cross-subgroup initiative to further strengthen Bayer's innovative capability.

Different species have many things in common – which is immediately clear even at the cellular level. One of the groundbreaking projects in terms of interdisciplinary research collaboration involves looking at the mechanisms that cause cells to multiply or wither. "Cells have a memory in the form of a chemical marking of DNA. This memory effect is referred to as epigenetics," explains Dr. Klaus Tietjen, one of the first Bayer scientists to devote himself to this area of research. The objective of the project is to find new ways of curing diseases or enhancing stress resistance in plants by stimulating or blocking identified target genes or proteins that are involved in epigenetic processes.

Scientists at Bayer HealthCare aim to use these epigenetic processes to discover novel therapeutic approaches in the fight against cancer. Says project manager Dr. Bernard Haendler: "Cells are programmed for a specific task when they are generated, subsequently developing into a brain cell, a skin cell or a liver cell, for example. Once they have achieved this target state, certain genes are switched on or off by epigenetic traits. If healthy cells later lose all or part of this epigenetic marking, they no longer form part of the whole system. They degenerate into cancer cells and begin to divide ruthlessly and uncontrollably." The team of scientists is now investigating the extent to which chemical active ingredients can be used to control the individual components of this epigenetic machinery and thus prevent cancer cell division. The team headed by Haendler has already come up with an initial candidate for preclinical development.

Scientists at Bayer CropScience are working on influencing the signaling pathways of cells in a different way. Their project is aimed at finding epigenetic mechanisms that could enhance the stress resistance of plants. They

Bayer's scientists are working in interdisciplinary teams across subgroup boundaries: for example, molecular biologist Dr. Wayne Coco (above) and his team are working to design therapeutic antibodies for use in the treatment of diseases such as cancer. Meanwhile, Dr. Bernard Haendler from Bayer HealthCare in Berlin and Catherine Sirven from Bayer CropScience in Lyon are conducting joint research into gene regulation (left).

are pursuing two complementary approaches. First, teams of scientists are looking for substances that strengthen the immune system of the cells and thus increase the plant's resistance to cold, heat, insects, diseases and drought. Second, epigenetics offers new approaches to plant breeding.

The joint substance libraries of Bayer HealthCare and Bayer CropScience serve as the basis for these experiments. The huge volumes of data generated by such tests today can only be managed using computer analysis, which is why the epigenetics team now also includes bioinformatics experts like Dr. Mark Christoph Ott from Bayer CropScience. He is fascinated by the opportunities inherent in interdisciplinary collaboration with colleagues from other specialist units: "The cross-function innovation culture that we have here at Bayer has benefits for us all." //

THE BAYER LIFE SCIENCE FUND

The Bayer Life Science Fund supports a total of 12 projects, bundling expertise to discover new approaches in the areas of health care and nutrition. "Innovations can often be found at the interfaces between scientific disciplines," says Dr. Monika Lessl, Head of Strategic Innovations. "That's why these joint research projects offer us new findings and perspectives and thus support the development of groundbreaking medicines, new plant cultivars with resistance traits, or innovative crop protection agents." These synergies combined with the scientists' passion for research enable Bayer to help in shaping the future of the life sciences and thus contribute to improving the health of all living organisms.

Optimally equipped for the future

Achim Symannek (left) and process engineer Dirk Steinmeister inspect a district-heating pipe at the polyurethanes technical center of Bayer MaterialScience in Leverkusen.

MaterialScience // Innovative materials such as those produced and constantly improved by Bayer MaterialScience are the driving force behind technological progress. The planned demerger from the Bayer Group is expected to make MaterialScience the fourth-leading chemical company in Europe – and enable it to apply its strengths even more effectively.

His eyes scrutinize it closely as he taps it a few times and runs his hand over the gleaming black surface – Hans-Jörg Dahmen nods in satisfaction. "A perfect sample," he says, putting the freshly pressed rectangle down in front of the injection molding machine. Here at the technical center in Leverkusen, the engineer from Application Development at Bayer MaterialScience has just examined a new panoramic roof for a car. The sample product is made from high-performance polycarbonate and was produced in a single process. And it's 50 percent lighter than conventional glass roofs. "Automotive manufacturers are grateful for such developments because the less a vehicle weighs, the greater its fuel efficiency and environmental compatibility," Dahmen explains.

The automotive sector is just one of many key industries for which Bayer MaterialScience produces and develops materials, and polycarbonate is one of its main products. It also supplies the components for polyurethanes, a highly versatile class of plastics used in many everyday items such as flexible foam for mattresses, car seats and upholstered furniture. And in the form of rigid foam, they serve primarily as insulation for buildings and refrigeration equipment. Polyurethane chemistry is also the basis for precursors used in coatings, adhesives and sealants, which also form part of the Bayer MaterialScience portfolio. The company holds leading positions on the world market in all of these segments.

Whether protective coatings, insulating foam or lightweight polycarbonate: products like these can help to master the challenges posed by climate change, increasing mobility and the growth of cities. "With this in mind, we develop sustainable solutions that contribute to preserving the environment, improve our quality of life and create value," says CEO Patrick Thomas. The foundations underlying all this are a culture steeped in innovation and our proximity to customers all over the world.

Added to these factors are a strategy aligned to technological and cost leadership, along with highly modern, competitive large-scale facilities in which the company continues to invest. In late 2014, for example, MaterialScience commissioned a particularly efficient and environmentally friendly plant at its site in Dormagen, Germany, for the production of the polyurethane component TDI. Total investment in the plant came to €250 million.

Independence is intended to put the company in a position to apply its strengths even more effectively, rapidly and flexibly against the global competition. Most importantly, it will then be easier for MaterialScience to raise the capital it needs to continue developing its business and align its organization, processes and corporate culture solely toward its own industrial environment and business model. The plans call for MaterialScience to be a stand-alone company with a new name by mid-2016 at the latest – likely as the fourth-largest chemical company in Europe, with approximately 16,800 highly skilled employees who have every reason to be optimistic for the future. //

Patrick Thomas, Chairman of the Executive Committee of Bayer MaterialScience, on the subgroup's strategy

"Our company combines many advantages"

Following the announcement of the planned flotation, all eyes are now on Bayer MaterialScience and there are high expectations – among employees, customers and potential investors. I am convinced that we are optimally equipped for the future. We know this because our company has many advantages: a consistent focus on innovation and sustainability, outstanding employees, market-leading positions, and locations close to its customers. Then there are our advanced technologies and safe plants, which ensure highly efficient, cost-effective production. The materials we offer worldwide are first-class and help people to overcome formidable challenges. I am looking ahead with confidence, and I hope you share my enthusiasm as we set out on the road to independence.

About this Report

Integrated Annual Report

This integrated Annual Report combines our financial and our sustainability reporting. In this way we make clear the interactions between financial, ecological and societal factors and underline their influence on our company's long-term development.

How to use this report

The sales, earnings and other financial data for the Bayer Group can be found in the Report on Economic Position, which is color-coded in the table of contents on the back flap.

Our integrated report for 2014 is available in a print version, the "Annual Report 2014," and an online version containing additional information, the "Annual Report 2014 – Augmented Version." The print version refers the reader to numbered "Online annexes" in the Augmented Version. You can enter the numbers in a search mask on any page of the online Annual Report to directly access the annexes.

PDF files of the print version and the Augmented Version are available for download from the Bayer website.

Online annexes

Cross-references within the Annual Report

References to internet sites

The Annual Report 2014 – Augmented Version can be found at WWW.BAYER.COM/AR14.

The "Annual Report 2014" (print version) is also available as an app from the appstore under "Bayer Annual Report."

Reporting principles

This Annual Report provides comprehensive and transparent information on all the topics we believe are important for the company and its stakeholders.

The consolidated financial statements of the Bayer Group were prepared according to the International Financial Reporting Standards (IFRS) and the applicable provisions of the German Commercial Code. The combined management report complies with the German Commercial Code and German financial reporting standards.

The financial statements of Bayer AG were prepared according to the requirements of the German Commercial Code and Stock Corporation Act. 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.

The Bayer Group's sustainability reporting is aligned to the G3.1 guidelines of the Global Reporting Initiative (GRI) and the ten principles of the UN Global Compact (UNGC). The GRI has checked and confirmed that level A+ has been maintained. The logo and a GRI index listing the corresponding UNGC principles can be found in the "Further Information" section under "GRI Index and UN Global Compact Principles." A comprehensive overview of the GRI indicators and an outline of our progress in implementing the 10 UNGC principles (corresponding to the Advanced Level) are available online. Our reporting is also aligned to international guidelines and recommendations, including those on the definition and selection of non-financial indicators and on reporting.

We follow the OECD guidelines and comply with the ISO 26000 standard. 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 non-financial 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 FOR FINANCIAL AND NON-FINANCIAL INDICATORS

Credible reporting is based on transparency and data validity. We collect the data of all relevant organizational units and companies worldwide that fall within the scope of the Bayer Group's consolidated financial statements.

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 regardless 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.

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.

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 of Bayer AG, Leverkusen, and the combined management report for the fiscal year from January 1 to December 31, 2014, and has issued an unqualified opinion.

All of the online annexes that supplement the management report in the augmented online version of the Bayer Annual Report 2014 ("Annual Report 2014 – Augmented Version") for the fiscal year from January 1 to December 31, 2014, and the parts of the Annual Report 2014 entitled "Investor Information" and "Reporting Principles" have been reviewed by PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft on a limited assurance basis.

Bayer Annual Report 2014

Executive Council

The Executive Council, chaired by the Group CEO and comprising the members of the Bayer AG Board of Management and the CEOs of the three subgroups Bayer HealthCare, Bayer CropScience and Bayer MaterialScience

DR. OLIVIER BRANDICOURT[1]
Chief Executive Officer, Bayer HealthCare

Olivier Brandicourt studied medicine and biology in Paris and has worked as a practicing physician. Having begun his industrial career in 1987 at Parke-Davis/Warner-Lambert, he subsequently joined Pfizer, where he held positions of increasing responsibility, becoming a member of its Executive Leadership Team in 2010. Brandicourt took over as Chief Executive Officer of Bayer HealthCare in November 2013.

JOHANNES DIETSCH
Chief Financial Officer of Bayer

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, and in 2011 he became Senior Bayer Representative and CFO of Bayer in China. He was appointed to the Bayer Board of Management in September 2014.

DR. MARIJN DEKKERS
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.

WERNER BAUMANN[1]
Strategy and Portfolio Management · Europe 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 and its Labor Director. He was appointed to the Board of Management in 2010, first as Chief Financial Officer and from October 2014 as Chief Strategy and Portfolio Officer.

PATRICK THOMAS
Chief Executive Officer, Bayer MaterialScience

Patrick Thomas studied engineering at Oxford University. He began his career with Imperial Chemical Industries (ICI). Positions held by Thomas include that of CEO of ICI Polyurethanes and Corporate Executive Vice President of Huntsman Matlin Patterson. Thomas took over as Chief Executive Officer of Bayer MaterialScience in January 2007.

KEMAL MALIK
Innovation · North and Latin America regions

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.

LIAM CONDON
Chief Executive Officer, Bayer CropScience

Liam Condon studied International Business at Dublin City University and the Technical University of 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 took over as Chief Executive Officer of Bayer CropScience in December 2012.

MICHAEL KÖNIG*
Human Resources · Technology and Sustainability · Asia/Pacific, Africa and Middle East regions

Michael König studied chemical process engineering in Dortmund, joining Bayer in 1990. After holding positions of increasing responsibility, he transferred to China in 2000 as a General Manager. In 2007 König became Senior Bayer Representative, and from 2011 he headed up the Polycarbonates Business Unit of Bayer MaterialScience in Shanghai. He was appointed to the Bayer Board of Management in April 2013.

[1] Dr. Olivier Brandicourt will leave the company on March 31, 2015. Werner Baumann will become Chairman of Bayer HealthCare effective April 1, 2015 in addition to his function as a member of the Bayer Board of Management.

* Labor Director

Report of the Supervisory Board

During 2014 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.

The term of office of Professor Ekkehard Schulz expired at the Annual Stockholders' Meeting in April. Dr. Simone Bagel-Trah was elected to be his successor. The Supervisory Board elected Dr. Helmut Panke to succeed Professor Schulz as a member of the Audit Committee. Dr. Klaus Kleinfeld stepped down from the Supervisory Board effective September 30, 2014. The Local Court of Cologne appointed Professor Otmar Wiestler as his successor.

Six meetings of the full Supervisory Board took place during 2014. The Supervisory Board adopted two resolutions by way of a written vote, one on a planned acquisition and one on a divestment of part of a business. Professor Wiestler was unable to attend the only meeting that took place after he assumed his office. No other member of the Supervisory Board attended fewer than half of its meetings. The average attendance rate by Supervisory Board members at the meetings of the full Supervisory Board and of its committees held in 2014 was approximately 90 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

PRINCIPAL TOPICS DISCUSSED BY THE SUPERVISORY BOARD

The deliberations of the Supervisory Board focused on questions relating to the strategies and business activities of the Group as a whole and of the subgroups, as well as personnel decisions. The discussions at the respective meetings in 2014 centered on various topics. At the February meeting, the Supervisory Board discussed the 2013 Annual Report and the agenda for the 2014 Annual Stockholders' Meeting. It also dealt at length with the planned acquisition of Dihon Pharmaceuticals in China, the Bayer Group's risk management system and matters relating to the Board of Management's compensation.

At an extraordinary meeting in April, the Supervisory Board discussed in detail the planned acquisition of the global consumer care business of the U.S. pharmaceutical company Merck & Co., Inc. At a further meeting in April, the Supervisory Board reviewed the development of the business in the first quarter and discussed the imminent Annual Stockholders' Meeting. It also adopted a resolution on the acquisition of the consumer care business of Merck & Co., Inc. and a resolution on the divestment of the Interventional device business.

At an extraordinary meeting held in June, the Supervisory Board discussed matters relating to the Board of Management. It extended the contract of Dr. Marijn Dekkers as Chairman of the Board of Management until December 31, 2016 and appointed Johannes Dietsch as an additional member of the Board of Management with effect from September 1, 2014. Effective October 1, 2014, the Supervisory Board appointed Werner Baumann, previously Chief Financial Officer, as Chief Strategy and Portfolio Officer and Johannes Dietsch as Chief Financial Officer.

At the September meeting, the Supervisory Board focused on the future strategic alignment of the Bayer Group and approved the Board of Management's proposal to demerge the MaterialScience subgroup.

At its meeting in December 2014, the Supervisory Board undertook the routine review of the fixed compensation of the members of the Board of Management and the pensions of the former members of the Board of Management. Also at this meeting, the Board of Management presented its planning for the business operations, the finances and the asset and liability structure of the Bayer Group in the years 2015 through 2017. In addition, the Supervisory Board resolved on the declaration concerning the German Corporate Governance Code. Following the meeting, an information and discussion forum took place entitled "Trends in pharmaceutical research and development."

COMMITTEES OF THE SUPERVISORY BOARD

The Supervisory Board has a Presidial Committee, an Audit Committee, a Human Resources Committee and a Nominations 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 2014 the Presidial Committee was not required to convene in its capacity as the mediation committee. Based on an authorization granted by the Supervisory Board, the Presidial Committee adopted three resolutions in 2014 on financing measures related to the acquisition of the consumer care business of Merck & Co., Inc.

Audit Committee: The Audit Committee comprises three stockholder representatives and three employee representatives. The Chairman of the Audit Committee in 2014, 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 examining the company's financial reporting along with 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 the 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. In addition, the Audit Committee oversees the company's internal control system – along with the procedures used to identify, track and manage risk – and the internal audit system. It also deals with corporate compliance issues and discusses developments in this area at each of its meetings.

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 statements.

The meetings focused on a number of topics. At the February meeting, the Audit Committee discussed the consolidated 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 Corporate Auditing. At this meeting the Audit Committee also discussed IT security and submitted a recommendation to the full Supervisory Board concerning the resolution to be put before 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 and with determining the main areas of focus for the audit of the 2014 financial statements. At the July meeting, the quarterly financial statements as well as legal and compliance issues were discussed as always. At its meeting in October, the Audit Committee discussed the planned bidding process for the audit of the financial statements in addition to the fixed 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 and passed one written resolution. The matters discussed at these meetings concerned the compensation and contracts of the members of the Board of Management, the appointment of Johannes Dietsch to the Board of Management and the extension of Dr. Marijn Dekkers' term of office as Chairman 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.

At one meeting and on several other occasions in 2014, the Nominations Committee discussed candidates for the Supervisory Board elections that were necessary in 2014 as well as the mid-term planning for the composition of the stockholder side of the Supervisory Board.

CORPORATE GOVERNANCE

The Supervisory Board dealt with the ongoing development of corporate governance at Bayer, taking into account the June 24, 2014 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 distribution of the profit, which provides for payment of a dividend of €2.25 per share.

The Supervisory Board would like to thank the Board of Management and all employees for their dedication and hard work in 2014.

Leverkusen, February 25, 2015
For the Supervisory Board:

WERNER WENNING
Chairman

Investor Information

Performance of Bayer Stock in 2014 [Graphic 2.1]

(indexed; 100 = Xetra closing price on December 31, 2013; source: Bloomberg)

// Bayer stock clearly outperforms the overall market in 2014 with a yield of around 13 percent

// Board of Management and Supervisory Board propose dividend increase to €2.25 per share for 2014

The stock market in 2014

STOCK MARKETS END THE YEAR WITH GAINS FOLLOWING A VOLATILE PERFORMANCE

2014 was dominated by stock market gains, interspersed with considerable volatility. Sentiment was held back by emerging economic concerns in Europe, the Ukraine crisis and the related sanctions, and conflicts in the Middle East. By contrast, low capital market rates and the economic upturn in the United States were sources of optimism. The DAX topped 10,000 points several times in the first half of the year, dropping back to below 8,600 in mid-October. It then rallied strongly to a new high for the year, reaching 10,087 at the start of December, and ended the year up 2.7 percent at around 9,800 points.

The European equities index EURO STOXX 50 (performance index) rose 4 percent, ending the year at 5,851 points. Share prices also rose in the United States and Japan. The S&P 500 index gained 11.4 percent, while the Nikkei 225 rose by 7.1 percent.

RETURN ON BAYER SHARES WELL ABOVE MARKET

Including the dividend of €2.10 per share paid at the end of April, the return on Bayer stock was 13.2 percent in 2014, a far better performance than most of the benchmark indices. The share price performance in the second half of the year was particularly encouraging. Bayer stock ended the year at €113.00, having reached a high for the year and an all-time high of €120.95 in late November and early December.

The EURO STOXX Health Care Index (performance index) rose by 8 percent in 2014, while the EURO STOXX Chemicals Index (performance index) advanced by 3 percent.

More than 95 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]

		2013	2014
Earnings per share	€	3.86	4.14
Core earnings per share[1]	€	5.61	6.02
Gross cash flow per share	€	7.05	8.25
Equity per share	€	25.16	24.45
Dividend per share	€	2.10	2.25
Year-end price[2]	€	101.95	113.00
High for the year[2]	€	103.05	120.95
Low for the year[2]	€	69.01	91.51
Total dividend payment	€ million	1,737	1,861
Number of shares entitled to the dividend (Dec. 31)	million shares	826.95	826.95
Market capitalization (Dec. 31)	€ billion	84.3	93.4
Average daily share turnover on German stock exchanges	million shares	2.1	2.1
Price / EPS[2]		26.4	27.3
Price / core EPS[2]		18.2	18.8
Price / cash flow[2]		14.5	13.7
Dividend yield	%	2.1	2.0

[1] For details on the calculation of core earnings per share, see Combined Management Report, Chapter 16.3.
[2] Xetra closing prices (source: Bloomberg)

FAVORABLE FINANCING CONDITIONS FACILITATE EXTENSIVE BOND ISSUANCE BY BAYER

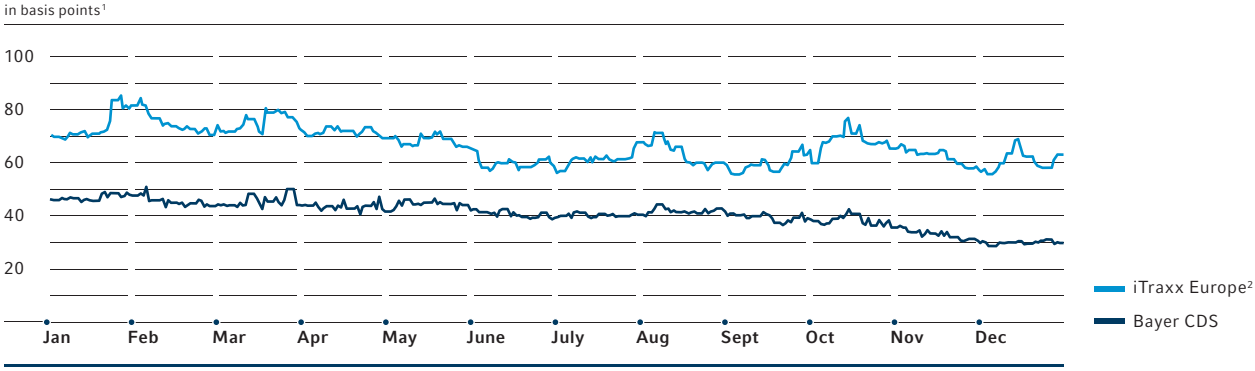
Issue volume on the corporate bond market was significant in 2014, with interest coupons at a historic low, and demand from investors consistently high. Supply was mainly driven by increasing mergers and acquisitions activity. Investors were interested in both short and medium-term maturities, depending on how they expected interest rates to develop. At the same time, demand for subordinated debt remained high throughout the year thanks to higher returns.

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, show how market participants rate a company's credit standing. As can be seen from the graphic, 2014 was characterized by little volatility and low rate levels. Looking at the overall cost, there was a further drop in refinancing costs for companies compared with 2013 because credit premiums were relatively stable and the risk-free interest rate declined significantly during the year.

Bayer used this attractive environment for strategic refinancing and issued several EMTNs with a total nominal volume of €3.0 billion, two hybrid bonds with a total nominal volume of €3.25 billion and, for the first time since 1998, 144A/RegS bonds denominated in U.S. dollars with a total nominal volume of US$7.0 billion. The issues comprised a total of eleven tranches with maturities of between two and ten years and 60 or 61 years for the hybrids. Most were issued with fixed-rate coupons, although some of the shorter maturities have floating-rate coupons based on the 3-month EURIBOR or 3-month USDLIBOR. A €1.3 billion bond issued in 2009 matured in 2014 and was repaid. Further details of outstanding bonds are given in Note [27] to the consolidated financial statements.

Note 27 to the consolidated financial statements of the Bayer Group

Rates for Five-Year Credit Default Swaps (CDS) 2014 [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 WELL 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 €22,991 as of December 31, 2014, giving an average annual return of 18.1 percent. This 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 and in 2014.

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

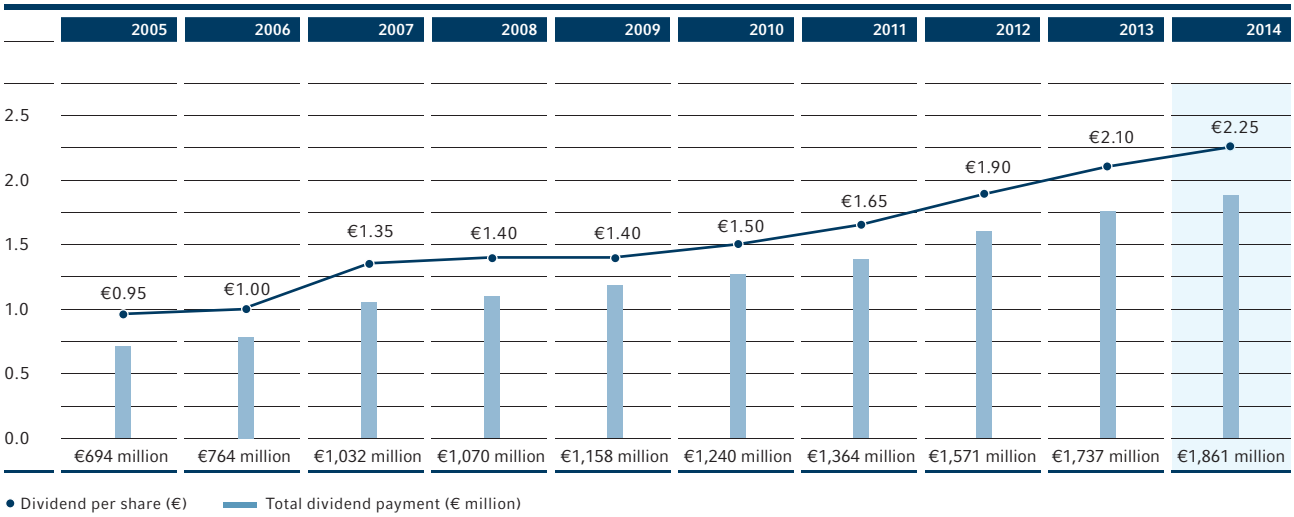
Annual returns	1 year 2014	3 years 2012 – 2014	5 years 2010 – 2014
	%	%	%
Bayer	13.2	35.1	18.1
DAX	2.7	18.5	10.5
EURO STOXX 50	4	13.4	4.5

DIVIDEND INCREASE TO €2.25 PER SHARE

The Board of Management and the Supervisory Board will propose to the Annual Stockholders' Meeting that the dividend be increased by €0.15 to €2.25 per share. Thus we once again intend that our stock-holders should participate in last year's positive business performance. The resulting payout ratio of 37.4 percent calculated on core earnings per share is within our target corridor of 30 to 40 percent (for details of the calculation of core earnings per share, see Chapter 16.3 of the Combined Management Report).

The dividend yield calculated on the share price of €113.00 at year end 2014 amounts to 2.0 percent and the total dividend payment to €1,861 million.

Dividends Per Share and Total Dividend Payments [Graphic 2.3]



A SUSTAINABLE INVESTMENT

www.bayer.com/en/awards.aspx

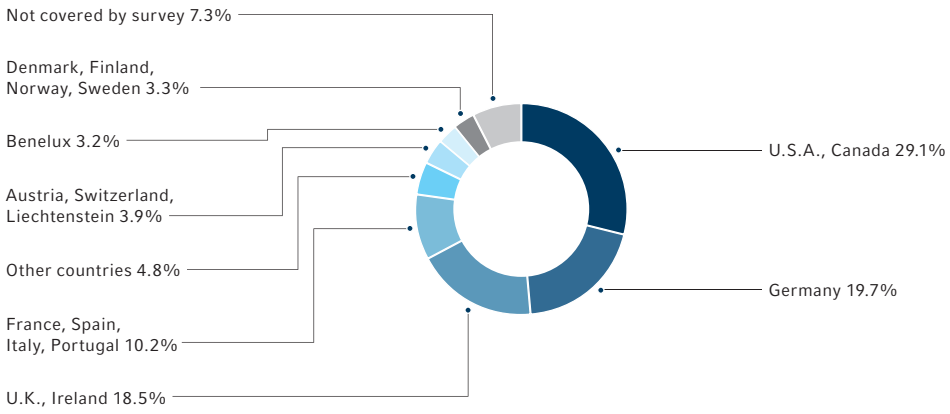
In 2014 Bayer again qualified for inclusion in major sustainability indices that assess companies on the basis of environmental, social and governance (ESG) criteria: Dow Jones Sustainability World Index, FTSE4Good Europe and FTSE4Good Global, MSCI Low Carbon Target Index, NYSE Euronext Low Carbon 100 Europe Index, STOXX® Global ESG Leaders, Access to Medicine Index (not a tradable index) and the CDP Climate Performance Leadership Index (not a tradable index).

We have a strong interest in a transparent and understandable assessment of our sustainability performance. To enhance the efficiency of the work involved, we actively support initiatives to harmonize sustainability ratings such as the Global Initiative for Sustainability Ratings (GISR). In 2014 we continued our dialogue with current and potential investors who base their investment decisions on sustainability criteria, for example, through special conference calls.

INTERNATIONAL OWNERSHIP STRUCTURE

An analysis of our ownership structure carried out in the fourth quarter of 2014 shows the international distribution of our capital stock. The highest proportion of our outstanding shares, almost 30 percent, is held by investors in the United States and Canada, followed by Germany with nearly 20 percent. Bayer has a stable ownership structure that has altered only slightly in recent years.

Ownership Structure by Country [Graphic 2.4]



source: IPREO

At the end of 2014, approximately 260,000 stockholders were listed in our share register. Bayer has a 100 percent free float as defined by Deutsche Börse, the operator of the Frankfurt Stock Exchange.

ACCOLADES FOR EXCELLENT CAPITAL MARKET COMMUNICATION

Bayer's investor relations activities in 2014 were dominated by structural and strategic decisions. Investor interest focused on portfolio adjustments already undertaken or announced, such as the decision on the planned stock market flotation of MaterialScience and the acquisitions of Algeta ASA, Norway, and the consumer care business of Merck & Co., Inc., United States.

Our "Meet Management" conferences in Leverkusen, New York and London gave investors and analysts an opportunity for direct dialogue with our top management. We were present at 18 brokers' conferences and conducted 30 roadshows. These activities took place in a total of 22 financial centers. 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 a number of awards for our IR work in 2014. For example, in the Thomson Reuters Extel Survey 2014 we were awarded three first prizes in the chemicals sector: for the best CFO, the best IR professional and the best IR work in the sector. We were also ranked third 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, 2014

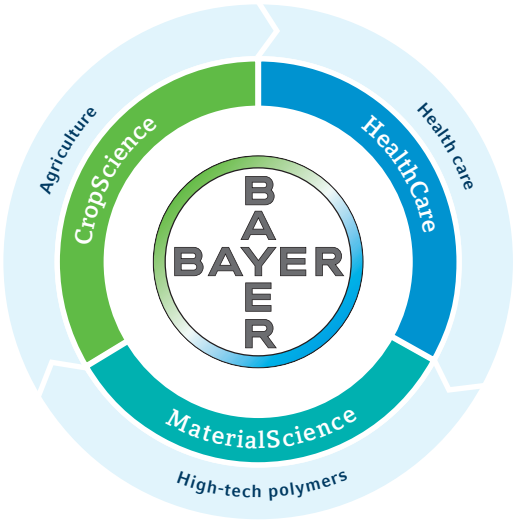
For direct access to a chapter, simply click on its name.

Fundamental Information About the Group

1. Bayer at a Glance

1.1 Corporate Profile

The Bayer Group [Graphic 3.1.1]



Bayer is a global enterprise with core competencies in the areas of health care, agriculture and high-tech polymer materials.

Bayer AG, Leverkusen, Germany, acts as a strategic **management holding company**. It defines the values, goals and strategies of the entire Group. It is also responsible for resource allocation and managerial appointments. Led by Bayer AG, the HealthCare, CropScience and MaterialScience subgroups independently manage their business operations in line with preset objectives.

Bayer HealthCare is a world-leading innovation company in the area of prescription medicines and consumer products. This subgroup researches, develops, manufactures and markets products to improve the health of people and animals.

Bayer CropScience is one of the world's leading research-intensive companies in the agricultural industry, offering a broad range of innovative chemical and biological products for improving plant health, along with high-value seeds. It also provides extensive customer service to support modern, sustainable agriculture. A further focus is on non-agricultural applications.

Bayer MaterialScience is a renowned supplier of high-tech polymers and develops innovative product solutions for a wide variety of everyday uses. Products holding leading positions on the world market account for a large proportion of its sales.

For more information on the planned stock market flotation of Bayer MaterialScience, see Chapter 1.2 "Group Strategy."

The holding company and subgroups are supported in their activities by the three service companies Bayer Business Services, Bayer Technology Services and Currenta.

The Bayer Group in 2014 [Graphic 3.1.2]

Total	Sales	Employees	R&D expenditures	Bayer AG and no. of fully consolidated companies
	42,239 (40,157) (€ million)	**118,900** (112,400)[1]	**3,574** (3,406)[1] (€ million)	**302** (289)

North America
10,248 (9,680) (€ million)
16,300 (15,200)
876 (968)[1] (€ million)
43 (40)

Europe
15,806 (15,086) (€ million)
55,200 (53,300)[1]
2,444 (2,209)[1] (€ million)
156 (150)

Latin America/Africa/Middle East
7,066 (6,768) (€ million)
16,900 (16,200)[1]
59 (51) (€ million)
44 (44)

Asia/Pacific
9,119 (8,623) (€ million)
30,500 (27,700)[1]
195 (178)[1] (€ million)
59 (55)

2013 figures in parentheses
[1] 2013 figures restated

Today, the Bayer Group comprises around 300 consolidated companies in 75 countries throughout the world. We have corporate locations in close proximity to our customers and markets worldwide, invest locally and offer attractive jobs.

Mission and Values

OUR MISSION: "BAYER: SCIENCE FOR A BETTER LIFE"

Bayer is a world-class innovation company with a 150-year history. Our scientific successes are intended to help improve people's lives. At the same time, our innovations form the basis for sustainable and profitable business activity and are the key to maintaining or achieving leadership positions in all of our markets.

Our products are helping to address some of today's biggest challenges, including global population growth, an aging society and the need to make efficient – and, wherever possible, sustainable – use of natural resources.

- We are improving people's quality of life by preventing, alleviating or curing diseases.
- We are helping to provide an adequate supply of high-quality food, feed and renewable plant-based raw materials.
- Our high-tech polymer materials are making significant contributions in areas such as energy and resource efficiency for mobility, construction and home living.

OUR VALUES

Bayer's values play a central role in our daily work and are intended to guide us in fulfilling our mission. These values are represented by the word **LIFE**: **L**eadership, **I**ntegrity, **F**lexibility, **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 within the enterprise across national boundaries, management hierarchies and cultural differences.

We have also adopted a clearer position as we compete to attract the best talent, using the slogan: "Passion to Innovate, Power to Change." Further details can be found in the Chapter "Employees."

1.2 Group Strategy

In line with our mission "Bayer: Science For A Better Life," we aim to improve people's quality of life. For this endeavor, we focus on our core competency of developing and successfully commercializing innovative products and solutions based on scientific knowledge.

Entire focus on Life Science businesses

Bayer in future will focus entirely on the Life Science businesses – HealthCare and CropScience – and intends to float MaterialScience on the stock market as a separate company by mid-2016 at the latest. This move is designed to give MaterialScience direct access to the capital market for the continued development of its business. MaterialScience will align its organizational and process structures and corporate culture with its own industrial environment and business model in order to become a leading polymers company.

OUR OBJECTIVE: PROFITABLE GROWTH

Our corporate strategy is aligned toward profitable growth that will increase corporate value in the long term. We place special importance on developing new products and solutions that create significant value for customers and patients, and on serving the Emerging Markets, particularly those of Asia and Latin America. In this way we are giving more and more customers access to our products and establishing a solid basis for further growth.

THE FOUNDATION FOR OUR SUCCESS: INNOVATION

Bayer is steadily opening up new, attractive market segments in fast-growing and research-driven areas of the Life Sciences. Our success is based on the development of new molecules, technologies, processes and business models. In the long term we expect additional growth impetus to come from interdisciplinary and interspecies research as we build on successful first steps in these areas. We aim to drive growth in our established business areas through investment in research and development as well as through acquisitions and collaborations. We are investing heavily to deliver organic growth in all areas of activity. Bayer plans to invest a total of over €6 billion in research and development and in property, plant and equipment in 2015.

OUR ACTIONS: SUSTAINABLE

Sustainable business practices are essential to the Group's future viability. We therefore endeavor to balance our economic objectives with social and ecological requirements in the development, manufacturing and marketing of our products. We aim to ensure broad social acceptance for our business through responsible practices in the areas of compliance (e.g. anti-corruption and responsible marketing), human resources policy, product stewardship, health, environmental protection, safety and supplier management and by taking into account the expectations of important stakeholders.

OUR MOST CRUCIAL RESOURCE: THE EMPLOYEES

Motivated employees are especially important for the successful development of our business. Bayer embraces a performance- and development-oriented corporate culture, coupled with a pronounced sense of social responsibility. We encourage human and cultural diversity within the company, placing special importance on pleasant work environments, flexible working conditions and excellent vocational and advanced training opportunities. We offer excellent career prospects and aim to continue attracting the most talented people to support our company's successful and sustainable development.

1.3 Targets and Performance Indicators

To consistently implement our strategy, we have set ourselves ambitious Group targets 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 throughout the Group. The current status of our progress in these areas is documented in the following table and the respective chapters.

Bayer Group Targets [Graphic 3.1.3]

Definition of target	Target year	Target attainment in 2014	New target for 2015	Explanations of target
// Profitable Growth				
Increase in Group sales (Fx & portfolio adj.); forecast issued in February 2014: approx. 5% increase to approx. €41 billion – €42 billion	2014	7.2% increase to €42.2 billion	Low-single-digit percentage increase (Fx & portfolio adj.) to approx. €46 billion	
Increase in EBITDA before special items; forecast issued in February 2014: low- to mid-single-digit percentage increase	2014	4.9% increase	Low- to mid-teens percentage increase	
Increase in core earnings per share; forecast issued in February 2014: mid-single-digit percentage increase	2014	7.3% increase	Low-teens percentage increase	
// Innovation				
Group: Increase in R&D investment to approx. €3.5 billion	2014	€3.6 billion	Increase in R&D investment to over €4.0 billion	
HealthCare: Transition of more than 10 new molecular entities (NMEs) into development	2014	12 new molecular entities (NMEs) were transferred into development	Transition of more than 10 new molecular entities (NMEs) into development	A new molecular entity is a chemical or biological substance that has not yet been developed at Bayer for a specific indication.
CropScience: Transfer of at least 6 new molecular entities (NMEs) or plant traits into confirmatory technical proof-of-concept field studies	2014	5 new molecular entities or plant traits	Transfer of 2 new molecular entities (NMEs) or plant traits into confirmatory technical proof-of-concept field studies	A new plant trait is a specific characteristic that has not yet been available or offered at Bayer for the crop plant in question. The target was not fully achieved in 2014 due to changes in the legal framework in early selection.
MaterialScience: Improvement in production process technology to achieve better energy efficiency	Continuous	Improved production technologies introduced (e.g. Dream Production, new TDI facility)	Unchanged	This innovation target supports the achievement of the resource efficiency targets. More information on "efficient production" in Chapter 12.2 (Climate Program).
// Sustainability				
Supplier Management				
Evaluation of all strategically important suppliers	2017	66%. A total of 253 strategically important suppliers were evaluated by the end of 2014.	Unchanged	Strategically important suppliers are those with a major influence on business, including in terms of procurement spend and long-term collaboration prospects (3–5 years). Sustainability performance is evaluated in assessments and audits.
Evaluation of all potentially high-risk suppliers with significant Bayer spend	2020	61%. A total of 157 potentially high-risk suppliers were evaluated by the end of 2014.	Unchanged	Risk definition is based on a country- and material-based approach. We define significant procurement spend as > €1 million p.a.
Development and establishment of a new sustainability standard for our supply base	2020	In implementation	Unchanged	The sustainability standard for our suppliers is to be driven forward in tandem with relevant industry initiatives. We are currently working with the "Together for Sustainability" initiative and the Pharmaceutical Supply Chain Initiative. 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.

Bayer Group Targets [Graphic 3.1.3 (continued)]

Definition of target	Target year	Target attainment in 2014	New target for 2015	Explanations of target
Resource Efficiency				
Improvement of 10% in Group-wide energy efficiency. Reference year 2012: 3.50 MWh/t	2020	3.37 MWh/t (3.8% improvement)	Unchanged	Energy efficiency is defined as the quotient of energy consumption in MWh per t manufactured sales volume.
Reduction of 20% in Group-wide specific greenhouse gas emissions. Reference year 2012: 0.98 t CO_2/t	2020	1.02 t CO_2/t (+4.3%)	Unchanged	Specific greenhouse gas emissions: measured in CO_2 equivalents per t manufactured sales volume; special factor in 2014: inclusion for the first time of the energy-intensive site in Maasvlakte in our environmental reporting. This exclusively produces intermediates that according to our definition are not included in the manufactured sales volume.
Establishment of water management at all sites in water-scarce areas (35 sites)	2017	In the first stage, 80% of the identified sites were inspected to determine whether water management is in place, and if so, in what form.	Unchanged	The definition of water management is based, among other standards, on ISO 14001; identification of water-scarce areas according to WBCSD Global WaterTool™. As part of our analysis, we examined, for example, whether water-relevant strategies, targets and initiatives and an appropriate risk management system were already in place, for example. Based on this examination, specific steps to improve water management at the individual sites will be agreed beginning in 2015.
Safety				
Reduction of 35% in occupational safety incident rate. Reference year 2012: RIR 0.49	2020	RIR 0.43 (−12.1%)	Unchanged	RIR (Recordable Incident Rate): number of reportable occupational injuries affecting Bayer employees with and without lost workdays per 200,000 working hours. Until the end of 2015, we will continue reporting on our success in achieving our LTRIR (Lost Time Recordable Incident Rate) target, which covers only occupational injuries with lost workdays per 200,000 working hours. The 2015 target is an LTRIR of 0.21. The level in 2014 was 0.22.
Reduction of 30% in transport incidents. Reference year 2012: 6 incidents	2020	12 (+100%)	Unchanged	Transport incidents relate to both our own chemical transport movements and those we commission and pay third parties to perform on our behalf.
Reduction of 30% in process and plant safety incidents. Reference year 2012: LoPC-IR 0.38	2020	LoPC-IR 0.23 (−38%)	Unchanged	LoPC-IR (Loss of Primary Containment Incident Rate): number 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.
Product Stewardship				
Conclusion of assessment of hazard potential of all substances (>99%) used in quantities exceeding one metric ton per annum	2020	55%. Approx. 32,000 substances had been assessed by the end of 2014.	Unchanged	This globally harmonized Bayer standard also covers assessment of such substances that are not subject to the REACH Regulation (No. 1907/2006). If no relevant datasets are generated within the scope of REACH, substance information and the ability to provide data on key substance properties are to be determined to ensure and document responsible handling of the substances (including in terms of substance characteristics, purity, intended use, toxicological data).
Compliance				
Conducting of precautionary risk assessments in all three subgroups	2015	In implementation	Unchanged	Risk assessments are based on the integrated compliance management method developed by Ernst & Young. Integrated Compliance Management@Bayer (ICM@Bayer) preventively assesses and addresses risks in the following compliance areas: fairness in competition, integrity in business dealings, product-related communication at BHC, BHC price reporting, insider trading, foreign trade law, separation of corporate and private interests, fair and respectful working conditions, and data protection.
From 2015 annual compliance training for all Bayer managerial staff (>99%)	Annually	In preparation	Unchanged	Managers will participate in specific training courses depending on the risk area.
// Employees				
Improvement in employee engagement (established using an employee survey conducted every two years; reference year 2012: 85%)	Continuous	87%	Unchanged	We measure employee engagement in line with the Towers Watson engagement system. Engagement looks at how strongly an employee identifies with/feels attached to his/her company by supporting corporate values and objectives, for example.
Increase in the proportion of women in senior management to 30%; reference year 2010: 21%	2015	26%	Unchanged	Senior managers are managers in the five highest management grade levels.
Increase in the proportion of senior managers from outside the European Union, the United States or Canada to 25%; reference year 2013: 18%	2015	20%	Unchanged	Senior managers are managers in the five highest management grade levels.

Details of further key financial data are found in Chapter 20 "Future Perspectives."

Information on our Group targets is also provided in the relevant chapters. This is indicated by the reference to "Group target" in the margin.

1.4 Internal Management System

The economic planning and steering for the business units is carried out within a framework laid down by the Group Management Board 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.

KEY INDICATORS

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:

See Chapter 16.4

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. (See Chapter 16.4 "Value Management" for further details.)

See Chapter 16.2

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 (earnings before financial result, taxes, depreciation and amortization) 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. (See Chapter 16.2 "Calculation of EBIT(DA) Before Special Items" for further details.)

Targets and performance indicators are defined and established in areas such as innovation, supplier management, safety and product stewardship to align the Group toward sustainability. Bayer AG, as the strategic management holding company, has implemented management systems in close coordination with the subgroups to steer the Group's sustainable development.

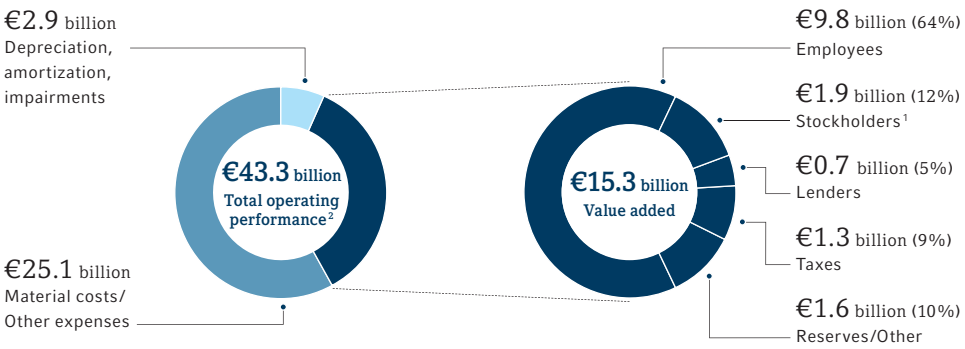
1.5 Value Creation

The value added statement shows Bayer's contribution to public and private incomes and is a measure of the value the company's business activities create for its stakeholders. 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 2014 was €43.3 billion. Value added increased by 5% to €15.3 billion. Of the value added, €9.8 billion (64%) was distributed to employees, €1.9 billion (12%) to stockholders, €0.7 billion (5%) to lenders and €1.3 billion (9%) to governments. The remainder was allocated to reserves.

In addition to direct cash flows, the company creates value for its stakeholders in various ways, in particular by focusing on innovative products and solutions in our core businesses. We operate production sites throughout the world, invest locally 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 payments of regional taxes.

Bayer Group Value Added 2014 [Graphic 3.1.4]



[1] Bayer AG dividend proposal for 2014
[2] total operating performance = sales + other operating income + financial income/equity-method income (loss)

1.6 Corporate Environment

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

ECONOMIC ENVIRONMENT

Global economic growth in 2014 was at the level of the previous year but below expectations. While the upswing in the United States continued, Europe's economic recovery was hesitant. Development in Europe was held back by continuing high unemployment, especially in the countries of southern Europe. The pace of growth in the emerging markets declined. China continued to experience a high, though weaker, rate of growth. Positive stimuli for the world economy came mainly from the persistently expansionary monetary policy of the industrialized countries and the drop in the oil price, which strengthened private consumption.

Economic Environment [Table 3.1.1]

	Growth[1] 2013	Growth[1] 2014
World	+2.6%	+2.7%
European Union	+0.1%	+1.3%
of which Germany	+0.2%	+1.5%
United States	+2.2%	+2.4%
Emerging markets[2]	+4.8%	+4.3%

2013 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 2015

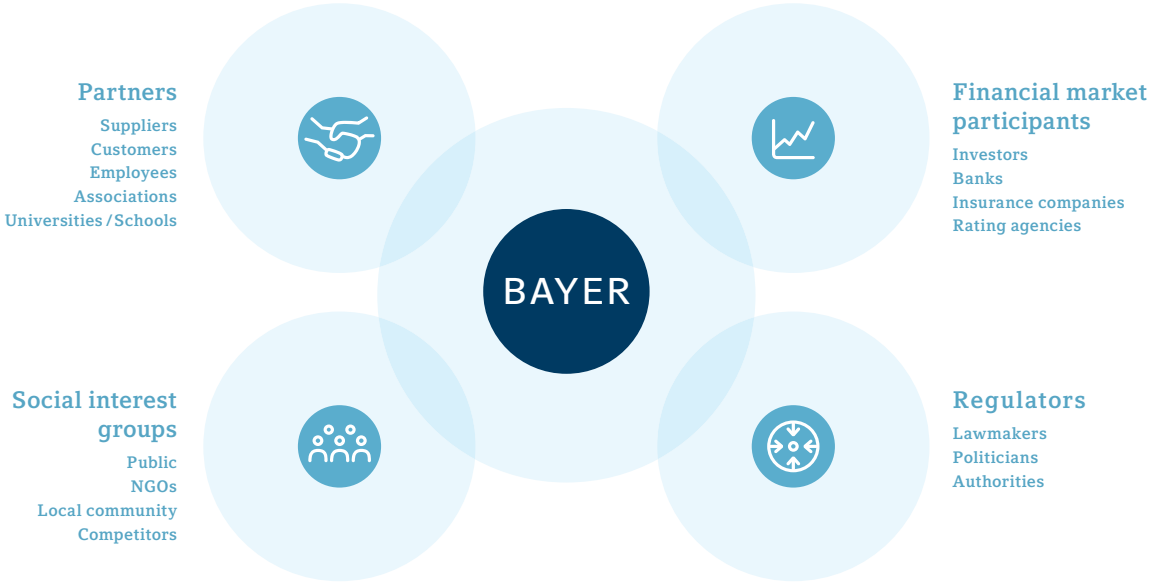
See Chapter 4

See Chapter 4 for more information on the economic environments of our subgroups.

SOCIAL ENVIRONMENT

As a commercial enterprise, Bayer is part of society, and the company's business activity is therefore closely linked with the social environment. The influence of stakeholders (see Graphic 3.1.5) on our business activity has steadily increased in recent years. Their expectations regarding sustainable development affect public acceptance of the company and thus our commercial success. We take the wide-ranging requirements of our stakeholders seriously and consider them wherever possible in our business activities. Evaluating their expectations and requirements provides significant impetus for the continued development of our activities, our risk management and our reporting. At the same time, open dialogue with our stakeholders gives us an opportunity to explain the value that our products and services hold for society. This is of growing importance for the success of our business model.

Stakeholder Dialogue at Bayer: Our Most Important Interest Groups [Graphic 3.1.5]



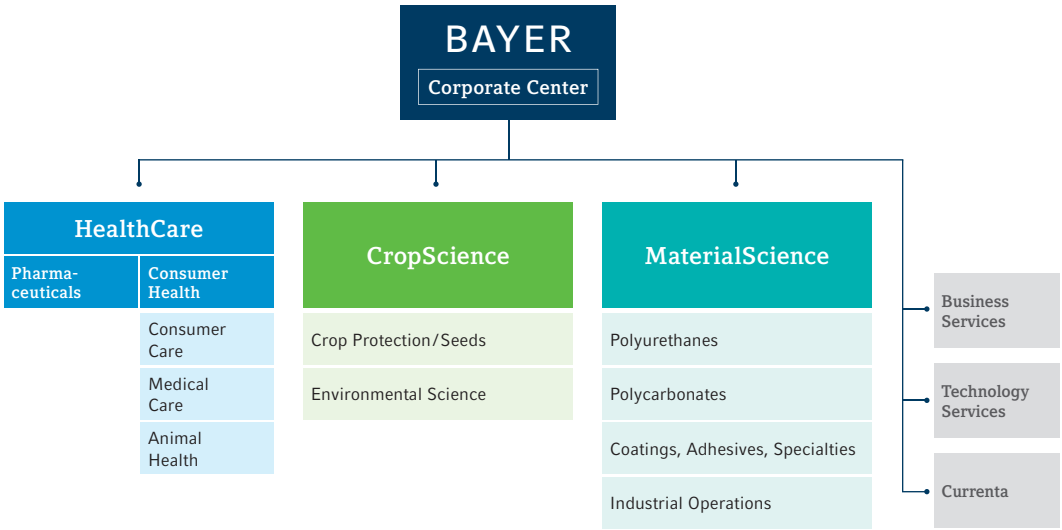
See Chapter 6

Read more about Bayer's commitment to its stakeholders in online annex 3-6-4 to Chapter 6 "Sustainability Management and Governance."

2. Corporate Structure

Bayer AG, headquartered in Leverkusen, Germany, is the strategic management holding company for the Bayer Group. Business operations are conducted by the HealthCare, CropScience and MaterialScience subgroups, supported by our three service companies.

Bayer Group Structure [Graphic 3.2.1]

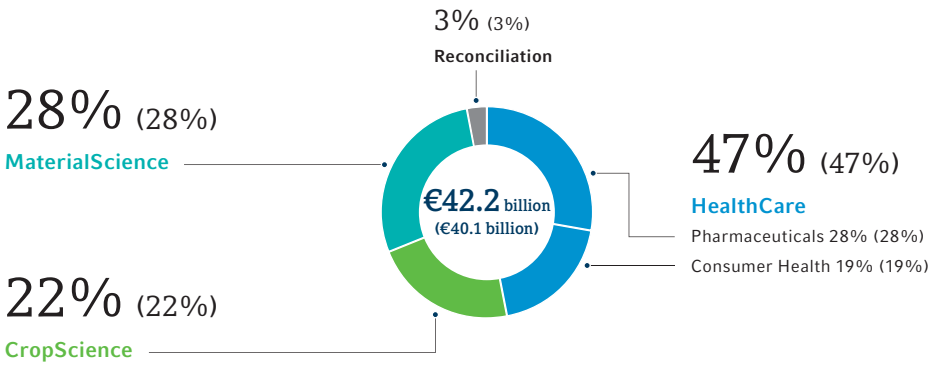


The globally operating **HealthCare** subgroup is divided into two reporting segments: Pharmaceuticals and Consumer Health. The **Pharmaceuticals** segment focuses on prescription products, especially for women's healthcare and cardiology, and also on specialty therapeutics in the areas of oncology, hematology and ophthalmology. Our **Consumer Health** segment includes the Consumer Care, Medical Care and Animal Health divisions. The main focus of the Consumer Care Division is on non-prescription medicines, dietary supplements and dermatology products. The Medical Care Division comprises the Diabetes Care business unit, which markets blood glucose monitoring systems, and the Radiology business unit, which offers contrast-enhanced diagnostic imaging equipment along with the necessary contrast agents. The products of the Animal Health Division are destined for use in livestock and companion animals.

CropScience has businesses in seeds, crop protection and non-agricultural pest control. It is organized into two operating segments: Crop Protection/Seeds and Environmental Science. Crop Protection/Seeds markets a portfolio of high-value seeds and traits along with chemical and biological pest management solutions, at the same time providing extensive customer service to the agriculture industry. Environmental Science focuses on non-agricultural applications, with a broad portfolio of pest control products and services for areas ranging from the home and garden sector to forestry.

MaterialScience develops, manufactures and markets high-tech polymer materials including polyurethane raw materials, polycarbonates, coating and adhesive raw materials, along with specialty chemicals. This subgroup also manufactures and markets selected inorganic basic chemicals. MaterialScience is organized into the Polyurethanes, Polycarbonates, and Coatings, Adhesives, Specialties business units, and the Industrial Operations area.

Share of Sales by Segment 2014 [Graphic 3.2.2]



2013 in parentheses

The service companies Business Services, Technology Services and Currenta are reported in the reconciliation under "All Other Segments." The reconciliation also includes the Corporate Center and consolidation effects.

Key Data by Subgroup and Segment [Table 3.2.1]

	Sales		EBIT		EBITDA before special items[1]	
	2013	2014	2013	2014	2013	2014
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	**18,924**	**19,975**	**3,260**	**3,581**	**5,334**	**5,484**
Pharmaceuticals	11,188	12,052	2,031	2,371	3,490	3,699
Consumer Health	7,736	7,923	1,229	1,210	1,844	1,785
CropScience	**8,819**	**9,494**	**1,729**	**1,806**	**2,248**	**2,360**
MaterialScience	**11,238**	**11,651**	**435**	**555**	**1,072**	**1,187**
Reconciliation	**1,176**	**1,119**	**(490)**	**(436)**	**(253)**	**(219)**
Group	**40,157**	**42,239**	**4,934**	**5,506**	**8,401**	**8,812**

[1] For definition see Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."

3. Strategies of the Subgroups

HEALTHCARE

The rise in life expectancy and the associated increase in chronic diseases are driving the demand for innovative medicines. Due to the need to contain costs in the health care systems of the industrialized regions, particularly North America, Europe and Japan, cost carriers are exerting more and more pressure on drug prices and increasing their demands for the health care industry to demonstrate the value added by new therapies. In the emerging economies, patients and consumers are gaining improved access to health care and thus the opportunity to benefit from innovative medicines.

See Chapter 1.2 for Bayer Group strategy

In this environment, our strategy is geared toward achieving above-average, profitable and sustained growth by continuously developing innovative health care products with a positive cost-benefit ratio and strengthening our consumer health business.

In our largest segment in terms of sales, **Pharmaceuticals**, we intend to step up our activities in cardiology, oncology, gynecology, hematology and ophthalmology. To achieve our medium-term growth targets, we are relying particularly on our recently launched products Xarelto™, Eylea™, Stivarga™, Xofigo™ and Adempas™. We plan to steadily expand the indications for these medicines through comprehensive study programs and thus make them available to further patient groups. We also consider entering into partnerships with other pharmaceutical companies.

Innovative products for profitable and sustainable growth

To safeguard long-term growth, we will further increase our investment in research and development. Among other projects, we plan to achieve crucial progress in the development of five drug candidates in cardiology, oncology and gynecology. In addition, we are selectively expanding and supplementing our development portfolio through licensing agreements and acquisitions. In March 2014, we acquired Algeta ASA, Norway, which specializes in the development of novel cancer therapies. We had partnered with Algeta in the development and marketing of Xofigo™ since 2009. In June 2014, we entered into a licensing agreement with Orion Corporation, Finland, concerning the global development and marketing of the development candidate ODM-201 for the treatment of prostate cancer.

This focus on certain therapeutic areas is supplemented by specific measures for key markets such as Japan, Germany, Brazil, China and Russia. In the medium term, we aim to strengthen our presence in the United States. We want to maximize the potential of our extensive portfolio of established products, especially in the Emerging Markets.

We are developing concepts to facilitate access to our products, especially in developing and emerging countries, as part of our "Access to Medicine" (ATM) activities. ONLINE ANNEX: 3-3-BHC-1

Our investment in the **Consumer Health** segment is concentrated on fields of business in which we are aiming for leadership.

The strategy of the Consumer Care Division is aimed at building on our position in the over-the-counter (OTC) medicines business. In 2014, we expanded our Consumer Care portfolio by acquiring the consumer care business of Merck & Co., Inc., United States, adding leading brands such as Claritin™, Coppertone™ and Dr. Scholl's™. We also acquired Dihon Pharmaceutical Group Co. Ltd., China, which offers self-medication products in the fields of dermatology and traditional Chinese medicine, and now are primarily focusing on integrating these acquired business areas. We intend to continue exploiting external growth opportunities through acquisitions and inlicensing as part of the global consolidation of the OTC industry.

To sharpen our regional focus, we are expanding our position in important markets such as the United States, Brazil, Russia and China. We aim to strengthen our established brands, such as Aspirin™, Aleve™ and Berocca™, through product line extensions and geographical expansion. We are also working to get certain prescription products transitioned to OTC status.

The Medical Care Division comprises two business units, Diabetes Care and Radiology.

At Diabetes Care, we are focusing on our core business of innovative blood glucose meters and developing strategic partnerships for further market penetration, such as the collaboration with Medtronic in the United States.

In the Radiology business unit, we aim to defend our leading position through innovative product and service offerings and by streamlining our portfolio. Against this background, we divested our Interventional business with thrombectomy and atherectomy systems to Boston Scientific, United States, in September 2014.

Our Animal Health Division aims to strengthen its position in the already heavily consolidated market for veterinary medicines. Here we rely not only on organic growth, such as through the increased use of existing distribution channels, especially specialist retail chains, but are also adding to our portfolio with targeted inlicensing and acquisitions.

CROPSCIENCE

Sustainable agriculture, higher crop yields and improved crop quality are becoming increasingly important. Global agricultural production must increase by approximately 60% by 2050 in order to ensure adequate nutrition for a growing world population despite the limited amount of arable land and the increased demand for animal feed and renewable raw materials. CropScience is aligning its corporate planning to these long-term trends in the agricultural markets. Our aim is to help shape the future of the agricultural industry, increase its productivity and thus generate profitable and sustainable growth for our business. CropScience's strategy is built on four key elements:

CropScience strategy based on four core elements

- enhancing the Crop Protection and Environmental Science portfolio,
- increasing customer centricity along the entire value chain,
- leading the way in innovation,
- and expanding the Seeds business.

Our activities focus on implementing these elements.

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 important technology platform for both chemical and biological crop protection. We are investing heavily in the expansion of our production capacities to meet rising demand for our products.

Another major part of our strategy is to strengthen customer centricity along the entire value chain and continuously optimize distribution. In this context we are also steadily expanding the successful business model of food chain partnerships in the form of collaborations with food processors and retailers. This furthers our objective of sustainably increasing productivity through a joint effort with our customers. In these projects, CropScience works with all participants in the food chain to safeguard and increase yields, and to improve the quality of harvested produce. To strengthen customer centricity, we are also increasing our commitment to direct cooperation with farmers as part of the Bayer Forward Farming initiative. At these "ForwardFarms" we can demonstrate the advantages of our integrated solutions and services to interested stakeholders.

To lead the way in innovation, we aim to build on our expertise in the integration of seed technology with chemical and biological crop protection in order to develop holistic solutions. New areas of innovation, such as digitization in agriculture, account for a major part of this.

Another key element in our strategy is 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 build significant positions in soybeans and wheat. For example, we intend to gain long-term access to high-quality breeding material through acquisitions, inlicensing and partnerships and to steadily expand our existing breeding expertise.

MATERIALSCIENCE

MaterialScience helps to address global challenges

MaterialScience, with its high-tech polymer materials and application solutions, is helping to address the global challenges posed by population growth, the depletion of fossil resources, climate change and increasing urbanization. We are steadily developing our product portfolio, which mainly comprises components for polyurethane foams, high-tech polycarbonate plastics and raw materials for coatings and adhesives. These products are supplied to key industry sectors such as automotive, construction and electronics. Our innovations extend not only to products, but also to the production processes, which we design to be as environmentally friendly and efficient as possible, always observing the highest levels of safety and reliability at our plants. Our activities are based on a comprehensive approach to sustainability: we aim to burden the environment as little as possible, benefit society and create value.

Against this background, the strategy of MaterialScience is aimed at ensuring long-term, profitable growth. We aim to sustainably earn a return that exceeds our capital costs and thus helps to increase the company's value. We intend to safeguard or expand our leading competitive positions in world markets in a challenging environment. This applies to the established core markets of Europe and the United States, as well as to emerging countries such as China. Our investment policy there is aligned to the needs of the market.

In the **Polyurethanes (PUR) business unit**, we intend to safeguard our strong position on the world market as an integrated raw material and systems supplier, mainly for rigid and flexible foams. Demand for these products is expected to rise further. 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 manufacture of polyurethane components, we are focused on achieving further improvements in the efficiency of our facilities through new process technologies. At the site in Dormagen, Germany, for example, a large-scale, state-of-the-art facility was commissioned at the end of 2014 for toluene diisocyanate (TDI), a key precursor for flexible foams. In the future we plan to produce the second polyurethane component, polyol, with the help of carbon dioxide, initially in limited quantities. It is planned to build a production line for this purpose in Dormagen. CO_2 can partly replace the traditional raw material, oil, as the carbon base. In the rigid foam business, we further increased capacities for the precursor MDI (diphenylmethane diisocyanate) at the Shanghai, China, site in 2014 in view of the demand situation in Asia.

The global polycarbonate market is focused on Asia. In this region, the **Polycarbonates (PCS) business unit** operates several large-scale facilities for this high-tech plastic, which boasts numerous favorable properties such as low weight, stability, durability and relatively high design freedom. We plan to gradually raise production capacity in Shanghai to safeguard our position in the world market. We also intend to further improve the efficiency of our plants worldwide. It is planned to more closely align the product portfolio to applications that make particularly high demands on the material – so that customers in the automotive, consumer electronics and other industries can derive maximum benefit from the respective products.

The **Coatings, Adhesives, Specialties business unit (CAS)** develops and manufactures polyurethane-based raw materials, mainly for coatings and adhesives. The main areas of application include transportation and traffic, infrastructure and construction, and wood and furniture. Our aim is to maintain our leading position in our core business. The focus here continues to be on market- and customer-centric solutions for coating and adhesive applications that offer protection, attractive design and high functionality in numerous areas. As one of the leading suppliers, we also offer a broad range of waterborne polyurethane dispersions. We see these products as innovative system solutions and plan to replace solvent-based coatings by waterborne solutions. In addition to our core business, we are working in further growth areas such as cosmetics, medicine and textiles.

The **Industrial Operations unit (IO)** supports the business units. It is responsible for ensuring a dependable supply of raw materials and services, developing modern production technologies to enable the efficient use of resources, and for the safety and reliability of operations. It also manufactures and markets basic chemicals such as chlorine, sodium hydroxide solution and hydrochloric acid.

Further information on the planned stock market listing of Bayer MaterialScience is given in Chapter 1.2 "Group Strategy."

4. Economic Environments of the Subgroups

The economic environments in which the subgroups operate are outlined below. (The economic environment for the Bayer Group as a whole is described in Chapter 1.6 "Corporate Environment.")

Economic Environments of the Subgroups [Table 3.4.1]

	Growth[1] 2013	Growth[1] 2014
HealthCare		
Pharmaceuticals market	+5%	+8%
Consumer care market	+5%	+4%
Medical care market	−3%	−3%
Animal health market	+3%	+5%
CropScience		
Seed and crop protection market	+9%	+6%
MaterialScience (main customer industries)		
Automotive industry	+4%	+3%
Construction industry	+3%	+4%
Electrical/electronics industry	+4%	+5%
Furniture industry	+3%	+4%

2013 figures restated
[1] Bayer's estimate, except pharmaceuticals. Source for pharmaceuticals market: IMS Health, IMS Market Prognosis. Copyright 2015. All rights reserved, currency-adjusted; 2014 data provisional
as of February 2015

HEALTHCARE

The **pharmaceuticals market** saw significantly higher growth in 2014 than in the previous year. In the United States in particular, there was a marked increase in sales of pharmaceuticals, mainly as a result of new product introductions and a smaller impact from patent expirations. Despite a persistently restrictive health policy environment, growth was stronger in a number of European countries due to the launch of new products. Pharmaceuticals growth in the emerging markets was comparable with the prior year.

Following the high growth in the previous year due to the strong cold season, the **consumer care market** resumed a normal growth rate in 2014, which was thus slightly below the 2013 rate. The shrinkage in the **medical care market** was due to the weakening of the diabetes care market, while the market for contrast agents and medical equipment (Radiology business unit) nearly reached the previous year's level. Growth in the **animal health market** in 2014 picked up in the second half of the year and showed an increase for the year as a whole.

CROPSCIENCE

The global **seed and crop protection market** continued to show dynamic development in 2014. There was a further tangible increase in the demand for high-value seeds. The global crop protection market also expanded, albeit at a slower rate than in the prior year.

Growth in the global seed and crop protection market last year was again driven by Latin America, particularly Brazil and Argentina. The European market also showed strong growth in 2014 thanks to generally favorable weather conditions. While growth rates were moderate in the Mediterranean region, they were above average in Eastern Europe despite the Ukraine conflict. In Asia/Pacific, too, the generally positive market trend persisted in 2014, with the Chinese and Indian crop protection markets showing the strongest momentum. Growth rates in North America, however, were below the average for the global market. This was mainly the result of a late start to the season in the corn- and soybean-growing areas caused by adverse weather conditions.

MATERIALSCIENCE

Global development of the **principal customer industries** for MaterialScience (automotive, construction, electrical/electronics and furniture) in 2014 was slower than expected overall. This was partly due to the continued weakening of the business environment in the eurozone. The slower growth in China and some other emerging economies was offset by stronger-than-expected growth in North America.

The global **automotive industry** recorded moderate, albeit slightly slower, growth overall in 2014 than in the previous year. Strong demand across all vehicle segments led to robust growth in North America and Asia. Development in Western Europe was likewise positive, bolstered by a number of government incentive programs and continued strong demand for premium class vehicles. By contrast, Latin America, particularly Brazil and Argentina, posted considerable declines. In addition, 2014 was marked by numerous vehicle recalls affecting all the main automakers in all geographies.

Growth in the global **construction industry** improved year on year. The development was characterized by a sustained recovery in both Western and Eastern Europe, continuing positive development in the United States and a stabilizing trend in Latin America. Growth in Asia was steady overall with a slight weakening in China, the region's most important market.

The global **electrical and electronics industry** posted robust growth once again in 2014. While the high growth rates experienced in past years continued in Asia, driven mainly by China, growth in Europe and North America was slower than in 2013.

Growth of the global **furniture industry** improved in 2014 compared with the previous year, with the industry benefiting from the progressive market recovery in North America and Europe. Growth in Latin America, however, slowed. Market development in Asia was satisfactory, driven by exports. Domestic demand in this region, however, increased only slightly.

5. Research, Development, Innovation

Innovation and the skills of our employees form the basis for our success as a company. We drive innovation by continuously developing new molecules, technologies and business models in our research centers, investing in research and development projects, supporting the development of our employees and expanding our activities through acquisitions or collaborations with external partners. Strengthening our innovative capability enables us to address the challenges of our time and achieve profitable corporate growth.

Group target 2014: increase in R&D investment to approx. €3.5 billion

See Chapter 1.3 for Group targets

In 2014 we raised our research and development spend by 5.3% (Fx adj.) to €3,574 million. Adjusted for special items of €2 million (2013: €212 million), this represented a 12.2% increase (Fx adj.). The ratio of research and development expenses to sales before special items was 8.5%. Approximately 14,000 employees worldwide work in this field.

Research and Development Expenses Full Year 2014 [Table 3.5.1]

	Research and development expenses		Research and development expenses before special items		Share of R&D expenses		R&D expenses before special items/sales	
	2013	2014	2013	2014	2013	2014	2013	2014
	€ million	€ million	€ million	€ million	%	%	%	%
HealthCare	**2,229**	**2,301**	**2,039**	**2,297**	**65.4**	**64.4**	**10.8**	**11.5**
Pharmaceuticals	1,771	1,878	1,653	1,876	52.0	52.6	14.8	15.6
Consumer Health	458	423	386	421	13.4	11.8	5.0	5.3
CropScience	**861**	**974**	**858**	**974**	**25.3**	**27.3**	**9.7**	**10.3**
MaterialScience	**231**	**210**	**211**	**213**	**6.8**	**5.9**	**1.9**	**1.8**
Reconciliation	**85**	**89**	**86**	**88**	**2.5**	**2.5**	**7.3**	**7.9**
Group	**3,406**	**3,574**	**3,194**	**3,572**	**.**	**.**	**8.0**	**8.5**

2013 figures restated
[1] For definition see Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."

As well as investing in research and development, Bayer promotes an innovation culture based on openness to new approaches and internal interdisciplinary cooperation. We are building a national and international network of outstanding scientists to further increase our expertise and extending this network through collaborations with external partners. ⊙ ONLINE-ANNEX: 3-5-1

Our collaborations and alliances with leading universities, public research institutes and partner companies are supplemented by incubators, crowdsourcing and science hubs in Asia and the United States to tap into external innovative potential using the open innovation approach. Some of our collaborations are supported by public funding. ⊙ ONLINE ANNEX: 3-5-2

Reliable, global 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 2014, we owned approximately 68,200 valid patent applications and patents worldwide relating to some 8,300 protected inventions. ONLINE ANNEX: 3-5-3

STRENGTHENING RESEARCH IN THE LIFE SCIENCES

Bayer is the only global company simultaneously researching improvements in human, animal and plant health. Systematic and intensive collaboration among researchers from both Life Science subgroups is providing new impetus. Researchers from HealthCare and CropScience are collaborating on projects involving central biological processes such as gene regulation or energy metabolism. Such projects are aimed at developing a better understanding of diseases, deciphering mechanisms of action, personalizing therapies or explaining resistance mechanisms. The joint use of technology platforms is being expanded. These projects have been supported since 2012 by Bayer's internal Life Sciences Fund and are mostly implemented in collaboration with external partners.

HEALTHCARE

Research and development expenses at HealthCare rose by 3.6% (Fx adj.) in 2014 to €2,301 million. Adjusted for special items of €4 million (2013: €190 million), this represented a 13.0% increase (Fx adj.) and was equivalent to 11.5% of HealthCare sales. At the end of the reporting period there were 8,100 employees working in research and development at HealthCare.

PHARMACEUTICALS

Research areas and sites

Drug discovery in the **Pharmaceuticals** segment focuses on the areas of cardiology, oncology, ophthalmology, hematology and gynecology. We conduct research activities at six centers. Work in Berlin and Wuppertal, Germany, focuses on the discovery, optimization and development of new active substances. Research is also carried out at these sites in the fields of drug metabolism, pharmacokinetics, toxicology and clinical pharmacology. On the other hand, our U.S. research and development activities in the Mission Bay district of San Francisco and in Berkeley, California, are focused on hematology. In Turku, Finland, polymer-based release systems are being developed for fertility control. At our site in Oslo, Norway, we are carrying out research on Thorium Conjugate for use in cancer. We also operate innovation centers in Beijing, China; Singapore; and Osaka, Japan, which focus on coordinating our research partnerships in Asia.

Research activities in 2014

See table 3.5.3 for more details on our active substance candidates

Group target 2014: HealthCare – transition of more than 10 new molecular entities (NMEs) into development

We conducted clinical trials with several drug candidates from our research and development pipeline during 2014 to drive the development of new substances for treating diseases with a high unmet medical need. At the focus of our clinical development are five active substance candidates currently in Phase II trials. These are finerenone, vericiguat and molidustat in the cardiology and cardiorenal syndrome areas, copanlisib in oncology and vilaprisan in gynecology. We strengthen our already approved products, such as the anticoagulant Xarelto™ (rivaroxaban), the cancer drugs Stivarga™ (regorafenib) and Xofigo™ (radium-223 dichloride), the eye medicine Eylea™ (aflibercept) and Adempas™ (riociguat) for treatment of pulmonary hypertension, through life cycle management activities in order to further enhance their use and/or expand their spectrum of indications.

Some of our development candidates are being investigated for the treatment of illnesses that are serious but at the same time very rare – also known as orphan diseases. For example, ciprofloxacin DPI (dry powder for inhalation) for therapy of non-cystic-fibrosis bronchiectasis (NCFB) was classified by the regulatory authorities as an orphan drug.

Clinical trials account for a major portion of the development process for medicines. They are an essential tool for determining the safety and efficacy 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 applicable national laws and standards. ONLINE ANNEX: 3-5-BHC-1

Following the completion of the required studies with several of the drug candidates, we submitted applications to one or multiple regulatory agencies for approvals or approval expansions.

The most important drug candidates in the approval process are:

Products Submitted for Approval[1] [Table 3.5.2]

	Indication
Aflibercept	E.U., Japan; treatment of macular edema secondary to branch retinal vein occlusion
Bay 81-8973	E.U., U.S.A.; treatment of hemophilia A
Riociguat	Japan; treatment of pulmonary arterial hypertension
Rivaroxaban[2]	U.S.A.; secondary prophylaxis of acute coronary syndrome
Rivaroxaban	Japan; treatment of deep vein thrombosis and pulmonary embolism, prevention of recurrent venous thromboembolism

[1] as of February 3, 2015
[2] submitted by Janssen Research & Development, LLC

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

Research and Development Projects (Phases II and III)[1] [Table 3.5.3]

	Indication	Status
Amikacin inhale	Treatment of pulmonary infection	Phase III
Damoctocog alfa pegol (BAY 94-9027, long-acting rFVIII)	Treatment of hemophilia A	Phase III
Ciprofloxacin DPI	Treatment of pulmonary infection	Phase III
LCS-16 (ULD LNG Contraceptive System)	Intrauterine contraception, duration of use: up to 5 years	Phase III
ODM-201 (AR antagonist)	Treatment of prostate cancer	Phase III
Radium-223 dichloride	Combination treatment of castration-resistant prostate cancer	Phase III
Regorafenib	Treatment of refractory liver cancer	Phase III
Regorafenib	Treatment of colorectal cancer following surgical removal of liver metastases	Phase III
Riociguat	Pulmonary arterial hypertension (PAH) in patients who do not sufficiently respond to PDE-5i/ERA	Phase III
Rivaroxaban	Prevention of major adverse cardiac events (MACE)	Phase III
Rivaroxaban	Anti-coagulation in patients with chronic heart failure[2]	Phase III
Rivaroxaban	Long-term prevention of venous thromboembolism	Phase III
Rivaroxaban	Prevention of venous thromboembolism in high-risk patients after discharge from hospital[2]	Phase III
Rivaroxaban	Embolic stroke of undetermined source (ESUS)	Phase III
Rivaroxaban	Peripheral artery disease (PAD)	Phase III
Sorafenib	Treatment of kidney cancer, adjuvant therapy	Phase III
Tedizolid	Treatment of complicated skin infections and pneumonia	Phase III
BAY 1067197 (partial adenosine A1 agonist)	Heart failure	Phase II
Copanlisib (PI3k inhibitor)	Treatment of recurrent/resistant non-Hodgkin's lymphoma	Phase II
Finerenone (MR antagonist)	Chronic heart failure	Phase II
Finerenone (MR antagonist)	Diabetic nephropathy	Phase II
Molidustat (HIF-PH inhibitor)	Anemia	Phase II
Radium-223 dichloride	Treatment of bone metastases in cancer	Phase II
Refametinib (MEK inhibitor)	Cancer therapy	Phase II
Regorafenib	Cancer therapy	Phase II
Regorafenib (ophthalmology)	Treatment of wet age-related macular degeneration (AMD)	Phase II
Riociguat	Pulmonary hypertension (IIP)	Phase II
Riociguat	Raynaud's phenomenon	Phase II
Riociguat	Diffuse systemic sclerosis	Phase II
Riociguat	Cystic fibrosis	Phase II
Rivaroxaban	Secondary prevention of acute coronary syndrome (ACS)[2]	Phase II
Roniciclib (CDK inhibitor)	Treatment of small-cell lung cancer (SCLC)	Phase II
Sorafenib	Cancer therapy	Phase II
Vericiguat (BAY 1021189, sGC stimulator)	Chronic heart failure	Phase II
Vilaprisan (S-PRM)	Treatment of uterine fibroids	Phase II

[1] as of February 3, 2015
[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 pre-defined 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.

Cardiology

Xarelto™ (active ingredient: rivaroxaban) has been approved for more indications in the area of venous and arterial thromboembolism than any of the other new oral anticoagulants. Xarelto™ is approved in more than 125 countries worldwide across all indications, its approval status varying from country to country.

In February 2014, the FDA issued complete response letters in connection with the U.S. approval process in the prevention of atherothrombotic events secondary to acute coronary syndrome (ACS). A new Phase II study will now investigate rivaroxaban in combination with a single platelet aggregation inhibitor for long-term prevention in patients with ACS. Xarelto™ is marketed in the United States by Janssen Pharmaceuticals, Inc., a subsidiary of Johnson & Johnson.

In May 2014, we submitted rivaroxaban to the Japanese Ministry of Health, Labor and Welfare (MHLW) for marketing authorization to treat patients with deep vein thrombosis and pulmonary embolism and for the prevention of recurrent venous thromboembolism.

Beyond the already approved indications, rivaroxaban is also being investigated in other cardiovascular disorders. Ongoing Phase III clinical trials include COMPASS and COMMANDER-HF. The aim of the COMPASS study is to investigate the potential of rivaroxaban in the prevention of major adverse cardiac events. The COMMANDER-HF study is evaluating the potential additional benefit of rivaroxaban in combination with standard therapy in the prevention of cardiovascular events in patients with chronic heart failure and significant coronary heart disease.

In 2014, the study program for rivaroxaban was expanded to include new trials: the EINSTEIN CHOICE trial is evaluating two different doses of rivaroxaban for the long-term, secondary prevention of deep vein thrombosis and pulmonary embolism. The MARINER trial is evaluating the efficacy and safety of rivaroxaban to reduce the risk of post-hospital-discharge symptomatic venous thromboembolism (VTE) in patients who were hospitalized for acute medical illness. The ESUS NAVIGATE study is investigating the efficacy and safety of rivaroxaban in patients following embolic stroke of undetermined source. A further Phase III study (VOYAGER PAD) to investigate the efficacy and safety of rivaroxaban in patients with peripheral artery disease (PAD) following surgery is in preparation.

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

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

Adempas™ was approved in the United States in 2013 for the treatment of inoperable chronic thromboembolic pulmonary hypertension (CTEPH) and pulmonary arterial hypertension (PAH). In March 2014, Adempas™ was also approved by the European Commission in both indications. In Japan, the drug was approved for CTEPH in January 2014 and was submitted for approval to treat PAH in April 2014.

In 2014 the study program for riociguat was expanded to include new trials: a Phase IIIb pilot study was launched in March 2014 to evaluate the effect of riociguat in patients with PAH who demonstrated an insufficient response to treatment with phosphodiesterase-5 inhibitors (PDE-5i) either as a monotherapy or in combination with an endothelin receptor antagonist (ERA). In June 2014, we commenced the Phase IIb study RISE-IIP to investigate the safety and efficacy of riociguat in patients with symptomatic pulmonary hypertension associated with idiopathic interstitial pneumonia (IIP). Outside of the pulmonary hypertension indication, 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.

Since October 2014, we have been collaborating with Merck & Co., Inc., on the development and commercialization of sGC modulators.

Finerenone is a next-generation oral non-steroidal mineralcorticoid receptor antagonist that is currently in Phase IIb clinical development for the treatment of worsening chronic heart failure and diabetic nephropathy.

In the cardiorenal syndrome area, molidustat is being investigated for the treatment of patients with anemia accompanied by chronic kidney disease and/or terminal kidney failure.

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 several other countries for the treatment of patients with metastatic colorectal cancer (mCRC). In 2013, Stivarga™ was also approved in the United States, Japan and other countries for the treatment of gastrointestinal stromal tumors (GIST). In July 2014, the European Commission granted approval for the treatment of GIST.

In February 2014, we initiated a Phase III trial investigating the effect of regorafenib as an adjuvant treatment option for colorectal cancer patients following resection of liver metastases with curative intent and completion of all planned chemotherapy.

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 2014, a new Phase III trial began that is evaluating radium-223 dichloride in combination with abiraterone acetate and prednisone/prednisolone for the treatment of asymptomatic or mildly symptomatic patients with bone-predominant metastatic castration-resistant prostate cancer who have not received chemotherapy.

We are jointly developing and commercializing our cancer drug **Nexavar™** (active ingredient: sorafenib) with Onyx Pharmaceuticals, Inc., United States. The active ingredient sorafenib, which targets both cancer cells and the vascular system of the tumor, is registered in more than 100 countries for the treatment of liver cancer and advanced kidney cancer. In May 2014, Nexavar™ was approved by the European Commission for the treatment of patients with progressive, locally advanced or metastatic, differentiated thyroid carcinoma refractory to radioactive iodine. In June 2014, the Japanese MHLW approved sorafenib for the treatment of patients with unresectable differentiated thyroid carcinoma.

Two clinical Phase III trials with sorafenib failed to meet their respective primary endpoints in March and July 2014. The trials investigated sorafenib as an adjuvant treatment for hepatocellular carcinoma and as a combination therapy for breast cancer.

Copanlisib is a novel, intravenous phosphatidylinositol 3-kinase (PI3K) inhibitor currently in Phase II clinical development for the treatment of non-Hodgkin's lymphoma.

Ophthalmology

Eylea™ (active ingredient: aflibercept) is our joint developmental 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 blood. The medication is administered directly into the eye. Regeneron Pharmaceuticals, Inc. holds exclusive rights to the product in the United States, while in other countries it is marketed by Bayer.

Eylea™ is approved in more than 80 countries for the treatment of wet age-related macular degeneration (AMD). In 2013, Eylea™ was also approved in Europe, Japan, the United States and further countries for the treatment of visual impairment due to macular edema secondary to central retinal vein occlusion (CRVO). In August 2014, the European Commission approved Eylea™ in the treatment of diabetic macular edema (DME). The Japanese MHLW approved Eylea™ in this indication in November 2014. We also submitted the first applications – to the European Medicines Agency (EMA) in June 2014 and to the Japanese MHLW in September 2014 – for marketing authorization of aflibercept in the treatment of patients with visual impairment due to macular edema secondary to branch retinal vein occlusion (BRVO). In September 2014, the MHLW approved Eylea™ for the treatment of myopic choroidal neovascularization (mCNV). Pathologic myopia and the associated myopic CNV is the second most common cause of blindness in Japan.

Hematology

In May 2014, the recombinant Factor VIII Kogenate FS (octocog alfa) was approved in the United States for routine prophylaxis to prevent or reduce the frequency of bleeding episodes in adults with hemophilia A.

In December 2014 we submitted applications for marketing authorization to the European Medicines Agency (EMA) and the U.S. FDA for BAY 81-8973 for the treatment of hemophilia A in adults and children. BAY 81-8973 is a full-length recombinant factor VIII (rFVIII) which has demonstrated clinical evidence of efficacy when used for prophylaxis twice or three times per week, with standard dosages.

In February 2014, a Phase III study with damoctocog alfa pegol (Bay 94-9027), a long-acting recombinant Factor VIII, reached its primary objective of ensuring effective protection against bleeding caused by hemophilia A with fewer infusions.

We consider that gene therapy holds potential to offer new long-term treatment options for hemophilia A. Gene therapy could transform the treatment of hemophilia by inserting a correct version of the faulty gene responsible for the disease. We are currently working with our partner Dimension Therapeutics on a treatment option of this kind.

Gynecology

Vilaprisan (SPRM) is a novel oral progesterone receptor modulator that is currently being investigated in a Phase II trial for the treatment of uterine fibroids.

In February 2014, we successfully concluded the registration procedure in the European Union for a new transparent low-dose contraceptive patch (FC-Patch Low).

CONSUMER HEALTH

In our **Consumer Care** Division, research and development activities at the product development centers in Morristown, New Jersey and Memphis, Tennessee, United States, and Gaillard, France, focus on developing non-prescription medicines, medical skincare products, foot care products, sunscreens and nutritional supplements to market maturity. Aligned to end consumers, our development strategies are geared toward expanding and improving our brand portfolio through new products and delivery forms. We also work to achieve reclassification of current prescription medicines as OTC products. We introduced a number of new product line expansions to various markets in 2014. They included new delivery forms and uses for existing brands such as Canesten™, Bepanthen™/Bepanthol™, Coppertone™ and Dr. Scholl's™.

The research and development activities of our **Medical Care** Division focus on blood glucose monitoring and the continuing development of contrast agents and medical equipment used in the diagnosis or treatment of various diseases.

At our two U.S. research and development locations for the Diabetes Care business unit – Tarrytown, New York, and Mishawaka, Indiana – we are focusing on strengthening our product lines. Among the innovative products we launched in key markets in 2014 was the Contour™ TS platform in Europe.

The aim of our research and development activities in the area of contrast agents and medical equipment (Radiology business unit) is to steadily improve our contrast agents and our contrast injection systems in order to build on our leadership position. Our research and development centers are located near Pittsburgh, Pennsylvania, United States; in Toronto, Canada; in Berlin, Germany; and in Sydney, Australia. In June 2014, Gadavist™ (gadobutrol) was approved by the FDA as the first contrast agent in magnetic resonance imaging (MRI) for detection and evaluation of breast cancer. In January 2015, Gadavist™ was the first contrast agent to receive FDA approval for use in children under two years of age. In 2014 we also worked to expand the capabilities of our informatics product offerings by developing new software and informatics to improve contrast agent and radiation dose management.

In our **Animal Health** Division, we focus our research and development activities on antiparasitics, antibiotics and medicines to treat non-infectious disorders. We operate R&D centers in Germany, the United States, New Zealand and Brazil. Our central research activities are conducted in Monheim, Germany, as part of our Life Sciences platform in conjunction with pharmaceutical research and in close collaboration with our researchers at CropScience. We reinforce the business by continually identifying further product development candidates through our existing collaborations.

OPEN INNOVATION

Strategic cooperation in research and development

We gain access to complementary technologies and external innovation potential through strategic collaborations with partners. Our **Pharmaceuticals** segment works with various partners during the individual development stages of a medicine. A number of examples are listed below:

Pharmaceuticals Cooperation Partners [Table 3.5.4]

Partner	Cooperation objective
Amgen Research GmbH	Access to BiTE™ antibodies for developing novel tumor therapies
Ardea Biosciences Inc.	Codevelopment of oncology products based on MEK (mitogen-activated ERK kinase) inhibitors
BioInvent International AB	Access to antibody library with antibody inlicensing option
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
Cubist Pharmaceuticals, Inc.	Codevelopment of tedizolid to treat various infections
German Cancer Research Center	Strategic partnership for the development of new therapeutic options in oncology and immunotherapy
Dimension Therapeutics, Inc.	Development of a novel gene therapy for hemophilia A
Dyax Corp.	Access to antibody library with the option to inlicense antibodies for the development and commercialization of novel tumor therapies
Evotec AG	Research collaboration to identify and validate development candidates in endometriosis
ImmunoGen Inc.	Cooperation in the field of antibody-drug conjugates (ADCs) for novel tumor therapies
Inception 4, Inc.	Research into new approaches for the treatment of various eye diseases
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 and marketing collaboration in the field of soluble guanylate cyclase (sGC) modulation
Nektar Therapeutics	Codevelopment of a targeted antibiotic inhalation therapy for lung infections (amikacin inhale)
Novartis AG	Development of a targeted antibiotic inhalation therapy for lung infections (ciprofloxacin DPI)
OncoMed Pharmaceuticals Inc.[1]	Discovery and development of novel anti-cancer stem cell therapeutics
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
Peking University	Research cooperation and establishment of a research center for joint projects
Prometheus Laboratories Inc.	Development of diagnostic in-vitro assays for personalized medicine
Qiagen Manchester Ltd.	Development of companion diagnostic tests in personalized oncology treatment
Regeneron Pharmaceuticals Inc.	Development of Eylea™ (aflibercept) to treat various eye diseases Development of a PDGFR-beta antibody for ophthalmology
Seattle Genetics Inc.	Cooperation in the field of antibody-drug conjugates (ADCs) for novel tumor therapies
Tsinghua University	Research cooperation and establishment of a research center for joint projects
University of Oxford	Strategic research alliance for the development of novel gynecological therapies

[1] Bayer is not active in the area of conventional stem cell research, which examines adult or embryonic stem cells.

In June 2014, we signed an agreement with Orion Corporation, Espoo, Finland, for the global development and commercialization of ODM-201, an investigational novel oral androgen receptor inhibitor in clinical development for the treatment of patients with prostate cancer. A joint clinical Phase III study to further evaluate the efficacy and tolerability of ODM-201 in patients with non-metastatic castration-resistant prostate cancer was initiated in September 2014.

In June 2014, we entered into an agreement with Dimension Therapeutics concerning the joint development and commercialization of a novel gene therapy for the treatment of hemophilia A.

In July 2014, we entered into a strategic research alliance with the University of Oxford, U.K., in the area of novel gynecological therapies. The collaboration focuses on innovative treatment options for women with endometriosis and uterine fibroids.

In October 2014, we began our strategic pharmaceutical collaboration with Merck & Co., Inc. in the area of soluble guanylate cyclase (sGC) modulation. This collaboration includes Adempas™ (riociguat), which was developed by Bayer and is already approved for the treatment of certain forms of pulmonary hypertension, and its development for additional indications. The development candidate vericiguat also forms part of the collaboration.

In the area of oncology, we began collaborating in 2014 with the MD Anderson Cancer Center, United States, for early clinical development.

In April 2014, we announced our participation in the "High-Tech Gründerfonds II," in which we are the first investor from the pharmaceutical industry. This fund supports and finances promising start-ups in the life sciences and other areas in Germany. In November 2014, we also announced that we will participate as a strategic investor in the newly established "Versant Venture Capital V" fund. In this way we aim to support the development of new therapies in areas with a high unmet medical need.

Since 2009 we have been operating an internet platform called "Grants4Targets," through which researchers at universities, other research institutions or start-up companies can propose biological targets for a collaboration with Bayer. In 2013 we added two more platforms: "Grants4Leads" for proposals concerning biologically active molecules as leads, and "Grants4Apps" for proposals regarding IT solutions with potentially multiple applications in the health care field. In August 2014 a further initiative was launched: the "Grants4Apps Accelerator Program." Five start-ups with innovative health care and therapy-relevant solution approaches are each receiving a start-up package under this program.

Since 2012, we have run the CoLaborator™, a center in the Mission Bay district of San Francisco with laboratory facilities for bioscience startup companies. With this incubator concept, the scientists benefit both from the laboratory infrastructure and from the expertise of the Bayer researchers, which can facilitate the professional, goal-oriented design of development programs, for example. At the same time, we aim to be the first contact point for young companies in their search for possible cooperation partners. We opened a second CoLaborator™ at the Berlin site in May 2014.

CROPSCIENCE

Research and development expenses at CropScience rose by 13.6% (Fx adj.) in 2014 to €974 million. Adjusted for special items of €0 million (2013: €3 million), this represented an increase of 14.0% (Fx adj.) and was equivalent to 10.3% of CropScience sales.

CropScience maintains a global network of research and development facilities employing some 5,000 people. Our largest R&D sites for chemical and biological crop protection products are located in Monheim and Frankfurt am Main, Germany; Lyon, France; and Sacramento, California, United States. The major research centers of the Seeds unit, which focuses on improving seed through seed technology and breeding, are located in Ghent, Belgium; Haelen, Netherlands; and Lubbock, Texas and Morrisville/Raleigh, North Carolina, United States. 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 substances and crop varieties can be tested according to specific regional and local requirements.

In **Crop Protection/Seeds,** our scientists working in the areas of seed technology, agricultural chemistry and biologics are closely collaborating as part of our integrated research approach. This bundles the technical expertise acquired in chemical and biological research and field development, aligning it to our long-term research objectives and business strategies for the various crops.

In the Crop Protection unit, we identify and develop 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 steadily broadening the range of uses for our active ingredients by developing new mixtures or innovative formulations so that they can be applied in additional crops or in different regions or be made easier to handle. Successful collaborations with external partners complement our own activities.

In March 2014, CropScience signed an agreement to acquire Biagro Group, a producer and distributor of biological seed treatment solutions based in Argentina. Its portfolio of established brands includes biological seed treatment products, plant-growth-promoting microorganisms and other products for integrated pest management based on bacterial and fungal strains.

Also in March 2014, CropScience announced plans to significantly expand its research site in Wismar, Germany, in order to serve the growing global demand for biological crop protection solutions. The planned investment includes the construction of a new manufacturing facility for biological crop protection products along with the necessary infrastructure. The production capacities will be expanded in stages, and work should be completed by 2016 at the latest. The planned total investment amounts to approximately €18 million.

In May 2014, CropScience's rice herbicide Council™ Complete received regulatory approval in South Korea – its first registration worldwide. The market launch in South Korea is scheduled for 2015, with other major rice-growing countries in Asia to follow. Council™ Complete is based on two innovative active ingredients, triafamone and tefuryltrione, which considerably improve integrated weed control. In 2014 Bayer CropScience also launched a new nematicide based on the active ingredient fluopyram and marketed under the brand names Velum™ and Verango™. In field trials, these products have shown a significant increase in yield and quality in a broad spectrum of crops such as fruit, vegetables and tobacco. We plan to launch several more new products based on chemical and biological crop protection mechanisms in the coming years. For example, in 2015 we expect to launch a further insecticide under the Sivanto™ brand, a new insecticide class for the control of sucking insects.

In September 2014, we combined our U.S. research and development activities in vegetable seeds and biological crop protection products at a new, integrated site in West Sacramento, California. Our goal is to better exploit the potential of our global research and development capacities by merging and expanding 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 new 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 (canola) 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.

In January 2014, CropScience signed two new agreements with Cellectis Plant Sciences, United States. The extended partnership aims to develop plant traits specifically for canola seed using new breeding methods. The collaboration also gives Bayer access to technologies that enable the direct engineering of plant genomes in order to develop improved crop varieties.

We aim to jointly develop advanced hybrid rice varieties with Kaiima Bio-Agritech Ltd., Israel. The goal of the multi-year collaboration is to breed new high-yielding hybrid rice varieties.

In June 2014, the first global soybean brand from CropScience – Credenz™ – was launched in the United States. Under this brand, the company intends to offer soybean growers innovative varieties and traits. HBK™ Seed, the brand of Hornbeck Seed Company, United States, which CropScience acquired in 2011, will also be sold under the Credenz™ name.

At the end of September 2014, we acquired the seeds business of Granar S.A., headquartered in Encarnación, Paraguay, a company specializing in the breeding, production and marketing of improved seed, especially soybean seed. Granar has a strong presence in Paraguay and Uruguay, and an increasing presence in Brazil. At the focus of the acquisition is Granar's Igra™ Semillas brand. Granar retained responsibility for marketing Igra™ seed until the end of 2014. For CropScience, this acquisition represents one more step towards achieving an international platform of excellence in soybean seed. It also underscores the importance of the Latin American region for the soybean seed business.

Our proprietary glyphosate herbicide tolerance technology GlyTol™ has been available in FiberMax™ cotton seed varieties in the United States for several years. In 2014 we launched a new combination of insect resistance and herbicide tolerance for cotton that for the first time contains both TwinLink™ and GlyTol™ technology, offering farmers integrated pest and weed control.

In the 2014 planting season, CropScience began marketing a new canola variety in Canada under the InVigor™ brand. The hybrid variety features a new trait that prevents the pods from opening prematurely, thus enabling higher yields.

In the coming years we plan to market numerous new hybrid rice and canola varieties with improved stress and insect resistance under the Arize™ and InVigor™ trademarks.

We plan to launch the first CropScience wheat seed in 2015. In September 2014, CropScience announced plans to invest a total of €1.5 billion in the research and development of wheat seed and crop protection products for wheat between 2010 and 2020.

With many crops, such as vegetables, major success can be achieved using conventional plant breeding methods. As vegetables are mostly intended 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.

Our integrated product pipeline for crop protection and seed technology contains a total of 25 individual projects, along with numerous new seed varieties and improved products that have estimated launch dates between 2011 and 2016. We believe these products have a combined peak sales potential of more than €4 billion. In Crop Protection, we plan to have launched around 10 products by the end of this period. In our Seeds business, we plan to bring some 15 projects to market for the broad-acre crops of cotton, oilseed rape/canola, rice, wheat and soybeans, along with several hundred new vegetable varieties, over the same period.

Group target 2014: CropScience – transfer of at least six new molecular entities (NMEs) and traits into confirmatory technical proof-of-concept field studies

See Chapter 1.3 for Group targets

In **Environmental Science**, we evolve chemically and biologically based solutions for consumers and professional users by tailoring substances from our Crop Protection unit or external partners for use in non-agricultural scenarios. Current development projects include insect gels and baits, herbicides, fungicides and products for the control of disease-transmitting insects.

In 2014 Environmental Science expanded its portfolio in all business segments. We strengthened our range of turf care products for golf courses with the introduction of the new fungicide Mirage™ in the United States and the new herbicide Tribute™ in South Korea. In the area of professional pest control, we launched new formulations of the insecticides Maxforce™ (Maxforce™ Fusion, Maxforce™ Prime) in Europe. The herbicide Esplanade™ (active ingredient: indaziflam), which is already used very successfully in the U.S. industrial vegetation management sector, became available to customers in Canada in 2014. We launched a number of new insecticides for private customers in Europe. In addition, we expanded the Natria™ range of biological solutions in the United States.

In October 2014, CropScience announced plans to purchase certain assets of DuPont Crop Protection's land management business in the United States, Canada, Mexico, Australia and New Zealand. The transaction was closed at the beginning of December 2014 after it received regulatory approvals. This acquisition will enable Environmental Science to offer a comprehensive portfolio of effective weed control products for industrial vegetation management. In addition, the company will gain access to the growing forestry and range and pasture business segments in North America. DuPont will continue to sell its land management products outside the United States, Canada, Mexico, Australia and New Zealand.

OPEN INNOVATION

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. These cross-industry partnerships enable us to better understand and do justice to the needs of our customers over the long term. An example is the partnership between CropScience and the U.K.-based Innovative Vector Control Consortium (IVCC). We are cooperating with IVCC to develop new substances for use against mosquitoes that transmit diseases such as malaria and dengue fever.

Bayer has played an active role for over 50 years in the fight against malaria, which remains among the most dangerous tropical diseases. The product portfolio of CropScience enables it to offer a unique range of solutions. For example, CropScience – through its Environmental Science operating segment – is a leading producer of indoor spray insecticides to control malaria mosquitoes. Over the past three years, Ficam™ has played a particularly important role in controlling mosquitoes resistant to pyrethroids. In 2014, CropScience once again made an important contribution to malaria protection by supplying Ficam™ in Ethiopia. After the WHO had already recommended our new, long-acting and thus more cost-effective deltamethrin-based spray insecticide K-Othrine PolyZone™ in 2013, national registration applications were submitted in 2014 in several countries of sub-Saharan Africa.

In April 2014, CropScience and Targenomix GmbH, Potsdam, Germany, entered into a five-year research collaboration to jointly develop and apply systems biology approaches to gain a better understanding of genetic and metabolic process regulation in plants. The aim is to use novel active substances and plant traits to develop innovative crop protection and plant health solutions.

CropScience also continued its wheat research collaboration with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in Australia. This strategic collaboration, which began in 2009, is aimed at raising wheat yields and thus boosting global wheat production in the long term.

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 now been working in food chain partnerships for 10 years, helping to improve the quality of crops and raise yields. It has initiated such projects for over 40 crops in more than 30 countries, mainly in Asia, Latin America and Europe. Our experts advise farmers on sustainable growing methods – from seed selection and the controlled, eco-friendly use of crop protection products to the transparent monitoring of production.

We also worked with certifier GLOBAL G.A.P. to lay the foundation for training designed to help small farmers understand and meet the requirements of good agricultural practice using CropScience's training programs. It is planned to introduce "BayGAP foundational training" throughout the world in 2015, enabling small farmers to supply local customers according to their needs.

CropScience: Important Collaborations [Table 3.5.5]

Partner	Cooperation objective
Celletics Plant Sciences	Targeted modification of certain plant genes and genomes to improve the plants
CSIRO	Increase in wheat yields and long-term increase in global wheat production
IVCC	Joint development of new substances to control mosquitoes that transmit diseases such as malaria and dengue fever
Kaiima	Development of modern hybrid rice varieties
Targenomix	Development and application of systems biology processes to better understand genetic and metabolic process regulation in plants

MATERIALSCIENCE

Research and development expenses at MaterialScience decreased by 8.2% in 2014 to €210 million. Adjusted for special items of minus €3 million (2013: €20 million), this represented an increase of 0.9% (Fx adj.) and was equivalent to 1.8% of MaterialScience sales. In addition, MaterialScience spent €79 million (2013: €97 million) on joint development projects with customers.

A total of about 900 people were employed in research and development in 2014, many of them at major Innovation Centers in Leverkusen, Germany; Pittsburgh, Pennsylvania, United States; and Shanghai, China. The strong international presence is also geared toward aligning our research and development to regional market trends and customer needs, especially in the emerging economies.

Our activities in the **Polyurethanes (PUR)** business unit include work on products and material solutions to drive forward the use of environmentally friendly wind energy. The most recent developments include polyurethane infusion resins used in the interior of wind turbine rotor blades to bond fiber layers to a stable core. The resin is better distributed and cures more quickly than conventional infusion material, thus significantly reducing production times and saving costs. The material can also be used without difficulty for very long rotor blades capable of generating larger quantities of electricity.

In the area of process development, we are progressing with the use of carbon dioxide as a new source of carbon for polyurethanes in order to reduce dependence on petrochemical raw materials. In 2014, for example, we began transitioning an existing research project ("Dream Production") to commercial use. The goal is to begin marketing an innovative form of the polyol component of polyurethane with a CO_2 content of around 20% in 2016. At the laboratory level, we also succeeded in producing another polyol type through direct and indirect integration of CO_2 using 40% alternative raw materials – a further contribution to resource efficiency.

Our activities in the **Polycarbonates (PCS)** business unit are mainly geared to the development of products for the automotive and electrical/electronics industries as well as the IT sector. The focus here is on reducing weight, improving energy efficiency and safety, and enabling greater design freedom.

In the automotive industry, our focus is partly on exterior applications. Not only add-on components such as spoilers, but also glazing and entire panorama roofs and their frames are increasingly being manufactured from polycarbonate or polycarbonate blends that weigh up to 50% less than equivalent glass or steel components. This supports the industry's efforts to produce cars that are as light as possible and therefore more fuel-efficient. We are working to further improve the properties of these products and the respective manufacturing processes.

Light-emitting diodes also contribute to sustainability in vehicles and in other applications, as they require significantly less energy and last longer than traditional light sources. We have developed special materials for channeling, scattering and reflecting LED light that feature high transparency, design freedom and heat resistance. Special materials can also be used in the production of thermally conductive parts, helping to make LED light sources last longer.

We are also working on the evolution of polycarbonate-based composite materials that address the needs of the automotive, consumer electronics and other industries. In this area we are developing especially lightweight, continuous-fiber-reinforced materials that can be used in the future in applications such as chassis and structural components, or as housing materials for ultra-mobile laptops, tablet computers and smartphones.

In the **Coatings, Adhesives, Specialties (CAS)** business unit, we are driving the development of raw materials for high-performance polyurethane coatings, colorants, adhesives and sealants. Among our fields of research and development are coatings for textiles and synthetic leather. For these coatings we have developed a new generation of purely waterborne polyurethane dispersions. This technology, which was launched in mid-2014 under the name Insqin™, enables all types of coated textiles and synthetic leather to be manufactured without using solvents.

Our development activities as a whole are focused on eco-friendly products that spare resources and can be more efficiently applied. The use of renewable raw materials is also playing an increasingly important role.

OPEN INNOVATION

In line with the open innovation approach, MaterialScience collaborates with external scientific institutions and with start-up companies and academic spin-offs. These collaborations are mainly based in Europe, the United States, China or Japan.

Our partners in Germany include RWTH Aachen University, Germany, with which we jointly operate the CAT Catalytic Center. In China we maintain a close alliance with Tongji University in particular, while in the United States we support research activities at renowned universities.

In the scientific field, we take either a leading or an advisory role in numerous publicly funded projects. We also participate in industry associations and other organizations such as the German Chemical Society (GDCh), the DECHEMA Society for Chemical Engineering and Biotechnology in Germany and the American Chemical Society. Our innovation capability is also spurred by collaborations with customers or other industry sectors, an example being the "future_bizz" corporate network.

BAYER TECHNOLOGY SERVICES

Bayer Technology Services is a major driver of innovation for the subgroups in the areas of technology development, engineering and production. All Bayer subgroups work closely with this service company worldwide on technology solutions, particularly in the fields of process technology, engineering, and the safe and efficient operation of production facilities. ONLINE ANNEX: 3-5-4

Technology Services – an important innovation partner for all subgroups

6. 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).

Responsibility for steering and aligning our Group-wide sustainability strategy lies with the Group Management Board member responsible for Human Resources, Technology and Sustainability in his function as Chief Sustainability Officer, and with the Sustainable Development (SD) Committee chaired by the Group Head of Environment & Sustainability. ONLINE ANNEX: 3-6-1

The SD Committee, on which all subgroups are represented, sets targets, draws up initiatives, management systems and Group regulations, and is responsible for monitoring these aspects. In order to operationalize the Group strategy and make it measurable, we have set ambitious non-financial targets and indicators all along the value-added chain. Further information about our target program can be found in Chapter 1.3 "Targets and Performance Indicators." Internal Group regulations ensure the implementation of our sustainability principles in business operations. These principles are realized through corresponding management systems, regulations and processes at the subgroup level.
ONLINE ANNEX: 3-6-2

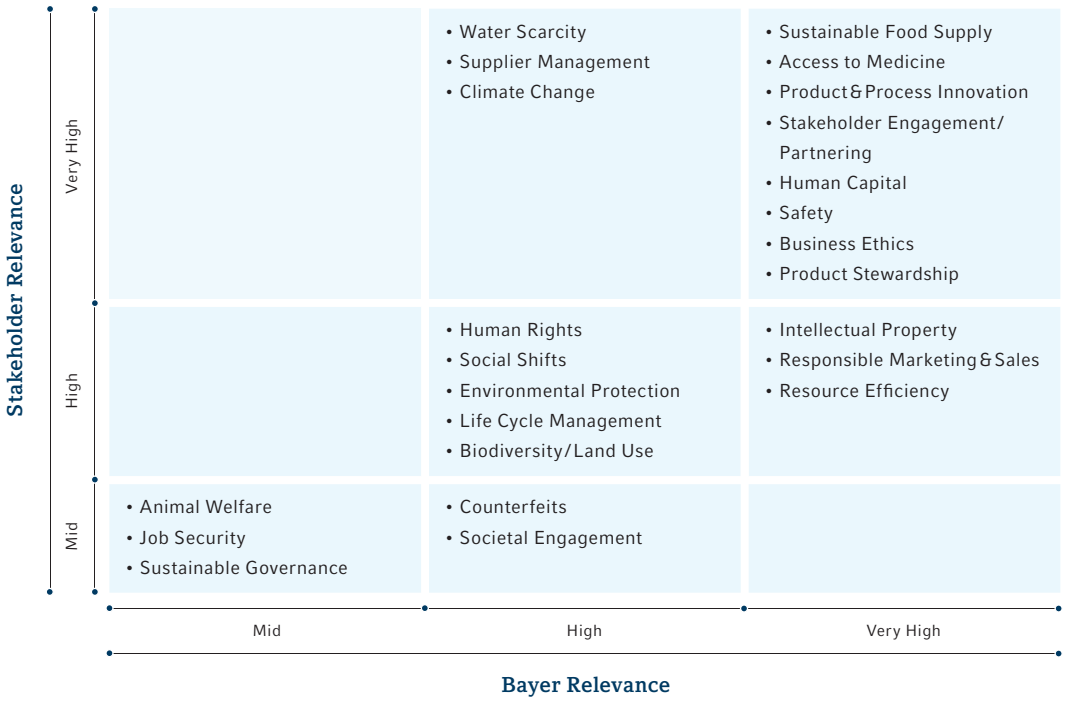
See Chapter 1.3

MATERIALITY ANALYSIS

We analyze and evaluate what the major stakeholders expect and require from the Group. This approach enables us to identify early on any opportunities and risks relevant to sustainability, along with key non-financial areas of activity, and to react to them.

We updated our materiality analysis during 2014. First, relevant external stakeholder sources were analyzed to identify the main non-financial issues for Bayer. The analysis was conducted with the support of an international management consultancy company to ensure neutrality in the process. The relevance to Bayer of the most important 24 issues identified in this way was evaluated in respect of sales, costs, risk and reputation by selected representatives of the Bayer holding company and the three subgroups in the form of interviews and a global online survey. Internal and external views were then entered into the following matrix for discussion and confirmation by the SD Committee. The matrix was formally accepted by Bayer's Chief Sustainability Officer. Next year, reporting will be structured according to the new GRI G4 guidelines on the basis of the non-financial subject areas identified.

Materiality Matrix [Graphic 3.6.1]



Definitions of these areas of activity can be found in ONLINE ANNEX: 3-6-3.

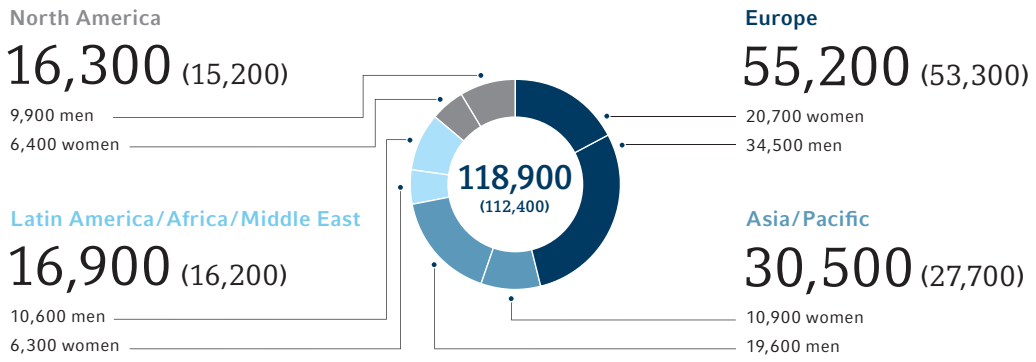
STAKEHOLDER DIALOGUE AT BAYER

Bayer considers itself 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 among Bayer's stakeholders 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: 3-6-4

7. Employees

Our business success is largely attributable to the knowledge, skills and commitment of our employees. It is their ability to innovate and their willingness to embrace continuous development that drive our position as a world-class innovation company. This is clearly reflected in our new employer branding: "Passion to innovate | Power to change," which shows what the Bayer Group expects of its employees and what it can offer them. It translates Bayer's mission statement "Science For A Better Life" into the world of work. Following introduction in China, Brazil, Germany and the United States, it will be in use worldwide by the end of 2015.

Employees by Region and Gender 2014 [Graphic 3.7.1]



2013 figures restated and in parentheses; as of 2014 interns are no longer accounted for in the data; values rounded to the nearest hundred

TARGETING TALENTS

We create a working environment where everyone can utilize their full potential, drive forward innovations and achieve an excellent performance. That is how Bayer attracts the most talented employees worldwide and retains them in the company in the long term. In total, the Bayer Group hired more than 15,500 new employees in 2014. ONLINE ANNEX: 3-7-1

Our success in recruiting employees is attributable to our attractiveness as an employer, which was once again confirmed by numerous awards around the world in 2014, for example in Brazil and Germany.

www.bayer.com/en/awards.aspx

In addition, it is due to our foresighted recruitment policies in all countries where we operate. We maintain close contact to leading universities throughout the world to draw the opportunities offered by Bayer to the attention of gifted students as early as possible. In some regions, this also enables us to selectively cover our recruitment needs. In 2014 we expanded our activities in Taiwan, Hong Kong, Finland and the Philippines. Raising our profile in this way encourages an increasing number of young people to apply to Bayer, so we are not currently facing a significant skills shortage in Germany. Nevertheless, as a prudent company we are already addressing the foreseeable consequences of demographic change by stepping up our activities to recruit staff, especially from the younger generation, retain knowledge in the company and foster the health of our employees worldwide.

We therefore give young people an opportunity to gain an insight into working for our company at an early age. Overall, Bayer provided around 3,100 demanding professional internships to students around the world in 2014. We also train young people for more than 20 different occupations. In Germany alone, nearly 900 young people embarked on a vocational training course at Bayer in 2014. We intend to step up this commitment in the coming years.

Employees by Age Group [Table 3.7.1]

Age in years	< 20	20 – 29	30 – 39	40 – 49	50 – 59	> 60
2013	0.2%	15.7%	29.8%	29.1%	22.2%	3.0%
2014	**0.1%**	**15.8%**	**30.2%**	**28.2%**	**22.3%**	**3.4%**

PRESENT EMPLOYEE DATA

On December 31, 2014, Bayer had around 118,900 employees worldwide. This increase of just over 5% compared with the previous year was mainly driven by acquisitions. In Germany there were 35,800 employees (2013: 35,300), which was 30% of the total Group workforce.

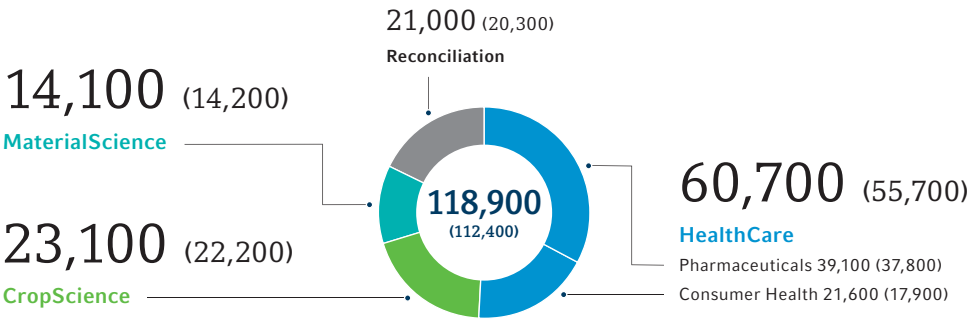
Employment Data[1] [Table 3.7.2]

	Dec. 31, 2013	Dec. 31, 2014
	FTE	FTE
Employees by region		
Europe	53,274	55,207
North America	15,196	16,317
Asia/Pacific	27,684	30,436
Latin America/Middle East/Africa	16,212	16,928
Employees by corporate function		
Production	45,616	49,288
Marketing and distribution	44,225	46,417
Research and development	13,509	14,026
General administration	9,016	9,157
Total	**112,366**	**118,888**
Apprentices	2,538	2,566

2013 figures restated
[1] 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. As of 2014, interns are no longer accounted for in the figures.

The breakdown by subgroup was as follows in 2014:

Employees by Segment 2014 [Graphic 3.7.2]



2013 figures restated and in parentheses; as of 2014 interns are no longer accounted for in the data; values rounded to the nearest hundred

Of the total Group workforce, 113,700 employees had permanent contracts while 5,200 had temporary contracts. ONLINE ANNEX: 3-7-2

In 2014 we were again successful in retaining staff in the company for long periods. On the reporting date, our employees had worked for the company for an average of 12 years, the same as in the previous year.

Group-wide, the fluctuation rate was around 11% in 2014 and thus down 3 percentage points on the year. The proportion of employee-driven terminations (voluntary fluctuation) in 2014 was around 5%.

Employee Fluctuation[1] [Table 3.7.3]

	Voluntary fluctuation		Total[2]	
	2013	2014	2013	2014
Women	6.5%	5.3%	15.4%	11.6%
Men	4.8%	4.6%	13.1%	11.3%
Total	**5.5%**	**4.8%**	**14.0%**	**11.4%**

[1] The fluctuation rate is calculated as the ratio of the headcount to the number of employees stated in full-time equivalents.
[2] includes all employer- and employee-driven terminations, retirements and deaths

Further information on fluctuation by region and gender can be found in the ONLINE ANNEX: 3-7-3

In Germany, 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: 3-7-4

UNIFORM GROUP-WIDE PERFORMANCE MANAGEMENT

In 2014 we started to introduce "Bayer Competencies" throughout the Group. The aim is to enhance development opportunities for employees and at the same time provide guidance on career paths. There are 16 clearly defined core and leadership competencies, which have been introduced as a reference base for personnel management in all areas. They are intended to ensure that in the future managers and employees use uniform terminology and criteria to assess professional activities in all situations, ranging from recruitment interviews to the Development Dialogue. The Bayer Competencies help put the LIFE values into practice and ensure fair and transparent discussion.

As part of Bayer's global performance management system, employees agree individual objectives with their supervisor. These are based on corporate goals. At the end of the year, attainment of these objectives is evaluated by each supervisor and discussed individually with employees. The results are documented in the employee portal so they are transparent to each employee. In 2014, this system covered more than 83,000 employees, i.e. about two-thirds of our total workforce. Of the participants, 41% were female and 59% 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. Observing the LIFE values is as important as meeting business targets and therefore affects the level of their variable compensation.

In addition, more than 26,500 Development Dialogues were held with employees in 2014 as part of the performance management system. They are an opportunity for employees to discuss their personal strengths and development needs, career expectations and professional aspirations. We aim to step up the Group-wide rollout of the Development Dialogue and give it a firm place in our global leadership culture.

EMPLOYEE COMMUNICATION

Group target: improvement in employee engagement (established using a Group-wide employee survey conducted every two years)

See Chapter 1.3 for Group targets

Our Group-wide Employee Survey is an important element in our intensive dialogue with our employees and a key feedback tool for the entire Group. It is conducted every two years and gives us competent feedback from our employees on our strategy, culture and working conditions. In 2014, a record 79% of employees took part in the third Group-wide Employee Survey. Compared with the previous survey in 2012, the findings show an improvement in all areas covered. Particularly high scores were once again registered for employee engagement, with an overall result of 87% (+2%). This shows we are meeting our goal of a continuous improvement in employee satisfaction. The survey revealed improvements but also showed that the willingness to embrace new ideas needs further encouragement. For example, there is a need to improve the basis for open exchange of ideas with direct colleagues. In addition, Bayer would like to strengthen communication between senior management and employees. ONLINE ANNEX: 3-7-5

Dialogue with employees includes informing staff promptly and extensively about upcoming changes, in compliance with the applicable national and international regulations. ONLINE ANNEX: 3-7-6

We actively involve our employees in dialogue through a range of offerings and specifically encourage open discussion. Particular attention is paid to explaining strategic issues, business performance, research, innovation and sustainability.

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. ONLINE ANNEX: 3-7-7

ADVANCING KNOWLEDGE AND LEADERSHIP SKILLS

Fostering employees' individual abilities, talents and strengths is another key factor for Bayer's future success. Sustained success is only possible if we create working conditions that allow all employees to utilize their talents optimally and therefore contribute to innovative solutions. We therefore actively support lifelong learning as part of our philosophy of people development and managing 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. ONLINE ANNEX: 3-7-8

At the heart of our ongoing training concept is the Group-wide Bayer Academy, which bundles our extensive continuing education opportunities. Alongside systematic development of managerial employees, it offers continuous professional training through various functional academies. In 2014, the Bayer Academy was honored with the renowned Brandon Hall Group Excellence Award in bronze in the "Best Leadership Development Program" category.

15,269 managers from various management levels have received training through the various programs offered by the Bayer Academy for managers since 2013, including 9,536 in 2014.

Harmonization of our employee training concept has also improved reporting on participation rates. Our global training reporting system currently compiles data on the main training activities in 73 countries. Employees received an average of 22.1 hours training in these countries.

Training Activities in Hours in 2014 by Employee Group and Gender[1] [Table 3.7.4]

	Women	Men	Total
Employee group			
Senior management	45.3	32.5	34.2
Junior management	26.9	22.6	24.1
Specialists	17.3	13.6	15.0
Overall average	**20.4**	**16.7**	**18.0**

[1] Selected training activities in the 14 largest countries where distinguishable by category and gender in the system. The gender-specific averages do not include the United States or Japan as statutory regulations preclude differentiation by gender in these countries.

Well-trained employees who keep up with the latest developments expect to be offered new perspectives. Thanks to its wide-ranging business activities, Bayer can offer them development opportunities within the Group. Vacancies in the Bayer Group, from non-managerial right up to senior management level, are advertised via a globally accessible platform. In 2014 we posted around 11,900 vacancies in 62 countries on this platform.

DIVERSITY AND INTERNATIONALITY

A diverse employee structure is vital for our company's future competitiveness. This is particularly true for our management throughout the Group. 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 the management level is 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.

Furthermore, since November 2014 Bayer has been a member of the Gender Parity Council of the World Economic Forum in Davos.

Overall, the Bayer Group employs people from 150 different nations. Of the members of our Group Leadership Circle, in which 35 nationalities are currently represented, around 66% come from the country in which they are employed. The Group Leadership Circle comprises managers who perform senior functions at Bayer AG and in the subgroups and service companies. Five years ago, 23 nationalities were represented in the Group Leadership Circle. 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 2014, the proportion of employees in the latter group had increased by two percentage points.

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

At the end of 2010 we set ourselves the target of shifting the proportion of women to men in senior management (the five highest contract levels) from a ratio of 21% to 79% to a ratio of 30% to 70% by the end of 2015. At the end of 2014, the ratio was 26% to 74%. Our gender balance has therefore improved by five percentage points in four years.

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

See Chapter 1.3 for Group targets

In our Group Leadership Circle, the ratio had improved from 93% men and 7% women at the end of 2010 to 87% men and 13% women by year-end 2014. ONLINE ANNEX: 3-7-9

WORK-LIFE BALANCE

Our employees' lifestyles are as diverse as they are. Bayer 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. In 2014 we continued to expand our benefits and services in this area.

In 2014 the Bayer Group had around 9,500 part-time employees, just under 8% of the total workforce.
ONLINE ANNEX: 3-7-10

By the end of 2014, around 81% of employees in Germany who took statutory parental leave or participated in the company's more far-reaching "Family & Career" program over the past five years had returned to work. Roughly 60% of the returnees were female and 40% were male. Since national parental leave regulations vary widely from country to country, we only compile data for Germany.
ONLINE ANNEX: 3-7-11

A General Works Agreement on caring for close relatives came into effect at Bayer in Germany in April 2014. The agreement makes it easier for employees to combine working with their role as a carer.
ONLINE ANNEX: 3-7-12

Bayer also extended the range of flexible working arrangements offered to employees in many regions such as in Costa Rica, Poland, Slovenia, South Korea and East Africa. In many cases, the offerings go well beyond statutory requirements.

EMPLOYEE COMPENSATION AND BENEFITS

Bayer's compensation philosophy is rooted worldwide in the LIFE values. A basic salary reflecting performance and responsibility is combined 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. Raises 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 compensation worldwide and informing our employees transparently about the overall structure of their compensation. ONLINE ANNEX: 3-7-13

Consolidated Financial Statements Note 26.6

Under our Group-wide Short-Term Incentive program alone, variable one-time payments totaling around €900 million are earmarked for our employees for 2014. In many countries, employee stock programs enable our staff to purchase shares in Bayer 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 a uniform stock-based compensation program known as "Aspire" (see Note [26.6] to the consolidated financial statements). This is based on ambitious earnings targets and – in the case of the Group Leadership Circle members – requires an appropriate personal investment in Bayer stock.

In 2014 our personnel expenses amounted to €9,845 million (2013: €9,430 million). The change was mainly due to an increase in employee numbers, higher employee bonuses and salary adjustments.

Personnel Expenses and Pension Obligations [Table 3.7.5]

	2010	2011	2012	2013	2014
	€ million	€ million	€ million	€ million	€ million
Personnel expenses	8,099	8,726	9,194	9,430	9,845
of which pension and social security contributions	1,623	1,672	1,823	1,845	1,847
Pension obligations[1]	17,699	19,310	22,588	20,682	27,771

[1] present value of defined-benefit obligations for pensions and other post-employment benefits

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 directive. Alongside working conditions in the Bayer Group, this outlines 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 mission statement, 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. ONLINE ANNEX: 3-7-14

See Chapter 8

To enhance our employees' awareness of the importance of human rights in their day-to-day activities, we organized a variety of training seminars in 2014 on the main aspects of our Human Rights Position. Courses totaling 240,000 hours in duration were offered and were attended by approximately 53% of our workforce.

The compliance organizations at the Group and country levels monitor compliance with the relevant directives. If there are signs of violation, employees can contact their Compliance Officer at any time, anonymously if required. For further details see Chapter 18.3 "Compliance."

See Chapter 18.3

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 35,800 employees, business-related dismissals are excluded through the end of 2020 for a large proportion of employees under an agreement with the employee representatives.

The reduction of around 700 positions at MaterialScience worldwide over a period of four years, which was announced in September 2013, will also be undertaken in a socially compatible manner wherever possible, such as by utilizing natural fluctuation and avoiding business-related dismissals. Approximately 350 of these positions were shed in 2014.

In 2014 the working conditions for around 52% 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.

Percentage of Collective Agreements by Region [Table 3.7.6]

	Percentage of employees covered by collective agreements, especially on compensation and working conditions[1]		Percentage of full-time employees with contractually agreed 48-hour work weeks	
	2013	2014	2013	2014
	%	%	%	%
Region/Area				
Asia/Pacific[2]	18	14	100	100
Europe	88	87	100	100
Latin America/Africa/Middle East	45	45	100	100
North America	5	5	100	100
Total[2]	**54**	**52**	**100**	**100**

[1] collective or company agreements
[2] 2013 figures restated

Our understanding of our role as a socially responsible company includes a commitment to helping disadvantaged people. Some 2,500 people with disabilities are employed in 27 countries. That is around 2% of our total workforce. 35% are female and 65% male. Most of them work for our companies in Germany, where they made up 4.7% of the workforce in 2014.

Our sustainable human resources policy also includes ensuring a high level of social protection for our employees. Alongside competitive compensation, we offer our employees a wide range of additional benefits, for example almost all employees worldwide have either statutory health insurance or can obtain health insurance through the company. In 2014, we once again expanded or improved the quality of the health benefits provided for employees in many countries. 77% of employees have access to a company pension plan.

Health Insurance and Pension Plans [Table 3.7.7]

	Health insurance[1]		Pension plans[2]	
	2013	2014	2013	2014
	%	%	%	%
Region				
Asia/Pacific	92	95	39	57
Europe	99	99	87	86
Latin America/Africa/Middle East	94	94	55	59
North America	89	92	97	99
Total	**95**	**96**	**72**	**77**

[1] state or employer/employee-funded
[2] programs to supplement statutory pension plans

To supplement health insurance, Bayer actively encourages awareness of healthy lifestyles, especially in view of the challenges facing us as a result of demographic change and the raising of the retirement age in many countries.

Bayer has therefore introduced a wide range of workplace health management programs at all levels, which are being expanded in response to employee surveys. This is designed to provide all employees with access to adequate, affordable and targeted health offerings such as sports programs, regular medical check-ups, help in overcoming illness and on-site medical care. The type and scope of the health promotion programs offered by Bayer Group companies worldwide varies depending on national health systems and their accessibility. In many countries, preventive health care measures are a discretionary benefit provided by the company, while in others they are required by law.

Group-wide initiatives to foster employees' health and maintain their employability in view of the rise in the retirement age include the 2010 General Works Agreement on lifetime working and demographic change in Germany. ONLINE ANNEX: 3-7-15

8. Procurement and Production

Our procurement function ensures the timely, global supply of goods and services at suitable market conditions, in the required quality and in accordance with the Group's ethical, ecological and social standards. The principles of our procurement policy are defined in a directive that is binding for all employees throughout the Group.

We exert considerable influence on society and the environment in many regions through our procurement volume. In 2014, goods and services were procured from some 112,000 (2013: some 107,000) suppliers in 147 (2013: 138) countries for approximately €20.3 billion (2013: €18.7 billion) and recorded in the Group-wide reporting system.

The procurement volume in Germany, the United States and Japan in 2014 accounted for nearly 66% of the expenditures in the countries of the OECD (Organisation for Economic Cooperation and Development), or about 52% of the Bayer Group's total procurement spend. Brazil, India and China together accounted for about 70% of the expenditures in the non-OECD countries or about 14% of the total spend. ONLINE ANNEX: 3-8-1

Direct and production-related procurement at Bayer is organized decentrally in the subgroups. Indirect and non-production-related goods and services are sourced in each case by the organizational unit that is their major user within the Bayer Group. Our Group-wide procurement strategy and application of the major-user principle enable us to realize synergy potentials in the form of standardization, volume pooling and streamlining of negotiations. The activities of the various procurement organizations are coordinated through the Group Procurement Committee, which reports to the Chief Financial Officer.

Important raw materials are procured on the basis of long-term supply agreements and an active supplier management to minimize procurement risks such as supply shortages or substantial price fluctuations. Regular sustainability and quality audits of our suppliers ensure compliance with internal and external standards. This is the case, for instance, when raw materials are procured, for which sustainability aspects are becoming increasingly important due to legal standards – an example being the purchase of minerals from conflict areas. ONLINE ANNEX: 3-8-2

SUSTAINABILITY IN SUPPLIER MANAGEMENT

Bayer regards adherence to sustainability standards within its supply chain as a crucial factor in the value chain. By acting responsibly in collaboration with our suppliers, we aim to minimize risks and create stable, long-term business relationships with our partners. This is also an important strategic lever for Bayer in safeguarding both its global competitiveness and the supply of materials and services. For this reason, we apply not just economic standards, but also environmental, social and corporate governance (ESG) standards in choosing new suppliers or continuing our relationships with existing ones. 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. The Code forms the general basis for our collaboration. It is legally binding and integrated into electronic ordering systems and contracts throughout the Group.

Group targets for supplier management

See Chapter 1.3 for Group targets

In order to continuously drive and measure sustainability in supplier management, we have set ambitious targets. By 2017, we plan to evaluate all our strategic suppliers with respect to sustainability-relevant aspects. By 2020, we also aim to evaluate all those suppliers with significant Bayer spend that are regarded as potential high-risk suppliers. Another objective is the development and establishment of a new sustainability standard for our supply base by 2020. This is to be driven forward in tandem with relevant industry initiatives. So far we have evaluated the sustainability performance of 66% of the Bayer Group's strategic suppliers and 61% of potential high-risk suppliers with significant spend.

For the development and introduction of new sustainability standards for our suppliers, we collaborate with the Pharmaceutical Supply Chain Initiative (PSCI) as well as with Together for Sustainability (TfS), an initiative co-founded by Bayer that is being established as an association under Belgian law. Bayer is engaged in these initiatives to successfully address the diverse challenges of a sustainable supply chain and to leverage synergies together with other companies. ONLINE ANNEX: 3-8-3

Evaluating the sustainability performance of our suppliers

The sustainability performance of our suppliers is monitored through online supplier assessments and on-site audits.

The assessments are carried out on our behalf by a leading web-based service platform for sustainability performance monitoring (EcoVadis). They are based on a web-supported, modular questionnaire completed by the supplier, coupled with accompanying verification documents and 360° screening. Suppliers are selected for these assessments based on a combination of country and material risks as well as strategic importance in accordance with our Group targets.

We conduct the on-site audits with external, independent auditors. Here, too, we apply the standard of the respective industry initiatives in which we participate in order to benefit from synergies. In addition, internal auditors perform inspections focusing on health, safety, environmental protection and sustainability.

An overview of the number of supplier assessments and audits can be found online.
ONLINE ANNEX: 3-8-4

All assessment and audit results are thoroughly analyzed and documented. Wherever the results are unsatisfactory, we develop improvement measures together with our suppliers to ensure that they observe social, ethical and environmental standards in the future. During the reporting period 5% of the assessments had a critical result. In each of these cases, we initiated measures ranging from action plans through the improvement of defined weaknesses to the reduction of the procurement volume. In 2014, Bayer was not prompted to end a supplier relationship due solely to sustainability performance.

Interaction and communication on the subject of sustainability

Procurement of products and services in differentiated markets and locations represents a particular challenge for our procurement organization. Dialogue with our suppliers is essential to ensure smooth production routines and to build up reliable relations. In particular, our goal is to make the principles of our procurement policy and our sustainability requirements clear to our suppliers. In return, we would like to know more about the suppliers' situation in order to be able to identify and remove obstacles in our collaboration at an early stage. Our procurement staff plays an important intermediary role here. We therefore offer both our procurement colleagues and suppliers a wide range of training and exchange opportunities. ONLINE ANNEX: 3-8-5

Tackling child labor in the supply chain

For Bayer, responsible corporate governance includes recognizing and respecting human rights both internally and within our external sphere of influence. This includes the supply chain. Our Human Rights Position is unequivocal and includes a strict ban on child labor. We obligate our suppliers along our supply chain to refrain from employing children. Particularly when working with suppliers in developing countries or emerging markets, we take care that they do not engage in child labor – which is still widespread in these regions.

For many years, CropScience has taken systematic action to prevent child labor in the seed supply chain in India through its Child Care Program. For example, teams from Bayer visit the fields used in cotton, rice and vegetable seed production throughout the 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, there are now only very few instances of child labor among our contractors, and we are closely tracking these cases. The system has now also been introduced in those countries in Asia in which CropScience seed is produced, such as Bangladesh and the Philippines (both rice seed). ONLINE ANNEX: 3-8-6

PROCUREMENT AND PRODUCTION IN THE SUBGROUPS

Both procurement and production are decentrally organized in the Bayer Group and are aligned to the individual requirements of the respective subgroups' businesses.

HEALTHCARE

Benefits from the production network

The Product Supply unit of **HealthCare** steers the subgroup's entire supply chain, from raw material procurement to manufacturing to product shipment, utilizing a global production network consisting of its own sites and those of subcontractors. The manufacturing of pharmaceutical and medical products 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: 3-8-BHC-1

The Pharmaceuticals segment generally procures the starting materials for the active ingredients of its prescription pharmaceuticals from external suppliers.

Our active ingredients are manufactured primarily at the sites in Wuppertal and Bergkamen, Germany, and Berkeley, California, United States. These substances are processed into finished products and packaged worldwide. Our medicines come in a wide range of delivery forms including solids such as tablets, coated tablets or powders; semi-solids such as ointments or creams; and liquid pharmaceuticals such as those used in injections or infusions. Our hormonal contraceptives are supplied as sugar- or film-coated tablets or used in intrauterine systems (coils), for example. Among the sites where formulating and packaging take place are Berlin, Leverkusen and Weimar, Germany; Garbagnate, Italy; Beijing, China; São Paulo, Brazil; and Turku, Finland. Our hemophilia drug Kogenate™ is manufactured by a biotechnological process at Berkeley, California, United States.

For the Consumer Care Division of the Consumer Health segment, we produce certain active substances, such as acetylsalicylic acid and clotrimazole, in La Felguera, Spain. The principal raw materials we purchase from third parties include naproxen, citric acid, ascorbic acid, other vitamins and paracetamol. Among the division's production sites are the facilities in Myerstown, Pennsylvania, United States; Cimanggis, Indonesia; Lerma, Mexico; Bitterfeld-Wolfen, Darmstadt and Grenzach-Wyhlen, Germany; Madrid, Spain; and Segrate, Italy. Our production network has expanded through the acquisitions of the consumer care business of Merck & Co., Inc. and Dihon Pharmaceutical Group Co. Ltd.

The Diabetes Care products (such as blood glucose meters) of our Medical Care Division are mainly procured from original equipment manufacturers. We hold strategic reserves of certain materials and finished products so that we can supply our customers consistently and reliably. The contrast agents for diagnostic imaging procedures are produced mainly in Berlin, Germany. Medical devices such as contrast agent injectors and sterile consumable articles are manufactured primarily at the U.S. sites near Pittsburgh, Pennsylvania. Most of the materials and components needed to manufacture our medical devices are procured from external suppliers.

The Animal Health Division procures the pharmaceutical active ingredients for its veterinary medicines both from within the Bayer Group and from external suppliers throughout the world. Our animal health products are manufactured mainly at the sites in Kiel, Germany, and Shawnee, Kansas, United States, and marketed worldwide.

CROPSCIENCE

Global procurement and production network for seeds and crop protection products at CropScience

CropScience, too, manages procurement and production as a single organizational unit. This enables an integrated supply chain from raw material purchase through end-product manufacture to warehousing, followed by a two- or three-step distribution system depending on local market conditions. Unitary management is also intended to help us steadily improve our cost structures, increase our flexibility, ensure a swifter response to market volatility and meet our high quality and safety standards.

Our principal procurement countries, representing the bulk of our procurement volume, are centrally managed. This enables us to operate efficiently in procurement markets and optimize our cost position.

Crop Protection and Environmental Science products are mainly manufactured at our own production sites and formulation facilities. Among the largest are the facilities in Dormagen, Knapsack and Frankfurt am Main, Germany; Kansas City, Missouri, United States; and Vapi, India. Our network of decentralized formulation and filling sites enables us to respond rapidly to local market needs. 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 in the Seeds business unit takes place at locations close to our customers in Europe, Asia, and North and South America at our own farms or under contract.

We invest continuously in our global production network in order to create 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 in a competitive and timely manner. We intend to invest approximately €2.4 billion in property, plant and equipment between 2013 and 2016.

Our CropScience products are manufactured according to high quality standards based on DIN ISO 9001. 80% of CropScience production sites are certified to this standard, and the compliance of the production processes and registered product specifications is regularly monitored by external auditors.

MATERIALSCIENCE

Procurement at **MaterialScience** is centrally steered and managed by the Procurement & Trading unit so as to leverage synergies globally.

MaterialScience 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% of the reporting MaterialScience sites worldwide are certified. This is regularly monitored by internal and external auditors. Certification takes place not just in Procurement and Production but also in most other organizational units.

Key raw materials for our MaterialScience products are petrochemical feedstocks such as benzene, toluene and phenol. The operation of our production facilities also requires large amounts of energy, mostly in the form of electricity or steam. In steam and electricity generation, we aim for close-to-market price indexing, diversification of fuels and a mix of external procurement and captive production to minimize the price fluctuation risk.

The principal production facilities of MaterialScience are at Dormagen, Krefeld and Leverkusen, Germany; Shanghai, China; and Baytown, Texas, United States. These supply all the subgroup's business units and are centrally managed by the Industrial Operations unit. Further major production sites are located at Antwerp, Belgium; Brunsbüttel, Germany; Map Ta Phut, Thailand; and Tarragona, Spain. Each of these sites is managed by the respective business unit.

World-scale facilities reduce costs for commodities

In the field of commodities, we endeavor to reduce costs by operating high-capacity production facilities that enable us to supply our markets on an international basis. We maintain a relatively large number of production facilities in selected countries to serve our differentiated businesses. These facilities include systems houses, where we formulate and supply customized polyurethane systems, and 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 functional films made of polycarbonate or thermoplastic polyurethane.

9. Products, Distribution and Markets

Bayer markets its products globally through a market- and customer-specific distribution network. Responsible marketing and distribution is a top priority for Bayer, which is why we do not tolerate legal violations in the marketing of our products. The necessary code of conduct is established in our Group directive on "Responsible Marketing & Sales." This Group directive and the respective training programs are implemented decentrally in the subgroups. Our distribution activities are primarily aimed at ensuring that our products are available on the market. A high level of customer satisfaction is essential for the long-term success of our business. This necessitates the systematic analysis of customer satisfaction and complaints, but especially partnership-based cooperation and the willingness to engage in dialogue.

HEALTHCARE

Broad product portfolio in the Pharmaceuticals segment

Our **Pharmaceuticals** segment supplies prescription products. Our range of cardiovascular products includes the anticoagulant Xarelto™, Adalat™ to treat hypertension and coronary heart disease, and Aspirin™ Cardio for secondary prevention of heart attacks. The product portfolio in women's healthcare comprises contraceptives such as YAZ™/Yasmin™/Yasminelle™, Mirena™ and the Essure™ procedure. We also offer specialty pharmaceuticals that are mainly prescribed by specialist physicians, including Kogenate™ for people with hemophilia A, Betaferon™/Betaseron™ to treat multiple sclerosis, the cancer drugs Nexavar™, Stivarga™ and Xofigo™, the eye medicine Eylea™, and Adempas™ to treat two forms of pulmonary hypertension. Our pharmaceutical products are primarily distributed through wholesalers, pharmacies and hospitals. Co-promotion and co-marketing agreements serve to optimize our distribution network.

Consumer Health segment: focus on non-prescription products

The portfolio of our **Consumer Health** segment mainly comprises non-prescription products. The Consumer Care Division specializes in over-the-counter (OTC) medicines – those available without a prescription – and is the second-leading supplier in the global OTC market with a portfolio covering all the major therapeutic areas. Our offering includes the pain relievers Aspirin™ and Aleve™ and the OTC medical skincare products Bepanthen™/Bepanthol™ and Canesten™. The product range also includes cough-and-cold and allergy products such as Alka-Seltzer Plus™ and Claritin™, nutritionals such as One A Day™, Berocca™ and Supradyn™, and products to treat gastrointestinal complaints, such as Miralax™ and Rennie™. Other OTC products include Coppertone™ sunscreen products and Dr. Scholl's™ foot care products. We also offer prescription dermatology products. The division's sales and distribution channels are generally pharmacies, with supermarket chains and other large retailers also playing a significant role in certain important markets such as the United States.

In the Medical Care Division we offer blood glucose monitoring devices such as Contour™. We also market the Contour™ USB meter, which features integrated diabetes management software and direct plug-in to computers. Outside Europe, these products are generally sold to consumers through pharmacies, drugstores, mass merchants, hospitals or wholesalers. In Europe, they are sold mainly through pharmacies. We are among the principal players in the area of blood glucose meters and are also one of the leading suppliers of contrast agent injection systems for diagnostic and therapeutic medical procedures in X-ray, computed tomography and magnetic resonance imaging. Examples from our portfolio of contrast agents for diagnostic imaging are Ultravist™, Gadovist™/Gadavist™ and Magnevist™. Our products 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.

The Animal Health Division offers an extensive portfolio of animal health products for farm and companion animals. Depending on local regulatory frameworks, we market our products through veterinarians and other distribution channels such as pharmacies or retail stores. Our Advantage™ family of products protects dogs and cats from parasite infestation and supports our number two position in the parasiticides market. The innovative Seresto™ collar provides dogs and cats with lasting protection against parasites through a modern system for controlled release of the active ingredients and reinforces our leading market position. Other important products include Baytril™ and Veraflox™ for the control of infectious diseases, the Drontal™ line of wormers, and Baycox™ to treat coccidiosis in livestock.

Responsible business practices in marketing and distribution

In marketing its medicines, HealthCare applies strict standards and observes the relevant international industry codes. This includes all codes of the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) and of regional associations such as the European Federation of Pharmaceutical Industries and Associations (EFPIA) concerning relations with health care professionals and patient organizations. These codes include rules governing the distribution of advertising materials and product samples, cooperation with health care and pharmacy professionals under speaker and consultancy agreements, and scientific studies. HealthCare has also undertaken to implement the EFPIA transparency code. The codes apply to prescription medicines. There are also local laws and codes applicable to all medicines. ONLINE ANNEX: 3-9-BHC-1

These local codes serve to bring the provisions of the global or regional codes mentioned above into line with local laws. In the event of discrepancies among the rules we have committed to respect, HealthCare always observes the more stringent requirement.

The WHO's Ethical Criteria for Medicinal Drug Promotion, together with national ethical standards, represent the minimum standard for the advertising of pharmaceutical products at HealthCare. National ethical standards are usually enshrined in industry codes at the local level, an example being that of the association "Voluntary Self-Regulation for the Pharmaceutical Industry" (FSA). The main principles for ethically and legally acceptable advertising for pharmaceuticals and medical products are also set out in the internal HealthCare directive "Compliance in Product-Related Communications". This directive in turn is based on our "Group-wide Responsible Marketing & Sales Policy" and the "Directive on Integrity & Responsibility in Communications and Marketing."

HealthCare has summarized the key requirements for compliant and ethical conduct in the global "Anti-Corruption Compliance Manual". ONLINE ANNEX: 3-9-BHC-2

Any suspected violation of our responsible marketing policy is recorded and investigated as part of our compliance management. This applies to complaints received from inside or outside the company.

Customer dialogue

Bayer utilizes a broad range of measures and quantitative targets to increase the value of its commercial distribution activities. In addition to internal monitoring, customer satisfaction is evaluated in core markets. The results of these evaluations help Bayer to continuously improve its offering in line with the needs of its customers.

The HealthCare divisions maintain their own active dialogue with their specific customer groups. The various sales organizations carry out customer satisfaction studies – for example with physicians from different disciplines. Different legal requirements apply for prescription medicines than for non-prescription or medicinal products. This makes the conditions under which customer satisfaction data are gathered in the health sector correspondingly complex. For example, patients may not be surveyed directly about the effects and side effects of prescription medicines. HealthCare therefore conducts primary market and data research in this area. ONLINE ANNEX: 3-9-BHC-3

CROPSCIENCE

Integrated product portfolio at CropScience

CropScience offers its customers in the Crop Protection/Seeds operating segment an outstanding range of products including high value seeds, innovative crop protection solutions based on chemical and biological modes of action as well as an extensive customer service for modern, sustainable agriculture. In the field of non-agricultural applications (Environmental Science operating segment), CropScience has a broad portfolio of pest control products and services for areas including the home and garden sector, professional applications for golf courses and forestry.

CropScience markets its products in more than 120 countries. In the coming years we intend to continue expanding our business, particularly in the emerging markets, by deploying innovative, leading-edge technologies in order to meet the increasing global demand for high-quality food and feed.

The marketing and distribution activities of the Crop Protection/Seeds operating segment have a product-specific alignment.

The Crop Protection business is based on a broad portfolio of highly effective herbicides, fungicides, insecticides and seed treatment products with chemical or biological modes of action. Our innovation capability and long years of experience with crop protection products have placed us among the leading companies in the world.

The activities of the Seeds unit are focused on the crops cotton, oilseed rape/canola, rice, soybeans and vegetables. We market high-value seeds based on our own research and breeding expertise. In our core crops, we have achieved strong market positions and are internationally represented.

Our Crop Protection products are primarily marketed through two- or three-step distribution systems, either via wholesalers or directly to retailers. We also sell products directly to customers in selected markets where farmers and market conditions require this mode of distribution.

Our seeds are sold to growers, plant raisers, 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 products of our Environmental Science operating segment are based on both proprietary and inlicensed active ingredients and designed for non-agricultural uses. We market pest control and plant care products both to private customers in the home and garden sector and to professional users in the green industry (including public parks and golf courses), forestry, professional pest control and public health (vector control to combat malaria and dengue fever). CropScience ranks among the world's leading suppliers of crop protection products for non-agricultural uses. The Environmental Science products are mainly sold through wholesalers and specialist retailers. A large part of our business in the area of vector control is transacted in response to tendering by government agencies and non-governmental organizations.

CropScience follows the International Code of Conduct on the Distribution and Use of Pesticides issued by the Food and Agriculture Organization of the United Nations (FAO). This forms the basis for CropScience's expanded Product Stewardship Policy, which satisfies the requirements of the Group's position on responsible marketing and sales. Training materials to explain this Group position have been distributed throughout the global organization and are available on the Bayer intranet.
ONLINE ANNEX: 3-9-BCS-1

Customer dialogue
CropScience investigates the satisfaction of its customers using standardized surveys as part of its commercial excellence activities, among other tools. In addition, CropScience completely overhauled its internal customer relationship management (CRM) processes in 2014 so as to establish a new understanding of CRM. Alongside farmers, this new approach also focuses on distribution channels in all markets. A centralized, global CRM platform will also standardize core processes. Furthermore, CropScience is intensifying its direct cooperation with farmers through the Bayer Forward Farming initiative. Our solutions for sustainable agriculture in practice are demonstrated at Bayer ForwardFarms.

MATERIALSCIENCE

One of the world's largest polymer companies, MaterialScience is a manufacturer and supplier of precursors for rigid and flexible foams, plastic granules, and raw materials for coatings and adhesives. The subgroup holds leading competitive positions in these product groups. We also manufacture and market plastic sheets, functional films and selected inorganic basic chemicals. The latter serve as raw materials for the manufacture of our products. Others are generated as by-products of our production and sold to external customers.

Our products are used mainly in the automotive, construction, electrical/electronics, furniture, wood, textile, sports and leisure goods, medical equipment and chemical industries.

Rigid or flexible polyurethane foams based on our diphenylmethane diisocyanate (MDI), toluene diisocyanate (TDI) or polyether (PET) raw materials have found a broad range of applications in a variety of industries. Automotive uses include the manufacture of car seats and components. They are also used in the construction industry and the refrigeration chain as insulating materials, and in the furniture industry for cushioning and mattresses.

Our polycarbonates are marketed as granules (Makrolon™, APEC™, Makroblend™, Bayblend™), sheet and films. Their uses include electrical appliance housings, CDs/DVDs, roof structures and automotive headlamps.

The Coatings, Adhesives, Specialties business unit manufactures raw materials for car and commercial vehicle coatings and for footwear and textile adhesives, for example. Specialties include films used in ID and credit cards, along with raw materials for cosmetic and medical products.

We market our products mostly through regional and local distribution channels. Here three regional Supply Chain Centers serve as the central link to the customer. We make use of e-commerce platforms and other channels for order processing. ONLINE ANNEX: 3-9-BMS-1

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

In the marketing of our products, we also take into account all the requirements of the Group's position on responsible marketing and sales. The importance of observing antitrust law and preventing corruption is regularly emphasized in training programs, internal communications and discussions with management. In 2014, antitrust law was a particular focus of our training measures. Around 3,000 MaterialScience employees took part in Group-wide, web-based courses and supplementary target group-oriented, on-site training sessions.

10. Product Stewardship

We assess the possible health and environmental risks of a product along the entire value chain. This starts with research and development and continues through production, marketing and use by the customer through to disposal.

At issue here are not just the safe handling and use of our products, but also the transparent communication and transfer of product safety information. Product stewardship involves both compliance with statutory requirements and voluntary commitment. Here, we also take into account 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. ONLINE ANNEX: 3-10-1

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 (health, safety, environmental protection and quality) 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: 3-10-2

IMPLEMENTATION OF REGULATIONS AND VOLUNTARY PROGRAMS PERTAINING TO CHEMICALS

Since 2007 we have operated in accordance with the European chemicals regulation REACH (Registration, Evaluation, Authorization and Restriction of Chemicals). It affects all our activities as a manufacturer, importer and user. To adequately address the scope and complexity of the REACH requirements, we have approved Group-wide and subgroup-specific regulations. 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. ONLINE ANNEX: 3-10-3

A number of Bayer substances are also affected by the REACH authorization procedure, which restricts the use of particularly hazardous substances or can lead to their replacement or ban.

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 products from other manufacturers, we maintain close contacts with our suppliers and ensure that they confirm conformity with REACH for these products.

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

The Bayer Group's product stewardship target is to conclude the assessment of the hazard potential of all substances used in quantities exceeding one metric ton per annum by 2020. 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. The procedure for the implementation of this target is established in our Bayer Group Regulation "Substance Information and Availability."

See also Chapter 1.3 for Group targets

At the same time, we are implementing the Globally Harmonized System (GHS) for the classification and labeling of chemicals, which came into force in the European Union (E.U.) in 2009. The purpose of this regulation is to achieve a globally standardized system for classifying chemicals and labeling them appropriately on packaging and in material safety data sheets.

We also support the Global Product Strategy (GPS), a voluntary commitment by the chemical industry initiated by the International Council of Chemical Associations (ICCA). Its objective is to improve knowledge about chemical products, especially in emerging and developing countries, and thus increase safety in the handling of these products. The ICCA has established an information portal through which summarized details on products (GPS Safety Summaries) are made available. GPS is of particular relevance for MaterialScience.

In accordance with the respective product safety and information obligations, all subgroups compile product information, whether on raw materials, intermediates or end products. To ensure worldwide access to this information, our subgroups use appropriate IT systems, including ones for product labeling.

PRODUCT STEWARDSHIP IN THE USE OF BIOTECHNOLOGY

The product development departments in our Pharmaceuticals and Crop Protection businesses make use of biotechnological methods. Biotechnology has already gained significant importance in pharmaceutical product development. The HealthCare products Betaferon™/Betaseron™, Kogenate™ and Eylea™ are manufactured by a biotechnological process.

Plant biotechnology can help to improve crop yields, yield security and the stress tolerance of plants through both genetic engineering and conventional breeding methods without the need for an increased 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 the subgroups and service companies.

ONLINE ANNEX: 3-10-4

FOCUSING ON ANIMAL WELFARE

Animal studies are legally required and essential from a scientific viewpoint to assess the effects of our products, especially on people, but also on nature and the environment. During research into new active pharmaceutical ingredients, they are only replaceable to a certain extent. In our handling of animals, we respect all legal requirements pertaining to animal welfare. If animal studies are required to assess our substances, Bayer respects the so-called 3Rs principle:

- replace: prior to each project, we check whether an approved method is available that does not rely on animal studies and then apply 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: we make sure animal studies are performed in a way that minimizes suffering of animals.

This year for the first time, we are offering an internal 3R Award that rewards and publicizes within the company special contributions to animal welfare.

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 at our website.

www.animalstudies.bayer.com

Bayer's Global Animal Welfare Committee monitors compliance with our principles on animal welfare and animal studies within the Bayer Group and in external studies. ONLINE ANNEX: 3-10-5

PROTECTION AGAINST PRODUCT COUNTERFEITING

Illegal trade with counterfeit medicines and crop protection products is on the rise worldwide. Counterfeit products harbor substantial risk for patients and consumers, and substandard quality also causes considerable financial damage for producers and users.

Industry, associations, governmental agencies and non-governmental organizations must join together to fight product counterfeiting. Bayer continuously advocates the strengthening and expansion of existing laws and provisions aimed at the identification and confiscation of illegal products. We undertake a wide range of measures to inform our customers about both the danger posed by, and the insufficient effectiveness of, counterfeit products. ONLINE ANNEX: 3-10-6

HEALTHCARE

BENEFIT-RISK MANAGEMENT FOR MEDICINAL PRODUCTS AND MEDICAL DEVICES

HealthCare continuously assesses the medical benefit-risk balance of its medicinal products and medical devices throughout their entire life cycle. For this process, experts from various disciplines form cross-functional Safety Management Teams (SMTs). These teams jointly evaluate the available benefit and risk data along with other relevant information on the product in order to identify possible safety risks at an early stage and assess the medical benefit-risk balance. The evaluation also makes use of external databases so as to ensure as broad a base of data as possible. Should significant risks be identified, HealthCare immediately takes measures to minimize them, such as updating the product information for patients and physicians. ONLINE ANNEX: 3-10-BHC-1

The Global Pharmacovigilance unit of HealthCare pools safety-relevant information on our products in the company's own global pharmacovigilance database on an ongoing basis. This information is continuously updated and evaluated by experts. In this process, Bayer works closely with the responsible regulatory and supervisory authorities at the international, national and regional 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).

HealthCare's quality and risk management functions make further contributions to increased safety. We examine external and internal quality assurance requirements for our products through systematic internal inspections – not just in research and development, but also in production. These inspections also cover institutes sub-contracted by us and our suppliers. Through our safety risk management system, drug product risks are systematically identified and assessed, and the necessary steps initiated. Countries and regions receive continuous support to help them comply with regulatory requirements for pharmaceuticals.

www.bayer.com/clinical-trials

Scientific publications by our researchers satisfy recognized international standards that we have committed ourselves to observe in our Good Publication Policy. We base the implementation of all clinical studies on the Good Clinical Practice guidelines of the World Health Organization (WHO) and on the guidelines of the International Conference on Harmonization (ICH). We disclose the methods and results of clinical trials.

ANALYSIS OF PHARMACEUTICAL TRACE AMOUNTS IN THE ENVIRONMENT

Active pharmaceutical ingredients can enter the environment through human excreta or livestock excrement, improper disposal by users or residues in wastewater from pharmaceutical production.

Measurements carried out by authorities and scientific institutes have revealed that the concentration of individual active pharmaceutical ingredients from human or veterinary medicines present in drinking water is lower than the level that would have pharmacological effects in humans. On the basis of our current knowledge, the presence of individual active pharmaceutical ingredients in bodies of water or drinking water does not pose any risk to humans. This is also confirmed by the most recent WHO Report on Pharmaceuticals in Drinking Water.

To assess the potential environmental impact of our pharmaceutical products, HealthCare carries out ecotoxicological investigations of the environmental behavior of trace amounts and degradation products.

When submitting dossiers to European regulatory authorities for both veterinary and human pharmaceuticals, an environmental assessment is required that is published in the European public assessment reports (EPAR). The U.S. Food and Drug Administration (FDA) also requires the submission of an environmental compatibility assessment. It must be demonstrated during the approval procedure that no significant risk exists for the environment when the drug products are used correctly.

Internal company wastewater threshold values ensure that no risk to the environment results from the release of traces of active ingredients in wastewater from production sites. All HealthCare production sites worldwide are evaluated with regard to these threshold values. Site-specific measures aimed at a further reduction are proposed should it not be possible to observe these standards over the long term. Additional active ingredient-specific retention measures are applied in addition to biological treatment in water treatment facilities.

HealthCare maintains regular contact with various stakeholder groups with regard to these issues.

ONLINE ANNEX: 3-10-BHC-2

SAFETY AND QUALITY STANDARDS AT ANIMAL HEALTH

In line with the statutory requirements, strict quality standards apply to all Animal Health product classes. Safety and quality standards comparable to those governing human medicine apply for veterinary pharmaceuticals such as parasiticides, dewormers (anthelmintics) or antibiotics. Within the scope of the approval procedures, Animal Health carries out studies in order to ensure the quality, efficacy and safety of its products, as well as minimize the environmental impact of the products' use.

We partner with veterinarians, farmers and private users to promote the responsible use of our products. The prudent use of antibiotics is especially important for public health. For this reason, we have established clear guidelines for the use of fluoroquinolones. In this context, we also support the European Platform for the Responsible Use of Medicines in Animals, which brings together various partner organizations from politics, industry and society.

CROPSCIENCE

Safety is also the top priority with products from CropScience. We analyze already prior to the development of a product whether the envisaged solution is compatible with our sustainability approach. During the development phase, we examine the products in stringent tests that are monitored by the authorities. At issue here are an active ingredient's toxicological properties on the one hand and on the other hand the question of how significant the remaining trace amount of a crop protection product is following proper application to the plants. Before a product is introduced to the market, we conduct

numerous further safety tests with regard to its use and environmental behavior, depending on the product area.

CropScience allowed the sale of all remaining WHO Class I insecticide formulations for leaf and soil applications and seed treatments to expire at the end of 2012. All insecticides affected were replaced by modern, targeted and more environmentally friendly formulations.

CropScience observes the International Code of Conduct on the Distribution and Use of Pesticides of the United Nations Food and Agriculture Organization (FAO). The principles of this code cover the entire life cycle of a product, 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: 3-10-BCS-1

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 the products is therefore a focus of product stewardship at CropScience. We address farmers and dealers particularly through numerous programs worldwide. Targeted workshops are aimed at enabling effective application of our products and ensuring the safety of users, the environment and consumers. Furthermore, we provide our customers with guidelines explaining the safe use, storage and disposal of all of our products. ONLINE ANNEX: 3-10-BCS-2

BEE HEALTH AND CROP PROTECTION

Products to protect crops and keep them healthy are necessary to safeguard harvests and thus guarantee the supply of nutrition for a growing world population both now and in the future. At the same time, it is essential to protect pollinators of plants that contribute to a wide variety of foods. The debate surrounding the use of certain neonicotinoid crop protection products and the subjective assessment of their impact on bee health has had an effect at the political level. As a result, the European Commission has suspended the use of a number of products in this active ingredient class for certain applications in Europe. Bayer considers the decision by the European Commission to be scientifically unjustified and legally flawed. The active ingredients in question were extensively examined with regard to their impact on bee health already during the approval procedure. Bayer has appealed the decision by the European Commission in order to ensure legal certainty for approval procedures. A decision is not yet available. Through its Bee Care Program, Bayer continues to work on behalf of bee health and the responsible use of crop protection products. The company invests in research to minimize the effects of crop protection products on honey bees. ONLINE ANNEX: 3-10-BCS-3

MATERIALSCIENCE

The products of MaterialScience satisfy the most stringent of safety requirements. This applies not just to those 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 just end with our company, but also includes suppliers, customers and partners. GPS is accessible at MaterialScience through the "Product Safety First" internet portal, and is available worldwide in seven languages. Through this website, we inform customers and other interest groups about our activities and product safety assessments. ONLINE ANNEX: 3-10-BMS-1

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

With regard to substances that come into direct contact with food, MaterialScience is following the scientific discussion about the chemical bisphenol A (BPA), a feedstock for various plastics. 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. 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 based on scientific analysis.

11. Safety

Safety management and the continuous development of safety culture are a cornerstone of corporate responsibility in the Bayer Group. All injuries and incidents we record are analyzed and evaluated in detail to enable adequate measures to be introduced to avoid them in the future. 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) is thus directly assumed by the Group Board of Management. Our HSEQ activities are geared toward ensuring the occupational health and safety of employees, contractors and suppliers on our company premises and under the supervision of Bayer, and the smooth and safe operation of our facilities. In this way, we also reduce running costs by avoiding damage as well as work and production disruptions.

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

OCCUPATIONAL HEALTH AND SAFETY

The rate of occupational injuries with lost workdays at Bayer has been decreasing for several years. In 2014 intensive training and awareness-raising once again helped enable the Bayer subgroups and service companies to report a reduction in injury figures.

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

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 2014 this rate dropped to 0.43 cases per 200,000 hours worked (2013: 0.47) throughout the Group, corresponding to 534 occupational injuries worldwide. This means that, in statistical terms, one recordable incident occurred for around every 465,000 hours worked.

See also Chapter 1.3 for Group targets

The rate of recordable occupational injuries with lost workdays (LTRIR, Lost Time Recordable Incident Rate) also fell. In 2014 it stood at 0.22 (2013: 0.26).

Unfortunately, there were four fatalities in work-related accidents in 2014, three of which concerned Bayer employees and one a contractor employee. One employee was killed in switching work in Wesseling, Germany. In La Tupia, Colombia, a tank wagon caught fire while gasoline was being transferred. Four workers sustained burns of varying degrees. The Bayer employee's burns were so severe that he died. A comprehensive root cause analysis was performed. Prevention and improvement measures were introduced. A third employee died in Brazil in a traffic accident, as did a contractor employee in Sanchor, India.

Occupational Injuries [Table 3.11.1]

	2010	2011	2012	2013	2014
Occupational injuries to Bayer employees with lost workdays (LTRIR[1])	0.34	0.31	0.27	0.26	0.22
Recordable occupational injuries to Bayer employees (RIR[1])	0.62	0.56	0.49	0.47	0.43
Fatal injuries (total)	4	3	2	2	4
of which Bayer employees	4	2	2	1	3
of which contractor employees[2]	–	1	–	1	1

[1] The values up to 2010 were calculated on the basis of the former MAQ values and do not include work-related illnesses.
[2] 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. ONLINE ANNEX: 3-11-1

Since 2012 workplace-related illnesses have additionally been recorded separately from legally listed recognized occupational diseases and are included in the LTRIR parameter. In 2014 there were 11 cases attributable to work-related factors recorded throughout the Group. We report such cases when they have been diagnosed and officially recognized by a medical officer.

As in previous years, we hardly recorded any sector-typical accidents involving contact with chemicals in 2014. The absolute number of injuries declined further. A significant proportion of our work-related accidents and injuries relate to behavior-linked errors. In 2014 we therefore placed the topic at the heart of numerous programs and training courses under the umbrella term "Behavioral Safety." In 2014 behavioral safety was therefore also the focus of our annual global Safety Day. ONLINE ANNEX: 3-11-2

PROCESS AND PLANT SAFETY

Through the Group-wide Top Performance in Process and Plant Safety (TOPPS) initiative, Bayer is continuously working to improve the safety culture and corresponding standards in plants and laboratories and to optimize safety technology. The corresponding Bayer Group Regulation "Process and Plant Safety" specifies uniform procedures and standards. The methods and criteria for identifying and assessing the risks posed to people and the environment by plants and processes underwent further development and were globally standardized. ONLINE ANNEX: 3-11-3

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 2014 this was 0.23 (2013: 0.35).

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

See also Chapter 1.3 for Group targets

Rate of Plant Safety Incidents (LoPC-IR[1]) [Table 3.11.2]

	2012	2013	2014
LoPC-IR	0.38	0.35	0.23

[1] LoPC-IR = Loss of Primary Containment Incident Rate

More information on the procedures in the case of LoPC incidents can be found in
ONLINE ANNEX: 3-11-4

The Bayer Group's competence center for process and plant safety, together with the Group HSEQ Platform for Process and Plant Safety, is managed by Technology Services. This comprises three regional competence centers, which are located in Leverkusen, Germany; Shanghai, China; and a combined center at the Baytown and Kansas City sites in the United States. ONLINE ANNEX: 3-11-5

TRANSPORTATION SAFETY

Transportation safety has a very high priority within the Bayer safety culture. The relevant Bayer Group directive specifies procedures that ensure all transported materials are handled in line with applicable regulations and their hazard potential. Logistics service providers are selected following a defined procedure, and their fulfillment of safety and quality standards is assessed regularly. Under the directive, people responsible for implementation are appointed in every organizational unit concerned.

In 2014 the Group-wide Transportation Safety Platform focused, for example, on regulations management, sustainable training tools for transportation safety, reviewing internal procedures and evaluating and selecting our logistics service providers. These topics are documented in appropriate HSEQ targets. In addition, as part of our Responsible Care activities, transportation safety instructions are also being drawn up for non-hazardous materials, and transportation risk analyses carried out for the transportation of hazardous materials that go beyond what is required under transportation legislation. To support knowledge sharing within the Group, a Global Transportation Safety Symposium was held for the first time in 2014 with 160 participants from 20 countries.

The transportation safety management of the subgroups is part of the audit system of the Bayer Group specified in the Bayer Group Regulation "Health, Safety, Environment and Quality (HSEQ) Audits."

Group target 2020: reduction of 30% in transport incidents

See also Chapter 1.3 for Group targets

We classify critical incidents during the transportation of our products as transport incidents. These include accidents that cause personal injury, significant damage to property, environmental impact through the release of substances, or leakage of hazardous materials. We record transport incidents using defined criteria. Assessment is based on the leaked load, graded according to the volume and hazardous material 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.

In total, well over one million transport movements took place in 2014. Despite extensive safety precautions and training activities, it is unfortunately impossible to prevent transport incidents from occurring altogether. We analyze and evaluate all incidents carefully so that adequate steps can be taken to prevent a recurrence. The number of transport incidents increased from 11 to 12 in the reporting period.
ONLINE ANNEX 3-11-6

See online annex 3-12.6-2 in Chapter 12.6

A detailed overview of the transport incidents can be found in Chapter 12.6 "Environmental Protection" in online annex 3-12-6-2.

12. Environmental Protection

Bayer takes its responsibility to protect the environment very seriously. It is constantly working to reduce environmental impact and find innovative product solutions that benefit the environment. Our environmental standards apply worldwide.

Eco-efficient processes help cut the costs associated with materials, energy, emissions and disposal. After all, an efficient approach to raw materials and energy is now more than ever an economic imperative, too. Ever increasing costs oblige us to take measures to improve resource and energy efficiency that relieve the strain on the environment while also cutting costs.

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, for example. 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.

We are committed to the chemical industry's Responsible Care™ initiative and have set out the basic principles of this commitment in our Bayer Sustainable Development Policy. Certified HSEQ management systems control its operational implementation.

12.1 Energy Consumption

Energy and material consumption and emission levels are essentially dependent on the manufactured sales volume, which does not include intermediates.

In 2014 Bayer's manufactured sales volume rose by 2.7%. Total energy consumption in the Group also rose, namely by 5.5% to 85.3 petajoules. We differentiate between primary energy consumption at our sites – 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 4.2%, while secondary energy consumption rose by 19.5%. Volumes of natural gas and crude oil used as energy sources were up on the previous year but considerably less coal, waste and other primary energy sources (e.g. hydrogen) were used in our own in-house energy generation processes. In the case of secondary energy sources, the use of steam has risen significantly. Consumption of electricity and process heat was also above the prior-year level (see Table 3.12.1).

The rise in total energy consumption (primary and secondary energy sources) is mainly caused by increased production activities and the resulting growth in manufactured sales volume. This development could be observed in particular at the Baytown site in the United States. However, the inclusion for the first time of the energy-intensive MaterialScience site in Maasvlakte, Netherlands, in our environmental reporting in 2014 also had a major effect. It was included in the scope of consolidation in 2013 and retroactively for 2012. This site alone is responsible for 4.8% of the Group's energy consumption. Production in Maasvlakte is exclusively of intermediates, which according to our definition are not included in the manufactured sales volume. The energy necessary for their manufacture is included in full in the total energy consumption, however. Without this special factor the trend away from a correlation between manufactured sales volume and energy consumption already identified in previous years would have still been recognizable.

Energy Consumption in the Bayer Group [Table 3.12.1]

	2010	2011	2012	2013	2014
Primary energy consumption for the in-house generation of electricity & steam (TJ)	**51,632**	**50,096**	**49,047**	**47,582**	**45,572**
Natural gas	31,847	31,162	30,411	29,796	31,580
Coal	17,801	16,776	15,954	15,094	12,611
Liquid fuels	532	660	656	416	421
Waste	678	515	1,005	1,282	833
Other[1]	774	983	1,021	994	127
Secondary energy consumption (net, TJ)	**34,078**	**34,846**	**34,137**	**33,266**	**39,745**
Electricity[2]	25,229	25,475	25,849	25,560	27,177
Steam	722	1,054	(121)	(801)	3,579
Steam from waste heat (process heat)	8,722	9,000	9,144	9,146	9,639
Refrigeration energy	(595)	(683)	(735)	(639)	(650)
Total energy consumption (TJ)	**85,710**	**84,942**	**83,184**	**80,848**	**85,317**
Manufactured sales volume[3] (million metric tons)	**10.4**	**11.0**	**11.2**	**11.1**	**11.4**
Energy efficiency[4] (MWh/t)	**3.77**	**3.63**	**3.50**	**3.44**	**3.37**

[1] e.g. hydrogen
[2] Secondary energy consumption for electricity is based on the raw material mix of the country concerned.
[3] The manufactured sales volume comprises all products sold in the reporting year, including secondary and trade products.
[4] Energy efficency: quotient of total energy consumption and manufactured sales volume. For MateralScience, this does not include either the secondary products sodium hydroxide solution and hydrochloric acid generated in production or trade products.

Bayer utilizes primary energy as efficiently as possible and applies combined heat and power processes in more than 90% of its energy generation. The electricity and heat generated 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 (secondary) energy purchased via us is also used at third-party production facilities. Furthermore, we purchase electricity on the market – through electricity exchanges, for example. The proportion of renewable energies is determined by the energy mix of our energy suppliers. We comment in detail on these issues in the CDP (previously Carbon Disclosure Project) Report.

www.annual-report2014.bayer.com/CDP-Climate

12.2 Air Emissions

At Bayer, air emissions are caused mainly by the generation and consumption of energy. Our commitment to greater energy efficiency helps reduce both costs and emissions. In addition, we aim to contribute to climate protection on several levels and have established a Group-wide Climate Program for this purpose.

CLIMATE PROGRAM

For some years, we have been working through our Climate Program to improve resource and energy efficiency, one objective being to reduce greenhouse gas emissions during production operations. We also offer market solutions aimed at protecting the climate and adapting to climate change.

As part of our package of targets for the Group, we slightly increased the existing emissions reduction target in 2013 and additionally formulated an energy efficiency target. According to this, between 2012 and 2020, Bayer intends to cut its specific greenhouse gas emissions by 20% and improve its energy efficiency by 10%. 2012 was taken as the base year for both targets. Specific greenhouse gas emissions amounted to 1.02 metric tons of CO_2 equivalents per metric ton of sales product. Energy efficiency in 2014 was at 3.37 MWh per metric ton.

Group target 2020: 20% reduction in specific greenhouse gas emissions and 10% improvement in energy efficiency

See also Chapter 1.3 for Group targets

Alongside aiming to achieve the overall Group climate target, the Bayer Climate Program reflects a commitment to three specific areas:

1. More efficient production: reducing emissions at Bayer's own production facilities by increasing energy efficiency and by developing and utilizing new, innovative technologies. ONLINE ANNEX: 3-12.2-1

2. Market solutions: using Bayer products – particularly in the areas of building insulation, lightweight construction and agriculture – to reduce customer emissions. Our products play their part in saving energy and conserving resources in many different ways. They help customers reduce emissions and provide them with solutions for adapting to climate change. ONLINE ANNEX: 3-12.2-2

3. Supporting activities: reducing emissions in non-production areas – such as the vehicle fleet and IT – involving the workforce in the process. ONLINE ANNEX: 3-12.2-3

Group target: MaterialScience – improvement in production process technology to achieve better energy efficiency

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) are determined at all production locations and relevant administrative sites.

The total volume of greenhouse gas emissions Group-wide climbed in 2014 by 4.2%. While direct emissions fell by 1.7%, indirect emissions rose by 9.7%. This increase is also primarily due to the inclusion for the first time of the MaterialScience site in Maasvlakte, Netherlands, in the environmental reporting of the Group.

Group Greenhouse Gas Emissions[1] [Table 3.12.2]

	Million metric tons of CO_2 equivalents				
	2010	2011	2012	2013	2014
Direct greenhouse gas emissions[2]	4.80	4.23	4.24	4.09	4.02
Indirect greenhouse gas emissions[3]	3.70	3.92	4.12	4.29	4.70
Total greenhouse gas emissions	**8.50**	**8.15**	**8.36**	**8.37**	**8.72**
Specific greenhouse gas emissions (metric tons of CO_2 equivalents per metric ton of manufactured sales volume)[4]	1.09	0.95	0.98	1.00	1.02
Manufactured sales volume[5] (million metric tons)	**10.4**	**11.0**	**11.2**	**11.1**	**11.4**

[1] portfolio-adjusted in accordance with the GHG Protocol
[2] In 2014 88.7% of emissions were CO_2 emissions, 10.8% N_2O emissions, just under 0.5% partially fluorinated hydrocarbons and 0.05% methane.
[3] Typically, CO_2 in incineration processes accounts for over 99% of all greenhouse gas emissions. We therefore base our calculation of indirect emissions on CO_2 only.
[4] Specific Group emissions are calculated from the total volume of direct and indirect emissions of the subgroups, including from the vehicle fleet, divided by the manufactured sales volume of the three subgroups. Quantities attributable to the supply of energy to external companies are deducted from the direct and indirect emissions. At MaterialScience the by-products sodium hydroxide solution and hydrochloric acid generated during production are not included in the production volume, nor are trade products.
[5] The manufactured sales volume includes all products sold in 2014, inclusive of secondary and trade products.

Owing to the inclusion for the first time of the Maasvlakte site, Netherlands, in our environmental reporting, specific greenhouse gas emissions for 2014 were up on the 2013 level, at 1.02 metric tons of CO_2 equivalents per metric ton of sales product. ONLINE ANNEX: 3-12.2-4

Information on subgroup-specific greenhouse gas emissions can be found online.
ONLINE ANNEX: 3-12.2-5

The reporting of all relevant indirect Scope 3 emissions under the GHG Protocol is bindingly regulated by the Corporate Value Chain 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.
ONLINE ANNEX: 3-12.2-6

In 2014 the Bayer Group was involved in European emissions trading with 19 plants in total. The greenhouse gas emissions of these plants amounted to approximately 2.29 million metric tons of CO_2 equivalents.

OTHER DIRECT EMISSIONS INTO THE AIR

Emissions of ozone depleting substances (ODS) fell by 5.6%. Emissions of volatile organic compounds excluding methane (VOCs) decreased by 6.5%. The main source of both types of emissions remains the CropScience site in Vapi, India, which accounts for 68.2% of VOC emissions and 94.9% of ODS emissions. The project initiated there three years ago to reduce these emissions continues to have an impact. VOC emissions have fallen by a further 9.5%, which is equivalent to 7.2% of the Group total. ODS emissions there decreased by 3.4%. By 2016 at the latest, a central waste air treatment system will bring together the many different sources of emissions in Vapi and significantly reduce these emissions.

Emissions of Ozone Depleting Substances (ODS)[1] [Table 3.12.3]

	2010	2011	2012	2013	2014
ODS in metric tons p.a.	20.8	16.3	16.3	15.7	14.8

[1] ozone depleting substances (ODS) in CFC-11 equivalents

Emissions of Volatile Organic Compounds (VOC)[1] [Table 3.12.4]

	2010	2011	2012	2013	2014
VOC in 1,000 metric tons p.a.	2.54	2.69	2.60	2.27	2.12
VOC in kg per metric ton of manufactured sales volume	0.2436	0.2457	0.2316	0.2047	0.1864

[1] volatile organic compounds (VOC) without methane

Nearly all other direct emissions also fell in 2014. ONLINE ANNEX: 3-12.2-7

12.3 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 make sure we have all the water we need while also ensuring that industrial water usage does not lead to local problems such as water scarcity for the people living in the area.

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. Our CDP Water Disclosure reports on our water usage and the associated risks. ONLINE ANNEX: 3-12.3-1

www.annual-report2014.bayer.com/CDP-Water

Based on our company's Water Position and the analysis of environmental aspects in our existing Bayer environmental management systems, we have established a program for the targeted and ongoing improvement of our water-related operating procedures. This covers both the conservation and the efficient use of resources. In 2013 we used the WBCSD (World Business Council for Sustainable Development) Global Water Tool™ to screen all of our environmentally relevant sites in terms of water scarcity. As a result, we identified sites whose location in water-scarce areas exposes them to particular risks in terms of water availability and quality. In line with our Group target, these sites are to establish water management with local targets by 2017 (see also Chapter 1.3 "Targets and Performance Indicators"). The existing water management at over 80% of these sites have already been reviewed in 2014. This review examined, for example, whether water-relevant strategies, objectives and initiatives and an appropriate risk management system were already in place. On the basis of this review, individual steps to improve water management will be agreed on with the sites in question. In addition, our three subgroups use specific systems and standards to address their own individual challenges in handling water. ONLINE ANNEX: 3-12.3-2

Group target 2017: establishment of water management at all sites in water-scarce areas

See also Chapter 1.3 for Group targets

WATER CONSUMPTION AND USAGE

In 2014 total water consumption in the Group fell by 3.1% to 349.8 million cubic meters. Major reductions were observed at the Chempark Dormagen site in Germany, and at the U.S. sites in South Charleston and Institute. As a result of the phased closure of the CropScience site in Institute, water consumption there fell by a further 2.2 million cubic meters to 15.2 million cubic meters.

71.1% of all water used by Bayer is once-through 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 248.7 million cubic meters in 2014. 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 around 12.8 million cubic meters of water was reused in 2014. ONLINE ANNEX: 3-12.3-3

The water sources largely corresponded with those of 2013.

Net Water Intake by Source [Table 3.12.5]

	2010	2011	2012	2013	2014
Water consumption (million m³ p.a.)	474	411	384	361	350
Proportion from surface water (%)	71	65	64	63	63
Proportion from boreholes/springs (%)	25	31	32	33	32
Proportion from public drinking water supplies (%)	3	2	2	3	3
Proportion from other sources, generally rainwater (%)	1	2	2	2	2

WASTEWATER AND WASTEWATER DISCHARGES

The total volume of process wastewater rose by 6.1%. All wastewater is subject to strict monitoring and analysis before it is discharged into disposal channels. Some 75.5% of Bayer's process wastewater worldwide was purified at wastewater treatment plants (Bayer or third-party facilities). Following careful analysis, the remaining 24.5% was categorized as environmentally safe. 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 3.12.6]

	2010	2011	2012	2013	2014
Volume of process wastewater (million m³)	69	72	65	63	66

Our goal is to minimize emissions into wastewater. The amount of phosphates released into wastewater fell by 12.6%. Total organic carbon emissions (TOC) fell by 21.6%. This is primarily due to lower TOC and phosphate discharges at the CropScience site in Kansas City, United States. Maintenance and inspection work at the wastewater treatment plant there was completed by the end of 2013, and a new wastewater laboratory also began operations. This considerably improved the cleaning performance and wastewater monitoring. HealthCare's site in Berkeley, United States, was also able to reduce phosphate discharges into wastewater in 2014 via the elimination rate of the local wastewater treatment plant.

We recorded an increase of 11.3% in the emission of nitrogen compounds into the wastewater in 2014. This was primarily caused by increased production volumes at CropScience's Dormagen site in Germany, but also by the situation at MaterialScience's Baytown site in the United States, where the denitrification process did not work to an optimal level of effectiveness as a result of operational disturbances.

Emissions into Water [Table 3.12.7]

	2010	2011	2012	2013	2014
Phosphorus (1,000 metric tons p.a.)	0.09	0.08	0.15	0.11	0.10
Nitrogen (1,000 metric tons p.a.)	0.49	0.53	0.70	0.69	0.76
Nitrogen (kg per metric ton of manufactured sales volume)	0.0474	0.0486	0.0624	0.0620	0.0671
TOC[1] (1,000 metric tons p.a.)	1.42	1.50	1.42	1.53	1.20
TOC (kg per metric ton of manufactured sales volume)	0.136	0.137	0.126	0.138	0.105
Heavy metals (1,000 metric tons p.a.)	0.0114	0.0108	0.0098	0.0091	0.0063
Inorganic salts (1,000 metric tons p.a.)	866	926	1,048	946	845
COD[2] (1,000 metric tons p.a.)	4.26	4.51	4.25	4.58	3.59

[1] total organic carbon
[2] chemical oxygen demand; calculated value based on TOC figures (TOC x 3 = COD)

12.4 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 2014 the total volume of waste generated remained approximately at the prior-year level.

Waste Generated[1] [Table 3.12.8]

	2010	2011	2012	2013	2014
Total waste generated (1,000 metric tons p.a.)	807	958	1,014	899	896
Hazardous waste generated[2]	354	474	603	467	487
of which hazardous waste from production	325	354	397	417	442
Specific volume of hazardous production waste (%)	3.12	3.23	3.54	3.77	3.89

[1] waste generated by Bayer only
[2] definition of hazardous waste in accordance with the local laws in each instance

The increase in hazardous waste generated, especially at the German sites in Dormagen, Frankfurt and Leverkusen, is essentially due to an increase in the production volume.

The volume of waste disposed of fell by 1.9%. Less waste was disposed of than in the previous year at the HealthCare sites in Bergkamen and Kiel, both in Germany, as a result of the completion of building work. At the CropScience site in Institute, United States, the volume of waste disposed of again fell significantly in 2014 owing to progressive dismantling. More information about the distribution of waste according to the different means of disposal is available online. ONLINE ANNEX: 3-12.4-1

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.

In 2014 the volume of waste recycled was 260,519 metric tons. The proportion of recycled waste that made up the total volume of waste disposed of thus rose by two percentage points to 29% compared with the previous year. This resulted from the recycling of slag granules as a building material at the Krefeld-Uerdingen site in Germany. Examples of recycling measures provide proof of Bayer's commitment to recycling. ONLINE ANNEX: 3-12.4-2

12.5 Biodiversity

The Group-wide biodiversity position takes into account influences on biodiversity along the whole value-added chain and the sustainable use of raw materials.

In this position, all subgroups commit themselves to the Convention on Biological Diversity. Under this Convention, the industrialized nations entered into an undertaking to provide developing countries with greater support in implementing international biodiversity goals. ONLINE ANNEX: 3-12.5-1

The use of renewable raw materials still plays only a minor role at Bayer. We are using them more intensively when it makes technical, economic and ecological sense to do so. ONLINE ANNEX: 3-12.5-2

A Group-wide directive on process and plant safety stipulates 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: 3-12.5-3

12.6 Environmental and Transport Incidents

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 or 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.

Despite extensive safety precautions and training, it is unfortunately impossible to prevent environmental incidents altogether. In 2014 the number of environmental incidents fell from ten to four.
ONLINE ANNEX: 3-12.6-1

Transport incidents increased from 11 to 12. Transport incidents are also classified according to clearly defined Bayer criteria (more information can be found in Chapter 11 "Safety." A detailed description of both environmental and transport incidents can be found online. ONLINE ANNEX: 3-12.6-2

12.7 International Standards and Certifications

To ensure high health, safety, environmental protection and quality (HSEQ) standards throughout the Group, Bayer has established 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 guidelines of the chemical industry's Responsible Care Global Charter.

With regard to the coverage of our business activities with HSEQ management systems based on energy consumption, in 2014 around 94% of all our production sites featured an HSE management system audited by Bayer. 95% of our entire business activities were certified externally to at least one internationally recognized standard in 2014. As part of a Group-wide certification plan, it is planned to achieve virtually complete coverage in both environmental and occupational safety management based on energy consumption by 2017. One hundred percent coverage is not feasible owing to changes in our site portfolio, however.

Standards and Certifications[1] [Table 3.12.9]

	2011	2012	2012	2014
Certification to external standards				
ISO 14001 certification/EMAS validation	66	84	84	91
HSEQ management systems based on other external standards[2]	54	58	67	58
Certified to OHSAS 18001	27	30	30	34
Certified to ISO 50001[3]	–	–	–	40
Degree of coverage with certification to at least one international standard	87	89	90	95
HSE management systems internally audited by Bayer				
HSE management systems audited by Bayer	99	99	99	94[4]

[1] % of business activities (based on energy consumption)
[2] e.g. RCMS (Responsible Care Management System) in the United States or Industria Limpia (Clean Industry) in Mexico
[3] Group values determined from 2014 onward
[4] The percentage reduction in the HSE management systems audited by Bayer can be explained by the inclusion for the first time of the Maasvlakte site in our environmental reporting. Since the workforce there to date has comprised exclusively employees of our joint venture partner, no internal Bayer audits are performed there.

We began introducing ISO 50001 in 2012. This standard defines the requirements for introducing, maintaining and improving an energy management system. In this report, we are for the first time publishing the coverage for the Group.

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, its coverage by certification is over 98%. More information about quality management can be found in Chapter 8 "Procurement and Production."

13. Social Commitment

Bayer actively supports charitable causes worldwide

Throughout the world, Bayer actively supports charitable causes in the core fields of education and science, health and social needs, and sports and culture. Through our corporate foundations – the Bayer Science & Education Foundation and the Bayer Cares Foundation – we support cutting-edge research, talented young people and sustainable educational and social projects. In line with our understanding of Bayer as an innovation company, the Group and its foundations base their social commitment as well on the potential that new approaches harbor to bring about change. Initiative and pioneering spirit are therefore overarching funding criteria.

The Group provided €49 million for non-profit investment in the future well-being of society in 2014 (2013: €50 million).

Expenses for Social Initiatives [Table 3.13.1]

Main sponsorship areas	2013	2014
	€ million	€ million
Education and science	14	13
Health and social needs	17	17
Sports and culture	19	19

Detailed information on expenses in our main sponsorship areas can be found in
ONLINE ANNEX: 3-13-1

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 country companies bear responsibility for implementing a large number of the initiatives. ONLINE ANNEX: 3-13-2

EDUCATION AND SCIENCE

The Bayer foundations and the country companies offer funding at all stages of the educational path – from kindergarten to high-level research.

When it comes to scientific funding, Bayer focuses on supporting outstanding research achievements, developing international young scientists and engaging in dialogue in Life Science fields.
ONLINE ANNEX: 3-13-3

Bayer also supports the scientific education of young people. We want to help awaken and promote an interest in science, technology and medicine through initiatives for schoolchildren and scholarship programs. In this way, we are helping talented young people at an early age to go on to become leading-edge researchers.

The foundation's scholarships enable students and trainees to carry out ambitious projects abroad. When it comes to supporting the talents of schoolchildren, Bayer is banking on the commitment and creativity of subject teachers – total funding of €500,000 was approved in 2014 for 53 projects in which they are exploring new, practical ways of teaching science. All kinds of schools are eligible for funding – from elementary school to high school, including special schools and vocational schools.

With this funding portfolio, the Bayer foundations recognize excellence in natural science and medicine in particular – the very scientific fields that form the basis for Bayer's business model as a research-oriented Life Science company.

HEALTH AND SOCIAL NEEDS

In many parts of the world, our social commitment includes involvement in improving health care, treating neglected diseases and providing better social living conditions in the communities around our sites. To this end, we work together with the World Health Organization (WHO) and local non-governmental organizations, for example. ONLINE ANNEX: 3-13-4

After the international expansion of the volunteering program in the previous year, the Bayer Cares Foundation provided funding of around €317,000 for 92 voluntary initiatives in 2014. These projects are primarily put forward by Bayer employees who are committed to improving the living conditions in the communities around Bayer's sites in some 40 countries worldwide.

2014 once again saw the Bayer Cares Foundation involved in disaster aid. After the devastating destruction caused by Typhoon Haiyan on the Philippines, for example, the foundation joined forces with local partners to launch three reconstruction projects. They provide health care and permanent accommodation for the people affected. These measures were made possible by funding to the tune of €280,000 financed in equal part by Bayer employees and the company itself.

SPORTS AND CULTURE

Bayer has been actively involved in supporting sports and culture for more than a century, thereby making a sustainable contribution to the cultural life and sports opportunities in the catchment areas of its sites in Germany. Some Bayer sports clubs offer a wide range of prophylactic exercise programs that health insurers have approved as preventive health measures. In 2014 the company provided funding of some €14 million for recreational, disabled and competitive sports activities. ONLINE ANNEX: 3-13-5

Report on Economic Position

FISCAL 2014:

Bayer: strong business momentum continues and portfolio transformation underway

// Group portfolio to focus on Life Sciences
// All subgroups contribute to record sales and earnings
// Continued growth momentum for recently launched products
// Group sales €42.2 billion (Fx & portfolio adj. +7.2%)
// EBIT €5.5 billion (+11.6%)
// EBITDA before special items €8.8 billion (+4.9%)
// Net income €3.4 billion (+7.4%)
// Core earnings per share €6.02 (+7.3%)
// Forecast for 2015: further sales growth and clear improvement in earnings

14. Overview of Sales, Earnings and Financial Position

Group targets for profitable growth in 2014

See Chapter 1.3 for Group targets

TARGET ATTAINMENT 2014

	Forecast 2014[2]	Adjusted forecast 2014[3]	Target attainment
Group sales	Approx. 5% increase[1]	Approx. 6% increase[1]	7.2% increase[1]
	Approx. €41 billion to €42 billion	Approx. €42 billion	€42.2 billion
EBITDA before special items	Low- to mid-single-digit percentage increase	Mid-single-digit percentage increase	4.9% increase
Core earnings per share	Mid-single-digit percentage increase	Mid- to high-single-digit percentage increase	7.3% increase

[1] currency- and portfolio-adjusted
[2] issued in February 2014
[3] issued in October 2014

FULL YEAR 2014

Bayer had a very successful year in 2014, both operationally and strategically. We set new records for sales and for EBITDA before special items. The growth momentum in our Life Science businesses – HealthCare and CropScience – persisted, driven by sales of our recently launched products. MaterialScience also registered encouraging sales gains. Group EBITDA before special items advanced significantly. Tangible volume growth and a modest rise in selling prices more than offset higher selling and R&D expenses and negative currency effects.

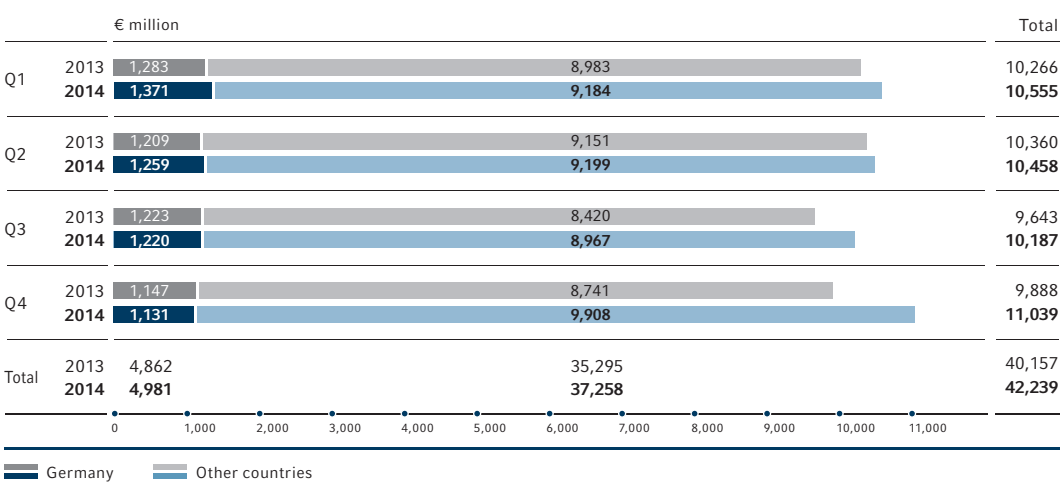
In 2014 we set the course for the Bayer Group to focus on the Life Science businesses – HealthCare and CropScience. MaterialScience is to be floated on the stock market as a separate company by mid-2016 at the latest. We considerably strengthened our Consumer Health segment by acquiring the consumer care businesses of Merck & Co., Inc., United States, and Dihon Pharmaceutical Group Co. Ltd., China. Our Pharmaceuticals business benefited from the acquisition of Algeta ASA, Norway, with which Bayer was already collaborating to develop and commercialize the cancer drug Xofigo™.

Changes in Sales [Table 3.14.1]

	2013	2014
	%	%
Volume	+4.3	+6.8
Price	+0.8	+0.4
Currency	−4.4	−2.8
Portfolio	+0.3	+0.8
Total	**+1.0**	**+5.2**

Group **sales** advanced by 7.2% on a currency- and portfolio-adjusted basis (Fx & portfolio adj.) to €42,239 million (reported: +5.2%; 2013: €40,157 million). All subgroups contributed to this increase. Sales of HealthCare improved by 7.5% (Fx & portfolio adj.; reported: +5.6%). CropScience sales gained 11.2% (Fx & portfolio adj.; reported: +7.7%) against the prior year. Sales at MaterialScience grew by 4.8% (Fx & portfolio adj.; reported: +3.7%).

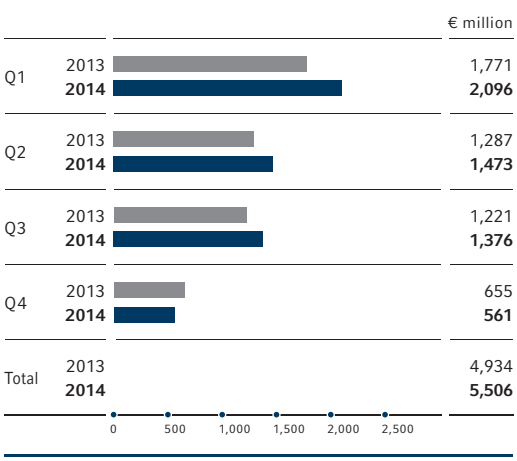
Bayer Group Quarterly Sales [Graphic 3.14.1]



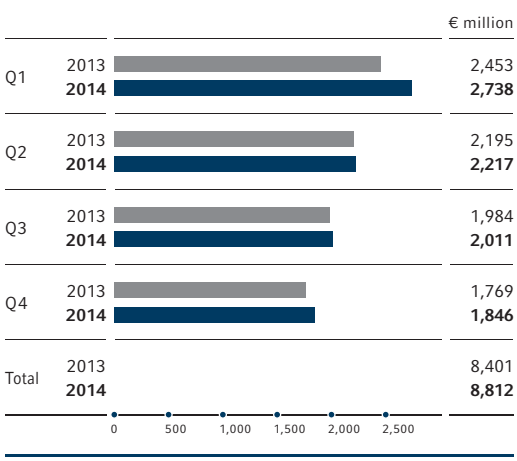
EBIT of the Bayer Group rose by 11.6% to €5,506 million (2013: €4,934 million) after net special charges of €438 million (2013: €839 million). The special charges mainly included €173 million for the derecognition of goodwill as a result of the sGC collaboration agreement with Merck & Co., Inc, United States, €153 million in integration costs for acquired businesses, and €89 million in accounting measures for litigations. These amounts were partly offset by a one-time net gain of €77 million from the sale of our Interventional device business to Boston Scientific, United States. EBIT before special items rose by 3.0% to €5,944 million (2013: €5,773 million).

EBITDA before special items increased by 4.9% to €8,812 million (2013: €8,401 million) despite negative currency effects of approximately €410 million or 4%. The good sales development was accompanied by higher selling and R&D expenses. At HealthCare, EBITDA before special items improved by 2.8% to €5,484 million (2013: €5,334 million; currency effect approx. minus 6%). While earnings of the Pharmaceuticals segment improved, those of Consumer Health declined. EBITDA before special items of CropScience rose by 5.0% to €2,360 million (2013: €2,248 million; currency effect approx. minus 2%) as a result of volume gains and higher selling prices. EBITDA before special items of MaterialScience advanced by 10.7% to €1,187 million (2013: €1,072 million; currency effect 0%), mainly thanks to higher volumes and lower raw material and energy costs.

Bayer Group Quarterly EBIT [Graphic 3.14.2]



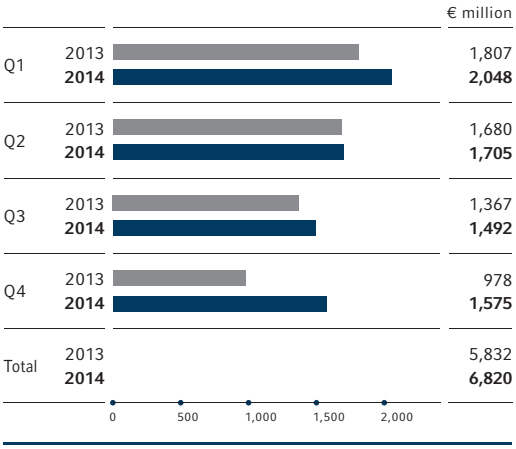
Bayer Group Quarterly EBITDA Before Special Items [Graphic 3.14.3]



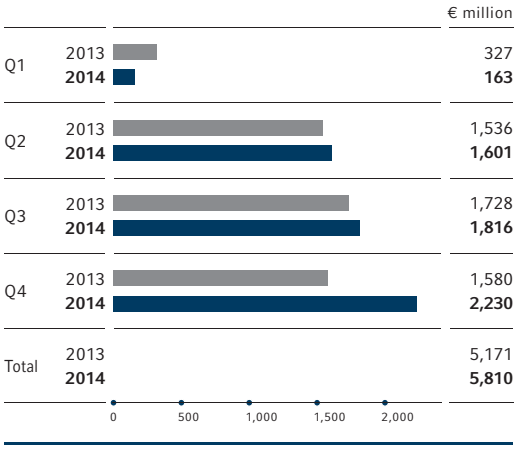
After a **financial result** of minus €981 million (2013: minus €727 million), **income before income taxes** was €4,525 million (2013: €4,207 million). After tax expense of €1,082 million (2013: €1,021 million) and non-controlling interest, **net income** for 2014 came in at €3,426 million (2013: €3,189 million).

Earnings per share were €4.14 (2013: €3.86). Core earnings per share advanced by 7.3% to €6.02 (2013: €5.61), calculated as explained in Chapter 16.3 "Core Earnings Per Share."

Gross Cash Flow by Quarter [Graphic 3.14.4]



Net Cash Flow by Quarter [Graphic 3.14.5]



Gross cash flow climbed by 16.9% in 2014 to €6,820 million (2013: €5,832 million), mainly because of the improvement in EBIT. Net cash flow moved ahead by 12.4% to €5,810 million (2013: €5,171 million) after a business-related increase in cash tied up in working capital and €778 million in deferred income from the one-time payment received in connection with the sGC collaboration with Merck & Co., Inc., United States. In 2014 we paid income taxes amounting to €1,835 million (2013: €1,281 million). Net financial debt rose by €12.9 billion against December 31, 2013, to €19.6 billion as a result of acquisitions. The net defined benefit liability for post-employment benefits – the difference between benefit obligations and plan assets – increased from €7.3 billion to €12.2 billion over the same period, mainly due to a decline in long-term capital market interest rates for high-quality corporate bonds.

Total assets increased in 2014 by 36.9% to €70.2 billion. Noncurrent assets rose by 48.7% to €48.0 billion, mainly as a result of acquisitions. Goodwill rose by €6.3 billion to €16.2 billion and other intangible assets by €6.7 billion to €15.6 billion. The carrying amount of current assets increased by 16.8% to €22.2 billion. Equity decreased by €0.6 billion to €20.2 billion. Liabilities increased by €19.5 billion against December 31, 2013 to €50.0 billion, mainly due to a €12.8 billion acquisition-related increase in financial liabilities and a €4.9 billion increase in pension provisions.

FOURTH QUARTER OF 2014

Group **sales** in the fourth quarter of 2014 rose by 6.9% (Fx & portfolio adj.) to €11,039 million (reported: +11.6%). Sales of HealthCare gained 7.8% (Fx & portfolio adj.) to €5,598 million (reported: +13.3%). Business in the Pharmaceuticals segment expanded by 10.1% (Fx & portfolio adj.) to €3,271 million (reported: +9.9%), driven by the encouraging development of our recently launched products. Sales at Consumer Health came in 4.2% ahead of the prior-year quarter at €2,327 million (reported: +18.5%). CropScience sales climbed by 8.3% (Fx & portfolio adj.) in the fourth quarter to €2,195 million (reported: +12.5%) as a result of higher volumes. Sales of MaterialScience rose by 5.5% (Fx & portfolio adj.) against the prior-year period, to €2,948 million (reported: +9.6%), thanks primarily to volume increases.

EBIT of the Bayer Group declined by 14.4% in the fourth quarter of 2014, to €561 million (Q4 2013: €655 million). Earnings were diminished by net special charges of €442 million (Q4 2013: €439 million). The special charges mainly included €173 million for the derecognition of goodwill as a result of the sGC collaboration agreement with Merck & Co., Inc, United States, €89 million in accounting measures for litigations and €86 million in integration costs for acquired businesses. EBIT before special items fell by 8.3% to €1,003 million (Q4 2013: €1,094 million).

EBITDA before special items rose in the fourth quarter of 2014 by 4.4% to €1,846 million (Q4 2013: €1,769 million), mainly as a result of higher volumes in all subgroups. Earnings were held back by higher selling and R&D expenses. HealthCare registered a 6.7% increase in EBITDA before special items to €1,426 million (Q4 2013: €1,337 million), while CropScience posted a 15.7% gain to €369 million (Q4 2013: €319 million). EBITDA before special items of MaterialScience came in at €217 million (Q4 2013: €248 million), down 12.5% against the prior-year quarter.

After a financial result of minus €347 million (Q4 2013: minus €84 million), income before income taxes fell to €214 million (Q4 2013: €571 million). The financial result mainly comprised net interest expense of €148 million (Q4 2013: €61 million), interest cost of €111 million (Q4 2013: €62 million) for pension and other provisions, and exchange losses of €66 million (Q4 2013: €29 million). After taxes and non-controlling interest, net income amounted to €224 million (Q4 2013: €455 million). Earnings per share declined to €0.27 (Q4 2013: €0.55). However, core earnings per share rose to €1.19 (Q4 2013: €1.10), calculated as explained in Chapter 16.3 "Core Earnings Per Share."

Gross cash flow of the Group advanced by 61.0% to €1,575 million (Q4 2013: €978 million) and net cash flow by 41.1% to €2,230 million (Q4 2013: €1,580 million). The sharp rise in net cash flow was largely attributable to the €778 million in deferred income from the one-time payment received in connection with the sGC collaboration with Merck & Co., Inc., United States. Net financial debt rose by €11.1 billion in the fourth quarter of 2014 to €19.6 billion (September 30, 2014: €8.5 billion), mainly due to higher borrowings for acquisitions. The net defined benefit liability for post-employment benefits increased by €0.9 billion against September 30, 2014, to €12.2 billion, mainly due to a decline in long-term capital market interest rates for high-quality corporate bonds.

Key Data by Subgroup and Segment [Table 3.14.2]

	Sales		EBIT		EBITDA before special items[1]	
	4th Quarter 2013	4th Quarter 2014	4th Quarter 2013	4th Quarter 2014	4th Quarter 2013	4th Quarter 2014
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	**4,939**	**5,598**	**631**	**562**	**1,337**	**1,426**
Pharmaceuticals	2,975	3,271	321	375	822	939
Consumer Health	1,964	2,327	310	187	515	487
CropScience	**1,951**	**2,195**	**163**	**191**	**319**	**369**
MaterialScience	**2,691**	**2,948**	**70**	**43**	**248**	**217**
Reconciliation	**307**	**298**	**(209)**	**(235)**	**(135)**	**(166)**
Group	**9,888**	**11,039**	**655**	**561**	**1,769**	**1,846**

[1] For definition see Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."

15. Business Development by Subgroup, Segment and Region

15.1 HealthCare

Key Data – HealthCare [Table 3.15.1]

	4th Quarter 2013	4th Quarter 2014	Change		Full Year 2013	Full Year 2014	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**4,939**	**5,598**	**+13.3**	**+7.8**	**18,924**	**19,975**	**+5.6**	**+7.5**
Change in sales								
Volume	+4.7%	+5.8%			+5.9%	+6.4%		
Price	+2.5%	+2.0%			+0.9%	+1.1%		
Currency	–7.7%	0.0%			–5.7%	–3.7%		
Portfolio	+0.9%	+5.5%			+0.6%	+1.8%		
Sales								
Pharmaceuticals	2,975	3,271	+9.9	+10.1	11,188	12,052	+7.7	+11.2
Consumer Health	1,964	2,327	+18.5	+4.2	7,736	7,923	+2.4	+2.1
Sales by region								
Europe	1,817	1,964	+8.1	+10.7	6,853	7,364	+7.5	+9.2
North America	1,286	1,597	+24.2	+16.8	5,024	5,312	+5.7	+6.3
Asia/Pacific	1,080	1,230	+13.9	+11.5	4,188	4,479	+6.9	+11.0
Latin America/Africa/Middle East	756	807	+6.7	+15.9	2,859	2,820	–1.4	+12.3
EBIT	**631**	**562**	**–10.9**		**3,260**	**3,581**	**+9.8**	
Special items	*(354)*	*(376)*			*(713)*	*(331)*		
EBIT before special items[1]	***985***	***938***	***–4.8***		***3,973***	***3,912***	***–1.5***	
EBITDA[1]	**1,069**	**1,079**	**+0.9**		**4,858**	**5,186**	**+6.8**	
Special items	*(268)*	*(347)*			*(476)*	*(298)*		
EBITDA before special items[1]	***1,337***	***1,426***	***+6.7***		***5,334***	***5,484***	***+2.8***	
EBITDA margin before special items[1]	27.1%	25.5%			28.2%	27.5%		
Gross cash flow[2]	**840**	**1,234**	**+46.9**		**3,573**	**4,011**	**+12.3**	
Net cash flow[2]	**959**	**2,185**	**.**		**2,980**	**4,444**	**+49.1**	

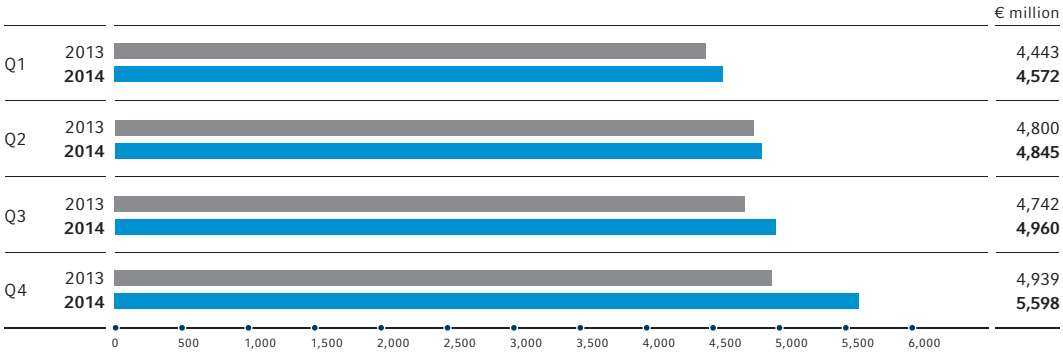
Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales; Fx adj.: Sales by region)
[1] For definition see Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 16.5 "Liquidity and Capital Expenditures of the Bayer Group."

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 7.5% (Fx & portfolio adj.) in 2014, to €19,975 million (reported: +5.6%). This encouraging growth was driven by our recently launched pharmaceutical products. Sales at Consumer Health came in slightly ahead of the prior year.

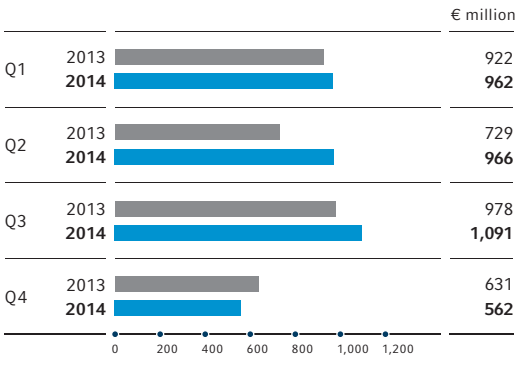
The integration of the businesses acquired from Merck & Co., Inc., United States, and from Dihon Pharmaceutical Group Co. Ltd., China, in the fourth quarter of 2014 is progressing on schedule.

HealthCare Quarterly Sales [Graphic 3.15.1]

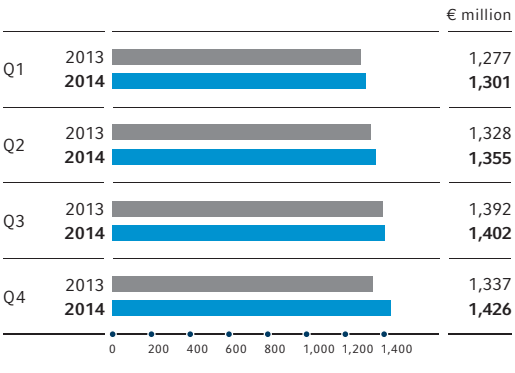


EBIT of the HealthCare subgroup advanced significantly by 98% in 2014 to €3,581 million. This increase was largely attributable to considerably lower special charges of €331 million (2013: €713 million). EBIT before special items declined by 1.5% to €3,912 million. By contrast, we raised **EBITDA** before special items by 2.8% to €5,484 million. This increase was driven by the gratifying business development in Pharmaceuticals, while earnings in Consumer Health posted a slight decrease. Earnings at HealthCare were diminished by higher selling expenses in both segments, higher research and development spending in Pharmaceuticals and negative currency effects of approximately €360 million.

HealthCare Quarterly EBIT [Graphic 3.15.2]



HealthCare Quarterly EBITDA Before Special Items [Graphic 3.15.3]



PHARMACEUTICALS

Key Data – Pharmaceuticals [Table 3.15.2]

	4th Quarter 2013	4th Quarter 2014	Change		Full Year 2013	Full Year 2014	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**2,975**	**3,271**	**+9.9**	**+10.1**	**11,188**	**12,052**	**+7.7**	**+11.2**
Sales by region								
Europe	1,049	1,176	+12.1	+13.5	3,918	4,396	+12.2	+13.3
North America	663	735	+10.9	+4.2	2,540	2,728	+7.4	+8.2
Asia/Pacific	783	884	+12.9	+10.9	3,016	3,278	+8.7	+13.1
Latin America/Africa/Middle East	480	476	−0.8	+9.6	1,714	1,650	−3.7	+10.1
EBIT	**321**	**375**	**+16.8**		**2,031**	**2,371**	**+16.7**	
Special items	*(259)*	*(290)*			*(521)*	*(286)*		
EBIT before special items[1]	***580***	***665***	***+14.7***		***2,552***	***2,657***	***+4.1***	
EBITDA[1]	**618**	**678**	**+9.7**		**3,124**	**3,446**	**+10.3**	
Special items	*(204)*	*(261)*			*(366)*	*(253)*		
EBITDA before special items[1]	***822***	***939***	***+14.2***		***3,490***	***3,699***	***+6.0***	
EBITDA margin before special items[1]	27.6%	28.7%			31.2%	30.7%		
Gross cash flow[2]	**510**	**843**	**+65.3**		**2,293**	**2,745**	**+19.7**	
Net cash flow[2]	**625**	**1,719**	**.**		**1,853**	**3,266**	**+76.3**	

Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales; Fx adj.: Sales by region)
[1] For definition see Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 16.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Pharmaceuticals** segment climbed by a substantial 11.2% (Fx & portfolio adj.) to €12,052 million. This very good performance was driven by our recently launched products Xarelto™, Eylea™, Stivarga™, Xofigo™ and Adempas™, which posted combined sales of €2,908 million (2013: €1,522 million). Our Pharmaceuticals business grew in all regions on a currency-adjusted basis, particularly in China, the United States and Western Europe.

Best-Selling Pharmaceuticals Products [Table 3.15.3]

	4th Quarter 2013	4th Quarter 2014	Change		Full Year 2013	Full Year 2014	Change	
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Xarelto™	316	516	+63.3	+65.0	949	1,679	+76.9	+81.6
Kogenate™	274	301	+9.9	+7.8	1,202	1,109	−7.7	−5.6
Betaferon™/Betaseron™	259	190	−26.6	−28.5	1,038	819	−21.1	−19.6
Mirena™ product family	195	225	+15.4	+10.0	719	819	+13.9	+15.1
Nexavar™	194	202	+4.1	+2.7	771	773	+0.3	+3.5
YAZ™/Yasmin™/Yasminelle™	219	198	−9.6	−4.4	853	768	−10.0	−3.3
Eylea™	126	219	+73.8	+74.4	333	759	+127.9	+132.8
Adalat™	157	153	−2.5	−2.9	603	588	−2.5	+2.5
Aspirin™ Cardio	120	130	+8.3	+9.1	452	486	+7.5	+12.4
Glucobay™	112	133	+18.8	+12.0	423	443	+4.7	+5.6
Avalox™/Avelox™	106	96	−9.4	−8.4	426	381	−10.6	−6.9
Levitra™	69	56	−18.8	−18.6	290	245	−15.5	−13.1
Stivarga™	59	63	+6.8	+4.0	197	224	+13.7	+16.6
Cipro™/Ciprobay™	42	52	+23.8	+27.3	197	191	−3.0	+1.9
Zetia™	45	47	+4.4	+9.4	172	168	−2.3	+5.9
Total	**2,293**	**2,581**	**+12.6**	**+12.1**	**8,625**	**9,452**	**+9.6**	**+13.1**
Proportion of Pharmaceuticals sales	77%	79%			77%	78%		

Fx adj. = currency-adjusted

Our oral anticoagulant Xarelto™ maintained its growth momentum, with strong sales gains especially in Japan, France and Germany. Royalties received and recognized as sales in the United States, where Xarelto™ is marketed by a subsidiary of Johnson & Johnson, more than doubled. Following its approval in additional indications, sales of our eye medicine Eylea™ continued to rise substantially, particularly in Europe. The cancer drug Stivarga™ developed positively, and the cancer drug Xofigo™ (sales in 2014: €157 million; 2013: €41 million) also made a pleasing contribution to sales growth, especially in the United States. The market introduction of Adempas™ to treat various forms of pulmonary hypertension continued successfully in additional countries. Since October 2014, we have been collaborating with Merck & Co., Inc., United States, in the development and commercialization of Adempas™. The sales attributable to Bayer amounted to €89 million in 2014 (2013: €3 million). The one-time payment of €793 million from the sGC cooperation will be recorded as sales and earnings over a 13.5 year period. €15 million of this was accounted for in the fourth quarter.

Sales of the hormone-releasing intrauterine devices of the Mirena™ product family rose mainly as a result of higher prices and volumes in the United States. The cancer drug Nexavar™ posted gains, mainly as a result of price increases in the United States. Adalat™ for the treatment of hypertension and coronary heart disease, Aspirin™ Cardio for secondary prevention of heart attacks and our oral diabetes treatment Glucobay™ benefited from further rising demand in China.

Sales of our blood-clotting medicine Kogenate™ receded, due partly to the temporary use of production capacities to develop our next-generation hemophilia medicines. Sales of the multiple sclerosis drug Betaferon™/Betaseron™ fell particularly in the United States due to increased competition there. Business with our YAZ™/Yasmin™/Yasminelle™ oral contraceptives was held back especially by generic competition in Western Europe and lower demand in Japan. Despite higher volumes in China, sales of the antibiotic Avalox™/Avelox™ declined overall, due particularly to the expiration of the patent in Europe and the United States. Sales of Levitra™ for the treatment of erectile dysfunction were down primarily in the United States.

EBIT of the **Pharmaceuticals** segment rose by a substantial 16.7% in 2014 to €2,371 million. This was mainly due to lower special charges of €286 million (2013: €521 million), which mainly included €173 million for the derecognition of goodwill as a result of the sGC collaboration with Merck & Co., Inc., United States, and €88 million in accounting measures for litigations. EBIT before special items increased by 4.1% to €2,657 million. We raised **EBITDA** before special items by 6.0% to €3,699 million. This earnings growth was mainly attributable to the encouraging business development and especially to the strong sales gains for our recently launched products, while earnings were diminished by higher selling and R&D expenses and roughly €330 million in negative currency effects.

CONSUMER HEALTH

Key Data – Consumer Health [Table 3.15.4]

	4th Quarter 2013	4th Quarter 2014	Change		Full Year 2013	Full Year 2014	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**1,964**	**2,327**	**+18.5**	**+4.2**	**7,736**	**7,923**	**+2.4**	**+2.1**
Consumer Care	1,015	1,384	+36.4	+8.7	3,904	4,245	+8.7	+5.3
Medical Care	653	643	−1.5	−0.2	2,526	2,360	−6.6	−3.7
Animal Health	296	300	+1.4	−1.3	1,306	1,318	+0.9	+4.0
Sales by region								
Europe	768	788	+2.6	+6.9	2,935	2,968	+1.1	+3.6
North America	623	862	+38.4	+30.2	2,484	2,584	+4.0	+4.4
Asia/Pacific	297	346	+16.5	+13.1	1,172	1,201	+2.5	+5.7
Latin America/Africa/Middle East	276	331	+19.9	+26.8	1,145	1,170	+2.2	+15.5
EBIT	**310**	**187**	**−39.7**		**1,229**	**1,210**	**−1.5**	
Special items	*(95)*	*(86)*			*(192)*	*(45)*		
***EBIT before special items*[1]**	***405***	***273***	***−32.6***		***1,421***	***1,255***	***−11.7***	
EBITDA[1]	**451**	**401**	**−11.1**		**1,734**	**1,740**	**+0.3**	
Special items	*(64)*	*(86)*			*(110)*	*(45)*		
***EBITDA before special items*[1]**	*515*	*487*	*−5.4*		*1,844*	*1,785*	*−3.2*	
EBITDA margin before special items[1]	26.2%	20.9%			23.8%	22.5%		
Gross cash flow[2]	**330**	**391**	**+18.5**		**1,280**	**1,266**	**−1.1**	
Net cash flow[2]	**334**	**466**	**+39.5**		**1,127**	**1,178**	**+4.5**	

Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales; Fx adj.: Sales by region)
[1] For definition see Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 16.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Consumer Health** segment advanced by 2.1% (Fx & portfolio adj.) in 2014 to €7,923 million. The Consumer Care and Animal Health divisions achieved sales gains, especially in the Emerging Markets. Sales in the Medical Care Division declined particularly in the United States and Europe.

Best-Selling Consumer Health Products [Table 3.15.5]

	4th Quarter 2013	4th Quarter 2014	Change		Full Year 2013	Full Year 2014	Change	
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Contour™ (Medical Care)	179	180	+0.6	−2.4	722	658	−8.9	−8.2
Advantage™ product family (Animal Health)	98	105	+7.1	+2.9	487	495	+1.6	+3.1
Aspirin™ (Consumer Care)	120	125	+4.2	+2.3	464	441	−5.0	−1.4
Aleve™ (Consumer Care)	82	102	+24.4	+17.3	321	350	+9.0	+10.1
Bepanthen™/Bepanthol™ (Consumer Care)	77	85	+10.4	+17.1	310	346	+11.6	+18.3
Ultravist™ (Medical Care)	80	84	+5.0	+5.7	322	302	−6.2	−3.3
Canesten™ (Consumer Care)	61	60	−1.6	−0.1	257	253	−1.6	+3.1
Gadovist™/Gadavist™ (Medical Care)	55	65	+18.2	+14.8	205	233	+13.7	+14.3
One A Day™ (Consumer Care)	48	55	+14.6	+6.2	176	167	−5.1	−5.3
Supradyn™ (Consumer Care)	43	42	−2.3	+10.7	158	154	−2.5	+8.2
Total	**843**	**903**	**+7.1**	**+5.8**	**3,422**	**3,399**	**−0.7**	**+2.0**
Proportion of Consumer Health sales	43%	39%			44%	43%		

Fx adj.= currency-adjusted
Total sales of Aspirin™ (including Aspirin™ Complex), also including Aspirin™ Cardio, which is reflected in sales of the Pharmaceuticals segment, increased by 1.2% (Fx adj. 5.4%) in 2014 to €927 million (2013: €916 million). Total sales of this product in the fourth quarter of 2014 climbed by 6.3% (Fx adj. 5.7%) to €255 million (Q4 2013: €240 million).

Sales in the **Consumer Care** Division rose by 5.3% (Fx & portfolio adj.) to €4,245 million. The business acquired from Merck & Co., Inc., United States, on October 1, 2014, accounted for €289 million of sales in the fourth quarter, which is traditionally weaker for seasonal reasons. We registered considerably higher sales of our pain reliever Aleve™ in the United States due mainly to a product line expansion. Our skincare product Bepanthen™/Bepanthol™ posted considerably higher sales on a currency-adjusted basis. Higher volumes in all regions contributed to this growth. Sales of our antifungal Canesten™ expanded particularly in the Emerging Markets. Driven partly by product line expansions, sales of our dietary supplement Supradyn™ developed positively in Europe. Business with the pain reliever Aspirin™ was held back mainly by a weak cold season in Europe. Business with our dietary supplement One A Day™ was held back mainly by lower demand in the United States.

Sales of the **Medical Care** Division fell by 3.7% (Fx & portfolio adj.) to €2,360 million. Sales of the Diabetes Care business declined overall despite positive development in the Emerging Markets. Business with our Contour™ line of blood glucose meters was held back, especially in the United States, due to reimbursement pressure and price decreases, mainly in the first half of the year. Sales of our contrast agents and medical equipment in the Radiology business were flat with the prior-year period on a currency-adjusted basis.

Business in the **Animal Health** Division improved by 4.0% (Fx & portfolio adj.) to €1,318 million. We raised sales of the Advantage™ product family of flea, tick and worm control products due to good development in Europe. Business with the Seresto™ flea and tick collar advanced substantially in Europe and the United States.

EBIT of the **Consumer Health** segment edged down by 1.5% in 2014 to €1,210 million after net special charges of €45 million (2013: €192 million). Reflected here are expenses of €122 million for the integration of acquired businesses and a one-time net gain of €77 million from the divestiture of the Interventional device business to Boston Scientific, United States. EBIT before special items fell by 11.7% to €1,255 million. **EBITDA** before special items, at €1,785 million, was below the prior-year level (2013: €1,844 million). This was due to lower earnings at Medical Care and Animal Health along with negative currency effects of around €30 million. However, there was a positive effect from earnings growth at Consumer Care, to which the business acquired from Merck & Co., Inc., United States, contributed €73 million.

15.2 CropScience

Key Data – CropScience [Table 3.15.6]

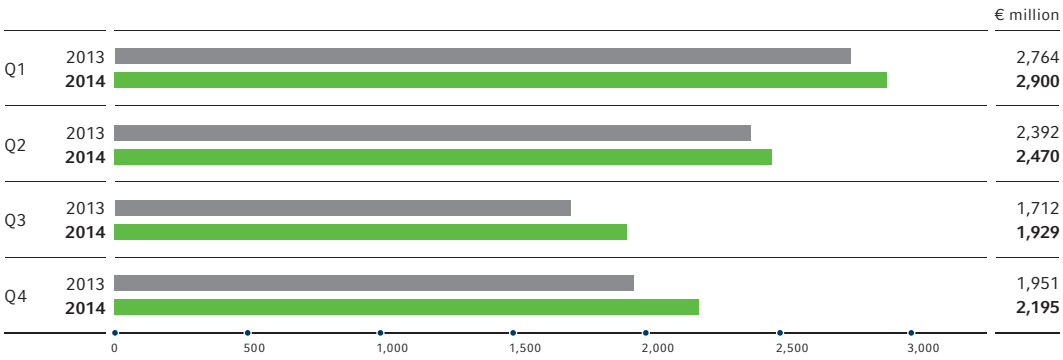
	4th Quarter 2013	4th Quarter 2014	Change		Full Year 2013	Full Year 2014	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**1,951**	**2,195**	**+12.5**	**+8.3**	**8,819**	**9,494**	**+7.7**	**+11.2**
Change in sales								
Volume	+11.8%	+7.6%			+6.8%	+9.1%		
Price	+1.0%	+0.7%			+2.6%	+2.1%		
Currency	–8.2%	+3.7%			–4.7%	–3.7%		
Portfolio	+0.5%	+0.5%			+0.5%	+0.2%		
Sales								
Crop Protection/Seeds	1,797	2,028	+12.9	+8.7	8,168	8,816	+7.9	+11.6
Environmental Science	154	167	+8.4	+3.9	651	678	+4.1	+6.9
Sales by region								
Europe	411	377	–8.3	–8.3	2,799	2,957	+5.6	+7.4
North America	301	329	+9.3	+0.3	2,211	2,334	+5.6	+10.2
Asia/Pacific	329	356	+8.2	+4.0	1,358	1,374	+1.2	+5.5
Latin America/Africa/Middle East	910	1,133	+24.5	+21.3	2,451	2,829	+15.4	+20.6
EBIT	**163**	**191**	**+17.2**		**1,729**	**1,806**	**+4.5**	
Special items	*(40)*	*(32)*			*(72)*	*(32)*		
EBIT before special items[1]	***203***	***223***	***+9.9***		***1,801***	***1,838***	***+2.1***	
EBITDA[1]	**282**	**367**	**+30.1**		**2,184**	**2,358**	**+8.0**	
Special items	*(37)*	*(2)*			*(64)*	*(2)*		
EBITDA before special items[1]	***319***	***369***	***+15.7***		***2,248***	***2,360***	***+5.0***	
EBITDA margin before special items[1]	16.4%	16.8%			25.5%	24.9%		
Gross cash flow[2]	**228**	**382**	**+67.5**		**1,590**	**1,835**	**+15.4**	
Net cash flow[2]	**29**	**103**	**.**		**682**	**950**	**+39.3**	

Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales; Fx adj.: Sales by region)
[1] For definition see Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 16.5 "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 11.2% (Fx & portfolio adj.) in 2014, to €9,494 million (reported: +7.7%). Crop Protection/Seeds achieved double-digit growth, due to the attractive market environment and especially to an increase in sales of the new Crop Protection products (launched since 2006) to over €1.8 billion (reported: around +23%). The Environmental Science unit also registered an increase in sales.

CropScience Quarterly Sales [Graphic 3.15.4]



Sales in **Crop Protection / Seeds** climbed by 11.6% (Fx & portfolio adj.), to €8,816 million. All business units contributed to this pleasing increase. The largest increase at Crop Protection in percentage terms was achieved in Fungicides. Sales developed positively in all parts of our Seeds business, particularly for cotton seed.

Sales in **Environmental Science** advanced by 6.9% (Fx & portfolio adj.) to €678 million. Consumer products posted double-digit growth. We also expanded the business with products for professional users.

Sales by Business Unit [Table 3.15.7]

	4th Quarter 2013	4th Quarter 2014	Change		Full Year 2013	Full Year 2014	Change	
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%	Fx & p adj. %
Herbicides	469	517	+10.2	+8.1	2,456	2,549	+3.8	+8.5
Fungicides	445	568	+27.6	+22.2	2,195	2,490	+13.4	+15.9
Insecticides	465	482	+3.7	−0.2	1,622	1,695	+4.5	+7.6
SeedGrowth	247	254	+2.8	−4.0	921	978	+6.2	+8.4
Crop Protection	1,626	1,821	+12.0	+7.8	7,194	7,712	+7.2	+10.5
Seeds	171	207	+21.1	+17.0	974	1,104	+13.3	+19.5
Crop Protection/Seeds	**1,797**	**2,028**	**+12.9**	**+8.7**	**8,168**	**8,816**	**+7.9**	**+11.6**
Environmental Science	**154**	**167**	**+8.4**	**+3.9**	**651**	**678**	**+4.1**	**+6.9**

Fx & p adj. = currency- and portfolio-adjusted

CropScience registered sales gains in all regions:

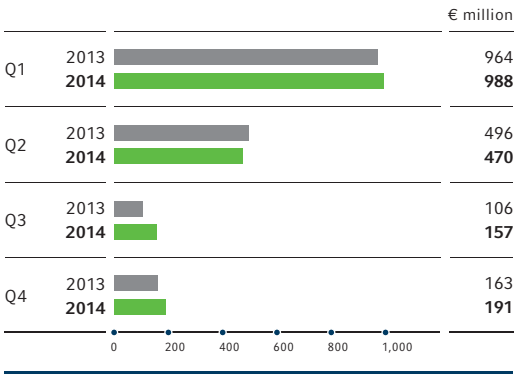
Sales in **Europe** rose by 7.4% (Fx adj.) to €2,957 million, driven by positive development at Crop Protection/Seeds. Sales at SeedGrowth and Fungicides registered double-digit percentage increases, while sales at Herbicides rose moderately. Business at Insecticides declined slightly overall. Seeds registered growth in all units. Business at Environmental Science developed positively. A strong consumer business more than offset the decline in sales of products for professional users.

Sales in **North America** advanced by 10.2% (Fx adj.) to €2,334 million. This was primarily attributable to the good development in Herbicides, particularly for use in corn and cereals, and in SeedGrowth. Business with cotton seed expanded briskly compared with the weak prior year and the soybean seed business also developed very well. The Fungicides business saw positive development, while sales at Insecticides declined due to lower pest pressure. Sales advanced at Environmental Science.

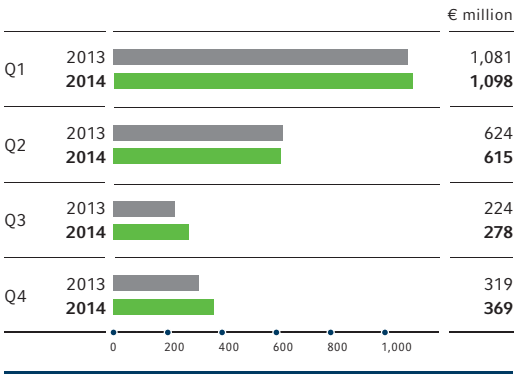
Sales in the **Asia / Pacific** region advanced by 5.5% (Fx adj.) to €1,374 million, thanks particularly to increased sales in Fungicides. Our Seeds business also developed well. Sales improved in the Insecticides and Herbicides businesses as well, but receded at SeedGrowth. Sales at Environmental Science expanded substantially. The region as a whole benefited especially from a significant business improvement in India, while sales in Japan and Australia also developed positively.

The strongest growth was recorded in **Latin America / Africa / Middle East**. Sales in that region climbed by a substantial 20.6% (Fx adj.) to €2,829 million. We achieved double-digit growth in Crop Protection / Seeds in a very positive market environment. Sales in Fungicides saw particularly robust expansion, especially for products used in soybeans. Herbicides also recorded strong growth. The SeedGrowth and Insecticides businesses also developed very well. Sales in Seeds also advanced considerably, particularly for soybeans, cotton and vegetable seeds. Sales in Environmental Science also moved ahead. Brazil, Argentina and Mexico accounted for a major part of the region's positive sales development overall.

CropScience
Quarterly EBIT [Graphic 3.15.5]



CropScience
Quarterly EBITDA Before Special Items [Graphic 3.15.6]



EBIT of **CropScience** advanced by 4.5% in 2014 to €1,806 million (2013: €1,729 million) after special charges of €32 million (2013: €72 million), which were primarily related to the planned consolidation of production facilities. EBIT before special items rose by 2.1% to €1,838 million. **EBITDA** before special items improved by 5.0% to €2,360 million. The earnings contributions from the very positive business development – marked by considerable volume gains and higher selling prices – were partially offset by higher selling and R&D expenses and negative currency effects of around €50 million.

15.3 MaterialScience

Key Data – MaterialScience [Table 3.15.8]

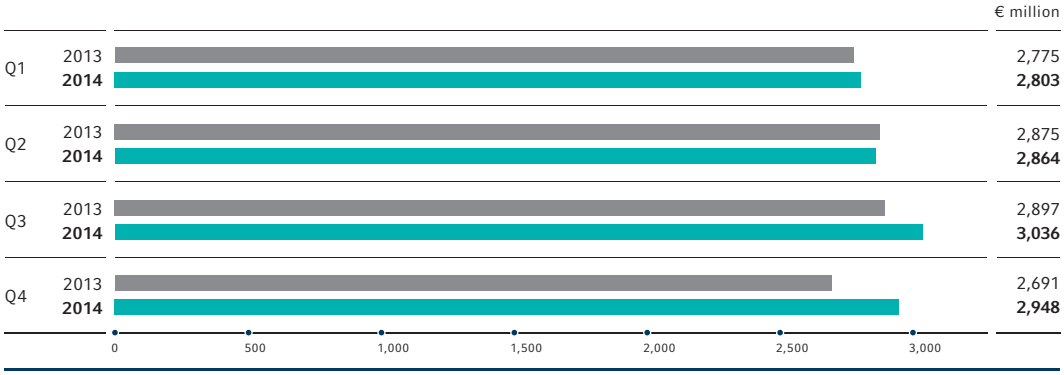
	4th Quarter 2013	4th Quarter 2014	Change		Full Year 2013	Full Year 2014	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**2,691**	**2,948**	**+9.6**	**+5.5**	**11,238**	**11,651**	**+3.7**	**+4.8**
Change in sales								
Volume	+4.1%	+5.7%			+0.6%	+6.3%		
Price	−2.5%	−0.2%			−0.2%	−1.5%		
Currency	−3.6%	+4.1%			−2.4%	−0.8%		
Portfolio	−0.5%	0.0%			−0.2%	−0.3%		
Sales								
Polyurethanes	1,472	1,591	+8.1	+4.4	6,054	6,285	+3.8	+4.9
Polycarbonates	640	741	+15.8	+10.3	2,640	2,820	+6.8	+7.2
Coatings, Adhesives, Specialties	417	460	+10.3	+6.7	1,863	1,915	+2.8	+5.5
Industrial Operations	162	156	−3.7	−6.2	681	631	−7.3	−7.2
Sales by region								
Europe	1,040	1,036	−0.4	−0.1	4,363	4,441	+1.8	+1.9
North America	561	673	+20.0	+10.3	2,424	2,593	+7.0	+7.1
Asia/Pacific	762	885	+16.1	+8.5	3,048	3,245	+6.5	+7.4
Latin America/Africa/Middle East	328	354	+7.9	+7.9	1,403	1,372	−2.2	+1.4
EBIT	**70**	**43**	**−38.6**		**435**	**555**	**+27.6**	
Special items	*(18)*	*(22)*			*6*	*(43)*		
***EBIT before special items*[1]**	***88***	***65***	***−26.1***		***429***	***598***	***+39.4***	
EBITDA[1]	**244**	**196**	**−19.7**		**1,101**	**1,149**	**+4.4**	
Special items	*(4)*	*(21)*			*29*	*(38)*		
***EBITDA before special items*[1]**	***248***	***217***	***−12.5***		***1,072***	***1,187***	***+10.7***	
EBITDA margin before special items[1]	9.2%	7.4%			9.5%	10.2%		
Gross cash flow[2]	**217**	**201**	**−7.4**		**887**	**961**	**+8.3**	
Net cash flow[2]	**545**	**517**	**−5.1**		**977**	**880**	**−9.9**	

Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales; Fx adj.: Sales by region)
[1] For definition see Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."
[2] For definition see Chapter 16.5 "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.

Sales of the **MaterialScience** subgroup advanced in 2014 by 4.8% (Fx & portfolio adj.) to €11,651 million (reported: +3.7%). This growth was due to higher volumes for Polycarbonates; Polyurethanes; and Coatings, Adhesives, Specialties. Volumes increased in Europe, North America and Asia/Pacific, while in Latin America/Africa/Middle East they were flat with the previous year. However, selling prices showed a slight decline.

MaterialScience Quarterly Sales [Graphic 3.15.7]



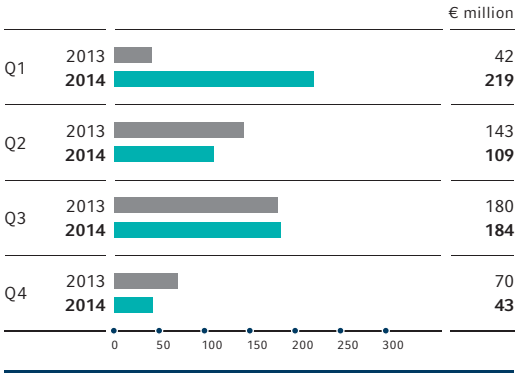
The **Polyurethanes** business unit raised sales by 4.9% (Fx & portfolio adj.) to €6,285 million. This increase was driven by higher volumes in all regions that in turn were attributable to improved demand in nearly all the main customer industries. Selling prices overall were below the prior-year level. Volumes of diphenylmethane diisocyanate (MDI) and toluene diisocyanate (TDI) improved, while selling prices receded. This led to an increase in overall sales of MDI and a decrease in sales of TDI. Both volumes and selling prices for polyether (PET) increased.

Sales of the **Polycarbonates** business unit increased by 7.2% (Fx & portfolio adj.) to €2,820 million, with volumes up in all regions except Latin America/Africa/Middle East. This was mainly attributable to improved demand from customers in the automotive, electrical/electronics and construction industries. Selling prices were down overall compared with the prior year.

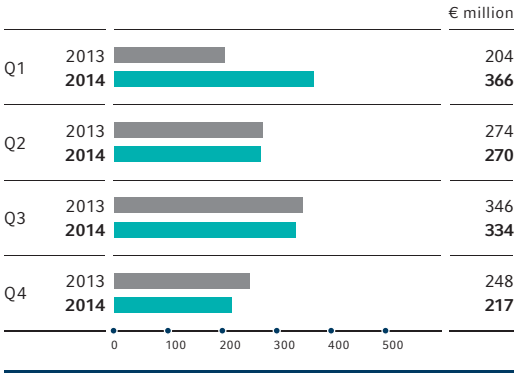
Sales in the **Coatings, Adhesives, Specialties** business unit moved forward by 5.5% (Fx & portfolio adj.) to €1,915 million, the increase resulting from higher volumes in all regions. Selling prices were level year on year.

Sales of **Industrial Operations** receded by 7.2% (Fx & portfolio adj.) to €631 million due to lower selling prices and volumes overall.

MaterialScience
Quarterly EBIT [Graphic 3.15.8]



MaterialScience
Quarterly EBITDA Before Special Items [Graphic 3.15.9]



EBIT of **MaterialScience** advanced by 27.6% to €555 million in 2014 (2013: €435 million), reflecting special charges of €43 million for restructuring (2013: special gains of €6 million). EBIT before special items improved by a clear 39.4% to €598 million. **EBITDA** before special items rose by 10.7% to €1,187 million. This was particularly due to higher volumes, efficiency improvement measures and lower raw material and energy costs. However, earnings were held back by lower selling prices. Currency effects as a whole were neutral to earnings.

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15.4 Business Development by Region

Sales by Region and Segment (by Market) [Table 3.15.9]

	Europe				North America				Asia/Pacific				Latin America/Africa/Middle East				Total			
	Full Year 2013	Full Year 2014			Full Year 2013	Full Year 2014			Full Year 2013	Full Year 2014			Full Year 2013	Full Year 2014			Full Year 2013	Full Year 2014		
	€ million	€ million	% yoy	Fx.adj. % yoy	€ million	€ million	% yoy	Fx.adj. % yoy	€ million	€ million	% yoy	Fx adj. % yoy	€ million	€ million	% yoy	Fx adj. % yoy	€ million	€ million	% yoy	Fx adj. % yoy
HealthCare	**6,853**	**7,364**	**+7.5**	**+9.2**	**5,024**	**5,312**	**+5.7**	**+6.3**	**4,188**	**4,479**	**+6.9**	**+11.0**	**2,859**	**2,820**	**−1.4**	**+12.3**	**18,924**	**19,975**	**+5.6**	**+9.3**
Pharmaceuticals	3,918	4,396	+12.2	+13.3	2,540	2,728	+7.4	+8.2	3,016	3,278	+8.7	+13.1	1,714	1,650	−3.7	+10.1	11,188	12,052	+7.7	+11.6
Consumer Health	2,935	2,968	+1.1	+3.6	2,484	2,584	+4.0	+4.4	1,172	1,201	+2.5	+5.7	1,145	1,170	+2.2	+15.5	7,736	7,923	+2.4	+6.0
CropScience	**2,799**	**2,957**	**+5.6**	**+7.4**	**2,211**	**2,334**	**+5.6**	**+10.2**	**1,358**	**1,374**	**+1.2**	**+5.5**	**2,451**	**2,829**	**+15.4**	**+20.6**	**8,819**	**9,494**	**+7.7**	**+11.4**
MaterialScience	**4,363**	**4,441**	**+1.8**	**+1.9**	**2,424**	**2,593**	**+7.0**	**+7.1**	**3,048**	**3,245**	**+6.5**	**+7.4**	**1,403**	**1,372**	**−2.2**	**+1.4**	**11,238**	**11,651**	**+3.7**	**+4.5**
Group (incl. reconciliation)	**15,086**	**15,806**	**+4.8**	**+5.9**	**9,680**	**10,248**	**+5.9**	**+7.3**	**8,623**	**9,119**	**+5.8**	**+8.8**	**6,768**	**7,066**	**+4.4**	**+12.8**	**40,157**	**42,239**	**+5.2**	**+8.0**

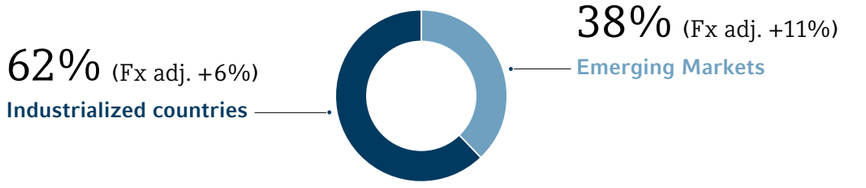
yoy = year on year; Fx. adj. = currency-adjusted

15.5 Business Development in the Emerging Markets

The Emerging Markets again accounted for a disproportionately large share of sales growth in 2014. For reporting purposes we have defined the Emerging Markets as Asia (excluding Japan), Latin America, Eastern Europe, Africa and the Middle East.

Sales in these markets rose by 11.3% (Fx adj.) in 2014 to €15,919 million (2013: €15,040 million), with encouraging gains in Latin America, Asia and Eastern Europe. The Emerging Markets accounted for 37.7% of sales (2013: 37.5%).

Sales Development in 2014 [Graphic 3.15.10]



currency-adjusted changes in parentheses

HEALTHCARE

HealthCare raised sales in the Emerging Markets by a substantial 12.9% (Fx adj.) in 2014 to €6,493 million (2013: €6,236 million). The strongest absolute growth was recorded in China. The Latin America region posted strong currency-adjusted increases, particularly in Brazil and Argentina. We achieved very gratifying sales growth in Russia, primarily in Consumer Care. The Emerging Markets accounted for 32.5% (2013: 33.0%) of total HealthCare sales.

CROPSCIENCE

CropScience improved sales in the Emerging Markets by 16.6% (Fx adj.) in 2014, to €4,409 million (2013: €3,959 million). Business developed particularly well in Latin America, especially in Brazil and Argentina. We posted encouraging sales gains in Eastern Europe and Africa/Middle East, where we also achieved double-digit (Fx adj.) growth rates. Business in Asia expanded as well. The Emerging Markets' share of total CropScience sales in 2014 was 46.4% (2013: 44.9%).

MATERIALSCIENCE

In the Emerging Markets, MaterialScience had sales of €4,951 million in 2014 (2013: €4,761 million), up 5.4% (Fx. adj.) year on year. Here we achieved our strongest growth in Asia, while gains were also registered in Eastern Europe and Latin America. Sales in Africa and the Middle East were below the prior-year level. The Emerging Markets accounted for 42.5% (2013: 42.4%) of total sales at MaterialScience.

We are active in the Emerging Markets in a variety of ways. Information and selected examples are contained in the ONLINE ANNEX: 3-15.5-1

16. Earnings; Asset and Financial Position of the Bayer Group

16.1 Earnings Performance of the Bayer Group

Bayer Group Summary Income Statements [Table 3.16.1]

	2013	2014	Change
	€ million	€ million	%
Net sales	40,157	42,239	+5.2
Cost of goods sold	19,516	20,266	+3.8
Selling expenses	10,312	11,018	+6.8
Research and development expenses	3,406	3,574	+4.9
General administration expenses	1,712	1,741	+1.7
Other operating income (+) and expenses (–)	(277)	(134)	+51.6
EBIT[1]	**4,934**	**5,506**	**+11.6**
Financial result	**(727)**	**(981)**	**–34.9**
Income before income taxes	**4,207**	**4,525**	**+7.6**
Income taxes	(1,021)	(1,082)	– 6.0
Income after income taxes	**3,186**	**3,443**	**+8.1**
of which attributable to non-controlling interest	(3)	17	–
of which attributable to Bayer AG stockholders (net income)	**3,189**	**3,426**	**+7.4**

2013 figures restated
[1] EBIT = earnings before financial result and taxes

Sales of the Bayer Group rose to €42,239 million (+5.2%). The increase after adjusting for currency and portfolio effects was 7.2%.

The cost of goods sold increased by 3.8% to €20,266 million, mainly due to higher volumes at HealthCare and MaterialScience. The ratio of the cost of goods sold to total sales was 48.0% (2013: 48.6%). The selling expenses of €11,018 million (+6.8%) amounted to 26.1% of sales (2013: 25.7%). Research and development (R&D) expenses rose in 2014 by 4.9% to €3,574 million, the increase being attributable to HealthCare and CropScience. The ratio of R&D expenses to sales remained level at 8.5% (2013: 8.5%). General administration expenses, at €1,741 million, were slightly above the prior year (+1.7%). The ratio of general administration expenses to total sales was somewhat lower at 4.1% (2013: 4.3%). The negative balance of other operating income and expenses was reduced considerably to minus €134 million (2013: minus €277 million), mainly because special charges for accounting measures related to legal claims were lower in 2014 (see also Chapter 16.2 "Calculation of E Before Special Items").

EBIT climbed by 11.6% in 2014 to €5,506 million.

The financial result fell by 34.9% to minus €981 million. It comprised €356 million (2013: €355 million) in net interest expense, €322 million (2013: €297 million) in interest cost for pension and other provisions, and a €248 million (2013: €120 million) net exchange loss. The year-on-year increase in the net exchange loss was mainly due to exchange rate effects in Venezuela, Ukraine and Argentina, higher exchange hedging costs and the fact that the prior year's financial result included a one-time gain of €77 million from the sale of Bayer's interest in Onyx Pharmaceuticals Inc., United States.

Tax expense in 2014 increased to €1,082 million as a result of earnings growth (2013: €1,021 million). Income after income taxes came in at €3,443 million. Income attributable to non-controlling interest rose by €20 million to €17 million. Bayer Group net income for 2014 was €3,426 million (2013: €3,189 million).

16.2 Calculation of EBIT(DA) Before Special Items

Key performance indicators for the Bayer Group are EBIT before special items and EBITDA before special items. These indicators are reported in order to allow a more accurate assessment of business operations. The special items – comprising effects that are non-recurring or do not regularly recur or attain similar magnitudes – are detailed in the following table. EBITDA, EBITDA before special items and EBIT before special items are not defined in the International Financial Reporting Standards (IFRS) and should therefore be regarded only as supplementary information. EBITDA before special items is a meaningful indicator of operating performance since it is not affected by depreciation, amortization, impairment losses, impairment loss reversals or special items. By reporting this indicator, the company aims to give readers a clear picture of the results of operations and ensure comparability of data over time. 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.

Depreciation, amortization and impairment losses increased by 1.4% in 2014 to €2,936 million (2013: 2,896), comprising €1,592 million (2013: €1,572 million) in amortization and impairments of intangible assets, €2 million (2013: €13 million) in impairment loss reversals and €1,346 million (2013: €1,337 million) in depreciation and impairments of property, plant and equipment. A total of €68 million (2013: €268 million) in depreciation, amortization and impairments constituted special items. This amount comprised €70 million (2013: €259 million) in impairment losses and €0 million (2013: €22 million) in depreciation and amortization, less €2 million (2013: €13 million) in impairment loss reversals.

Special Items Reconciliation [Table 3.16.2]

	EBIT[1] 4th Quarter 2013	EBIT[1] 4th Quarter 2014	EBIT[1] Full Year 2013	EBIT[1] Full Year 2014	EBITDA[2] 4th Quarter 2013	EBITDA[2] 4th Quarter 2014	EBITDA[2] Full Year 2013	EBITDA[2] Full Year 2014
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Before special items	**1,094**	**1,003**	**5,773**	**5,944**	**1,769**	**1,846**	**8,401**	**8,812**
HealthCare	**(354)**	**(376)**	**(713)**	**(331)**	**(268)**	**(347)**	**(476)**	**(298)**
Impairment losses/ impairment loss reversals	(55)	(29)	(171)	(29)	–	–	14	–
Restructuring	(109)	–	(197)	–	(78)	–	(145)	–
Litigations	(180)	(88)	(269)	(88)	(180)	(88)	(269)	(88)
Integration costs	(10)	(86)	(76)	(153)	(10)	(86)	(76)	(149)
Settlement of pre-existing relationship[3]	–	–	–	35	–	–	–	35
Divestitures	–	(173)	–	(96)	–	(173)	–	(96)
CropScience	**(40)**	**(32)**	**(72)**	**(32)**	**(37)**	**(2)**	**(64)**	**(2)**
Restructuring	(40)	–	(67)	–	(37)	–	(59)	–
Litigations	–	(1)	(5)	(1)	–	(1)	(5)	(1)
Divestitures	–	(31)	–	(31)	–	(1)	–	(1)
MaterialScience	**(18)**	**(22)**	**6**	**(43)**	**(4)**	**(21)**	**29**	**(38)**
Restructuring	(18)	(22)	(36)	(43)	(4)	(21)	(13)	(38)
Divestitures	–	–	42	–	–	–	42	–
Reconciliation	**(27)**	**(12)**	**(60)**	**(32)**	**(27)**	**(12)**	**(60)**	**(32)**
Restructuring	(25)	(12)	(58)	(32)	(25)	(12)	(58)	(32)
Litigations	(2)	–	(2)	–	(2)	–	(2)	–
Total special items	**(439)**	**(442)**	**(839)**	**(438)**	**(336)**	**(382)**	**(571)**	**(370)**
of which cost of goods sold	(79)	(68)	(116)	(80)	(42)	(37)	(83)	(49)
of which selling expenses	(37)	(50)	(73)	(63)	(37)	(21)	(73)	(34)
of which research and development expenses	(77)	1	(212)	(2)	(12)	1	1	(2)
of which general administration expenses	(38)	(23)	(56)	(55)	(35)	(23)	(53)	(51)
of which other operating income/expenses	(208)	(302)	(382)	(238)	(210)	(302)	(363)	(234)
After special items	**655**	**561**	**4,934**	**5,506**	**1,433**	**1,464**	**7,830**	**8,442**

[1] EBIT = earnings before financial result and taxes
[2] EBITDA = EBIT plus amortization and impairment losses on intangible assets, plus depreciation and impairment losses on property, plant and equipment, minus impairment loss reversals
[3] For details see Note [6.2] to the consolidated financial statements

16.3 Core Earnings Per Share

Earnings per share according to IFRS are affected by the purchase price allocation for acquisitions and other special factors. To enhance comparability, we also determine core net income after eliminating amortization and impairment losses/impairment loss reversals of intangible assets, impairment losses/impairment loss reversals of property, plant and equipment and special items, and the related tax effects.

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 in 2014 rose by 7.3% to €6.02 (2013: €5.61).

Core Earnings per Share [Table 3.16.3]

	4th Quarter 2013	4th Quarter 2014	Full Year 2013	Full Year 2014
	€ million	€ million	€ million	€ million
EBIT (as per income statements)	**655**	**561**	**4,934**	**5,506**
Amortization and impairment losses/loss reversals on intangible assets	437	507	1,559	1,590
Impairment losses/loss reversals on property, plant and equipment	21	57	48	96
Special items (other than amortization and impairment losses/loss reversals)	336	382	571	370
Core EBIT	**1,449**	**1,507**	**7,112**	**7,562**
Financial result (as per income statements)	(84)	(347)	(727)	(981)
Special items in the financial result	(72)	13	10	23
Income taxes (as per income statements)	(129)	16	(1,021)	(1,082)
Special items in income taxes	–	48	–	48
Tax effects related to amortization, impairment losses/loss reversals and special items	(266)	(246)	(734)	(576)
Income after income taxes attributable to non-controlling interest (as per income statements)	13	(6)	3	(17)
Core net income	**911**	**985**	**4,643**	**4,977**
	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 (€)	**1.10**	**1.19**	**5.61**	**6.02**

The calculation of earnings per share in accordance with IFRS is explained in Note [16] to the consolidated financial statements. Core net income, core earnings per share and core EBIT are not defined in IFRS.

Consolidatd Financial Statements Note 16

16.4 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 WACC is based on the terms for ten-year Eurobonds issued by industrial companies with an "A–" rating.

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 MaterialScience. The capital cost factor for the Group as a whole in 2014 was 7.6%.

Cost of capital for the Bayer Group

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 2014 was €4,447 million.

Actual gross cash flow came in at €6,820 million, exceeding the hurdle by 53.4%. Thus the entire cost of capital and asset reproduction costs were earned in 2014. The positive CVA of €2,373 million shows that Bayer exceeded the minimum return and reproduction requirements and created value. A CFROI of 11.9% was achieved in 2014.

HealthCare and CropScience exceeded their required returns (including asset reproduction), raised their CVA and helped to increase the value of the Group. In 2014 MaterialScience reduced the gap to the gross cash flow hurdle, which continues to be impacted by growth investments.

Value Management Indicators by Subgroup [Table 3.16.4]

	HealthCare		CropScience		MaterialScience		Bayer Group	
	2013	2014	2013	2014	2013	2014	2013	2014
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Gross cash flow[1] (GCF)	3,573	4,011	1,590	1,835	887	961	5,832	6,820
Gross cash flow hurdle	2,109	2,395	906	902	1,060	1,025	4,260	4,447
Cash value added (CVA)	1,464	1,616	684	933	(173)	(64)	1,572	2,373
Cash flow return on investment (CFROI)	14.1%	13.4%	14.2%	15.3%	5.5%	6.0%	11.1%	11.9%
WACC	7.9%	7.9%	7.3%	7.3%	6.9%	6.9%	7.6%	7.6%
Average capital invested	22,480	26,784	9,881	10,841	10,371	10,524	43,548	48,934

Delta cash value added is not listed due to its limited importance.
[1] For definition see Chapter 16.5 "Liquidity and Capital Expenditures of the Bayer Group."

16.5 Liquidity and Capital Expenditures of the Bayer Group

Bayer Group Summary Statements of Cash Flows [Table 3.16.5]

	Full Year 2013	Full Year 2014
	€ million	€ million
Gross cash flow[1]	**5,832**	**6,820**
Changes in working capital / other non-cash items	(661)	(1,010)
Net cash provided by (used in) operating activities (net cash flow)	**5,171**	**5,810**
Net cash provided by (used in) investing activities	**(2,581)**	**(15,539)**
Net cash provided by (used in) financing activities	**(2,535)**	**9,736**
Change in cash and cash equivalents due to business activities	**55**	**7**
Cash and cash equivalents at beginning of period	**1,698**	**1,662**
Change due to exchange rate movements and to changes in scope of consolidation	(91)	184
Cash and cash equivalents at end of period	**1,662**	**1,853**

[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 non-cash components of EBIT. It also contains benefit payments during the year.

OPERATING CASH FLOW

Gross cash flow climbed by 16.9% in 2014 to €6,820 million (2013: €5,832 million), mainly because of the improvement in EBIT. Net cash flow moved ahead by 12.4% to €5,810 million (2013: €5,171 million), after a business-related increase in cash tied up in working capital and €778 million in deferred income from the one-time payment received in connection with the sGC collaboration with Merck & Co., Inc., United States. Income taxes paid in 2014 amounted to €1,835 million (2013: €1,281 million).

INVESTING CASH FLOW

Net cash outflow for investing activities in 2014 amounted to €15,539 million. Cash outflows for property, plant and equipment and intangible assets were 10% higher at €2,371 million (2013: €2,157 million) and included €832 million (2013: €809 million) at HealthCare, €686 million (2013: €538 million) at CropScience and €605 million (2013: €559 million) at MaterialScience. The €13,545 million (2013: €1,082 million) in outflows for acquisitions mainly related to the purchases of the consumer care businesses of Merck & Co., Inc., United States, and Algeta ASA, Norway. Cash outflows from noncurrent and current financial assets amounted to €177 million (2013: inflow of €301 million). Inflows from interest and dividends totaled €107 million (2013: €125 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 3.16.6]

Segment	Description
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
MaterialScience	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
CAPITAL EXPENDITURES 2013	
Pharmaceuticals	Consolidation of multiple administrative and business operations in Whippany, New Jersey, United States
	Expansion of Xarelto™ production capacities in Wuppertal and Leverkusen, Germany
	Expansion of production capacities for biologics in Wuppertal, Germany
Consumer Health	–
CropScience	Capacity expansion and process modifications for the production of fungicides in Germany, Switzerland, and the United States and for related formulating units in France
	Expansion of manufacturing capacities for herbicidal active ingredients in Germany and the United States
	Establishment of breeding stations for wheat in Europe, North America, and Asia/Pacific; for soybeans in North America and Latin America; and for other crops and trait development
MaterialScience	Doubling of production capacities for polycarbonates in Shanghai, China
	Expansion of production capacities 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
	Completion of a multi-purpose facility for aliphatic isocyanates - hexamethylene diisocyanate (HDI) and isophorone diisocyanate (IPDI) - in Leverkusen, Germany

FINANCING CASH FLOW

Net cash inflow for financing activities in 2014 amounted to €9,736 million, including net borrowings of €11,838 million (2013: net loan repayments of €619 million). Net interest payments were 7% higher at €362 million (2013: €338 million). The cash outflow for dividends amounted to €1,739 million (2013: €1,574 million).

LIQUID ASSETS AND NET FINANCIAL DEBT

Net Financial Debt [Table 3.16.7]

	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million
Bonds and notes/promissory notes	4,520	14,964
of which hybrid bonds[1]	1,344	4,552
Liabilities to banks	2,302	3,835
Liabilities under finance leases	382	441
Liabilities from derivatives	310	642
Other financial liabilities	1,516	1,976
Positive fair values of hedges of recorded transactions	(504)	(258)
Financial liabilities	**8,526**	**21,600**
Cash and cash equivalents	(1,662)	(1,853)
Current financial assets	(133)	(135)
Net financial debt	**6,731**	**19,612**

[1] classified as debt according to IFRS

Net financial debt of the Bayer Group increased in 2014 to €19.6 billion, mainly as a result of cash outflows for acquisitions. As of December 31, 2014, the Group had cash and cash equivalents of €1.9 billion (2013: €1.7 billion). Financial liabilities at the end of the reporting period amounted to €21.6 billion (2013: €8.5 billion), with three subordinated hybrid bonds reflected at €4.6 billion overall. Net financial debt should be viewed against the fact that Moody's and Standard & Poor's treat 75% and 50%, respectively, of the hybrid bond issued in July 2005 with a nominal volume of €1.3 billion as equity. Moody's and Standard & Poor's treat 50% of the hybrid bonds issued in July 2014 with nominal volumes of €1.75 billion and €1.5 billion, respectively, as equity. The hybrid bonds thus have a more limited effect on the Group's rating-specific debt indicators than conventional borrowings. Our non-current financial liabilities increased in 2014 from €5.6 billion to €18.5 billion, while current financial liabilities remained unchanged at €3.4 billion.

16.6 Asset and Capital Structure of the Bayer Group

Bayer Group Summary Statements of Financial Position [Table 3.16.8]

	Dec. 31, 2013	Dec. 31, 2014	Change
	€ million	€ million	%
Noncurrent assets	32,289	48,007	+48.7
Current assets	19,028	22,227	+16.8
Total assets	**51,317**	**70,234**	**+36.9**
Equity	**20,804**	**20,218**	**–2.8**
Noncurrent liabilities	16,490	34,513	.
Current liabilities	14,023	15,503	+10.6
Liabilities	**30,513**	**50,016**	**+63.9**
Total equity and liabilities	**51,317**	**70,234**	**+36.9**

Total assets as of December 31, 2014, increased by 36.9% to €70.2 billion. Noncurrent assets rose by 48.7% to €48.0 billion due mainly to acquisitions. This was due to the €6.3 billion increase in goodwill and the €6.7 billion rise in other intangible assets. The carrying amount of current assets climbed to €22.2 billion.

Equity was lower by €0.6 billion at €20.2 billion. The positive effects from the net income of €3.4 billion and the exchange differences of €1.4 billion (2013: negative effect of €0.7 billion) were offset by the negative effect from the increase of €3.5 billion (2013: positive effect from the decline of €1.3 billion) – recognized outside profit or loss – in post-employment benefit obligations and the dividend payment of €1.7 billion (2013: €1.6 billion). The equity ratio (equity coverage of total assets) as of December 31, 2014 was 28.8% (2013: 40.5%).

Liabilities increased by €19.5 billion compared with December 31, 2013, to €50.0 billion, due to the acquisition-related €12.8 billion increase in financial liabilities and the €4.9 billion increase in provisions for pensions and other post-employment benefits.

Net Defined Benefit Liability for Post-Employment Benefits [Table 3.16.9]

	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million
Provisions for pensions and other post-employment benefits	7,368	12,236
Net defined benefit asset	(117)	(41)
Net defined benefit liability for post-employment benefits	**7,251**	**12,195**

The net defined benefit liability for pensions and other post-employment benefits increased from €7.3 billion to €12.2 billion in 2014, mainly due to a decline in long-term capital market interest rates for high-quality corporate bonds.

Ratios [Table 3.16.10]

		2013	2014
Cost of sales ratio (%)	Cost of goods sold / Sales	48.6	48.0
R & D expense ratio (%)	Research and development expenses / Sales	8.5	8.5
Return on sales in (%)	Income after income taxes / Sales	7.9	8.2
EBIT margin (%)	EBIT / Sales	12.3	13.0
EBITDA margin before special items (%)	EBITDA before special items / Sales	20.9	20.9
Asset intensity (%)	Property, plant and equipment + intangible assets / Total assets	56.1	61.6
Reinvestment ratio (%)	Capital expenditures[1] / Depreciation[1]	137.5	165.5
Liability structure (%)	Current liabilities / Liabilities	46.0	31.0
Gearing	Net debt + pension provisions / Equity	0.7	1.6
Free operating cash flow (€ million)	Net operating cash flow less cash outflows for property, plant and equipment and intangible assets	3,014	3,439
Inventory turnover	Cost of goods sold / Inventories	2.7	2.4
Receivables turnover	Sales / Trade accounts receivable	5.3	4.6
Payables turnover	Cost of goods sold / Trade accounts payable	4.4	3.8
Equity ratio (%)	Equity / Total assets	40.5	28.8
Return on equity (%)	Income after income taxes / Average equity	16.2	16.8
Return on assets (%)	Income before income taxes and interest expense / Average total assets	9.5	8.6

2013 figures restated
[1] property, plant and equipment

16.7 Financial Management of the Group

The financial management of the Bayer Group is conducted by the strategic management holding company 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 3.16.11]

	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 20.3 "Opportunities and Risks Report."

17. Earnings; Asset and Financial Position of Bayer AG

Bayer AG is the parent corporation of the Bayer Group and functions as a management holding company. The principal management functions for the entire Group are performed by the Board of Management of Bayer AG. 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).

17.1 Earnings Performance of Bayer AG

Bayer AG Summary Income Statements according to the German Commercial Code [Table 3.17.1]

	2013	2014
	€ million	€ million
Income from investments in affiliated companies – net	3,542	3,213
Interest expense – net	(315)	(341)
Other financial income – net	110	129
Other operating income	118	128
General administration expenses	(266)	(272)
Other operating expenses	(148)	(147)
Income before income taxes	**3,041**	**2,710**
Income taxes	(543)	(256)
Net income	**2,498**	**2,454**
Allocation to retained earnings	(761)	(593)
Distributable profit	**1,737**	**1,861**

In fiscal 2014 Bayer AG's net income was €2,454 million, which was around the same level as in the previous year (2013: €2,498 million). The main decline was in income from investments in affiliated companies. This was largely offset by lower tax expense.

The income from investments in affiliated companies declined year on year by €329 million to €3,213 million (2013: €3,542 million). Bayer Pharma AG posted income of €2,158 million (2013: €1,934 million), which was once again by far the largest contribution. The improvement in this subgroup's earnings was mainly due to a substantial increase in business with recently launched high-margin products. Bayer CropScience AG contributed €787 million (2013: €1,379 million) to Bayer AG's income. The previous year's figure included one-time income of €570 million from the intra-Group sale of seed technologies. Having made a loss of €20 million in the previous year, Bayer MaterialScience made a positive earnings contribution of €154 million in 2014. The main reasons for this were an improvement in operating earnings resulting from lower procurement prices for raw materials and energy, and higher dividend income. Other significant earnings contributions comprised €146 million (2013: €213 million) from a subsidiary that receives foreign dividend income. Bayer Business Services GmbH posted a loss of €75 million (2013: €74 million), and Bayer Technology Services GmbH reported a loss of €18 million (2013: €30 million).

Net interest expense was €341 million, an increase of €26 million compared with the previous year. This was mainly attributable to a rise in interest expense resulting from higher financial debt, principally as a consequence of bond issuances during the fiscal year. This was not fully compensated by lower interest rates. Of the net interest expense, €255 million was attributable to transactions with third parties and €86 million to intra-Group transactions.

Other financial income and expenses yielded a positive balance of €129 million (2013: €110 million). This mainly comprised income of €180 million (2013: €162 million) from the subgroups and service companies to cover pension expenses for retirees remaining with Bayer AG following the hive-down of the operating business. The non-interest portion of the corresponding expense, amounting to €19 million (2013: €26 million), is included in other financial expenses; the remainder is reflected in net interest expense. A further charge of €20 million (2013: €14 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 a holding company amounted to €272 million (2013: €266 million). Miscellaneous operating expenses relating to these functions, net of the respective miscellaneous operating income, came to €19 million (2013: €30 million). The increase in administration expenses was attributable in part to a slight increase in the number of employees.

Pre-tax income decreased to €2,710 million (2013: €3,041 million). Tax expense was also lower at €256 million compared with €543 million in 2013. After deduction of taxes, net income was €2,454 million (2013: €2,498 million). An allocation of €593 million was made to other retained earnings, leaving a distributable profit of €1,861 million.

The Board of Management and Supervisory Board will propose to the Annual Stockholders' Meeting on May 27, 2015 that the distributable profit be used to pay a dividend of €2.25 per share (826,947,808 shares) on the capital stock of €2,117 million entitled to the dividend for 2014.

17.2 Asset and Financial Position of Bayer AG

Bayer AG Summary Statements of Financial Position according to the German Commercial Code [Table 3.17.2]

	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million
ASSETS		
Noncurrent assets		
Intangible assets, property, plant and equipment	21	18
Financial assets	35,300	40,919
	35,321	**40,937**
Current assets		
Receivables from subsidiaries	1,712	2,729
Remaining receivables, other assets	455	460
Cash and cash equivalents, marketable securities	972	1,243
	3,139	**4,432**
Total assets	**38,460**	**45,369**
EQUITY AND LIABILITIES		
Equity	**14,815**	**15,532**
Provisions	**2,976**	**2,406**
Other liabilities		
Bonds and notes, liabilities to banks	2,229	7,210
Payables to subsidiaries	16,983	18,204
Remaining liabilities	1,457	2,017
	20,669	**27,431**
Total equity and liabilities	**38,460**	**45,369**

The asset and liability structure of Bayer AG is dominated by its role as a holding company in managing the subsidiaries and financing corporate activities. 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, 2014 were €45.4 billion (2013: €38.5 billion), which was €6.9 billion more than at the start of the year. Non-current assets rose by €5.6 billion and current assets by €1.3 billion.

Property, plant and equipment and intangible assets totaled €18 million (2013: €21 million) and were therefore of secondary importance. Financial assets increased by €5.6 billion, from €35.3 billion in the previous year to €40.9 billion at year end 2014, 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 88.3% (2013: 89.7%).

Receivables from subsidiaries amounted to €2.7 billion (2013: €1.7 billion) while payables to subsidiaries totaled €18.2 billion (2013: €17.0 billion). These amounts accounted for 6.1% of total assets and 40.1% of total equity and liabilities, respectively.

Including the deferred charges, the other receivables reflected in current assets were almost unchanged at €460 million (2013: €455 million) and were of only secondary importance in relation to total assets. Cash and cash equivalents were €271 million higher than in the previous year at €1,243 million (2013: €972 million) due to higher bank deposits.

Bayer AG had equity of €15.5 billion (2013: €14.8 billion), giving an equity ratio of 34.2% (2013: 38.5%). Net income for 2014 was €2,454 million while equity was diminished by the €1,737 million dividend payment for 2013. Despite the absolute rise in equity of €0.7 billion, the equity ratio declined by 4.3 percentage points as a result of the considerable increase in total assets.

Provisions decreased by €0.6 billion to €2.4 billion (2013: €3.0 billion). Pension provisions and provisions for taxes accounted for roughly equal proportions of the decline. Pension provisions decreased by €294 million to €1,868 million (2013: €2,162 million) while tax provisions were €283 million lower at €399 million (2013: €682 million). The other provisions were virtually unchanged at €139 million (2013: €132 million).

Other liabilities rose by €6.8 billion to €27.4 billion (net of deductible receivables; 2013: €20.7 billion), mainly due to the €6.1 billion increase in financial debt. Bonds with a total nominal amount of €5.25 billion were issued in 2014. In addition, the commercial paper program was increased by €0.5 billion and intra-Group debt rose by €0.7 billion. A promissory note with a face value of €0.25 billion was repaid in 2014 and other debt was reduced by €0.1 billion. Bayer AG had financial liabilities of €28.2 billion at year end 2014 (2013: €22.1 billion). After deduction of cash and cash equivalents of €1.2 billion, net debt was €5.9 billion higher than in the previous year at €27.0 billion (2013: €21.1 billion).

Corporate Governance Report

18. Corporate Governance Report

This Corporate Governance Report also constitutes the report pursuant to Section 3.10 of the German Corporate Governance Code.

18.1 Declaration Concerning the German Corporate Governance Code*

*not part of the audited management report

DECLARATION BY THE BOARD OF MANAGEMENT AND SUPERVISORY BOARD

concerning the German Corporate Governance Code (June 24, 2014 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 2013.

With respect to the past, the following declaration refers to the May 13, 2013 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 June 24, 2014 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 2013.

2. All the recommendations of the Code are now being complied with in full.

Leverkusen, December 2014

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.

18.2 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 and will continue to do so. In 2014 the company was 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 2014, the Board of Management and Supervisory Board again addressed the question of compliance with the German Corporate Governance Code, including the Code amendments of June 24, 2014. The resulting declaration, which is reproduced on the previous page, was issued in December 2014 and posted on Bayer's website along with previous declarations.

DUTIES AND ACTIVITIES OF THE BOARD OF MANAGEMENT

Bayer AG is a strategic management holding company, run by its Board of Management on the Board's own responsibility with the goal of sustainably increasing the company's enterprise value and achieving 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 defines the long-term goals and the strategies for the Group, its subgroups and its service companies, 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 entire Board. The allocation of duties among the members of the Board of Management is defined in a written schedule.

The entire Board of Management makes decisions on all matters of fundamental importance and in cases where a decision of the entire 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 entire 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 held. 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 schedule of duties, 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 departments of the Corporate Center and their fields of activity.

The responsibilities of the members of the Board of Management were redistributed effective October 1, 2014. Under the schedule of duties as of that date, responsibility is assigned to one member for Strategy and Portfolio Management; to one member for Finance; to one member for Human Resources, Technology and Sustainability (this member also serving as the Labor Director); and to one member for Innovation. In addition, three of the members are each responsible for a particular geographical region.

No committees of the Board of Management have been set up in view of the small number of members and the role of Bayer AG as a strategic management holding company.

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 the members of the Supervisory Board 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 of 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 currently 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 2014, 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 examining the company's financial reporting along with 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 the 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.

In addition, the Audit Committee oversees the company's internal control system – along with the procedures used to identify, track and manage risk – and the internal audit system. It also deals with corporate compliance issues and discusses developments in this area at each of its meetings.

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.

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.

Detailed information on the work of the Supervisory Board and its committees is provided in the Report of the Supervisory Board on page 34ff. 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[1].

Another goal for the composition of the Supervisory Board is that women continue to account for at least 20% of the members of the Supervisory Board in the medium term, subject to any future changes in the law, and that the female membership be distributed as evenly as possible between the stockholder and employee groups.

The goals described refer to the Supervisory Board as a whole unless resolved otherwise. However, since the Supervisory Board can only nominate candidates for election as stockholder representatives, it can only take the targets into account in these nominations.

Implementation status of the objectives

Taking into account the new appointments in 2014, the Supervisory Board continues to have 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 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 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, was the Chairman of the company's Board of Management until 2010. One

[1] Annex 2 to the recommendation of the European Commission of February 15, 2005, on the role of non-executive or supervisory directors of listed companies and on the committees of the (supervisory) board (2005/162/EC)

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. In 2014 the proportion of women on the Supervisory Board reached the target of 20% set by the Supervisory Board itself for the minimum percentage of women members.

DISCLOSURE OF SECURITIES TRANSACTIONS BY MEMBERS OF THE BOARD OF MANAGEMENT OR SUPERVISORY BOARD

Members of the Board of Management and Supervisory Board and their close relatives are legally required 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 2014 were reported to Bayer AG:

Securities Transactions by Members of the Board of Management or Supervisory Board [Table 3.18.1]

Date/ Place	Name/ Function	Financial instrument	ISIN	Transaction	Price/ Currency	Quantity	Total transaction volume
March 5, 2014/ Xetra	Dr. Paul Achleitner, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	447	EUR 45,003.96
March 5, 2014/ Xetra	Dr. Clemens Börsig, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	298	EUR 30,002.64
March 5, 2014/ Xetra	Thomas Ebeling, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	298	EUR 30,002.64
March 5, 2014/ Xetra	Dr.-Ing. Thomas Fischer, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	447	EUR 45,003.96
March 5, 2014/ Xetra	Dr. Klaus Kleinfeld, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	298	EUR 30,002.64
March 5, 2014/ Xetra	Dr. Helmut Panke, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	298	EUR 30,002.64
March 5, 2014/ Xetra	Michael Schmidt-Kiessling, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	298	EUR 30,002.64
March 5, 2014/ Xetra	Sue H. Rataj, Supervisory Board	Bayer AG American Depositary Receipt (ADR)	US0727303028	Purchase	US$ 137.69	293	US$ 40,343.17
March 5, 2014/ Xetra	Prof. Dr. Ekkehard Schulz, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 101.00	450	EUR 45,450.00
March 5, 2014/ Xetra	Dr. Klaus Sturany, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	596	EUR 60,005.28
March 5, 2014/ Xetra	Werner Wenning, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	894	EUR 90,007.92
March 5, 2014/ Xetra	Prof. Dr. Ernst-Ludwig Winnacker, Supervisory Board	Shares	DE000BAY0017	Purchase	EUR 100.68	298	EUR 30,002.64

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 related financial instruments 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 in business dealings and in working together 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

The established internal control system enables the company to identify any business or financial risks at an early stage and take appropriate action to manage them. This control system is designed to ensure that risks are monitored in a timely manner, all business transactions are properly accounted for, and reliable data on the company's financial position is always available.

When acquisitions are made, we aim to bring the acquired units' internal control systems into line with those of the Bayer Group as quickly as possible.

However, the control and risk management system cannot provide absolute protection against losses arising from business risks or fraudulent actions.

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 Group Management Board 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 following the end of each fiscal year. During the fiscal year, stockholders and other interested parties are kept informed of developments by means of the half-year financial report and additional interim reports for the first and third quarters. 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.

Bayer also provides information at news conferences and analysts' meetings. In addition, the company uses the internet as a platform for timely disclosure of information, including details of the dates of major publications and events, such as the annual report, quarterly financial reports (Stockholders' Newsletters) or the Annual Stockholders' Meeting.

In line with the principle of fair disclosure, all stockholders and other principal 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 that Bayer publishes locally in compliance with the stock market regulations of various countries.

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.

18.3 Compliance

Bayer manages its businesses responsibly and in compliance with the statutory and regulatory 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.

The Board of Management is unreservedly committed to corporate 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. This document details 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 private interests, proper record-keeping and transparent financial reporting, fair and respectful working conditions, and avoidance of all forms of discrimination. Every employee is required to immediately report any infringement of the Corporate Compliance Policy (except in France where this requirement does not apply due to national law). Managerial employees have a vital part to play in implementing the Corporate Compliance Policy. As role models, they must help to ensure that this important code of conduct is adhered to in practice. Managers may lose their entitlement to variable compensation components and be subject to disciplinary measures if systematic violations of applicable law entailing loss or damage to Bayer have occurred in their sphere of responsibility and could have been prevented if they had taken appropriate action. Compliant and lawful conduct forms part of the performance evaluations of all managerial employees.

Bayer's Corporate Audit department regularly verifies adherence to the Corporate Compliance Policy. In 2014, 219 audits, including 62 compliance audits, were performed on the basis of a risk-oriented audit plan that takes potential corruption and other risks into account. Such audits were either preventive or incident-related. Observance of the Corporate Compliance Policy is also a focus of all regular audits. The head of Corporate Audit regularly attends the meetings of the Audit Committee of the Supervisory Board and provides it with a list of conducted audits and their outcomes at least once a year.

The head of the Bayer Group's compliance organization is 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. Each subgroup and service company has its own compliance officer, who is responsible for ensuring its adherence to Group-wide standards and to any applicable subgroup- or industry-specific standards. There is a central Compliance Officer for each country and country group, supported where necessary by further compliance functions, to advise employees on lawful and ethically correct 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.

Compliance is crucial to the success of our business. Bayer adopted a Group-wide Compliance Charter in 2013 to integrate compliance even more closely into all operating units and their work processes.

Group target 2015: implementation of preemptive risk assessments in all three subgroups

As part of the Charter's implementation we have launched the Group-wide Integrated Compliance Management (ICM) project to turn the compliance organization's role into that of a proactive and preventive business partner. ICM fosters close, systematic collaboration between the compliance experts and the managers responsible for business operations in order to identify business-relevant risk areas and minimize existing risks. We plan to carry out comprehensive, preemptive risk assessments in all three subgroups 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 controls, conflicts of interest, insider trading, antidiscrimination policies and data privacy. ONLINE ANNEX 3-18.3-1

See Chapter 1.3 for Group targets

Group target from 2015 onward: 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 raise the employees' awareness for compliance issues and the risks these involve. ONLINE ANNEX 3-18.3-2

Compliance violations can be reported – anonymously if desired – via compliance hotlines that have been set up worldwide. In 2014 the compliance organization registered 70 reports via the central compliance hotline and email address. Of these, 14 were from Germany and 56 from other countries. 60 reports were received by email (17 of them anonymously) and 10 by telephone (eight of these anonymously). Suspected compliance violations may also be reported to the Compliance Officers, to Bayer's Corporate Audit department or via local hotlines set up by the country organizations.

All suspected compliance violations in the Group are recorded according to uniform criteria and dealt with according to the rules set forth in the Directive on the Management of Compliance Incidents.
ONLINE ANNEX 3-18.3-3

18.4 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 the International Financial Reporting Standards (IFRS).

18.4.1 Compensation of the Board of Management

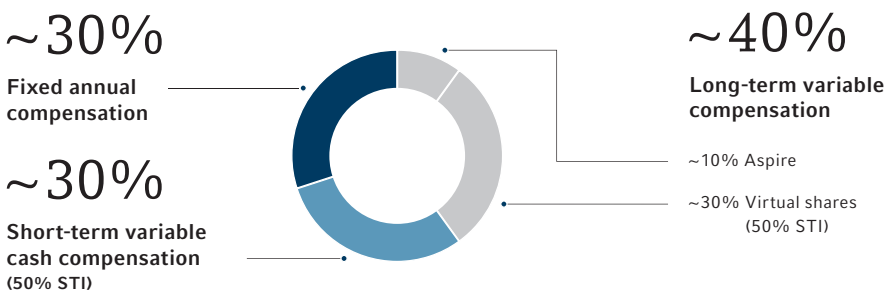
OBJECTIVES

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

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 3.18.1]



[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. To comply with the recommendation newly included in the 2013 version of the German Corporate Governance Code, caps have also been agreed for the disbursement of the performance-related components and for the compensation as a whole (total of the annual fixed compensation and the variable components) with effect from the fiscal year 2014. 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 indexes 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

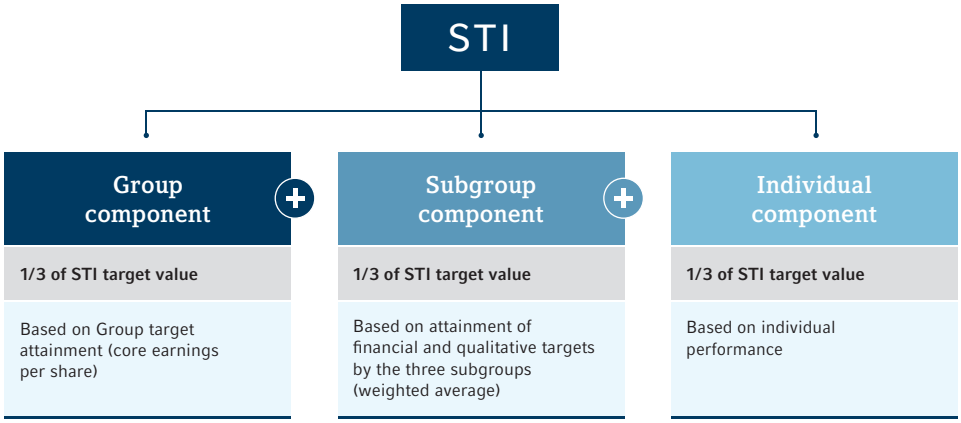
Short-term variable cash compensation

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 MaterialScience 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 MaterialScience 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 3.18.2]



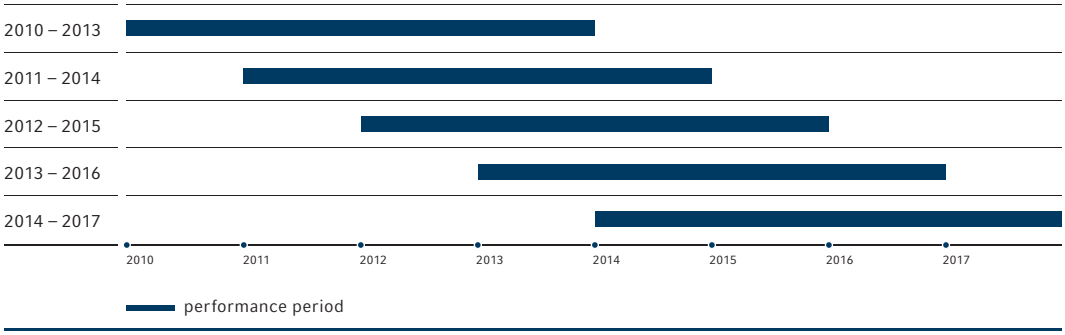
Long-term variable cash compensation based on virtual Bayer shares

Both the number of virtual shares granted and the amount of the payment at the end of a three-year retention period are based on the average official closing price 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 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 respective 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 3.18.3]



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 are 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 are held must be 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.

Future pension payments are annually reviewed and adjusted based on the development of consumer prices. Pension rights are suspended if a Management Board member 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 the members of the Board of Management in Germany.

Benefits upon termination of service on the Board of Management

Post-contractual non-compete agreements

Post-contractual non-compete 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. For the members newly appointed to the Board of Management on or after January 1, 2010, the compensatory payment is 100% of the average fixed compensation for the twelve months preceding their departure. The post-contractual non-compete 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 payments to be made in certain circumstances in the event of a change in control. The amount of any possible severance payments 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 2014

The aggregate compensation for the members of the Board of Management in 2014 totaled €15,648 thousand (2013: €13,563 thousand), comprising €4,561 thousand (2013: €3,956 thousand) in non-performance-related components and €11,087 thousand (2013: €9,607 thousand) in performance-related components. The pension service cost amounted to €1,385 thousand (2013: €1,271 thousand).

The following changes in the membership of the Board of Management or the terms of office of the members occurred in 2014:

The Chairman of the Board of Management, Dr. Marijn Dekkers, extended his contract by two years until December 31, 2016, upon the expiration of his initial five-year term of office.

Effective February 1, 2014, Kemal Malik was appointed to the Board of Management of Bayer AG. Effective April 30, 2014, he succeeded Prof. Wolfgang Plischke, who retired as of midnight on April 29, 2014.

By resolution of the Supervisory Board, Werner Baumann, previously Chief Financial Officer (CFO), was appointed Chief Strategy and Portfolio Officer (CSPO) effective October 1, 2014. Werner Baumann's current contract runs until December 31, 2017.

Johannes Dietsch, previously Senior Bayer Representative and CFO for Greater China, based in Shanghai, was appointed to the Board of Management of Bayer AG effective September 1, 2014. He assumed the office of Chief Financial Officer effective October 1, 2014.

The following table shows the total compensation of the individual members of the Board of Management who served in 2013 and/or 2014 according to the German Commercial Code:

Board of Management Compensation (German Commercial Code) [Table 3.18.2]

	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]	
	2013	2014	2013	2014	2013	2014	2013	2013	2014	2014	2013	2014	2013	2014	2013	2014
	€ 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, 2014																
Dr. Marijn Dekkers (Chairman)	1,347	1,363	39	42	1,532	1,828	15,802	1,532	15,809	1,828	382	414	4,832	5,475	677	722
Werner Baumann	888	899	43	67	881	1,051	9,085	881	9,088	1,051	252	273	2,945	3,341	189	204
Johannes Dietsch	–	240	–	22	–	280	–	–	2,424	280	–	–	–	822	–	65
Michael König	533	719	51	222	529	841	5,451	529	7,271	841	–	218	1,642	2,841	120	176
Kemal Malik	–	659	–	72	–	771	–	–	6,665	771	–	–	–	2,273	–	216
Former members																
Prof. Dr. Wolfgang Plischke[4, 5, 6]	710	238	35	18	1,476	280	7,631	740	2,485	287	201	73	3,162	896	6	2
Dr. Richard Pott[7]	296	–	14	–	294	–	3,028	294	–	–	84	–	982	–	279	–
Total	**3,774**	**4,118**	**182**	**443**	**4,712**	**5,051**	**40,997**	**3,976**	**43,742**	**5,058**	**919**	**978**	**13,563**	**15,648**	**1,271**	**1,385**

[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] Prof. Plischke stepped down from the Board of Management as of midnight on April 29, 2014.
[5] The short-term variable cash compensation for Prof. Plischke in 2013 includes the additional one-time variable payment of €771 thousand granted to him.
[6] In return for his acceptance of the early change made to the system of variable cash compansation in 2010, Prof. Plischke received one additional virtual Bayer share for every 20 virtual Bayer shares resulting from the conversion of 50% of the STI into virtual Bayer shares.
[7] Dr. Pott stepped down from the Board of Management as of midnight on May 31, 2013.

Fixed annual compensation

The fixed compensation of the members of the Board of Management was adjusted in 2014. The total fixed compensation of all the members was €4,118 thousand (2013: €3,774 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 2014 totaled €5,051 thousand (2013: €4,712 thousand) after deduction of the solidarity contribution. Provisions of €4,771 thousand were established for payment of this compensation component to the members of the Board of Management serving as of December 31, 2014. 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 2014 it amounted to 0.27% (2013: 0.47%) 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 2014 into virtual Bayer shares was based on an average price of €115.66 (2013: €96.96).

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 €5,058 thousand (2013: €3,976 thousand). The aggregate compensation according to the IFRS also includes a change of €1,559 thousand (2013: €5,030 thousand) in the value of existing entitlements.

Provisions of €17,775 thousand (2013: €18,310 thousand) existed as of December 31, 2014, 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 €978 thousand (2013: €919 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.

Board of Management Compensation – Aspire Program (IFRS) [Table 3.18.3]

		Serving members of the Board of Management as of December 31, 2014					Former members		
		Dr. Marijn Dekkers (Chairman)	Werner Baumann	Johannes Dietsch[3]	Michael König[3]	Kemal Malik[3]	Prof. Dr. Wolfgang Plischke	Dr. Richard Pott	Total
		€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Stock-based compensation entitlements earned in the respective year[1]	**2014**	**1,186**	**684**	**78**	**246**	**247**	**1,161**	**–**	**3,602**
	2013	1,115	679	–	141	–	651	339	2,925
Change in value of existing entitlements[2]	**2014**	**272**	**154**	**18**	**43**	**56**	**144**	**–**	**687**
	2013	703	444	–	87	–	444	634	2,312
Total	**2014**	**1,458**	**838**	**96**	**289**	**303**	**1,305**	**–**	**4,289**
	2013	1,818	1,123	–	228	–	1,095	973	5,237

[1] The newly earned entitlements are derived from the 2011–2014 (2013: 2010–2013) 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 2013 and 2014, respectively.
[2] This line shows the change in the value of the entitlements already earned in 2011, 2012 and 2013 (2013: 2010, 2011 and 2012).
[3] The Aspire entitlements earned in 2014 and the value changes for Johannes Dietsch, Michael König and Kemal Malik relate to Aspire tranches granted to them before they joined the Board of Management but not yet fully earned. This also applies to the 2013 data for Michael König.

Provisions of €7,155 thousand (2013: €6,813 thousand) were established for the Aspire entitlements of the members of the Board of Management serving as of December 31, 2014.

Pension entitlements

The pension service cost recognized for the members of the Board of Management in 2014 according to the German Commercial Code was €1,385 thousand (2013: €1,271 thousand), while the current service cost for pension entitlements recognized according to the IFRS was €1,716 thousand (2013: €1,805 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 3.18.4]

	German Commercial Code				IFRS			
	Pension service cost [1]		Settlement value of pension obligation as of December 31		Current service cost for pension entitlements		Present value of defined benefit pension obligation as of December 31	
	2013	2014	2013	2014	2013	2014	2013	2014
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Serving members of the Board of Management as of December 31								
Dr. Marijn Dekkers	677	722	5,451	8,256	960	877	6,684	12,812
Werner Baumann	189	204	4,936	5,738	291	259	6,354	10,701
Johannes Dietsch	–	65	–	2,160	–	85	–	4,133
Michael König	120	176	1,327	1,626	185	222	1,719	3,259
Kemal Malik	–	216	–	231	–	273	–	1,343
Former members								
Prof. Dr. Wolfgang Plischke[2]	6	2	7,621	–	–	–	8,716	–
Dr. Richard Pott[3]	279	–	–	–	369	–	–	–
Total	**1,271**	**1,385**	**19,335**	**18,011**	**1,805**	**1,716**	**23,473**	**32,248**

[1] including company contribution to Bayer-Pensionskasse VVaG or Rheinische Pensionskasse VVaG
[2] Prof. Plischke stepped down from the Board of Management as of midnight on April 29, 2014.
[3] Dr. Pott stepped down from the Board of Management as of midnight on May 31, 2013.

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.

The aggregate compensation according to the IFRS is shown in the following table:

Board of Management Compensation according to IFRS [Table 3.18.5]

	2013	2014
	€ thousand	€ thousand
Fixed annual compensation	3,774	4,118
Fringe benefits	182	443
Total short-term non-performance-related compensation	**3,956**	**4,561**
Short-term performance-related cash compensation	4,712	5,051
Total short-term compensation	**8,668**	**9,612**
Stock-based compensation (virtual Bayer shares) earned in the respective year	3,976	5,058
Change in value of existing entitlements to stock-based compensation (virtual Bayer shares)	5,030	1,559
Stock-based compensation (Aspire) earned in the respective year	2,925	3,602
Change in value of existing entitlements to stock-based compensation (Aspire)	2,312	687
Total stock-based compensation (long-term incentive)	**14,243**	**10,906**
Service cost for pension entitlements earned in the respective year	1,805	1,716
Total long-term compensation	**16,048**	**12,622**
Aggregate compensation (IFRS)	**24,716**	**22,234**

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18.4.2 Disclosures Pursuant to the Recommendations of the German Corporate Governance Code

The following tables show the compensation and fringe benefits paid for 2014, including the maximum and minimum achievable variable compensation, and the allocation of compensation for 2013 and 2014 in line with the recommendations in the June 2014 version of the German Corporate Governance Code.

Compensation and Benefits Granted for 2014 [Table 3.18.6]

	Serving members of the Board of Management as of December 31, 2014													Serving members of the Board of Management as of December 31, 2014								Former members							
	Dr. Marijn Dekkers (Chairman)				Werner Baumann (Strategy)				Johannes Dietsch (Finance)					Michael König[2] (Human Resources)				Kemal Malik (Innovation)				Prof. Dr. Wolfgang Plischke[1]				Dr. Richard Pott[1]			
	Joined Jan. 1, 2010				Joined Jan. 1, 2010				Joined Sep. 1, 2014					Joined April 1, 2013				Joined Feb. 1, 2014				Stopped down April 29, 2014				Stopped down June 1, 2013			
	Target value 2013	Target value 2014	Min. 2014	Max.[3] 2014	Target value 2013	Target value 2014	Min. 2014	Max.[3] 2014	Target value 2013	Target value 2014	Min. 2014	Max.[3] 2014		Target value 2013	Target value 2014	Min. 2014	Max.[3] 2014	Target value 2013	Target value 2014	Min. 2014	Max.[3] 2014	Target value 2013	Target value 2014	Min. 2014	Max.[3] 2014	Target value 2013	Target value 2014	Min. 2014	Max.[3] 2014
	€ thousand	€ thousand	€ thousand	€ thousand	€ 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	1,347	1,363	1,363	1,363	888	899	899	899	–	240	240	240		533	719	719	719	–	659	659	659	710	238	238	238	296	–	–	–
Fringe benefits	39	42	42	42	43	67	67	67	–	22	22	22		51	222	222	222	–	72	72	72	35	18	18	18	14	–	–	–
Total annual fixed compensation	**1,386**	**1,405**	**1,405**	**1,405**	**931**	**966**	**966**	**966**	**–**	**262**	**262**	**262**		**584**	**941**	**941**	**941**	**–**	**731**	**731**	**731**	**745**	**256**	**256**	**256**	**310**	**–**	**–**	**–**
Short-term variable cash compensation (50% of STI)	1,448	1,466	0	2,931	833	843	0	1,685	–	225	0	449		500	674	0	1,348	–	618	0	1,236	666	225	0	449	278	–	–	–
Long-term stock-based compensation (Aspire)[4]																													
2013 (Jan. 1, 2013– Dec. 31, 2016)	539	–	–	–	355	–	–	–	–	–	–	–		93	–	–	–	–	–	–	–	284	–	–	–	118	–	–	–
2014 (Jan. 1, 2014– Dec. 31, 2017)	–	545	0	1,636	–	359	0	1,078	–	107	0	321		–	288	0	863	–	135	0	405	–	96	0	288	0	–	–	–
Long-term variable cash compensation (virtual Bayer shares)[5]																													
2013 (Jan. 1, 2014– Dec. 31, 2016)	1,448	–	–	–	833	–	–	–	–	–	–	–		500	–	–	–	–	–	–	–	699	–	–	–	278	–	–	–
2014 (Jan. 1, 2015– Dec. 31, 2017)	–	1,466	0	5,862	–	843	0	3,370	–	225	0	899		–	674	0	2,696	–	618	0	2,471	–	230	0	921	–	–	–	–
HealthCare special bonus	–	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–	–	–	–	–	500	0	0	0	0	–	–	–
Total	**4,821**	**4,882**	**1,405**	**11,834**	**2,952**	**3,011**	**966**	**7,099**	**–**	**819**	**262**	**1,931**		**1,677**	**2,577**	**941**	**5,848**	**–**	**2,102**	**731**	**4,843**	**2,894**	**807**	**256**	**1,914**	**984**	**–**	**–**	**–**
Service cost	677	722	722	722	189	204	204	204	–	65	65	65		120	176	176	176	–	216	216	216	6	2	2	2	279	–	–	–
Total compensation	**5,498**	**5,604**	**2,127**	**12,556**	**3,141**	**3,215**	**1,170**	**7,303**	**–**	**884**	**327**	**1,996**		**1,797**	**2,753**	**1,117**	**6,024**	**–**	**2,318**	**947**	**5,059**	**2,900**	**809**	**258**	**1,916**	**1,263**	**–**	**–**	**–**

[1] including any contractually agreed free shares in connection with the grant of virtual shares
[2] The compensation and fringe benefits paid to Michael König in 2013 and to Johannes Dietsch, Michael König and Kemal Malik in 2014 relate solely to their service on the Board of Management. The 2013 and 2014 Aspire tranches were granted to them prior to the dates on which they were appointed to the Board of Management. The vesting periods for these tranches extend past those dates.
[3] The maximum achievable variable compensation shown here does not yet take into account the caps applicable from 2014 onward. Payments in a single year are limited to 1.8 times the target compensation.
[4] capped at 300%
[5] capped at 200% of the maximum short-term variable cash compensation (50% of STI)

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Allocation of Compensation for 2013 and 2014 [Table 3.18.7]

	Serving members of the Board of Management as of December 31, 2014							Serving members of the Board of Management as of December 31, 2014				Former members			
	Dr. Marijn Dekkers (Chairman)		Werner Baumann (Strategy)		Johannes Dietsch (Finance)			Michael König (Human Resources)		Kemal Malik (Innovation)		Prof. Dr. Wolfgang Plischke		Dr. Richard Pott	
	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		Stepped down June 1, 2013	
	2013	2014	2013	2014	2013	2014		2013	2014	2013	2014	2013	2014	2013	2014
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand		€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Fixed annual compensation	1,347	1,363	888	899	–	240		533	719	–	659	710	238	296	–
Fringe benefits	39	42	43	67	–	22		51	222	–	72	35	18	14	–
Total	**1,386**	**1,405**	**931**	**966**	**–**	**262**		**584**	**941**	**–**	**731**	**745**	**256**	**310**	**–**
Short-term variable cash compensation															
for 2013	1,532	–	881	–	–	–		529	–	–	–	705	–	294	–
for 2014	–	1,828	–	1,051	–	280		–	841	–	771	–	280	–	–
Long-term stock-based cash compensation (Aspire)															
2010 (Jan. 1, 2010 – Dec. 31, 2012)	–	–	–	–	–	–		–	–	–	–	253	–	253	–
2010 (Jan. 1, 2010 – Dec. 31, 2013) [1]	–	960	–	759	–	–		–	35	–	–	–	759	–	–
Long-term cash compensation (virtual Bayer shares) 2010 (Jan. 1, 2011 – Dec. 31, 2013)	**–**	**1,594**	**–**	**978**	**–**	**–**		**–**	**–**	**–**	**–**	**–**	**1,026**	**–**	**–**
Advance payment of 2/3 of long-term cash compensation (virtual Bayer shares)															
2010 (Jan. 1, 2011 – Dec. 31, 2013)	–	–	–	–	–	–		–	–	–	–	–	–	587	–
2011 (Jan. 1, 2012 – Dec. 31, 2014)	–	–	–	–	–	–		–	–	–	–	–	915	–	–
HealthCare special bonus	**–**	**–**	**–**	**–**	**–**	**–**		**–**	**–**	**–**	**–**	**771**	**–**	**–**	**–**
Total	**2,918**	**5,787**	**1,812**	**3,754**	**–**	**542**		**1,113**	**1,817**	**–**	**1,502**	**2,474**	**3,236**	**1,444**	**–**
Service cost/benefit expense	677	722	189	204	–	65		120	176	–	216	6	2	279	–
Total compensation	**3,595**	**6,509**	**2,001**	**3,958**	**–**	**607**		**1,233**	**1,993**	**–**	**1,718**	**2,480**	**3,238**	**1,723**	**–**

The prior-year figures have been restated due to an amendment contained in the June 24, 2014 version of the German Corporate Governance Code.
The short-term variable cash compensation is now allocated to the year in which it is granted rather than the year of disbursement.
[1] The payment to Michael König from the 2010 Aspire tranche related to a vesting period that began before he joined the Board of Management.
The tranche was not yet fully vested at the date on which he joined the Board of Management.

18.4.3 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 fixed compensation, including any compensation for committee membership (before taxes), and hold these shares for as long as they remain members of the Supervisory Board. This does not apply to members 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 2014

The following table shows the components of each Supervisory Board member's compensation for 2014.

Compensation of the Members of the Supervisory Board of Bayer AG in 2014 [Table 3.18.8]

	Fixed Compensation		Attendance Fee		Total	
	2013	2014	2013	2014	2013	2014
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Members of the Supervisory Board as of December 31, 2014						
Dr. Paul Achleitner	180	180	4	5	184	185
Dr. Simone Bagel-Trah	–	81	–	3	–	84
Dr. Clemens Börsig	120	120	4	4	124	124
André van Broich	120	120	4	5	124	125
Thomas Ebeling	120	120	4	4	124	124
Dr. Thomas Fischer	180	180	8	9	188	189
Peter Hausmann	150	150	4	4	154	154
Reiner Hoffmann	180	180	8	8	188	188
Yüksel Karaaslan	120	120	4	5	124	125
Petra Kronen	150	150	3	5	153	155
Dr. Helmut Panke	120	155	3	5	123	160
Sue H. Rataj	120	120	3	4	123	124
Petra Reinbold-Knape	120	120	3	4	123	124
Michael Schmidt-Kiessling	120	120	4	5	124	125
Dr. Klaus Sturany	240	240	8	8	248	248
Werner Wenning (Chairman)	360	360	8	10	368	370
Prof. Dr. Otmar D. Wiestler[1]	–	0	–	0	–	0
Thomas de Win (Vice Chairman)	240	240	7	7	247	247
Prof. Dr. Dr. Ernst-Ludwig Winnacker	120	120	4	5	124	125
Oliver Zühlke	150	150	4	5	154	155
Members who left the Supervisory Board during 2014						
Prof. Dr. Ekkehard D. Schulz	180	59	8	3	188	62
Dr. Klaus Kleinfeld	120	90	4	3	124	93
Total	**3,210**	**3,175**	**99**	**111**	**3,309**	**3,286**

[1] Prof. Wiestler's office as Chairman of the Management Board of the German Cancer Research Center precludes his acceptance of compensation for membership of the Supervisory Board.

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 2014 was €737 thousand (2013: €727 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.

18.4.4 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, 2014, nor at any time during 2014 or 2013.

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 2014 totaled €13,457 thousand (2013: €12,871 thousand). These benefits are 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 €187,759 thousand (2013: €150,148 thousand), while the settlement value of the pension obligation according to the German Commercial Code amounted to €146,341 thousand (2013: €136,307 thousand).

Events After the End of the Reporting Period

19. Events After the End of the Reporting Period

Since January 1, 2015, no events of special significance have occurred that we expect to have a material impact on the financial position or results of operations of the Bayer Group.

Report on Future Perspectives and on Opportunities and Risks

20. Future Perspectives

20.1 Economic Outlook

GLOBAL ECONOMY

Economic Outlook [Table 3.20.1]

	Growth[1] 2014	Growth forecast[1] 2015
World	+2.7%	+3.0%
European Union	+1.3%	+1.7%
of which Germany	+1.5%	+1.6%
United States	+2.4%	+3.1%
Emerging markets[2]	+4.3%	+4.1%

Growth 2014 restated
[1] real growth of gross domestic product, source: Global Insight
[2] including about 50 countries defined by Global Insight as emerging markets in line with the World Bank as of February 2015

The global economy will probably grow more quickly in 2015 than in the previous year, supported as before by a generally expansionary monetary policy. Economic stimulus will also come from the sharp decline in oil prices, which will provide consumer relief and stimulate consumption. On the other hand, growth continues to be hampered in many countries by the high level of private and public indebtedness.

We expect the economic recovery in the European Union to continue – driven by low inflation and the depreciation of the euro, and above all by the upswing in the United Kingdom. However, no significant growth stimulus is expected from the German economy. Economic development in the countries of southern Europe continues to be held back by high unemployment.

The United States economy is predicted to grow considerably faster than in 2014. There, the main driver of development will probably be private consumption, especially in light of the rapid increase in employment.

The rate of expansion in the emerging countries is again likely to show a slight year-on-year decline. In China, particularly, we foresee slower growth in view of industrial overcapacities. Russia is expected to see a significant decline in economic activity due to an outflow of capital, economic sanctions and lower oil export revenues.

Economic Outlook for the Subgroups [Table 3.20.2]

	Growth[1] 2014	Growth forecast[1] 2015
HealthCare		
Pharmaceuticals market	+8%	+7%
Consumer care market	+4%	+4%
Medical care market	−3%	−2%
Animal health market	+5%	+5%
CropScience		
Seeds and crop protection market	+6%	≤3%
MaterialScience (main customer industries)		
Automotive industry	+3%	+4%
Construction industry	+4%	+4%
Electrical/electronics industry	+5%	+6%
Furniture industry	+4%	+4%

[1] Bayer's estimate, except pharmaceuticals. Source for pharmaceuticals market: IMS Health, IMS Market Prognosis. Copyright 2015. All rights reserved; currency-adjusted; 2014 data provisional
As of February 2015

HEALTHCARE

The **pharmaceuticals market** is likely to grow rather more slowly in 2015 than in the previous year, especially because of the slightly lower growth rate predicted for this market in the United States. Following double-digit growth in the U.S. last year due to new product introductions and health system reforms, this market will probably expand at a somewhat slower rate in 2015, partly as a result of patent expirations and launches of new generic products. We expect a further increase in the demand for medicines in the emerging economies.

Growth in the **consumer care market** in 2015 is likely to be level with the previous year. We expect to see slight shrinkage in the **medical care market**, with the diabetes care market weakening and the market for contrast agents and medical equipment (Radiology business unit) matching the previous year. The **animal health market** is anticipated to grow at about the same rate as in 2014.

CROPSCIENCE

Following the persistent dynamic growth in the global **seed and crop protection market** last year, we anticipate a volatile market environment in 2015. Global inventories of most agricultural commodities are predicted to increase in 2015, while prices will likely be buoyed by the steady rise in demand for food and feed products. In 2015 we expect a slower rate of overall growth in the low single digits.

Latin America should continue to experience the strongest growth, though probably with a lower growth rate than in the prior year. This region's seed and crop protection market is mainly driven by the steady expansion of soybean farming. In Asia/Pacific, too, we expect agricultural production to continue to expand, though with markedly lower growth rates than in Latin America. Development in this region will mainly depend on cereals and rice along with specialty crops such as fruit and vegetables. We expect markets in the industrialized regions of the northern hemisphere to show weaker growth momentum than in 2014.

MATERIALSCIENCE

We expect the business climate for our **principal customer industries** to continue improving during 2015. The positive economic development in North America is again fueling hopes of an increase in demand. On the other hand, the economic recovery in Europe will probably occur at a slower pace, with lower rates of growth in our principal customer industries. We expect comparatively high growth rates in Asia.

We expect growth in the **automotive industry** to be higher in 2015 than in the previous year. A persistently low oil price could contribute to positive development. Asia and North America will likely remain the principal growth drivers, whereas the automotive sector faces challenges in some South American and Eastern European countries.

The global **construction industry** will probably grow at the prior-year rate in 2015. We anticipate a continued recovery in Europe. The prospects for North America and Asia are positive, and the investment climate in these regions should be stable. However, the economic development in Russia and Brazil could have adverse effects.

We expect the global **electrical/electronics industry** to continue growing strongly in 2015. Demand is likely to be driven by Asia, especially China and India. We predict positive development in North America, while growth in Europe is likely to remain slow.

We anticipate steady growth in the global **furniture industry** in 2015. In North America we expect to see a robust increase in demand from which furniture manufacturers in Asia should also benefit. We also anticipate gratifying business development in the domestic Asian market. We predict a continuing recovery in the European furniture industry.

20.2 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 MaterialScience business for the full year.

BAYER GROUP

Our forecast for fiscal 2015 is based on the exchange rates as of December 31, 2014, including a rate of US$1.21 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 €70 million.

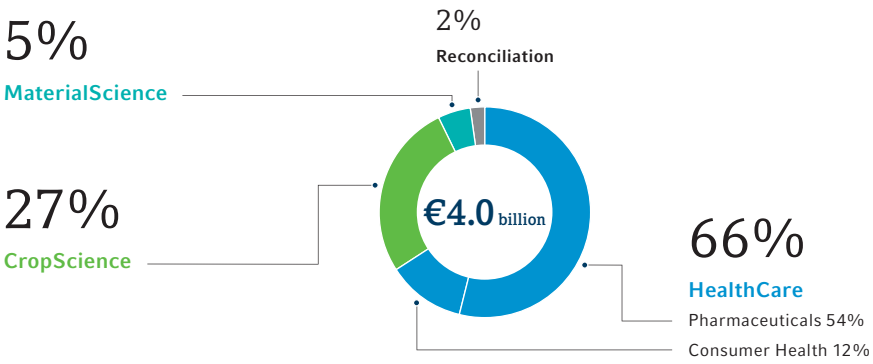
We are planning sales in the region of €46 billion for 2015. This corresponds to a currency- and portfolio-adjusted increase in the low single digits. We expect currency effects to boost sales by approximately 3% compared with the prior year. We plan to raise EBITDA before special items by a low- to mid-teens percentage, allowing for expected positive currency effects of about 2%. We aim to increase core earnings per share (calculated as explained in Chapter 16.3 “Core Earnings Per Share”) by a low-teens percentage, allowing for expected positive currency effects of around 3%.

	Forecast 2015	Currency effects allowed for in the forecast[2]
Group sales	Low-single-digit percentage increase[1]	
	Approx. €46 billion	Plus approx. 3%
EBITDA before special items	Low- to mid-teens percentage increase	Plus approx. 2% Plus approx. €200 million
Core earnings per share	Low-teens percentage increase	Plus approx. 3%

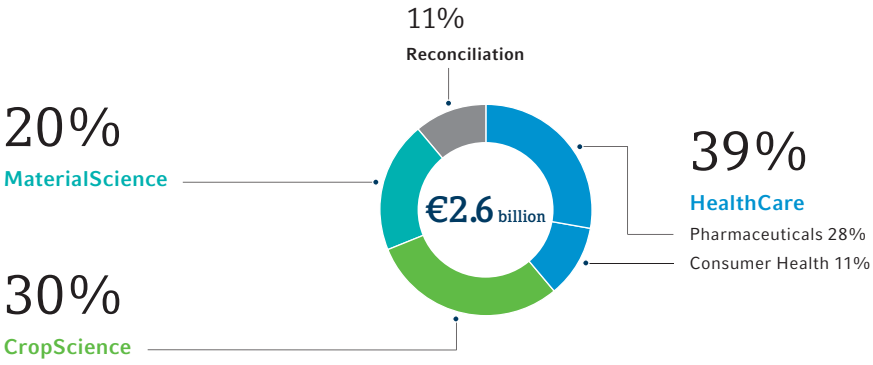
[1] currency- and portfolio-adjusted
[2] forecast for currency effects in 2015 computed by comparing exchange rates as of December 31, 2014 to full year 2014 rates

We expect to take special charges in the region of €700 million in 2015, with the integration of the acquired consumer care businesses and the planned stock market listing of MaterialScience accounting for most of this amount.

Research and Development Budget 2015 by Subgroup [Graphic 3.20.1]



Capital Expenditure Budget 2015 by Subgroup [Graphic 3.20.2]



We intend to increase our research and development spending by about 10% in 2015 to more than €4.0 billion. We have budgeted capital expenditures of about €2.3 billion for property, plant and equipment and €0.3 billion for intangible assets. Depreciation and amortization are estimated at about €3.0 billion, including €1.6 billion in amortization of intangible assets.

We predict the financial result to come in at around minus €1.0 billion. The effective tax rate is likely to be around 25%. We expect net financial debt to be below €18 billion at the end of 2015.

HEALTHCARE

At HealthCare we expect sales to post a mid-single-digit percentage increase on a currency- and portfolio-adjusted basis to approximately €23 billion. We predict positive currency effects of about 3% compared with 2014. We plan to raise EBITDA before special items by a mid-teens percentage.

In the Pharmaceuticals segment, we expect sales to move ahead by a mid- to high-single-digit percentage on a currency- and portfolio-adjusted basis to approximately €13 billion. Here we anticipate positive currency effects of about 2% compared with 2014. We intend to raise sales of our recently launched products in 2015 toward €4 billion. We plan to raise EBITDA before special items by a low-teens percentage, allowing for an additional €300 million of investment in research and development. We therefore expect to slightly improve the EBITDA margin before special items.

In the Consumer Health segment, we expect sales to increase toward €10 billion, including those of the acquired consumer care businesses. We plan to grow sales by a mid-single-digit percentage on a currency- and portfolio-adjusted basis. Here we anticipate positive currency effects of around 3% compared with 2014. We expect to raise EBITDA before special items by a mid-to-high-twenties percentage, with the acquired consumer care businesses contributing to the increase.

CROPSCIENCE

At CropScience we expect to continue growing faster than the market and to raise sales by a low- to mid-single-digit percentage on a currency- and portfolio-adjusted basis to approximately €10 billion. We anticipate positive currency effects of about 4% compared with 2014. We plan to improve EBITDA before special items by a low- to mid-single-digit percentage.

MATERIALSCIENCE

At MaterialScience we are planning further volume growth in 2015 accompanied by declining selling prices, leading to lower sales. However, we expect to see a significant increase in EBITDA before special items. We aim to return to earning the full cost of capital in 2015.

RECONCILIATION

In 2015 we expect sales on a currency- and portfolio-adjusted basis to be level with the previous year. We are planning EBITDA before special items of approximately minus €0.3 billion.

BAYER AG

As the holding company for 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. We expect an increase in net interest expense due to the higher level of net debt. 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.

20.3 Opportunities and Risks Report

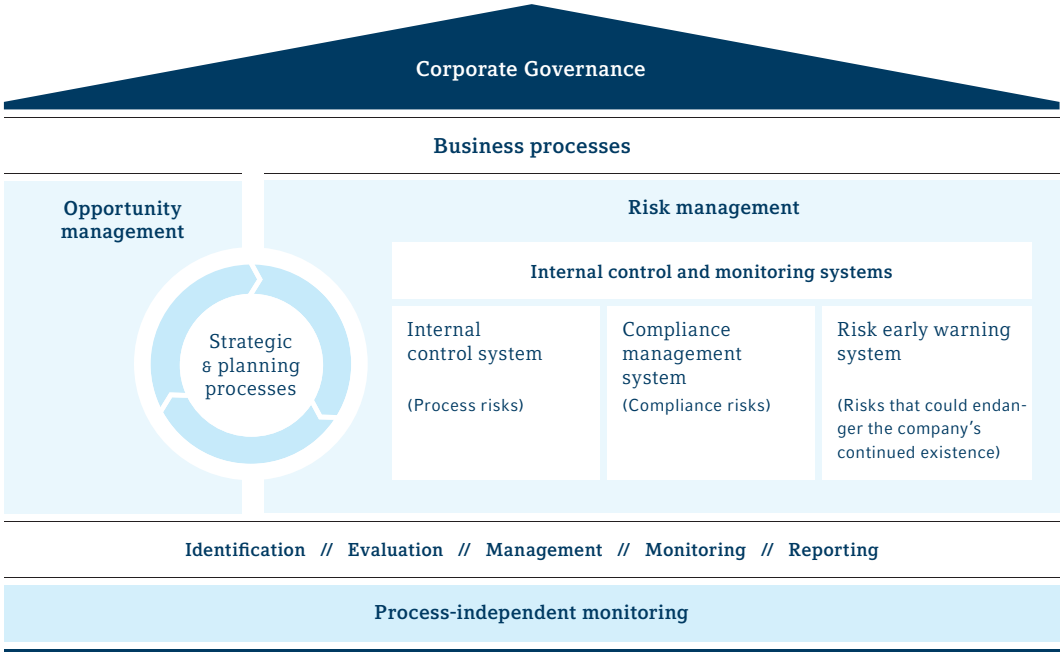
// Risk management is integral to Bayer's Group-wide corporate governance system

// No risks that could endanger the Bayer Group's continued existence are currently identified

20.3.1 Group-wide Risk Management System

Corporate governance forms the basis for sustainable growth and economic success. One factor for corporate governance is the ability to systematically identify and take advantage of opportunities while avoiding risks to the company's success.

Corporate Governance [Graphic 3.20.3]



The entrepreneurial decisions we make daily in the course of business processes are based on balancing opportunities and risks. We therefore regard risk management as an integral part of our business management system rather than the task of a specific organizational unit. Our risk management begins with our strategy and planning processes, from which relevant external and internal opportunities and risks of an economic, ecological or social nature are derived. Opportunities and risks are identified by observing and analyzing trends along with macroeconomic, industry-specific, regional and local developments. The identified opportunities and risks are subsequently evaluated and incorporated into the subgroup-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 are in reasonable proportion to the anticipated opportunities. We regard them as a general risk of doing business. Opportunities and risks are continuously monitored using indicators so that, for example, changes in the economic or legal environment 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 integrated into our central document control process (Margo) and are accessible to all employees via the Bayer intranet. In the subgroups, service companies, subsidiaries, and in the central functions of the Bayer Group, responsible persons and coordinators for the respective systems are named at the management level. 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 Group Accounting and Controlling unit of Bayer AG.

The management of each Group company holds responsibility for implementing the ICS standards at the local level. Using the Group's own shared service centers, the Group companies prepare their financial statements locally and transmit them with the aid of a data model that is standardized throughout the Group and 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 based on 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 Group Management Board. The system also makes use of internal and external audits. An IT application in use throughout the 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 Group Management Board has confirmed the effective functioning of the internal control system for accounting and financial reporting and the relevant criteria for the 2014 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. In 2014 we began implementing an integrated compliance management system worldwide. The compliance management system enhances the systematic and preventive identification and assessment of risks. Risk identification is carried out both bottom-up via the country organizations and top-down via the global functions, taking global, local and business-specific aspects into account. In addition, compliance program audits are performed by the Corporate Audit department. 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. A central unit within the Corporate Center establishes the framework and standards for the design of the Group's risk early warning system.

The BayRisk process is organized decentrally, with each subgroup, service company and central function being responsible for identifying, evaluating, managing and reporting risks at an early stage. It not only covers risks that could immediately impact our financial targets, but also those that could affect the achievement of qualitative objectives such as our good reputation. The Life Science units provide the information required for the BayRisk process from their own enterprise risk management systems. Risk officers are appointed to evaluate, manage and monitor the identified risks according to both financial and non-financial criteria.

Risks are evaluated using estimates of the likelihood of occurrence, the potential impact and their 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 3.20.3]

	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 material risks and the respective countermeasures are documented in a Group-wide database. The risk portfolio is reviewed three times a year. Significant changes must be promptly entered in the database and reported immediately to the Group Management Board. Details of the risk portfolio are documented in a management information system accessible to the members of the Group Leadership Circle. 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 Corporate Audit, which performs an independent and objective audit function focused on verifying compliance with laws and directives. Corporate 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-based approach. Corporate Audit performs its tasks according to 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 (IAA). 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 Group Management Board 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.

20.3.2 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 non-financial objectives.

This chapter outlines both opportunities and risks. Only those risks that are classified in our risk matrix as "medium" or "high" are included. The risks are more highly aggregated here than in our internal documentation. The sequence in which the risks are listed does not imply any order of significance. The opportunities and risks described apply to all subgroups unless otherwise indicated.

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. Any violations of this voluntary commitment can result in adverse media reporting and thus lead to a negative public perception of the Bayer Group. We counter this risk through responsible corporate management that 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 increase 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 suppliers in the health care sector 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. According to our assessment the current extent of regulatory controls and market pressures on pricing will persist or increase. Changes with respect to price development and governmental price controls 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 also arise if actual market developments vary from those we predict in Chapter 20.1 "Economic Outlook." Where macroeconomic developments deviate from forecasts, this may either positively or negatively impact our sales and earnings expectations.

For MaterialScience, an economic downturn, changes in competitors' behavior or the market entry of new competitors can lead to a more intense competitive situation characterized by overcapacities and 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. HealthCare is responding to the increased demand for innovative health care products to treat age-related diseases by focusing its R&D activities on the respective therapeutic areas such as oncology and cardiology.

Shortage of arable land and increasing demand for food

The growing world population poses one of the principal challenges to the sustainable supply of food, particularly in view of the reduction in arable land caused by increasing urbanization and extreme weather events associated with climate change. Increasing 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. For example, CropScience is developing processes to better protect crops against climate and environmental stresses.

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. MaterialScience is therefore developing new materials that help to raise energy efficiency and reduce emissions. For example, polyurethane from MaterialScience is used in the construction industry for thermal insulation, giving a positive energy balance, while the subgroup's polycarbonate is used in the automotive industry to reduce vehicle weight.

To strengthen our innovation capability, we place special importance on 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 5 "Research, Development, Innovation" and Chapter 3 "Strategies of the Subgroups."

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.

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 integration itself. Due diligence includes, for example, 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, profits can be invested in continued 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.

A large proportion of our products, especially in our Life Science businesses, is 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 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 assesses 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 occurrence of traces of unwanted genetically modified organisms in agricultural products and/or food 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 at CropScience. For further information, see Chapter 10 "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 cooperates with authorities' efforts to combat product counterfeiting by adopting preventive measures and prosecuting offenders.

PROCUREMENT AND PRODUCTION

Our Supplier Code of Conduct sets forth our sustainability principles and explains what we expect from our partners along the value chain. The Code requires that our suppliers observe environmental regulations as well as occupational health and safety rules, respect human rights and therefore not employ child labor in any form. 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 adhere to our Code of Conduct (see Chapter 8 "Procurement and Production").

The Bayer Group requires significant quantities of energy and petrochemical feedstocks for its production processes. Procurement prices for energy and raw materials may fluctuate significantly. Experience has shown that higher production costs cannot always be passed on to our customers through price adjustments. This applies especially to MaterialScience.

We place great importance not only on product safety but also on protecting our employees and the environment. Risks associated with the manufacturing, filling, storage or shipping of products are mitigated through an 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. This applies particularly to the production of active ingredients and to the biotechnological products of HealthCare in view of the highly complex manufacturing processes involved. If we are unable to meet demand, sales may undergo a structural decline, particularly in our Pharmaceuticals business. 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 MaterialScience in two ways. On the one hand, the development of innovative materials for our customers (see Chapter 5 "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 countries 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.

We are planning appropriate employee recruitment and development measures based on the analysis of future requirements. We aim to convince our target groups of the advantages of working for Bayer through comprehensive human resources marketing, including employer branding campaigns. 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.

For more information, see Chapter 7 "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 expertise. We have measures in place to counter this risk, including an authorization system.

Furthermore, a Group-wide 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 numerous 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 18.3 "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 for its products, 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 16.7 "Financial Management of the Group."

See Chapter 16.7

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 central 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 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, a €3.5 billion syndicated credit facility, which is undrawn.

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 non-derivative 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 Group's Central 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 Group Management Board, the finance department and the operating units. Hedging takes place through forward exchange contracts and currency options.

Sensitivities were determined based on a hypothetical adverse scenario in which the euro depreciates by 10% against all other currencies compared with the year-end exchange rates. Under this scenario, the estimated hypothetical loss of cash flows from derivative and non-derivative financial instruments would have diminished earnings and equity (other comprehensive income) as of December 31, 2014 by €295 million (December 31, 2013: €250 million). Of this amount, €136 million is related to the U.S. dollar, €41 million to the Japanese yen and €32 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 €315 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 Group debt.

A sensitivity analysis based on our net floating-rate receivables and payables position at year end 2014, taking into account the interest rates relevant for our receivables and payables in all principal currencies, produced the following result: a hypothetical increase of 100 basis points, or 1 percentage point, in these interest rates (assuming constant currency exchange rates) as of January 1, 2014 would have raised our interest expense for the year ended December 31, 2014 by €53 million (December 31, 2013: €33 million).

Risk to pension obligations from capital market developments

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 capability, 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.

21. 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, 2014 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 publish voting rights announcements at www.bayer.com/ownership-structure

We received no notifications in 2014 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.

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 its Chairman 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 stockholders' subscription rights, the Board of Management also may only exclude stockholders' subscrip-

tion 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 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 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 2019 and can be extended by a further one-year period. 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 US$2 billion syndicated credit facility granted to Bayer subsidiary Bayer World Investments B.V., Netherlands, in 2014 and guaranteed by Bayer AG. The facility matures in May 2018.

The terms of the €4.1 billion (as of December 31, 2014) 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

For direct access to a chapter, simply click on its name.

Bayer Group Consolidated Income Statements

[Table 4.1]

	Note	2013	2014
		€ million	€ million
Net sales	[7]	**40,157**	**42,239**
Cost of goods sold		(19,516)	(20,266)
Gross profit		**20,641**	**21,973**
Selling expenses	[8]	(10,312)	(11,018)
Research and development expenses	[9]	(3,406)	(3,574)
General administration expenses		(1,712)	(1,741)
Other operating income	[10]	887	716
Other operating expenses	[11]	(1,164)	(850)
EBIT[1]		**4,934**	**5,506**
Equity-method loss	[13.1]	(16)	(13)
Financial income		389	343
Financial expenses		(1,100)	(1,311)
Financial result	[13]	**(727)**	**(981)**
Income before income taxes		**4,207**	**4,525**
Income taxes	[14]	(1,021)	(1,082)
Income after income taxes		**3,186**	**3,443**
of which attributable to non-controlling interest	[15]	(3)	17
of which attributable to Bayer AG stockholders (net income)		**3,189**	**3,426**
		€	€
Earnings per share	[16]		
Basic		3.86	4.14
Diluted		3.86	4.14

2013 figures restated
[1] EBIT: earnings before financial result and taxes

Bayer Group Consolidated Statements of Comprehensive Income

[Table 4.2]

	Note	2013	2014
		€ million	€ million
Income after income taxes		**3,186**	**3,443**
of which attributable to non-controlling interest	*[15]*	*(3)*	*17*
of which attributable to Bayer AG stockholders		*3,189*	*3,426*
Remeasurements of the net defined benefit liability for post-employment benefit plans	[25]	1,946	(5,159)
Income taxes	[14]	(604)	1,621
Other comprehensive income from remeasurements of the net defined benefit liability for post-employment benefit plans		**1,342**	**(3,538)**
Other comprehensive income that will not be reclassified subsequently to profit or loss		**1,342**	**(3,538)**
Changes in fair values of derivatives designated as cash flow hedges	[30.3]	221	(146)
Reclassified to profit or loss		(156)	(46)
Income taxes	[14]	(18)	57
Other comprehensive income from cash flow hedges		**47**	**(135)**
Changes in fair values of available-for-sale financial assets	[20]	52	–
Reclassified to profit or loss		(76)	–
Income taxes	[14]	16	(2)
Other comprehensive income from available-for-sale financial assets		**(8)**	**(2)**
Changes in exchange differences recognized on translation of operations outside the eurozone		(737)	1,384
Reclassified to profit or loss		–	–
Other comprehensive income from exchange differences		**(737)**	**1,384**
Other comprehensive income that may be reclassified subsequently to profit or loss		**(698)**	**1,247**
Effects of changes in scope of consolidation		**(1)**	**–**
Total other comprehensive income[1]		**643**	**(2,291)**
of which attributable to non-controlling interest		*(14)*	*11*
of which attributable to Bayer AG stockholders		*657*	*(2,302)*
Total comprehensive income		**3,829**	**1,152**
of which attributable to non-controlling interest		*(17)*	*28*
of which attributable to Bayer AG stockholders		*3,846*	*1,124*

[1] total changes recognized outside profit or loss

Bayer Group Consolidated Statements of Financial Position

[Table 4.3]

	Note	Dec. 31, 2013	Dec. 31, 2014
		€ million	€ million
Noncurrent assets			
Goodwill	[17]	9,862	16,168
Other intangible assets	[17]	8,914	15,653
Property, plant and equipment	[18]	10,015	11,428
Investments accounted for using the equity method	[19]	203	223
Other financial assets	[20]	1,203	1,107
Other receivables	[23]	496	447
Deferred taxes	[14]	1,596	2,981
		32,289	**48,007**
Current assets			
Inventories	[21]	7,129	8,478
Trade accounts receivable	[22]	7,569	9,097
Other financial assets	[20]	779	723
Other receivables	[23]	1,476	1,488
Claims for income tax refunds		413	588
Cash and cash equivalents		1,662	1,853
		19,028	**22,227**
Total assets		**51,317**	**70,234**
Equity	[24]		
Capital stock of Bayer AG		2,117	2,117
Capital reserves of Bayer AG		6,167	6,167
Other reserves		12,434	11,822
Equity attributable to Bayer AG stockholders		**20,718**	**20,106**
Equity attributable to non-controlling interest		86	112
		20,804	**20,218**
Noncurrent liabilities			
Provisions for pensions and other post-employment benefits	[25]	7,368	12,236
Other provisions	[26]	1,977	2,016
Financial liabilities	[27]	5,590	18,484
Other liabilities	[29]	362	1,088
Deferred taxes	[14]	1,193	689
		16,490	**34,513**
Current liabilities			
Other provisions	[26]	4,727	4,912
Financial liabilities	[27]	3,441	3,376
Trade accounts payable	[28]	4,473	5,363
Income tax liabilities	[26.1]	101	63
Other liabilities	[29]	1,281	1,789
		14,023	**15,503**
Total equity and liabilities		**51,317**	**70,234**

Bayer Group Consolidated Statements of Cash Flows

[Table 4.4]

	Note	2013	2014
		€ million	€ million
Income after income taxes		3,186	3,443
Income taxes		1,021	1,082
Financial result		727	981
Income taxes paid or accrued		(1,644)	(1,315)
Depreciation, amortization and impairments		2,896	2,936
Change in pension provisions		(249)	(337)
(Gains) losses on retirements of noncurrent assets		(105)	30
Gross cash flow		**5,832**	**6,820**
Decrease (increase) in inventories		(608)	(741)
Decrease (increase) in trade accounts receivable		(751)	(1,094)
(Decrease) increase in trade accounts payable		389	518
Changes in other working capital, other non-cash items		309	307
Net cash provided by (used in) operating activities (net cash flow)	[33]	**5,171**	**5,810**
Cash outflows for additions to property, plant, equipment and intangible assets		(2,157)	(2,371)
Cash inflows from sales of property, plant, equipment and other assets		153	143
Cash inflows from divestitures		79	304
Cash inflows from (outflows for) noncurrent financial assets		204	(10)
Cash outflows for acquisitions less acquired cash		(1,082)	(13,545)
Interest and dividends received		125	107
Cash inflows from (outflows for) current financial assets		97	(167)
Net cash provided by (used in) investing activities	[34]	**(2,581)**	**(15,539)**
Dividend payments		(1,574)	(1,739)
Issuances of debt		9,078	27,584
Retirements of debt		(9,697)	(15,746)
Interest paid including interest-rate swaps		(550)	(541)
Interest received from interest-rate swaps		212	179
Cash outflows for the purchase of additional interests in subsidiaries		(4)	(1)
Net cash provided by (used in) financing activities	[35]	**(2,535)**	**9,736**
Change in cash and cash equivalents due to business activities		**55**	**7**
Cash and cash equivalents at beginning of year		**1,698**	**1,662**
Change in cash and cash equivalents due to changes in scope of consolidation		–	–
Change in cash and cash equivalents due to exchange rate movements		(91)	184
Cash and cash equivalents at end of year		**1,662**	**1,853**

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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 incl. net income	Exchange differences		Fair-value measurement of securities	Cash flow hedges	Revaluation surplus	Equity attributable to Bayer AG stockholders	Equity attributable to non-controlling interest	Equity
	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million	€ million	€ million
Dec. 31, 2012	**2,117**	**6,167**	**11,861**	**(1,822)**		**40**	**52**	**36**	**18,451**	**100**	**18,551**
Equity transactions with owners											
Capital increase/decrease											
Dividend payments			(1,571)						(1,571)	(3)	(1,574)
Other changes			(3)					(5)	(8)	6	(2)
Other comprehensive income			1,341	(723)		(8)	47		657	(14)	643
Income after income taxes			3,189						3,189	(3)	3,186
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**

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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		MaterialScience		Reconciliation					
	Pharmaceuticals		Consumer Health			CropScience		MaterialScience		All Other Segments		Corporate Center and Consolidation		Group	
	2013	2014	2013	2014		2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Net sales (external)	11,188	12,052	7,736	7,923		8,819	9,494	11,238	11,651	1,169	1,112	7	7	40,157	42,239
Change	+3.6%	+7.7%	−0.9%	+2.4%		+5.2%	+7.7%	−2.2%	+3.7%	−7.2%	−4.9%	+133.3%	–	+1.0%	+5.2%
Currency-adjusted change	+10.1%	+11.6%	+3.7%	+6.0%		+9.9%	+11.4%	+0.2%	+4.5%	−6.6%	−4.4%	+133.3%	–	+5.4%	+8.0%
Intersegment sales	70	99	7	9		34	49	56	59	2,196	2,243	(2,363)	(2,459)	–	–
Net sales (total)	11,258	12,151	7,743	7,932		8,853	9,543	11,294	11,710	3,365	3,355	(2,356)	(2,452)	40,157	42,239
Other operating income	154	184	81	156		167	208	112	81	57	16	316	71	887	716
EBIT	2,031	2,371	1,229	1,210		1,729	1,806	435	555	(11)	(11)	(479)	(425)	4,934	5,506
EBIT before special items	2,552	2,657	1,421	1,255		1,801	1,838	429	598	49	21	(479)	(425)	5,773	5,944
EBITDA before special items	3,490	3,699	1,844	1,785		2,248	2,360	1,072	1,187	222	200	(475)	(419)	8,401	8,812
Gross cash flow	2,293	2,745	1,280	1,266		1,590	1,835	887	961	113	331	(331)	(318)	5,832	6,820
Capital invested	14,953	17,288	8,367	19,492		9,909	11,772	10,029	11,019	597	1,197	(107)	(117)	43,748	60,651
CFROI	14.2%	15.3%	14.0%	10.6%		14.2%	15.3%	5.5%	6.0%	–	–	–	–	11.1%	11.9%
Net cash flow	1,853	3,266	1,127	1,178		682	950	977	880	308	360	224	(824)	5,171	5,810
Equity-method income (loss)	–	1	–	–		–	–	(16)	(14)	–	–	–	–	(16)	(13)
Equity-method investments	–	2	–	6		–	–	203	215	–	–	–	–	203	223
Assets	16,585	19,393	8,515	20,192		10,826	12,676	8,429	9,347	1,981	2,253	4,981	6,373	51,317	70,234
Capital expenditures	564	668	209	208		532	699	605	647	239	261	6	7	2,155	2,490
Additions to noncurrent assets from acquisitions	1,121	2,661	419	10,958		97	166	–	–	–	–	–	–	1,637	13,785
Depreciation, amortization and impairments	1,093	1,075	505	530		455	552	666	594	173	179	4	6	2,896	2,936
of which impairment losses	150	39	101	69		3	100	29	11	15	6	–	–	298	225
of which impairment loss reversals	–	–	(13)	–		–	–	–	(2)	–	–	–	–	(13)	(2)
Liabilities	4,873	7,075	2,108	3,079		4,114	5,214	2,473	3,520	3,657	4,682	13,288	26,446	30,513	50,016
Research and development expenses	1,771	1,878	458	423		861	974	231	210	21	29	64	60	3,406	3,574
Number of employees (as of Dec. 31)	37,788	39,069	17,924	21,647		22,143	23,060	14,205	14,122	19,561	20,256	745	734	112,366	118,888

2013 figures restated

Key Data by Region [Table 4.7]

	Europe		North America			Asia/Pacific		Latin America/ Africa/Middle East		Reconciliation		Total	
	2013	2014	2013	2014		2013	2014	2013	2014	2013	2014	2013	2014
	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Net sales (external) – by market	15,086	15,806	9,680	10,248		8,623	9,119	6,768	7,066	–	–	40,157	42,239
Change	+2.5%	+4.8%	+1.1%	+5.9%		−1.6%	+5.8%	+1.3%	+4.4%	–	–	+1.0%	+5.2%
Currency-adjusted change	+3.1%	+5.9%	+4.2%	+7.3%		+6.9%	+8.8%	+10.2%	+12.8%	–	–	+5.4%	+8.0%
Net sales (external) – by point of origin	16,649	17,531	9,556	10,081		8,442	8,872	5,510	5,755	–	–	40,157	42,239
Change	+1.7%	+5.3%	+0.9%	+5.5%		−0.4%	+5.1%	+1.6%	+4.4%	–	–	+1.0%	+5.2%
Currency-adjusted change	+2.3%	+6.3%	+4.2%	+6.9%		+8.3%	+8.2%	+12.6%	+14.7%	–	–	+5.4%	+8.0%
Interregional sales	8,828	9,178	3,285	3,397		642	725	607	551	(13,362)	(13,851)	–	–
Other operating income	567	329	102	147		85	70	133	170	–	–	887	716
EBIT	3,965	3,571	83	829		612	592	753	939	(479)	(425)	4,934	5,506
Assets	27,359	29,378	11,178	23,856		6,694	8,540	4,490	5,479	1,596	2,981	51,317	70,234
Capital expenditures	1,136	1,289	531	641		363	403	125	157	–	–	2,155	2,490
Depreciation, amortization and impairments	1,758	1,798	672	667		373	381	89	84	4	6	2,896	2,936
Liabilities	19,756	32,120	5,444	12,298		2,937	3,436	1,183	1,473	1,193	689	30,513	50,016
Research and development expenses	2,209	2,444	968	876		178	195	51	59	–	–	3,406	3,574
Number of employees (as of Dec. 31)	53,274	55,207	15,196	16,317		27,684	30,436	16,212	16,928	–	–	112,366	118,888

2013 figures restated

2. General information

The consolidated financial statements of the Bayer Group as of December 31, 2014, 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 take place in HealthCare, CropScience and MaterialScience. 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 13, 2015. They were discussed by the Audit Committee of the Supervisory Board of Bayer AG at its meeting on February 24, 2015, and approved by the Supervisory Board at its plenary meeting on February 25, 2015.

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 2014

The first-time application of the following amended financial reporting standards had no impact, or no material impact, on the presentation of the Group financial position or results of operations, or on earnings per share.

In December 2011, the IASB issued amendments to IAS 32 (Financial Instruments: Presentation) entitled "Offsetting Financial Assets and Financial Liabilities." The amendments clarify the meaning of "right of set-off in all circumstances" and "simultaneous settlement."

In October 2012, the IASB issued amendments to IFRS 10 (Consolidated Financial Statements), IFRS 12 (Disclosure of Interests in Other Entities) and IAS 27 (Separate Financial Statements) entitled "Investment Entities." The amendments exempt investment entities from the requirement to consolidate certain subsidiaries according to IFRS 10. Instead, they must recognize them at fair value through profit or loss. IFRS 12 introduces additional disclosure requirements for investment entities.

In May 2013, the IFRS IC issued the interpretation IFRIC 21 (Levies). The interpretation covers the accounting for government-imposed levies with the exception of income taxes covered by IAS 12 (Income Taxes). It also provides guidance on when to recognize a liability for a levy. In terms of the IFRS, the interpretation is effective for annual periods beginning on or after January 1, 2014. For companies in the European Union, application of the interpretation is mandatory for annual periods beginning on or after June 17, 2014. The interpretation was early applied as of January 1, 2014.

In November 2013, the IASB published narrow-scope amendments to IAS 19 (Employee Benefits) under the title "Defined Benefit Plans: Employee Contributions." These amendments address the accounting for contributions from employees or third parties to defined benefit pension plans according to whether the contributions are linked to service. Under certain conditions, such contributions may be accounted for as a reduction in current service cost in the period in which the related service was rendered. The amendments are to be applied for annual periods beginning on or after July 1, 2014. Earlier application is permitted. The amendments were early applied.

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 2014 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. 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. The Bayer Group is currently evaluating the impact the standard will have on the presentation of its financial position and results of operations.

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. They are to be applied for annual periods beginning on or after July 1, 2014. Early application is permitted. The Bayer Group is currently evaluating the impact the changes will have on the presentation of its 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 the Group'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. Earlier application is permitted. First-time application must take place prospectively. The amendments have not yet been endorsed by the European Union. The Bayer Group is currently evaluating the impact the changes will have on the presentation of its financial position and 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 prospectively for annual periods beginning on or after January 1, 2016. Earlier application is permitted. The amendments have not yet been endorsed by the European Union. The Bayer Group is currently evaluating the impact the changes will have on the presentation of its financial position and results of operations.

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 are transferred or the services are rendered to the customer. This principle is applied in five steps. In step 1, the contract with the customer is identified. In step 2, the distinct performance obligations in the contract are identified. In step 3, the transaction price is determined. In step 4, this transaction price is allocated to the distinct performance obligations. Finally, in step 5, revenue is recognized when the identified distinct performance obligations are satisfied, either over time or at a point in time. IFRS 15 replaces IAS 11 (Construction Contracts), IAS 18 (Revenue), IFRIC 13 (Customer Loyalty Programmes), IFRIC 15 (Agreements for the Construction of Real Estate), IFRIC 18 (Transfers of Assets from Customers) and SIC-31 (Revenue-Barter Transactions Involving Advertising Services). The new standard is to be applied for annual periods beginning on or after January 1, 2017. Earlier application is permitted. First-time application must take place retrospectively (modified). The standard has not yet been endorsed by the European Union. The Bayer Group is currently evaluating the impact the standard 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. Earlier application is permitted. 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 the Group'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. Earlier application is permitted. 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 the Group'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. The amendments are to be applied for annual periods beginning on or after January 1, 2016. Earlier application is permitted. The amendments have not yet been endorsed by the European Union. The Bayer Group is currently evaluating the impact the changes will have on the presentation of its financial position and results of operations.

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) under the title "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. Earlier application is permitted. 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 the Group's financial position or results of operations.

CHANGES IN THE REPORTING OF FUNCTIONAL COSTS AND SPECIAL ITEMS

To enhance the comparability and transparency of functional cost reporting, the organizational view was replaced in 2014 by a more function-based approach. This has the effect of reducing general administration expenses while increasing selling expenses and the cost of goods sold. In addition, certain special items are reflected in the respective functional costs rather than in other operating income or expenses so that their relationship to the functional costs is immediately apparent.

The prior-year figures are restated accordingly:

Accounting Changes: Consolidated Income Statement 2013 [Table 4.8]

	2013			
		Accounting changes		
	Before accounting changes	Functional cost	Special items	After accounting changes
Cost of goods sold	(19,347)	(69)	(100)	(19,516)
Gross profit	**20,810**	**(69)**	**(100)**	**20,641**
Selling expenses	(10,080)	(159)	(73)	(10,312)
Research and development expenses	(3,190)	(4)	(212)	(3,406)
General administration expenses	(1,883)	227	(56)	(1,712)
Other operating income	897	5	(15)	887
Other operating expenses	(1,620)	–	456	(1,164)

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 change in its equity corresponding to Bayer's percentage interest in the company. Differences arising upon first-time inclusion using the equity method are accounted for according to full-consolidation principles. Bayer's share of changes in these companies' equities recognized in profit or loss – including impairment losses recognized on goodwill – are reflected in equity-method income/loss. Intercompany profits and losses for these companies were not material in either 2014 or 2013.

Companies that do not have a material impact on the Group's financial position or results of operations, either individually or in aggregate, are accounted for at cost of acquisition less any impairment losses.

FOREIGN CURRENCY TRANSLATION

The financial statements of the individual companies for inclusion in the consolidated financial statements are prepared in their respective functional currencies. A company's functional currency is that of the economic environment in which it primarily generates and expends cash. The majority of consolidated companies carry out their activities autonomously from a financial, economic and organizational point of view, and their functional currencies are therefore the respective local currencies.

In the 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 4.9]

		Closing rate		Average rate	
€1/		2013	2014	2013	2014
BRL	Brazil	3.26	3.22	2.85	3.12
CAD	Canada	1.47	1.41	1.37	1.47
CHF	Switzerland	1.23	1.20	1.23	1.21
CNY	China	8.35	7.54	8.16	8.17
GBP	United Kingdom	0.83	0.78	0.85	0.81
JPY	Japan	144.72	145.23	129.20	140.32
MXN	Mexico	18.07	17.87	16.93	17.65
RUB	Russia	45.32	72.34	42.23	50.25
USD	United States	1.38	1.21	1.33	1.33

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 non-monetary assets and liabilities for inflation are recognized in other operating income and expenses.

In 2014, as in the previous year, the rules of IAS 29 were relevant for Bayer S.A., Venezuela. The exchange rate used for translation in 2013 was the year-end rate calculated on the basis of the official exchange rate for the Venezuelan bolivar (VEF) against the U.S. dollar (CADIVI rate of VEF 6.3 to the USD), converted at the respective USD/EUR rate. Several widely differing official exchange rates against the U.S. dollar have been published for 2014. As of 2014, Bayer S.A., Venezuela, is included in the consolidated financial statements at the official exchange rate potentially applicable to future capital transfers if permission for conversion into USD is granted (SICAD 1).

Since Venezuelan exchange controls prevent direct currency conversion and it is not possible to accurately estimate foreign exchange allocations, the Bayer Group is exposed to a potential devaluation loss that may adversely impact earnings.

As of December 31, 2014, Bayer S.A., Venezuela, had trade accounts equivalent to €150 million payable to other Group companies in USD. The €59 million in exchange losses incurred in 2014 mainly resulted from the remeasurement of intra-Group liabilities due to the devaluation of the VEF against the USD.

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 2014 amounted to 3.4% of total net sales (2013: 2.8%). In addition to rebates, Group companies offer cash discounts for prompt payment in some countries. Provisions for cash discounts as of December 31, 2014 and December 31, 2013 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 2014 amounted to 0.5% of total net sales (2013: 0.3%). 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 non-refundable payments received under these agreements are recorded as other liabilities and recognized in profit or loss over the estimated performance period stipulated in the agreement.

License or 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 accounting.

To qualify as a separate unit of accounting for revenue recognition purposes, a deliverable must have value to the licensee on a stand-alone basis. If this is not the case, the agreement as a whole or a combination of individual deliverables that has value on a stand-alone basis forms a unit of accounting.

If necessary goods have yet to be delivered or necessary services provided for a unit of accounting and such delivery or provision is probable, non-refundable (royalty) payments already received are recognized through profit or loss over the periods in which these goods are delivered or these services are provided.

Other operating 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.

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 non-monetary 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 acquisition comprises the acquisition price plus ancillary and subsequent acquisition costs, less any reduction received on the acquisition price. 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 4.10]

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	4 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.

Real estate held for investment 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. Such financial assets were mainly acquired for purposes of liquidity management with the intention of reselling them within a short time. Receivables from forward commodity contracts and receivables from other derivatives that are included in other financial assets are also 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 non-derivative 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 non-derivative 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 non-derivative financial assets that are not assigned to any of the above categories. They mainly include equity instruments, such as shares, 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.

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.

Uncertainties exist with respect to the interpretation of complex tax regulations 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 MaterialScience), 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 goods or services already received but not yet invoiced.

As a global company 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.

Financial liabilities are derecognized when the contractual obligation is discharged or canceled, or has expired.

OTHER RECEIVABLES AND LIABILITIES

Accrued items and other non-financial 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.

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 and commodity prices. Derivatives are recognized at the trade date.

Contracts concluded in order to receive or deliver non-financial 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 non-material 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.

LEASING

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. Leasing 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 leasing 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 non-patented 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 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 and costs. 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 measurement of fair value less costs of disposal is based on 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 2014 and 2013 and the capital cost factors used to discount the expected cash flows are shown in the following table:

Impairment Testing Parameters [Table 4.11]

	Growth rate		After-tax cost of capital	
	2013	2014	2013	2014
	%	%	%	%
Pharmaceuticals	0.0	0.0	6.5	6.5
Consumer Care	0.0	0.0	6.5	6.5
Diabetes Care	0.0	0.0	6.5	6.5
Radiology & Interventional	0.0	0.0	6.5	6.5
Animal Health	0.0	0.0	6.5	6.5
Crop Protection	2.0	2.0	7.3	6.7
Seeds	2.8	2.8	7.3	6.7
Environmental Science	1.3	1.3	7.3	6.7
Diphenylmethane Diisocyanate (MDI)	1.0	1.5	7.4	6.0
Polyether (PET)	0.0	0.0	7.4	6.0
Polycarbonates (PCS)	1.0	1.5	7.4	6.0
Base & Modified Isocyanates (BMI)	1.5	2.0	7.4	6.0
Resins (RES)	1.5	2.0	7.4	6.0
Specialty Films (SF)	0.5	1.0	7.4	6.0

No impairment losses were recognized on goodwill on the basis of the global annual impairment testing of the cash-generating units and unit groups in 2014 or 2013. Impairment losses of €6 million were recognized on goodwill in 2014 due to divestitures (2013: €0 million). Taking into account impairment loss reversals of €2 million (2013: €13 million), net impairment losses on goodwill, other intangible assets, property, plant and equipment amounted to €223 million (2013: €285 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, 2014, the Bayer Group comprised three subgroups, with operations subdivided into strategic business entities known as divisions (HealthCare), business groups (CropScience) or business units (MaterialScience). Their activities are aggregated into four reportable segments according to economic characteristics, products, production processes, customer relationships, methods of distribution and regulatory environment.

The segments' activities are as follows:

Activities of the Segments [Table 4.12]

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	Development, production and marketing of over-the-counter medications, dermatology products, nutritional supplements, veterinary medicines and grooming products for animals; diagnostic systems such as blood glucose meters, medical products such as injection systems and contrast media for diagnostic procedures
CropScience	
CropScience	Development, production and marketing of a comprehensive product portfolio in the areas of seeds and plant traits, crop protection, and for gardens, the green industry and non-agricultural pest control
MaterialScience	
MaterialScience	Development, production and marketing of high-tech polymer materials in the areas of polyurethanes, polycarbonates, coating and adhesive raw materials and specialty chemicals; production and marketing of selected inorganic basic chemicals

Business activities that cannot be allocated to any other segment are reported under "All other segments." These include primarily the services provided by the service areas: Business Services, Technology Services and Currenta.

Holding companies' activities, the elimination of intersegment sales, and higher or lower expenses for Group-wide long-term stock-based compensation arising from fluctuations in the performance of Bayer stock are presented in our segment reporting as "Corporate Center and Consolidation."

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.
- Although EBIT before special items and EBITDA before special items are not defined in the International Financial Reporting Standards, they represent key performance indicators for the Bayer Group. The special items comprise effects that are non-recurring or do not regularly recur or attain similar magnitudes. EBITDA is the EBIT as reported in the income statement plus amortization and impairment losses on intangible assets and depreciation and impairment losses on property, plant and equipment, minus impairment loss reversals.
- The gross cash flow comprises income after 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 non-cash components of EBIT. It also contains benefit payments during the year.
- 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 fixed-term 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 4.13]

	2013	2014
	€ million	€ million
EBITDA before special items of segments	8,876	9,231
EBITDA before special items of Corporate Center	(475)	(419)
EBITDA before special items	**8,401**	**8,812**
Depreciation, amortization and impairment losses/loss reversals before special items of segments	(2,624)	(2,862)
Depreciation, amortization and impairment losses/loss reversals before special items of Corporate Center	(4)	(6)
Depreciation, amortization and impairment losses / loss reversals before special items	**(2,628)**	**(2,868)**
EBIT before special items of segments	6,252	6,369
EBIT before special items of Corporate Center	(479)	(425)
EBIT before special items	**5,773**	**5,944**
Special items of segments	(839)	(438)
Special items of Corporate Center	–	–
Special items	**(839)**	**(438)**
EBIT of segments	5,413	5,931
EBIT of Corporate Center	(479)	(425)
EBIT	**4,934**	**5,506**
Financial result	(727)	(981)
Income before income taxes	**4,207**	**4,525**

Reconciliation of Segments' Assets to Group Assets [Table 4.14]

	2013	2014
	€ million	€ million
Assets of the operating segments	**46,336**	**63,861**
Corporate Center assets	179	195
Non-allocated assets	4,802	6,178
Group assets	**51,317**	**70,234**

Reconciliation of Segments' Liabilities to Group Liabilities [Table 4.15]

	2013	2014
	€ million	€ million
Liabilities of the operating segments	**17,225**	**23,570**
Corporate Center liabilities	2,842	3,409
Non-allocated liabilities	10,446	23,037
Group liabilities	**30,513**	**50,016**

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 about Geographical Areas [Table 4.16]

	Net sales (external) – by market		Intangible assets and property, plant and equipment	
	2013	2014	2013	2014
	€ million	€ million	€ million	€ million
Germany	4,862	4,981	12,806	12,403
United States	8,351	8,908	6,836	18,307
China	3,305	3,625	2,349	3,102
Other	23,639	24,725	6,800	9,437
Total	**40,157**	**42,239**	**28,791**	**43,249**

INFORMATION ON MAJOR CUSTOMERS

Revenues from transactions with a single customer in no case exceeded 10% of Bayer Group sales in 2014 or 2013.

6. Scope of consolidation; subsidiaries and affiliates

6.1 Changes in the scope of consolidation

Changes in the scope of consolidation in 2014 were as follows:

Change in Number of Consolidated Companies [Table 4.17]

	Germany	Other countries	Total
Bayer AG and consolidated companies			
December 31, 2013	65	224	289
Changes in scope of consolidation	1	5	6
Additions	1	20	21
Retirements	–	(14)	(14)
December 31, 2014	**67**	**235**	**302**

The increase in the number of consolidated companies in 2014 was primarily due to acquisitions. Derecognitions were primarily due to mergers among Group companies.

The Bayer Group holds 100% of the voting rights in the fully consolidated subsidiary Bayer Pearl Polyurethane Systems LLC, United Arab Emirates, pursuant to a contractual agreement with the non-controlling stockholders.

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 €20 million as of December 31, 2014 (2013: €22 million).

The above table includes the joint operation Lyondell Bayer Manufacturing Maasvlakte VOF, Netherlands, as of December 31, 2014 (2013: two joint operations). Pursuant to IFRS 11, Bayer's shares of these companies' 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.

Three (2013: two) associates and three (2013: three) joint ventures are accounted for in the consolidated financial statements using the equity method. Details of these companies are given in NOTE [19].

Nanjing Baijingyu Pharmaceutical Co., Ltd., China, was newly classified as an associate in view of Bayer's representation on its executive committee and supervisory board. This enables Bayer to exert significant influence over its financial and operating policy decisions despite owning only 15% of its voting rights and capital.

A total of 78 (2013: 79) subsidiaries, including one (2013: one) structured entity and 12 (2013: 14) 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.ANNUALREPORT2014.BAYER.COM/EN/COMPANYLIST.PDFX

The following domestic subsidiaries availed themselves in 2014 of certain exemptions granted under Section 264 Paragraph 3 and Section 264b of the German Commercial Code regarding the preparation, auditing and publication of financial statements:

German Exempt Subsidiaries [Table 4.18]

Company Name	Place of Business	Bayer's interest
		%
Adverio GmbH	Schönefeld	100
AgrEvo Verwaltungsgesellschaft mbH	Frankfurt am Main	100
Alcafleu Management GmbH & Co. KG	Schönefeld	99.9
Bayer 04 Immobilien GmbH	Leverkusen	100
Bayer 04 Leverkusen Fußball GmbH	Leverkusen	100
Bayer Altersversorgung GmbH	Leverkusen	100
Bayer Animal Health GmbH	Leverkusen	100
Bayer Beteiligungsverwaltung Goslar GmbH	Leverkusen	100
Bayer Business Services GmbH	Leverkusen	100
Bayer Chemicals AG	Leverkusen	100
Bayer Consumer Care Deutschland GmbH	Berlin	100
Bayer CropScience AG	Monheim am Rhein	100
Bayer CropScience Biologics GmbH	Malchow/Poel Island	100
Bayer CropScience Deutschland GmbH	Langenfeld	100
Bayer Direct Services GmbH	Leverkusen	100
Bayer Gastronomie GmbH	Leverkusen	100
Bayer Gesellschaft für Beteiligungen mbH	Leverkusen	100
Bayer HealthCare AG	Leverkusen	100
Bayer Innovation GmbH	Leverkusen	100
Bayer Intellectual Property GmbH	Monheim am Rhein	100
Bayer MaterialScience AG	Leverkusen	100
Bayer MaterialScience Customer Services GmbH	Leverkusen	100
Bayer MaterialScience GmbH	Darmstadt	100
Bayer MaterialScience Oldenburg GmbH & Co. KG	Oldenburg	100
Bayer Real Estate GmbH	Leverkusen	100
Bayer Schering Pharma AG	Berlin	100
Bayer Technology Services GmbH	Leverkusen	100
Bayer Vital GmbH	Leverkusen	100
Bayer Weimar GmbH und Co. KG	Weimar	100
Bayer-Handelsgesellschaft mit beschränkter Haftung	Leverkusen	100
BGI Deutschland GmbH	Leverkusen	100
Chemion Logistik GmbH	Leverkusen	100
Dritte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100
Dritte K-W-A Beteiligungsgesellschaft mbH	Leverkusen	100
Epurex Films GmbH & Co. KG	Bomlitz	100
Erste Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100
Erste K-W-A Beteiligungsgesellschaft mbH	Leverkusen	100
Euroservices Bayer GmbH	Leverkusen	100
Fünfte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100
Generics Holding GmbH	Leverkusen	100
GP Grenzach Produktions GmbH	Grenzach-Wyhlen	100
Hild Samen GmbH	Marbach am Neckar	100
Intendis GmbH	Berlin	100
Intraserv GmbH & Co. KG	Schönefeld	100
Jenapharm GmbH & Co. KG	Jena	100
KOSINUS Grundstücks-Verwaltungsgesellschaft mbH & Co. Gamma OHG	Schönefeld	100
KVP Pharma+Veterinär Produkte GmbH	Kiel	100
Marotrast GmbH	Jena	100
MENADIER Heilmittel GmbH	Berlin	100
Schering-Kahlbaum Gesellschaft mit beschränkter Haftung	Berlin	100
Sechste Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100
Siebte Bayer VV GmbH	Leverkusen	100
Steigerwald Arzneimittelwerk GmbH	Darmstadt	100
TECTRION GmbH	Leverkusen	100
TravelBoard GmbH	Leverkusen	100
Vierte Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100
Zweite Bayer Real Estate VV GmbH & Co. KG	Schönefeld	100
Zweite K-W-A Beteiligungsgesellschaft mbH	Leverkusen	100

6.2 Business combinations and other acquisitions

ACQUISITIONS IN 2014

Acquisitions are accounted for by the acquisition method, the results of the acquired businesses therefore being included in the consolidated financial statements as of the respective acquisition dates. The purchase prices of acquired companies domiciled outside the eurozone were translated at the exchange rates in effect at the respective acquisition dates.

The total purchase price of the acquisitions made in 2014 was €13,741 million (2013: €1,441 million). The purchase prices of the acquired companies or businesses were settled mainly in cash. Total goodwill of €5,990 million (2013: €801 million) arose on these acquisitions. It related principally to the following transactions:

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 will help CropScience to build on the success of its soybean seed business in Latin America. The acquisition remains subject to the approval of the Argentinian antitrust authorities. 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. Sales of €6 million were recorded since the acquisition date.

In March 2014, Pharmaceuticals 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 NOK362 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 NOK362 per share.

Algeta develops 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 have collaborated since 2009 to develop and commercialize radium-223 dichloride, which was approved in the United States in May 2013 under the tradename Xofigo™. The acquisition strengthens 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 represents the value of the advantage enjoyed by the acquirer from the contractual relationship that existed prior to the acquisition compared to current market conditions for similar collaborations. The settlement amount is reflected in other operating income and at the same time increases 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 will continue to sell the seed for its own account for the 2014/15 sowing season. Bayer will take 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), MiraLAX™ (gastrointestinal) and Afrin™ (cold), and – in North America and Latin America – Dr. Scholl's™ (foot health). These products complement Bayer's existing range of non-prescription medicines.

The acquisition significantly enhances Bayer's over-the-counter (OTC) business across multiple therapeutic categories and geographies. It gives Consumer Health the global number two position in a widely diversified sector and strong global positions in the five most important OTC segments: dermatology, gastrointestinal, sinus & flu (cold, allergy, sinus, flu), dietary supplements and pain therapy.

In those countries where the consumer care business was acquired via an asset deal, Merck & Co., Inc. will continue the sales activities in its own name for a transitional period until the marketing authorizations are transferred to Bayer or Bayer can take over the business as distributor. During this period, the economic rewards and risks will already accrue to Bayer, and Bayer will receive the operating profit on the business from Merck. The transitional period has already ended for the majority of countries.

Where the business was acquired via a share deal, Bayer purchased 100% of the respective company's shares.

Bayer paid a provisional purchase price of €11,177 million, less specific amounts that are being retained pending the receipt of antitrust approvals in the Republic of Korea and the transfer of further assets. The provisional purchase price allocation mainly comprises goodwill of €5,137 million and acquired brands valued at €5,362 million. Goodwill 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 €3,761 million is tax-deductible. The acquired business recorded sales of €289 million in the Consumer Health segment and €7 million in the Pharmaceuticals segment since the acquisition date.

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) 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. It includes an amount of €15 million recognized for the fourth quarter of 2014.

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 paid, based on a purchase price adjustment mechanism. The purchase price pertained mainly to acquired trademarks and goodwill. Sales of €3 million were recorded since the acquisition date.

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. 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 pertained mainly to intangible assets for product-related technologies and goodwill.

The purchase price allocations for Biagro Group, the consumer care business of Merck & Co., Inc., Dihon Pharmaceutical Group Co. Ltd. and the land management assets of E. I. DuPont de Nemours and Company 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 acquired businesses named above contributed €305 million to Bayer Group sales in 2014. Of this amount, €296 million pertained to the consumer care business acquired from Merck & Co., Inc. and €3 million to Dihon. Their combined EBIT for 2014 amounted to minus €132 million, with the consumer care business acquired from Merck & Co., Inc. accounting for minus €57 million, Algeta for minus €52 million and Dihon for minus €22 million. Their total income after taxes since the respective dates of their first-time consolidation was minus €194 million, of which the consumer care business acquired from Merck & Co., Inc. accounted for minus €108 million, Algeta for minus €64 million and Dihon for minus €20 million. This includes the financing costs incurred since the respective acquisition dates.

If the above acquisitions had already been made as of January 1, 2014, the Bayer Group would have had total sales of €43,639 million in 2014, with €1,525 million pertaining to the consumer care business acquired from Merck & Co., Inc. and €112 million to Dihon. Group income after taxes would have amounted to €3,292 million, with the consumer care business acquired from Merck & Co., Inc. accounting for minus €214 million, Algeta for minus €86 million and Dihon for minus €46 million. This takes into account the effects of the hypothetical financing costs for the full year. The acquisition of the above-named businesses as of January 1, 2014, would have diminished earnings per share by €0.18.

The effects of these and other, smaller transactions made in 2014 – and of purchase price adjustments made in 2014 relating to previous years'/quarters' 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 4.19]

	2013	Of which Conceptus	2014	Of which Merck CC	Of which Algeta	Of which Dihon
	€ million	€ million	€ million	€ million	€ million	€ million
Goodwill	801	475	5,990	5,137	679	96
Patents and technologies	400	338	1,762	–	1,758	–
Trademarks	281	45	5,672	5,362	–	295
Production rights	–	–	71	–	–	–
R&D projects	64	28	16	–	2	–
Other rights	35	15	30	–	21	6
Property, plant and equipment	55	14	235	146	23	66
Other noncurrent assets	1	1	9	–	–	9
Deferred tax assets	101	78	443	401	39	3
Inventories	59	24	331	295	15	18
Receivables	38	26	222	106	39	70
Other current assets	7	7	–	–	–	–
Cash and cash equivalents	74	58	105	3	90	12
Provisions for pensions and other post-employment benefits	(9)	–	–	–	–	–
Other provisions	(16)	(10)	(105)	(101)	–	(3)
Financial liabilities	(85)	(83)	(213)	(20)	(128)	(65)
Other liabilities	(93)	(76)	(292)	(150)	(79)	(60)
Deferred tax liabilities	(273)	(160)	(535)	(2)	(485)	(46)
Net assets	**1,440**	**780**	**13,741**	**11,177**	**1,974**	**401**
Changes in non-controlling interest	1	–	–	–	–	–
Purchase price	**1,441**	**780**	**13,741**	**11,177**	**1,974**	**401**
Acquired cash and cash equivalents	(74)	(58)	(105)	(3)	(90)	(12)
Settlement gain from pre-existing relationship	–	–	(35)	–	(35)	–
Liabilities for future payments	(295)	–	(92)	(65)	–	–
Payments for previous years'/quarters' acquisitions	14	–	4	–	–	–
Purchase price adjustment	–	–	33	–	–	33
Net cash outflow for acquisitions	**1,086**	**722**	**13,546**	**11,109**	**1,849**	**422**

ACQUISITIONS IN 2013

In 2013, the following acquisitions were accounted for in accordance with IFRS 3:

On January 2, 2013, Consumer Health wholly acquired the U.S. company Teva Animal Health Inc., St. Joseph, Missouri. The acquisition broadens Consumer Health's range of anti-infective solutions for livestock and expands the existing product offering to include reproductive hormones. The transaction also adds dermatological products for companion animals, pet wellness products and nutraceuticals to the company's portfolio. The parties agreed on a one-time payment of €38 million plus potential milestone payments, for which an amount of €45 million was included in the purchase price allocation. The milestone payments are mainly dependent on the achievement of various sales targets. The purchase price pertained mainly to product trademarks.

On January 18, 2013, CropScience acquired all the shares of PROPHYTA Biologischer Pflanzenschutz GmbH, a leading supplier of biological crop protection products headquartered in Malchow in the German state of Mecklenburg-Western Pomerania. In addition to research and development facilities, the acquisition also includes state-of-the-art production and formulation facilities in the city of Wismar. A purchase price of €25 million was agreed, pertaining mainly to technologies, research and development projects and goodwill. In addition, two related distribution rights were acquired for €5 million.

On March 15, 2013, CropScience wholly acquired soybean seed producer Wehrtec Tecnologia Agricola Ltda. and the soybean business of Agricola Wehrmann Ltda. Both companies are headquartered in Cristalina in the Brazilian state of Goiás. This transaction strengthens the soybean research and development activities of CropScience and contributes to the development of varieties tailored to the requirements of Brazilian soybean growers. A purchase price of €34 million was agreed along with potential milestone payments of up to €11 million. The purchase price pertained mainly to marketable crop plants, breeding material and goodwill.

In June 2013, Pharmaceuticals successfully completed the tender offer for the shares of Conceptus, Inc., currently headquartered in Milpitas, California, United States, and acquired 100% of the outstanding shares. Conceptus, Inc. has developed Essure™, the only non-surgical permanent birth control method, which it markets in the U.S. and other countries. This acquisition enables Bayer to offer an even broader range of short-term, long-term and permanent contraceptive choices for women. A purchase price of €780 million was paid, pertaining mainly to technology and trademark rights. The goodwill remaining after the purchase price allocation is attributable to various factors, including significant cost savings in the marketing and sales functions along with general administration and infrastructure synergies.

In April 2013, the District Court of Berlin reached a decision in the court proceeding initiated by former minority stockholders of Bayer Pharma AG (formerly Bayer Schering Pharma AG) to review the adequacy of compensation payments made by Bayer in connection with the domination and profit and loss transfer agreement of 2006. The court decided that the compensation by Bayer at the time should be increased by about 40%. Bayer disagrees with this decision and has appealed. The potential supplementary payment represents a subsequent purchase price adjustment according to the March 31, 2004 version of IFRS 3 applicable at the acquisition date. Additional goodwill of €261 million, excluding interest, has been capitalized for this proceeding and for the parallel proceeding relating to the squeeze-out of the former minority stockholders.

On July 1, 2013, Consumer Health acquired all the shares of Steigerwald Arzneimittelwerk GmbH, Darmstadt, Germany. Steigerwald holds a strong position in the German phytopharmaceuticals market, which is focused on pharmacy-only herbal medicines. Its product portfolio includes Iberogast™ for the treatment of functional gastrointestinal disorders and Laif™ for the treatment of mild to moderate depression. A purchase price of €218 million was agreed, pertaining mainly to product trademarks, technologies and goodwill.

On December 2, 2013, CropScience acquired FN Semillas S.A. and its parent company Holding Manager S.A., both headquartered in Buenos Aires, Argentina. FN Semillas specializes in the breeding, production and marketing of improved soybean seeds in Argentina. A purchase price of €25 million was agreed, pertaining mainly to commercial cultivars, germplasm and goodwill.

6.3 Divestitures

DIVESTITURES IN 2014

The effects of divestitures made in 2014 and previous years on the consolidated financial statements for 2014 are detailed below.

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 and deferred income of €2 million were recognized.

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.

The effects of these and other, smaller divestitures made in 2014 were as follows:

Divested Assets and Liabilities [Table 4.20]

	2013	2014
	€ million	€ million
Goodwill	–	286
Patents and technologies	–	62
Other intangible assets	–	17
Property, plant and equipment	13	18
Other noncurrent assets	–	2
Inventories	–	10
Other current assets	4	–
Other provisions	(2)	–
Other liabilities	(3)	–
Divested net assets	**12**	**395**
Net cash inflow from divestitures	79	304
Changes in future cash payments receivable	(25)	–
Deferred income	–	2
Net gain/(loss) from divestitures (before taxes)	**42**	**(93)**

Of these divested assets and liabilities, €354 million were reported in previous quarters as held for sale.

In December 2014, Consumer Health signed an agreement to sell two equine products, Legend/Hyonate and Marquis, to Merial, Inc. A sale price of US$135 million was agreed. The transaction is subject to various conditions, including antitrust approvals, and is expected to close in the first quarter of 2015.

DIVESTITURES IN 2013

On June 1, 2013, MaterialScience sold its global powder polyester resins business and its U.S.-based liquid polyester resins merchant business to Stepan Company of Northfield, Illinois, United States. A purchase price of €45 million was agreed. The divestment gain of €42 million was reported under special items.

The Bayer Group received further revenue-based payments of €25 million in 2013 in connection with the transfer of the hematological oncology portfolio to Genzyme Corp., United States, effected in May 2009.

Notes to the Income Statements

7. Net sales

Net sales are derived primarily from product deliveries. Total reported net sales rose compared to 2013 by €2,082 million, or 5.2%, year on year to €42,239 million. The increase resulted from the following factors:

Factors in Sales Development [Table 4.21]

	2014	
	€ million	%
Volume	2,730	+6.8
Price	174	+0.4
Currency	(1,136)	−2.8
Portfolio	314	+0.8
Total	**2,082**	**+5.2**

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 4.22]

	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million
Internal and external sales force	4,547	4,611
Advertising and customer advice	2,393	2,565
Physical distribution and warehousing of finished products	1,071	1,157
Commission and licensing expenses	877	1,084
Other selling expenses	1,424	1,601
Total	**10,312**	**11,018**

2013 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 4.23]

	2013	2014
	€ million	€ million
Gains on retirements of noncurrent assets	134	133
Reversal of impairment losses on receivables	42	24
Reversals of unutilized provisions	29	44
Gains from derivatives	365	149
Miscellaneous operating income	317	366
Total	**887**	**716**
of which special items	49	118

2013 figures restated

Gains from the sale 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 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 are €64 million in payments received from insurers.

In 2013, gains from the sale of noncurrent assets included a €42 million gain in the MaterialScience segment from the sale of the global powder polyester resins business and the U.S.-based liquid polyester resins merchant business to Stepan Company of Northfield, Illinois, United States. A gain of €22 million was also incurred from the sale of transfer rights at Bayer 04 Leverkusen Fußball GmbH. A gain of €11 million was recorded in the CropScience segment from the sale of the Bayer House administration building in Powdai, India. In the Consumer Health segment, a gain of €11 million was received from the sale of the French insect repellent Cinq sur Cinq.

The miscellaneous operating income in 2013 contained a €17 million gain in the MaterialScience segment from the sale of the Desmolux product line for UV-curing coating systems to Allnex S.à r.l., Luxembourg, and Allnex Belgium SA, Belgium, and a €16 million gain in the Pharmaceuticals segment from the sale of the antibiotic Binotal to Paladin Labs Inc., Canada. The Consumer Health segment recorded a €13 million gain from the reversal of an impairment loss previously recognized on a patent.

11. Other operating expenses

Other operating expenses were comprised as follows:

Other Operating Expenses [Table 4.24]

	2013	2014
	€ million	€ million
Losses on retirements of noncurrent assets	(28)	(198)
Impairment losses on receivables	(82)	(87)
Expenses related to significant legal risks	(334)	(168)
Losses from derivatives	(253)	(74)
Miscellaneous operating expenses	(467)	(323)
Total	**(1,164)**	**(850)**
of which special items	(431)	(356)

2013 figures restated

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 €168 million in expenses related to significant legal risks mainly included accounting measures for anticipated litigation defense costs. The €334 million in expenses reported under this item in 2013 mainly pertained to the Yasmin™/ YAZ™, Cipro™ and Mirena™ litigations.

The miscellaneous operating expenses included €10 million in restructuring charges, which were incurred entirely by MaterialScience (2013: €111 million in total, of which Pharmaceuticals accounted for €31 million, Consumer Health for €35 million, CropScience for €29 million, MaterialScience for €2 million and the service areas for €14 million). Pharmaceuticals and Consumer Health also incurred expenses of €12 million and €71 million, respectively (2013: €52 million in total, of which €46 million in Pharmaceuticals and €6 million in Consumer Health) for the integration of acquired businesses.

As in the previous year, the remaining amount of miscellaneous operating expenses comprised a large number of individually immaterial items at the subsidiaries.

12. Personnel expenses and employee numbers

Personnel expenses rose in 2014 by €415 million to €9,845 million (2013: €9,430 million), with higher variable compensation and regular salary adjustments accounting for most of this increase.

Personnel Expenses [Table 4.25]

	2013	2014
	€ million	€ million
Salaries	7,585	7,998
Social expenses and expenses for pensions and other benefits	1,845	1,847
of which for defined contribution pension plans	487	491
of which for defined benefit and other pension plans	410	351
Total	**9,430**	**9,845**

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 4.26]

	2013	2014
Production	46,117	46,614
Marketing and distribution	43,748	45,889
Research and development	13,286	13,967
General administration	9,174	9,167
Total	**112,325**	**115,637**
Apprentices	2,277	2,349

2013 figures restated

The number of employees on either permanent or fixed-term 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. The increase is mainly due to the acquisition of the consumer care business of Merck & Co., Inc., Whitehouse Station, New Jersey, United States, and the acquisition of Dihon Pharmaceutical Group Co. Ltd., Kunming, Yunnan, China.

13. Financial result

The financial result for 2014 was minus €981 million (2013: minus €727 million), comprising an equity-method loss of €13 million (2013: €16 million), financial expenses of €1,311 million (2013: €1,100 million) and financial income of €343 million (2013: €389 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 4.27]

	2013	2014
	€ million	€ million
Net loss from investments accounted for using the equity method (equity-method loss)	(16)	(13)
Expenses		
Impairment losses on investments in affiliated companies	(2)	–
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
Gains from the sale of investments in affiliated companies	77	–
Total	**59**	**(10)**

The main components of the income from investments in affiliated companies were the €18 million (2013: €20 million) equity-method loss from the associate PO JV, LP, United States and the €5 million (2013: €4 million) aggregate of the equity-method gains and losses of the remaining joint ventures and associates accounted for using the equity method.

Further details of the companies accounted for using the equity method are given in NOTE [19].

13.2 Net interest expense

The net interest expense was comprised as follows:

Net Interest Expense [Table 4.28]

	2013	2014
	€ million	€ million
Expenses		
Interest and similar expenses	(602)	(618)
Interest expenses for derivatives (held for trading)	(54)	(75)
Income		
Interest and similar income	257	283
Interest income from derivatives (held for trading)	44	54
Total	**(355)**	**(356)**

Interest and similar expenses included interest expense of €55 million (2013: €43 million) relating to non-financial liabilities. Interest and similar income included interest income of €48 million (2013: €26 million) from non-financial assets.

At the end of April 2013, the District Court of Berlin reached a decision in the court proceeding initiated by former minority stockholders of Bayer Pharma AG (formerly Bayer Schering Pharma AG) to review the adequacy of compensation payments made by Bayer in connection with the domination and profit and loss transfer agreement of 2006. The court decided that the compensation paid by Bayer at the time should be increased by about 40%. Bayer disagrees with this decision and has appealed. Interest expense of €10 million was recognized in 2014 (2013: €63 million) in connection with a potential additional payment.

The change in the liability for redeemable non-controlling interests is reflected in interest income or expense. In 2014 a €46 million decrease (2013: €31 million increase) in this liability was recognized as interest income (2013: interest expense).

13.3 Other financial income and expenses

Other financial income and expenses were comprised as follows:

Other Financial Income and Expenses [Table 4.29]

	2013	2014
	€ million	€ million
Expenses		
Interest portion of interest-bearing provisions	(297)	(322)
Exchange loss	(120)	(248)
Miscellaneous financial expenses	(25)	(48)
Income		
Miscellaneous financial income	11	3
Total	**(431)**	**(615)**

The interest portion of noncurrent provisions comprised €275 million (2013: €302 million) in interest expense for pension and other post-employment benefit provisions plus €47 million (2013: minus €5 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 €828 million (2013: €763 million) for the unwinding of discount on the present value of the defined benefit obligation and €553 million (2013: €461 million) in interest income from plan assets.

The higher exchange loss was partly due to the devaluation of the Venezuelan bolivar.

14. Taxes

The breakdown of tax expenses by origin was as follows:

Tax Expense by Origin [Table 4.30]

	2013		2014	
		Of which income taxes		Of which income taxes
	€ million	€ million	€ million	€ million
Taxes paid or accrued				
Income taxes				
Germany	(795)		(566)	
Other countries	(849)		(749)	
Other taxes				
Germany	(43)		(48)	
Other countries	(188)		(189)	
	(1,875)	**(1,644)**	**(1,552)**	**(1,315)**
Deferred taxes				
from temporary differences	569		163	
from tax loss carryforwards and tax credits	54		70	
	623	**623**	**233**	**233**
Total	**(1,252)**	**(1,021)**	**(1,319)**	**(1,082)**

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 4.31]

	Dec. 31, 2013		Dec. 31, 2014	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
	€ million	€ million	€ million	€ million
Intangible assets	328	2,217	765	2,520
Property, plant and equipment	86	639	86	672
Financial assets	181	185	57	207
Inventories	628	37	652	50
Receivables	207	538	286	627
Other assets	19	13	24	13
Provisions for pensions and other post-employment benefits	2,044	1,075	3,508	1,037
Other provisions	933	288	976	129
Liabilities	587	57	674	71
Tax loss carryforwards	313	–	446	–
Tax credits	126	–	144	–
	5,452	**5,049**	**7,618**	**5,326**
of which noncurrent	4,142	4,692	6,361	4,912
Set-off	(3,856)	(3,856)	(4,637)	(4,637)
Total	**1,596**	**1,193**	**2,981**	**689**

Deferred taxes on remeasurements, recognized outside profit or loss, of the net liability for defined benefit pension and other post-employment benefits increased equity by €1,621 million (2013: diminished equity by €604 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 increased equity by €55 million (2013: diminished equity by €2 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 2014 by €24 million (2013: €62 million). The use of tax credits reduced income taxes paid or accrued by €10 million (2013: €18 million).

Of the total tax loss carryforwards of €4,535 million in 2014 (2013: 3,071 million), an amount of €1,737 million (2013: €2,127 million) is expected to be usable within a reasonable period. The increase in loss carryforwards was mainly due to losses that newly arose in 2014 and tax reassessments for prior years. Deferred tax assets of €446 million (2013: €313 million) were recognized for the amount of loss carryforwards expected to be usable. The deferred tax assets included an amount of €39 million (2013: €98 million) that resulted from purchase price allocations and was recognized outside profit or loss.

The use of €2,798 million (2013: €944 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 €138 million (2013: €117 million) would have been recognized.

Tax credits of €144 million were recognized in 2014 (2013: €126 million) as deferred tax assets, including €0 million (2013: €2 million) outside profit or loss. The use of €45 million (2013: €29 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 4.32]

	Tax credits		Tax loss carryforwards	
	Dec. 31, 2013	Dec. 31, 2014	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million	€ million	€ million
Within one year	–	4	43	14
Within two years	3	–	–	9
Within three years	–	3	3	3
Within four years	2	–	7	24
Within five years	1	23	24	82
Thereafter	23	15	867	2,666
Total	**29**	**45**	**944**	**2,798**

In 2014, subsidiaries that reported losses for 2014 or 2013 recognized net deferred tax assets totaling €1,296 million (2013: €757 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 €6 million were recognized in 2014 (2013: €10 million) for planned dividend payments by subsidiaries. Deferred tax liabilities of €48 million were recognized in 2014 (2013: €0 million) for the planned sale of shares in subsidiaries upon the separation of the MaterialScience business. Deferred tax liabilities were not recognized for temporary differences on €8,648 million (2013: €10,583 million) of retained earnings of subsidiaries because the Bayer Group is able to control the timing of the difference reversal and the temporary differences will not reverse in the foreseeable future.

The reported tax expense of €1,082 million for 2014 (2013: €1,021 million) differed by €58 million (2013: €32 million) from the expected tax expense of €1,140 million (2013: €1,053 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 25.2% in 2014 (2013: 25.0%). The effective tax rate was 23.9% (2013: 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 4.33]

	2013		2014	
	€ million	%	€ million	%
Expected income tax expense and expected tax rate	**1,053**	**25.0**	**1,140**	**25.2**
Reduction in taxes due to tax-free income				
Income related to the operating business	(123)	(2.9)	(92)	(2.0)
Income from affiliated companies and divestiture proceeds	(39)	(0.9)	(2)	–
First-time recognition of previously unrecognized deferred tax assets on tax loss carryforwards	(6)	(0.1)	(15)	(0.3)
Use of tax loss carryforwards on which deferred tax assets were not previously recognized	–	–	(1)	–
Increase in taxes due to non-tax-deductible expenses				
Expenses related to the operating business	173	4.1	149	3.3
Impairment losses on investments in affiliated companies	1	–	2	–
New tax loss carryforwards unlikely to be usable	10	0.2	57	1.3
Existing tax loss carryforwards on which deferred tax assets were previously recognized but which are unlikely to be usable	1	–	7	0.2
Tax income (–) and expenses (+) relating to other periods	42	1.0	(119)	(2.6)
Tax effects of changes in tax rates	(55)	(1.3)	(10)	(0.2)
Other tax effects	(36)	(0.8)	(34)	(1.0)
Actual income tax expense and effective tax rate	**1,021**	**24.3**	**1,082**	**23.9**

15. Income/losses attributable to non-controlling interest

Income attributable to non-controlling interest amounted to €19 million (2013: €1 million). Losses attributable to non-controlling interest amounted to €2 million (2013: €4 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 4.34]

	2013	2014
	€ million	€ million
Income after income taxes	3,186	3,443
of which attributable to non-controlling interest	(3)	17
of which attributable to Bayer AG stockholders (net income)	3,189	3,426
	Shares	Shares
Weighted average number of issued ordinary shares	826,947,808	826,947,808
	€	€
Basic earnings per share	3.86	4.14
Diluted earnings per share	3.86	4.14

Notes to the Statements of Financial Position

17. Goodwill and other intangible assets

Changes in intangible assets in 2014 were as follows:

Changes in Intangible Assets [Table 4.35]

	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, 2013	**9,862**	**11,021**	**4,282**	**1,598**	**2,062**	**775**	**2,994**	**32,594**
Changes in scope of consolidation	–	–	–	–	–	–	2	2
Acquisitions	5,990	1,762	5,672	–	71	16	30	13,541
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
Remeasurement (IFRS 3)	–	–	–	–	–	–	–	–
Exchange differences	602	155	318	89	7	54	223	1,448
December 31, 2014	**16,168**	**12,827**	**10,242**	**1,808**	**2,168**	**882**	**3,189**	**47,284**
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	**16,168**	**5,399**	**7,654**	**769**	**257**	**729**	**845**	**31,821**
Carrying amounts, December 31, 2013	**9,862**	**4,368**	**2,020**	**764**	**289**	**644**	**829**	**18,776**

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 €127 million, net of a €2 million impairment loss reversal, were recognized on intangible assets. In the Pharmaceuticals reporting segment, a €29 million impairment loss was recognized on marketing and distribution rights in a segment of cardiovascular risk management due to a heightened competitive environment. In the Consumer Health reporting segment, a €22 million impairment loss was recognized on trademarks at Animal Health in light of strong generic competition.

Impairment losses were recognized on further intangible assets in the Consumer Health segment (€40 million), the CropScience segment (€24 million), the MaterialScience segment (€5 million), the Pharmaceuticals segment (€4 million) and Other Segments (€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 2013 were as follows:

Changes in Intangible Assets (Previous Year) [Table 4.36]

	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, 2012	**9,293**	**10,743**	**4,048**	**1,440**	**2,079**	**899**	**2,968**	**31,470**
Changes in scope of consolidation	–	–	–	1	–	–	3	4
Acquisitions	801	400	281	–	–	64	35	1,581
Capital expenditures	–	35	–	117	–	69	162	383
Retirements	–	(185)	(4)	(44)	(13)	(55)	(32)	(333)
Transfers	–	87	–	126	–	(180)	(33)	–
Transfers (IFRS 5)	–	–	–	–	–	–	–	–
Inflation adjustment (IAS 29)	6	–	–	–	–	–	–	6
Remeasurement (IFRS 3)	–	–	–	–	–	–	–	–
Exchange differences	(238)	(59)	(43)	(42)	(4)	(22)	(109)	(517)
December 31, 2013	**9,862**	**11,021**	**4,282**	**1,598**	**2,062**	**775**	**2,994**	**32,594**
Accumulated amortization and impairment losses, December 31, 2012	**–**	**6,082**	**2,107**	**760**	**1,661**	**6**	**2,097**	**12,713**
Changes in scope of consolidation	–	–	–	–	–	–	2	2
Retirements	–	(158)	(2)	(44)	(13)	(55)	(32)	(304)
Amortization and impairment losses in 2013	–	766	180	135	128	186	177	1,572
Amortization	–	737	176	131	114	–	164	1,322
Impairment losses	–	29	4	4	14	186	13	250
Impairment loss reversals	–	(13)	–	–	–	–	–	(13)
Transfers	–	–	–	–	–	–	–	–
Transfers (IFRS 5)	–	–	–	–	–	–	–	–
Exchange differences	–	(24)	(23)	(17)	(3)	(6)	(79)	(152)
December 31, 2013	**–**	**6,653**	**2,262**	**834**	**1,773**	**131**	**2,165**	**13,818**
Carrying amounts, December 31, 2013	**9,862**	**4,368**	**2,020**	**764**	**289**	**644**	**829**	**18,776**
Carrying amounts, December 31, 2012	**9,293**	**4,661**	**1,941**	**680**	**418**	**893**	**871**	**18,757**

Changes in the carrying amounts of goodwill for the reporting segments in 2014 and 2013 were as follows:

Goodwill by Reporting Segment [Table 4.37]

	Pharma-ceuticals	Consumer Health	HealthCare	CropScience	Material-Science	Bayer Group
	€ million	€ million	€ million	€ million	€ million	€ million
Carrying amounts, January 1, 2013	**4,648**	**2,420**	**7,068**	**1,983**	**242**	**9,293**
Change in scope of consolidation	–	–	–	–	–	–
Acquisitions	680	95	775	26	–	801
Retirements	–	–	–	–	–	–
Impairment losses in 2013	–	–	–	–	–	–
Transfers	–	–	–	–	–	–
Transfers (IFRS 5)	–	–	–	–	–	–
Inflation adjustment (IAS 29)	–	6	6	–	–	6
Remeasurement (IFRS 3)	–	–	–	–	–	–
Exchange differences	(90)	(86)	(176)	(58)	(4)	(238)
Carrying amounts, December 31, 2013	**5,238**	**2,435**	**7,673**	**1,951**	**238**	**9,862**
Change in scope of consolidation	–	–	–	–	–	–
Acquisitions	767	5,154	5,921	69	–	5,990
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
Remeasurement (IFRS 3)	–	–	–	–	–	–
Exchange differences	185	289	474	117	11	602
Carrying amounts, December 31, 2014	**6,017**	**7,771**	**13,788**	**2,137**	**243**	**16,168**

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 Indefinite Useful Life [Table 4.38]

Reporting segment	Cash-generating unit / Group of cash-generating units	Goodwill	Important intangible assets with indefinite useful life
		€ million	€ million
Pharmaceuticals	Pharmaceuticals	6,017	459
Consumer Health	Consumer Care	6,467	23
CropScience	Crop Protection	1,259	88
CropScience	Seeds	427	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 €729 million as of the end of 2014 (2013: €644 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™/Eylia™, Kogenate™, Levitra™, Magnevist™, Mirena™, Nexavar™, Stivarga™, Xarelto™, Xofigo™, YAZ™, Yasmin™ and Yasminelle™:

Expiration Dates of Most Important Patents [Table 4.39]

	Market								
	Germany	France	U.K.	Italy	Spain	Japan	China	U.S.A.	Canada
Products									
Adempas™									
Active ingredient	2023[a]	2023[a]	2023[a]	2023[a]	2023[a]	2023[a]	2023	2023[a]	2023
Avalox™/Avelox™									
Active ingredient	2014	2014	2014	2014	2014	2014	2013	2014	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™/Eylia™									
Active ingredient	2020[a]	2025	2020[a]	2025	2025	2020[a/f]	2020	–	2020
Kogenate™									
Active ingredient	–	–	–	–	–	–	–	2014	2021
Formulation	2017	2017	2017	2017	2017	2020[c]	2017	2016[c]	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	2020[h]	2020	2020/2027[g]	2020
Stivarga™									
Active ingredient	2024[a]	2028[i]	2024[a]	2028[i]	2028[i]	2024[j]	2024	2029[c/e]	2024
Xarelto™									
Active ingredient	2023	2023	2023	2023	2023	2024	2020	2021[a]	2020
Xofigo™									
Use	2019[a]	2019[a]	2019[a]	2019[a]	2019[a]	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
Dosage regimen	–	–	–	–	–	2014[b]	–	–	2014
Production process	2025	2025	2025	2025	2025	2026	2026	2025	2026
Yasmin™									
Formulation	–	–	–	–	–	2020	2020	–	2020
Production process	2025	2025	2025	2025	2025	2026	2026	2025	2026
Yasminelle™									
Formulation	–	–	–	–	–	2020	2020	–	2020
Production process	2025	2025	2025	2025	2025	2026	2026	2025	2026

a current expiration date; extension applied for
b patent pending.
c patent expiry date updated
d opposition to EP patent pending
e patent term adjustment under calculation
f indication-specific term extensions until 2021 for AMD and until 2022 for CRVO
g compound patent expires 2020, polymorph patent expires 2027
h patent term extension granted for kidney cancer until 2021 and liver cancer until 2022; patent term extension for thyroid cancer applied for
i patent term extension granted
j patent term extension granted for colon cancer until 2026; patent term extension for GIST applied for
k notice of allowance received

18. Property, plant and equipment

Changes in property, plant and equipment in 2014 were as follows:

Changes in Property, Plant and Equipment [Table 4.40]

	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
Remeasurement (IFRS 3)	–	–	–	–	–
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**

Impairment losses totaling €96 million were recognized on property, plant and equipment in the CropScience segment (€76 million), the Consumer Health segment (€7 million), the Pharmaceuticals segment (€6 million), the MaterialScience segment (€4 million) and Other Segments (€3 million).

In 2014, borrowing costs of €32 million (2013: €34 million) were capitalized as components of the cost of acquisition or construction of qualifying assets, applying an average interest rate of 3.1% (2013: 3.8%).

Capitalized property, plant and equipment included assets with a total net value of €504 million (2013: €439 million) held under finance leases. The cost of acquisition or construction of these assets as of the closing date totaled €827 million (2013: €695 million). They comprised plant installations and machinery with a carrying amount of €233 million (2013: €201 million), buildings with a carrying amount of €132 million (2013: €126 million) and other property, plant and equipment with a carrying amount of €139 million (2013: €112 million). For information on the liabilities arising from finance leases, see NOTE [27].

In 2014, rental payments of €219 million (2013: €215 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 2015 from operating leases – as defined in IAS 17 (Leases) – pertaining to property, plant and equipment. Lease payments totaling €7 million are expected to be received in 2016–2019 and lease payments totaling €2 million after 2019.

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, 2014, was €175 million (December 31, 2013: €173 million). The fair value of this property was €501 million (2013: €540 million). The rental income from investment property was €14 million (2013: €20 million), and the operating expenses directly allocable to this property amounted to €9 million (2013: €12 million). A further amount of €2 million (2013: €4 million) in operating expenses was directly allocable to investment property from which no rental income was derived.

Changes in property, plant and equipment in 2013 were as follows:

Changes in Property, Plant and Equipment (Previous Year) [Table 4.41]

	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, 2012	**8,273**	**16,555**	**1,854**	**1,343**	**28,025**
Changes in scope of consolidation	10	11	5	–	26
Acquisitions	21	15	3	16	55
Capital expenditures	196	406	190	980	1,772
Retirements	(119)	(387)	(162)	(8)	(676)
Transfers	217	360	32	(609)	–
Transfers (IFRS 5)	–	–	–	–	–
Inflation adjustment (IAS 29)	5	2	–	1	8
Remeasurement (IFRS 3)	–	–	–	–	–
Exchange differences	(228)	(406)	(69)	(52)	(755)
December 31, 2013	**8,375**	**16,556**	**1,853**	**1,671**	**28,455**
Accumulated depreciation and impairment losses, December 31, 2012	**4,539**	**12,214**	**1,370**	**4**	**18,127**
Changes in scope of consolidation	12	8	3	–	23
Retirements	(82)	(363)	(144)	(7)	(596)
Depreciation and impairment losses in 2013	276	844	208	9	1,337
Depreciation	264	826	199	–	1,289
Impairment losses	12	18	9	9	48
Impairment loss reversals	–	–	–	–	–
Transfers	2	(1)	(1)	–	–
Transfers (IFRS 5)	–	–	–	–	–
Exchange differences	(117)	(288)	(46)	–	(451)
December 31, 2013	**4,630**	**12,414**	**1,390**	**6**	**18,440**
Carrying amounts, December 31, 2013	**3,745**	**4,142**	**463**	**1,665**	**10,015**
Carrying amounts, December 31, 2012	**3,734**	**4,341**	**484**	**1,339**	**9,898**

19. Investments accounted for using the equity method

Three (2013: two) associates and three (2013: three) joint ventures were accounted for using the equity method.

Associates and Joint Ventures Accounted for Using the Equity Method [Table 4.42]

Company Name	Place of Business	Bayer's interest
		%
Associates		
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 IMSA, S.A. de C.V.	Nuevo Leon, Mexico	50
Bayer Zydus Pharma Private Limited	Mumbai, India	50
DIC Bayer Polymer Ltd.	Tokyo, Japan	50

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 Bayer holds a 39.4% interest). Bayer 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 associate 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 4.43]

	2013	2014
	€ million	€ million
Net sales	2,217	2,414
Net loss after taxes	(46)	(44)
Share of net loss after taxes	(18)	(17)
Share of total comprehensive income after taxes	**(18)**	**(17)**
Gain (loss) after taxes from impairments/derecognition of other interests	(2)	(1)
Recognized loss after taxes of PO JV, LP, accounted for using the equity method	**(20)**	**(18)**

Data from the Statements of Financial Position of PO JV, LP, Accounted for Using the Equity Method [Table 4.44]

	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million
Noncurrent assets	441	462
Equity	441	462
Share of equity	**175**	**182**
Other	(1)	2
Carrying amount of PO JV, LP, accounted for using the equity method	**174**	**184**

The item "Other" mainly comprised differences arising from adjustments of data to Bayer's uniform accounting policies, 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 non-material associates that are accounted for using the equity method.

Income Statement Data and Carrying Amount of Associates Accounted for Using the Equity Method [Table 4.45]

	2013	2014
	€ million	€ million
Income after taxes	4	4
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	**20**	**27**

The following table contains a summary of the aggregated income statement data and aggregated carrying amounts of the individually non-material 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 4.46]

	2013	2014
	€ million	€ million
Income after taxes	6	8
Share of income after taxes	4	4
Share of total comprehensive income after taxes	**4**	**4**
Gain (loss) after taxes from impairments/derecognition of other interests	(1)	–
Recognized income after taxes of joint ventures accounted for using the equity method	**3**	**4**
Carrying amount of joint ventures accounted for using the equity method	**9**	**12**

20. Other financial assets

The other financial assets were comprised as follows:

Other Financial Assets [Table 4.47]

	Dec. 31, 2013		Dec. 31, 2014	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Loans and receivables	815	38	915	177
Available-for-sale financial assets	298	133	354	143
of which debt instruments	238	133	261	136
of which equity instruments	60	–	93	7
Held-to-maturity financial investments	96	34	69	11
Receivables from derivatives	765	574	484	392
Receivables under lease agreements	8	–	8	–
Total	**1,982**	**779**	**1,830**	**723**

The loans and receivables mainly comprised capital with a nominal volume of €595 million (2013: €595 million) provided to Bayer-Pensionskasse VVaG (Bayer-Pensionskasse) for its effective initial fund, and jouissance right capital (Genussrechtskapital) with a nominal volume of €150 million (2013: €150 million), also provided to Bayer-Pensionskasse.

The debt instruments reported as available-for-sale financial assets comprised German treasury bills in the amount of €125 million (2013: €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 to replace them with German government securities until 2016.

The equity instruments reported as available-for-sale financial assets included €29 million (2013: €22 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 2014, impairment loss reversals totaling €2 million (2013: impairment losses totaling €2 million) on available-for-sale financial assets were recognized in profit or loss.

Unimpaired other financial assets of €8 million (2013: €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 €46 million (2013: €48 million), including €37 million (2013: €40 million) in interest. Of the expected lease payments, €1 million (2013: €1 million) is due within one year, €2 million (2013: €4 million) within the following four years and €43 million (2013: €43 million) in subsequent years.

21. Inventories

Inventories were comprised as follows:

Inventories [Table 4.48]

	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million
Raw materials and supplies	1,369	1,603
Work in process, finished goods and goods purchased for resale	5,745	6,781
Advance payments	15	94
Total	**7,129**	**8,478**

Impairment losses recognized on inventories were reflected in the cost of goods sold. They were comprised as follows:

Impairments of Inventories [Table 4.49]

	2013	2014
	€ million	€ million
Accumulated impairment losses, January 1	**(384)**	**(423)**
Changes in scope of consolidation	2	–
Impairment losses in the reporting period	(214)	(214)
Impairment loss reversals or utilization	149	176
Exchange differences	24	(16)
Accumulated impairment losses, December 31	**(423)**	**(477)**

22. Trade accounts receivable

Trade accounts receivable less impairment losses amounted to €9,097 million (2013: €7,569 million) on the closing date and were comprised as follows:

Trade Accounts Receivable [Table 4.50]

	2013	2014
	€ million	€ million
Trade accounts receivable (before impairments)	7,769	9,330
Accumulated impairment losses	(200)	(233)
Carrying amount, December 31	**7,569**	**9,097**
of which noncurrent	18	32

Changes in impairment losses on trade accounts receivable were as follows:

Impairments of Trade Accounts Receivable [Table 4.51]

	2013	2014
	€ million	€ million
Accumulated impairment losses, January 1	**(240)**	**(200)**
Impairment losses in the reporting period	(66)	(73)
Impairment loss reversals or utilization	85	39
Exchange differences	21	1
Accumulated impairment losses, December 31	**(200)**	**(233)**

Trade accounts receivable amounting to €9,029 million (2013: €7,499 million) were not individually impaired. Of this amount, €1,105 million (2013: €1,222 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 4.52]

		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, 2014	9,097	7,924	738	165	85	117	68
December 31, 2013	7,569	6,277	848	130	104	140	70

The gross carrying amount of individually impaired trade accounts receivable was €217 million (2013: €193 million). The impairment losses recognized on these assets totaled €149 million (2013: €123 million), resulting in a net carrying amount of €68 million (2013: €70 million).

The unimpaired receivables were deemed to be collectible on the basis of established credit management processes and individual assessments of customer risks. The impairment losses recognized 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 2014 or 2013, 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 2014 totaled €183 million (2013: €231 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 (2013: €100 million).

A further €459 million (2013: €438 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 €3 million (2013: €4 million), were comprised as follows:

Other Receivables [Table 4.53]

	Dec. 31, 2013		Dec. 31, 2014	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Other tax receivables	577	504	612	528
Deferred charges	269	240	297	273
Reimbursement claims	321	321	127	113
Net defined benefit asset	117	–	41	–
Receivables from employees	41	41	48	44
Miscellaneous receivables	647	370	810	530
Total	**1,972**	**1,476**	**1,935**	**1,488**

The reimbursement claims of €127 million (2013: €321 million) consisted mainly of receivables from insurance companies in connection with product liability claims.

The miscellaneous receivables include a €57 million receivable from Merck & Co., Inc., United States, arising from the business that Merck & Co., Inc. continues to operate pending its final transfer to Bayer. The operating profit earned during this transition period is transferred to Bayer.

Of the €678 million (2013: €526 million) in financial receivables included in other receivables, €675 million (2013: €524 million) was unimpaired. Of this amount, €313 million (2013: €204 million) was past due or due immediately on the closing date. The gross carrying amount of individually impaired other receivables was €6 million (2013: €6 million). The impairment losses recognized on these assets totaled €3 million (2013: €4 million), resulting in a net carrying amount of €3 million (2013: €2 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 4.54]

	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, 2014	678	362	259	17	9	28	3
December 31, 2013	526	320	148	12	18	26	2

24. Equity

The foremost objectives of our financial management are to help bring about a sustained increase in the value of the Bayer Group 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 the creditworthiness of the Bayer Group as follows:

Rating [Table 4.55]

	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 for financing purposes. Bayer's capital management strategy is based on the debt ratios published by the rating agencies, which – by somewhat differing methods – look at the cash flow for a given period in relation to debt. The financial strategy of the Bayer Group 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 2005 and July 2014, 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 2013 and 2014 are shown in the consolidated statements of changes in equity.

CAPITAL STOCK

The capital stock of Bayer AG on December 31, 2014 amounted to €2,117 million (2013: €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

The Authorized Capital I amounting to €530 million was canceled because it would have expired on April 29, 2015, prior to the planned date of the 2015 Annual Stockholders' Meeting.

A new Authorized Capital I in the same amount was approved by the Annual Stockholders' Meeting on April 29, 2014. It expires on April 28, 2019. It can be used to increase the capital stock by issuing new no-par registered shares against cash contributions and/or contributions in kind, but capital increases against contributions in kind may not exceed a total of €423 million (Authorized Capital I). Stockholders must normally be granted subscription rights. However, the Board of Management is authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights where the subscription ratio gives rise to fractions in the case of capital increases against cash and/or contributions in kind, and also to the extent necessary to grant the holders of bonds with warrants or conversion rights or obligations issued by the Company or its group companies a right to subscribe for new shares to the extent to which they would be entitled after exercise of their warrants or conversion rights, or performance of their exercise or conversion obligations. The Board of Management is also authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights if the shares are issued in connection with the admission of shares to a foreign stock exchange and the total interest in the capital stock attributable to the new shares for which subscription rights are excluded does not exceed 10% of the existing capital stock on the date of entry of the authorization in the commercial register or, in the event that this amount is lower, 10% of the existing capital stock on the date of issuance of the new shares. The Board of Management is further authorized, with the consent of the Supervisory Board, to exclude stockholders' subscription rights if the capital is increased against contributions in kind to issue shares either for the purpose of acquiring companies, parts of companies, interests in companies, or other assets, or for the purpose of implementing a scrip dividend, where stockholders are given the option of contributing their dividend entitlements to the Company (either in whole or in part) as a contribution in kind against the issuance of new shares out of the Authorized Capital I. The amount of capital stock represented by shares issued against cash contributions and/or contributions in kind without granting subscription rights to the stockholders must not exceed a total of 20% of the capital stock that existed on the date the authorized capital was approved by the Annual Stockholders' Meeting.

The Authorized Capital II amounting to €212 million was canceled because it would have expired on April 29, 2015, prior to the planned date of the 2015 Annual Stockholders' Meeting.

A new Authorized Capital II in the same amount 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 Conditional Capital 2010 created by the Annual Stockholders' Meeting on April 30, 2010, was canceled because it would have expired prior to the planned date of the 2015 Annual Stockholders' Meeting.

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 Paragraph 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. The latter results from the acquisition in 2005 of the remaining 50% interest in an OTC joint venture with Roche in the United States that was established in 1996 and the acquisition in 2008 of the remaining 50% interest in Bayer MaterialScience Oldenburg GmbH & Co. KG, Oldenburg, Germany. In 2014, an amount of €5 million (2013: €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 €28 million (2013: €12 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 €2.10 per share for 2013. The proposed dividend for the 2014 fiscal year is €2.25 per share, which would result in a total dividend payment of €1,861 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.

NON-CONTROLLING INTEREST

The changes in the non-controlling interest in Group equity during 2013 and 2014 are shown in the following table:

Components of Non-Controlling Interest in Equity [Table 4.56]

	2013	2014
	€ million	€ million
January 1	**100**	**86**
Changes in equity not recognized in profit or loss		
Exchange differences on translation of operations outside the eurozone	(14)	11
Other changes in equity	6	–
Dividend payments	(3)	(2)
Changes in equity recognized in profit or loss	**(3)**	**17**
December 31	**86**	**112**

Non-controlling interests exist mainly in the equities of Bayer CropScience Limited, India; Bayer Jinling Polyurethane Co. Ltd., China; Bayer Pearl Polyurethane Systems FZCO, United Arab Emirates; Bayer East Africa Ltd., Kenya; and Bayer S.A., Peru.

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 4.57]

	Pensions		Other post-employment benefits		Total	
	Dec 31, 2013	Dec 31, 2014	Dec 31, 2013	Dec 31, 2014	Dec 31, 2013	Dec 31, 2014
	€ million	€ million	€ million	€ million	€ million	€ million
Provisions for pensions and other post-employment benefits (net liability)	**7,037**	**11,796**	**331**	**440**	**7,368**	**12,236**
of which Germany	6,230	10,336	–	–	6,230	10,336
of which other countries	807	1,460	331	440	1,138	1,900
Net defined benefit asset	**114**	**38**	**3**	**3**	**117**	**41**
of which Germany	95	22	–	–	95	22
of which other countries	19	16	3	3	22	19
Net defined benefit liability	**6,923**	**11,758**	**328**	**437**	**7,251**	**12,195**
of which Germany	6,135	10,314	–	–	6,135	10,314
of which other countries	788	1,444	328	437	1,116	1,881

The expenses for defined benefit plans for pension and other post-employment benefits comprised the following components:

Expenses for Defined Benefit Plans [Table 4.58]

	Pension plans						Other post-employment benefit plans	
	Germany		Other countries		Total		Other countries	
	2013	2014	2013	2014	2013	2014	2013	2014
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Current service cost	287	236	71	66	358	302	22	28
Past service cost	30	23	2	(25)	32	(2)	(1)	2
of which plan curtailments	–	–	*1*	*(15)*	*1*	*(15)*	*(1)*	–
Plan settlements	–	–	(1)	21	(1)	21	–	–
Net interest	233	223	48	34	281	257	21	18
Total	**550**	**482**	**120**	**96**	**670**	**578**	**42**	**48**

In 2014, a total of minus €5,159 million (2013: €1,946 million) in effects of remeasurements of the net defined benefit liability was also recognized outside profit or loss. Of this amount, minus €5,098 million (2013: €1,810 million) related to pension obligations and minus €61 million (2013: €135 million) to other post-employment benefit obligations.

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The net defined benefit liability developed as follows:

Changes in Net Defined Benefit Liability [Table 4.59]

	Defined benefit obligation		Fair value of plan assets			Effects of the asset ceiling		Net defined benefit liability	
	2013	2014	2013	2014		2013	2014	2013	2014
	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million
Germany									
January 1	**16,049**	**14,870**	**8,640**	**8,735**		**–**	**–**	**(7,409)**	**(6,135)**
Acquisitions	9	–	–	–		–	–	(9)	–
Divestitures/changes in the scope of consolidation	25	–	21	–		–	–	(4)	–
Current service cost	287	236						(287)	(236)
Past service cost	30	23						(30)	(23)
Gains/losses from plan settlements	–	–						–	–
Net interest	509	553	276	330		–	–	(233)	(223)
Net actuarial (gain) loss	(1,453)	5,254						1,453	(5,254)
of which due to changes in financial assumptions	*(1,485)*	*5,208*						*1,485*	*(5,208)*
of which due to changes in demographic assumptions	–	–						–	–
of which due to experience adjustments	*32*	*46*						*(32)*	*(46)*
Return on plan assets excluding amounts recognized as interest income			(114)	802				(114)	802
Remeasurement of asset ceiling						–	–	–	–
Employer contributions			86	331				86	331
Employee contributions	35	38	35	38				–	–
Payments due to plan settlements	–	–	–	–				–	–
Benefits paid out of plan assets	(209)	(211)	(209)	(211)				–	–
Benefits paid by the company	(412)	(424)						412	424
December 31	**14,870**	**20,339**	**8,735**	**10,025**		**–**	**–**	**(6,135)**	**(10,314)**
Other countries									
January 1	**6,539**	**5,812**	**4,742**	**4,705**		**(13)**	**(9)**	**(1,810)**	**(1,116)**
Acquisitions	–	–	–	–		–	–	–	–
Divestitures/changes in the scope of consolidation	(1)	–	–	–		–	–	1	–
Current service cost	93	94						(93)	(94)
Past service cost	1	(23)						(1)	23
Gains/losses from plan settlements	1	21						(1)	(21)
Net interest	254	275	185	223		–	–	(69)	(52)
Net actuarial (gain) loss	(473)	1,094						473	(1,094)
of which due to changes in financial assumptions	*(451)*	*815*						*451*	*(815)*
of which due to changes in demographic assumptions	*7*	*264*						*(7)*	*(264)*
of which due to experience assumptions	*(29)*	*15*						*29*	*(15)*
Return on plan assets excluding amounts recognized as interest income			133	387				133	387
Remeasurement of asset ceiling						1	–	1	–
Employer contributions			120	130				120	130
Employee contributions	6	9	6	9				–	–
Payments due to plan settlements	(1)	(64)	(1)	(64)				–	–
Benefits paid out of plan assets	(261)	(254)	(261)	(254)				–	–
Benefits paid by the company	(43)	(53)						43	53
Plan administration costs paid out of plan assets			–	(1)				–	(1)
Exchange differences	(303)	521	(219)	425		3	–	87	(96)
December 31	**5,812**	**7,432**	**4,705**	**5,560**		**(9)**	**(9)**	**(1,116)**	**(1,881)**
of which other post-employment benefits	*721*	*918*	*393*	*481*		*–*	*–*	*(328)*	*(437)*
Total as at December 31	**20,682**	**27,771**	**13,440**	**15,585**		**(9)**	**(9)**	**(7,251)**	**(12,195)**

The pension obligations pertained mainly to Germany (73%; 2013: 72%), the United States (14%; 2013: 14%) and the United Kingdom (6%; 2013: 7%). In Germany, current employees accounted for about 45% (2013: 39%), retirees or their surviving dependents for about 47% (2013: 54%) and former employees with vested pension rights for about 8% (2013: 7%) of entitlements under defined benefit plans. In the United States, current employees accounted for about 26% (2013: 28%), retirees or their surviving dependents for about 61% (2013: 60%) and former employees with vested pension rights for about 13% (2013: 12%) of entitlements under defined benefit plans.

In Brazil, employees were given the option of switching from a defined benefit plan to a defined contribution plan. This offer was accepted by around 34% of the employees. This resulted in a plan settlement loss of €21 million and a plan curtailment gain of €11 million. The defined benefit obligation was reduced by a total of €55 million and plan assets by €65 million.

The actual return on the assets of defined benefit plans for pensions or other post-employment benefits amounted to €1,691 million (2013: €414 million) and €51 million (2013: €66 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 4.60]

	Pension obligation		Other post-employment benefit obligation		Total	
	2013	2014	2013	2014	2013	2014
	€ million	€ million	€ million	€ million	€ million	€ million
Defined benefit obligation	**19,961**	**26,853**	**721**	**918**	**20,682**	**27,771**
of which unfunded	794	1,117	95	104	889	1,221
of which funded	19,167	25,736	626	814	19,793	26,550
Funded status of funded obligations						
Overfunding	124	47	3	3	127	50
Underfunding	6,244	10,679	236	336	6,480	11,015

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.

The Bayer Group 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 is therefore 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 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 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, deferred compensation, pension obligations previously administered by Schering Altersversorgung Treuhand e.V., and components of other direct commitments.

The defined benefit pension plans in the United States have been frozen for some years, and no significant new entitlements can be earned under these plans. The assets of all the U.S. pension plans are held by a master trust for reasons of efficiency. The applicable regulatory framework is based on the Employee Retirement Income Security Act (ERISA), which includes a statutory 80% minimum funding requirement to avoid benefit restrictions. The actuarial risks, such as investment risk, interest-rate risk and longevity risk, remain with the company.

The defined benefit pension plans in the United Kingdom 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 related to retirees' health care benefit payments in the United States.

The fair value of the plan assets to cover pensions and other post-employment benefit obligations was as follows:

Fair Value of Plan Assets as of December 31 [Table 4.61]

	Pension obligations				Other post-employment obligations	
	Germany		Other countries		Other countries	
	2013	2014	2013	2014	2013	2014
	€ million	€ million	€ million	€ million	€ million	€ million
Plan assets based on quoted prices in active markets						
Real estate and special real estate funds	–	–	168	205	16	18
Equities and equity funds	1,724	1,941	1,490	1,669	110	125
Callable debt instruments	–	–	146	162	–	–
Non-callable debt instruments	–	–	952	690	155	110
Bond funds	2,911	3,345	755	1,509	6	90
Derivatives	8	28	89	86	1	–
Cash and cash equivalents	369	409	115	98	14	14
Other	–	–	236	236	–	–
	5,012	**5,723**	**3,951**	**4,655**	**302**	**357**
Plan assets for which quoted prices in active markets are not available						
Real estate and special real estate funds	532	544	36	41	–	–
Equities and equity funds	51	70	52	59	–	–
Callable debt instruments	1,213	1,493	8	6	–	–
Non-callable debt instruments	1,678	1,931	–	–	–	–
Bond funds	–	–	50	60	–	–
Derivatives	–	(4)	–	–	–	–
Other	249	268	215	258	91	124
	3,723	**4,302**	**361**	**424**	**91**	**124**
Total plan assets	**8,735**	**10,025**	**4,312**	**5,079**	**393**	**481**

The fair value of plan assets in Germany included real estate leased by Group companies, recognized at a fair value of €65 million (2013: €67 million), and Bayer AG shares and bonds held through investment funds, recognized at their fair value of €58 million (2013: €49 million) and €6 million (2013: €0 million), respectively. The other plan assets comprise 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 pensions or surviving dependents' pensions, longer claim periods or earlier claims may result in higher benefit obligations, higher benefit expense and/or higher pension payments than previously anticipated.

Investment risks

If the actual return on plan assets were below the return anticipated on the basis of the discount rate, the net defined benefit liability would increase, assuming there were no changes in other parameters. This could happen as a result of a drop in share prices, increases in market rates of interest, default of individual debtors or the purchase of low-risk but low-interest bonds, for example.

Interest-rate risk

A decline in capital market interest rates, especially for high-quality corporate bonds, would increase the defined benefit obligation. This effect would be at least partially offset by the ensuing increase in the market values of the debt instruments held.

MEASUREMENT PARAMETERS AND THEIR SENSITIVITIES

The following weighted parameters were used to measure the pension obligations as of December 31 and the expense for pensions and other post-employment benefits in the respective year:

Parameters for Benefit Obligations [Table 4.62]

	Germany		Other countries		Total	
	2013	2014	2013	2014	2013	2014
	%	%	%	%	%	%
Pension obligations						
Discount rate	3.80	2.00	4.70	3.70	4.05	2.40
of which U.S.A			4.50	3.70	4.50	3.70
of which U.K.			4.60	3.60	4.60	3.60
Projected future salary increases	3.00	3.00	3.95	3.65	3.25	3.15
Projected future benefit increases	1.75	1.75	3.60	3.30	2.20	2.10
Other post-employment benefit obligations						
Discount rate	–	–	4.90	3.95	4.90	3.95

In Germany the Heubeck 2005 G mortality tables were used, in the United States the RP-2014 (2013: RP-2000) Combined Healthy Mortality Tables, and in the United Kingdom 95% of S1NXA. The adjustment of the mortality table in the U.S. led to actuarial losses of approximately €224 million.

Parameters for Benefit Expense [Table 4.63]

	Germany		Other countries		Total	
	2013	2014	2013	2014	2013	2014
	%	%	%	%	%	%
Pension obligations						
Discount rate	3.20	3.80	4.05	4.70	3.45	4.05
Projected future salary increases	3.00	3.00	3.85	3.95	3.20	3.25
Projected future benefit increases	1.75	1.75	3.20	3.60	2.15	2.20
Other post-employment benefit obligations						
Discount rate	–	–	4.15	4.90	4.15	4.90

The parameter sensitivities were computed by expert actuaries based on a detailed evaluation similar to that performed to obtain the data presented in Table 4.59. Altering individual parameters by 0.5 percentage points (mortality by 10 percent per beneficiary) while leaving the other parameters unchanged would have impacted pension and other post-employment benefit obligations as of year end 2014 as follows:

Sensitivity of Benefit Obligations [Table 4.64]

	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 to retirees. The valuation of health care costs was based on the assumption that they will increase at a rate of 7.0% (assumption in 2013: 7.5%), which should gradually decline to 5.0% (2013: 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 4.65]

	Increase of one percentage point	Decrease of one percentage point
	€ million	€ million
Impact on other post-employment benefit obligations	86	(72)
Impact on benefit expense	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 4.66]

	Germany			Other countries		
	2013	2014	2015 expected	2013	2014	2015 expected
	€ million	€ million	€ million	€ million	€ million	€ million
Pension obligations	86	331	71	117	112	111
Other post-employment benefit obligations	–	–	–	3	18	10
Total	**86**	**331**	**71**	**120**	**130**	**121**

Bayer has currently committed to make annual deficit contributions through 2016 amounting to GBP21 million for its U.K. pension plans and will likely have to make annual payments of US$50 million for its U.S. pension plans over the same period.

Pensions and other post-employment benefits payable in the future from funded and unfunded plans are estimated as follows:

Future Benefit Payments [Table 4.67]

	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
2015	214	266	12	492	437	57	36	530
2016	217	280	13	510	445	55	34	534
2017	219	292	13	524	451	58	36	545
2018	223	304	15	542	458	63	38	559
2019	227	315	15	557	465	65	40	570
2020-2024	1,216	1,659	82	2,957	2,404	403	222	3,029

The weighted average term of the pension obligations is 18.0 years in Germany and 13.9 years in other countries. The weighted average term of the obligations for other post-employment benefits in other countries is 12.1 years.

26. Other provisions

Changes in the various provision categories in 2014 were as follows:

Changes in Other Provisions [Table 4.68]

	Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
December 31, 2013	**1,148**	**250**	**242**	**1,530**	**934**	**2,325**	**275**	**6,704**
Acquisitions/divestments	1	–	–	100	–	4	1	106
Additions	1,341	41	60	3,729	209	2,287	263	7,930
Utilization	(1,557)	(31)	(116)	(3,196)	(401)	(1,775)	(249)	(7,325)
Reversal	(87)	(6)	(22)	(468)	(59)	(208)	(67)	(917)
Interest cost	–	17	–	–	–	49	1	67
Exchange differences	24	12	9	156	87	69	6	363
December 31, 2014	**870**	**283**	**173**	**1,851**	**770**	**2,751**	**230**	**6,928**

The provisions recognized in the statement of financial position as of December 31, 2014 were expected to be utilized as follows:

Expected Utilization of Other Provisions [Table 4.69]

	Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
2015	393	39	124	1,768	603	1,834	151	4,912
2016	34	29	18	58	70	242	11	462
2017	1	22	12	12	37	168	–	252
2018	278	19	8	11	–	120	5	441
2019	2	6	4	2	3	67	–	84
2020 or later	162	168	7	–	57	320	63	777
Total	**870**	**283**	**173**	**1,851**	**770**	**2,751**	**230**	**6,928**

The provisions were partly offset by claims for refunds in the amount of €124 million (2013: €318 million), which were recognized as receivables. These claims related principally to product liability and environmental protection measures.

26.1 Taxes

Provisions for taxes comprised provisions for income taxes amounting to €805 million (2013: €1,079 million) and provisions for other types of taxes amounting to €65 million (2013: €69 million).

Further income tax commitments according to IAS 12 (Income Taxes) existed at year end in the amount of €63 million (2013: €101 million), recognized in the statement of financial position as income tax liabilities.

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 €126 million (2013: €189 million) for severance payments and €47 million (2013: €53 million) for other restructuring expenses, which mainly comprised other costs related to the closure of production facilities.

A major focus in HealthCare was on continuing the restructuring begun in the Medical Care Division (Consumer Health reporting segment) in 2013, utilizing the provisions established for this purpose. Provisions were also established for the integration of newly acquired businesses. Provisions for the above and other restructuring measures at HealthCare as of December 31, 2014, amounted to €71 million. Of this amount, severance payments accounted for €62 million and other restructuring expenses for €9 million.

In CropScience, the restructuring initiated in the United States in 2011, involving the closure of several carbamate production facilities and a formulation plant, continued in 2014, utilizing the provisions established for this purpose. Provisions for the above and other restructuring measures at CropScience as of December 31, 2014, amounted to €70 million, comprising €35 million for severance payments and €35 million for other restructuring expenses.

Provisions for restructuring measures in MaterialScience pertained largely to the global consolidation of production facilities in the Polycarbonates unit, including the closure of the site in Darmstadt, Germany. Provisions for restructuring at MaterialScience as of December 31, 2014, amounted to €18 million, comprising €17 million for severance payments and €1 million for other restructuring expenses.

In addition, restructuring measures focusing on the introduction of country platforms, along with further efficiency improvements, were carried out throughout the Group so as to more effectively pool central functions. The restructuring provisions associated with these measures as of December 31, 2014, amounted to €14 million, comprising €12 million for severance payments and €2 million for other restructuring expenses.

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, credit balances on long-term accounts, service awards, early retirements, pre-retirement part-time working arrangements and other personnel costs. Also reflected here are the obligations under the stock-based compensation programs. Provisions for severance payments resulting from restructuring are reflected in provisions for restructuring.

STOCK-BASED COMPENSATION PROGRAMS

The Bayer Group 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 4.70]

	Stock Incentive Program	Stock Participation Program	Aspire I Four-Year Program	Aspire II Four-Year Program	Total
	€ million	€ million	€ million	€ million	€ million
December 31, 2013	**0**	**5**	**134**	**230**	**369**
Additions	–	1	80	182	263
Utilization	–	(5)	(49)	(83)	(137)
Reversal	–	–	(26)	(40)	(66)
Exchange differences	–	(1)	3	22	24
December 31, 2014	**0**	**0**	**142**	**311**	**453**

The value of the Aspire tranches that were fully earned at the end of 2014, resulting in payments at the beginning of 2015, was €151 million (2013: €136 million).

Total expense for all stock-based compensation programs in 2014 was €278 million (2013: €275 million), including €5 million (2013: €4 million) for the BayShare stock participation program and €10 million (2013: €12 million) for grants of virtual Bayer shares forming a component of long-term compensation.

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 4.71]

	2013	2014
Dividend yield	2.14%	1.89%
Risk-free interest rate for the four-year program	0.644%	(0.079)%
Volatility of Bayer stock	27.06%	23.39%
Volatility of the EURO STOXX 50	22.54%	18.11%
Correlation between Bayer stock price and the EURO STOXX 50	0.77	0.76

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 – based on 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 four-year tranche issued in 2010 expired at the end of 2013, and payment of the maximum resulting amount (300%) was made at the beginning of 2014.

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 four-year tranche issued in 2010 expired at the end of 2013, and payment of the maximum resulting amount (250%) was made at the beginning of 2014.

BAYSHARE 2014

All management levels and non-managerial 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 2014 it was 20% (2013: 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 (2013: €2,500) or €5,000 (2013: €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 2014, employees purchased a total of about 225,000 shares (2013: 242,600 shares) under the BayShare program.

STOCK-BASED COMPENSATION PROGRAMS 2004

The stock-based compensation programs offered to the different employee groups in 2004 had similar basic structures. Changes in the obligations under these programs are reflected in the financial statements at fair value through profit or loss. Entitlements to awards under these programs are conditioned on retention of the Bayer shares for a certain time period. The tranches issued in 2004 expired in 2014.

STOCK INCENTIVE PROGRAM

A Stock Incentive Program was offered to middle management until 2004. Participants receive a cash payment equivalent to a defined number of Bayer shares on certain dates during the ten-year duration of the program. For every ten shares held in a special account (personal investment), they receive two shares after two years, and a further four shares after six and ten years, respectively. To qualify for these payments, they must still hold the personal investment on the incentive payment dates and the percentage rise in the price of Bayer stock by the payment date must be above the performance of the EURO STOXX 50 since the start of the program. Participants may sell their shares during the term of the program. However, the shares sold do not qualify for incentive payments on subsequent distribution dates. The number of shares that each employee could transfer to the program was equivalent to half of his or her performance-related bonus for the preceding fiscal year.

STOCK PARTICIPATION PROGRAM

The structure of this program, which was offered to the other employee groups until 2004, is similar to the Stock Incentive Program. However, the incentive payments are based exclusively on the period for which employees hold their personal investment in Bayer shares. Incentive payments are half those allocated under the Stock Incentive Program. For every ten shares held, participants receive the equivalent of one share after two years and the equivalent of a further two shares after six and ten years, respectively.

26.7 Miscellaneous

Miscellaneous provisions included those for other liabilities, contingent liabilities from business combinations, asset retirement obligations (other than those included in provisions for environmental protection) and guarantees.

27. Financial liabilities

Financial liabilities were comprised as follows:

Financial Liabilities [Table 4.72]

	Dec. 31, 2013		Dec. 31, 2014	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Bonds and notes/promissory notes	4,520	1,560	14,964	169
Liabilities to banks	2,302	549	3,835	1,221
Liabilities under finance leases	382	51	441	53
Liabilities from derivatives	311	117	644	296
Other financial liabilities	1,516	1,164	1,976	1,637
Total	**9,031**	**3,441**	**21,860**	**3,376**

A breakdown of financial liabilities by contractual maturity is given below:

Maturities of Financial Liabilities [Table 4.73]

Maturity	Dec. 31, 2013	Maturity	Dec. 31, 2014
	€ million		€ million
2014	3,441	2015	3,376
2015	1,208	2016	2,191
2016	713	2017	2,075
2017	491	2018	3,359
2018	1,165	2019	1,857
2019 or later	2,013	2020 or later	9,002
Total	**9,031**	**Total**	**21,860**

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 (2013: €370 million), the Bayer Group has issued the following bonds and notes:

Bonds and Notes [Table 4.74]

Effective interest rate	Stated rate		Nominal volume	Dec. 31, 2013	Dec. 31, 2014
				€ million	€ million
		Bayer AG			
Floating[1]	Floating[1]	EMTN bond 2014/2016	EUR 500 million	–	500
1.206%	1.125%	EMTN bond 2014/2018	EUR 750 million	–	747
5.774%	5.625%	EMTN bond 2006/2018	GBP 250 million	298	319
5.541%	5.625%	EMTN bond 2006/2018 (increase)	GBP 100 million	120	129
2.042%	1.875%	EMTN bond 2014/2021	EUR 750 million	–	753
3.742%	3.750%	Hybrid bond 2014/2074	EUR 1,500 million	–	1,493
2.995%	3.000%	Hybrid bond 2014/2075	EUR 1,750 million	–	1,742
5.155%	5.000%	Hybrid bond 2005/2105	EUR 1,300 million	1,344	1,317
		Bayer Capital Corporation B.V.			
4.750%	4.625%	EMTN bond 2009/2014	EUR 1,300 million	1,310	–
1.310%	1.250%	EMTN bond 2014/2023	EUR 500 million	–	497
		Bayer Corporation			
7.180%	7.125%	Notes 1995/2015	US$ 200 million	145	169
6.670%	6.650%	Notes 1998/2028	US$ 350 million	284	308
		Bayer Holding Ltd.			
0.858%	0.816%	EMTN bond 2012/2017	JPY 30 billion	207	206
1.493%	1.459%	EMTN bond 2010/2017	JPY 10 billion	69	69
3.654%	3.575%	EMTN bond 2008/2018	JPY 15 billion	104	103
0.629%	0.594%	EMTN bond 2013/2019	JPY 10 billion	69	69
		Bayer Nordic SE			
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
		Bayer U.S. Finance LLC			
Floating[4]	Floating[4]	Notes 2014/2016	US$ 500 million	–	411
Floating[5]	Floating[5]	Notes 2014/2017	US$ 400 million	–	329
1.611%	1.500%	Notes 2014/2017	US$ 850 million	–	698
2.468%	2.375%	Notes 2014/2019	US$ 2,000 million	–	1,635
3.001%	3.000%	Notes 2014/2021	US$ 1,500 million	–	1,230
3.484%	3.375%	Notes 2014/2024	US$ 1,750 million	–	1,421
		Total		**4,150**	**14,844**

[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

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 2014 and 2013:

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. In September 2014, it redeemed at maturity the EMTN bond with a nominal volume of €1.3 billion issued in March 2009.

In April 2013, Bayer Nordic SE issued an EMTN bond with a nominal volume of €200 million. In May 2013, Bayer AG redeemed at maturity the EMTN bond with a nominal volume of €1,000 million issued in May 2006. In May 2013, Bayer Holding Ltd. issued an EMTN bond with a nominal volume of JPY 10 billion. In July 2013, Bayer Holding Ltd. redeemed at maturity the EMTN bond with a nominal volume of JPY 10 billion issued in June 2008.

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.

SUBORDINATED BONDS

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 percent. 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 percent. 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 bonds as equity. They therefore have a more limited effect on the Group's rating-relevant debt indicators than conventional borrowings.

In July 2005, Bayer AG issued a 100-year subordinated hybrid bond with a nominal volume of €1,300 million. This issue matures in 2105 and has a fixed coupon of 5.0% in the first 10 years. Thereafter, interest is calculated quarterly at a floating rate. After the first 10 years, Bayer AG has a quarterly option to redeem the bond at face value. In NOTE [30.2] the 100-year hybrid bond is reflected at the earliest possible repayment date in 2015. It is treated as 75% equity by Moody's and as 50% equity by Standard & Poor's.

Bayer AG guarantees all the bonds issued by subsidiaries.

LEASING LIABILITIES

Lease payments totaling €603 million (2013: €538 million), including €162 million (2013: €156 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:

Leasing Liabilities [Table 4.75]

	Dec. 31, 2013				Dec. 31, 2014		
Maturity	Lease payments	Interest component	Liabilities under finance leases	Maturity	Lease payments	Interest component	Liabilities under finance leases
	€ million	€ million	€ million		€ million	€ million	€ million
2014	71	20	51	2015	76	23	53
2015	63	19	44	2016	70	21	49
2016	54	18	36	2017	63	19	44
2017	44	16	28	2018	53	16	37
2018	41	14	27	2019	47	14	33
2019 or later	265	69	196	2020 or later	294	69	225
Total	**538**	**156**	**382**	**Total**	**603**	**162**	**441**

OTHER FINANCIAL LIABILITIES

The other financial liabilities as of December 31, 2014, included commercial paper of €1,433 million (2013: €943 million).

OTHER INFORMATION

As of December 31, 2014, the Group had credit facilities at its disposal totaling €7.3 billion (2013: €5.8 billion), of which €3.8 billion (2013: €2.3 billion) was used and €3.5 billion (2013: €3.5 billion) was unused and thus available for borrowing on an unsecured basis.

Further information on the accounting for liabilities from derivatives is given in NOTE [30].

28. Trade accounts payable

Trade accounts payable comprised €5,357 million (2013: €4,467 million) due within one year and €6 million (2013: €6 million) due after one year.

29. Other liabilities

Other liabilities comprised:

Other Liabilities [Table 4.76]

	Dec. 31, 2013		Dec. 31, 2014	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Other tax liabilities	409	378	477	433
Deferred income	319	122	1,136	207
Liabilities to employees	183	168	196	185
Liabilities for social expenses	150	137	154	140
Accrued interest on liabilities	105	99	201	192
Liabilities to non-controlling interest	49	–	–	–
Miscellaneous liabilities	428	377	713	632
Total	**1,643**	**1,281**	**2,877**	**1,789**

Deferred income included an upfront payment of 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 will be amortized over a period of 13.5 years and includes €15 million amortized in 2014. The remaining amount deferred as of the end of 2014 was €778 million.

The deferred income included €70 million (2013: €61 million) in grants and subsidies received from governments, of which €8 million (2013: €9 million) was reversed and recognized in profit or loss.

Liabilities to non-controlling interest pertained to the pro-rated claim that exists on the total assets of Currenta GmbH & Co. OHG in view of the other stockholder's statutory right of termination, which it could exercise at any time.

The miscellaneous liabilities included €204 million (2013: €73 million) from derivatives. A further liability of €54 million existed for payments not yet made for inventories taken over as part of the acquisition of the consumer care business of Merck & Co., Inc., United States.

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 by category of financial instrument 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 non-financial 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 "Non-financial assets/liabilities."

Carrying Amounts and Fair Values of Financial Instruments

[Table 4.77]

	Dec. 31, 2013								Dec. 31, 2014							
	Carried at amortized cost		Carried at fair value			Non-financial assets/ liabilities			Carried at amortized cost		Carried at fair value			Non-financial assets/ liabilities		
	Carrying amount Dec. 31, 2013	Fair value (for information)	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 Dec. 31, 2014	Fair value (for information)	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	€ million	€ million
Trade accounts receivable	7,569						7,569		9,097						9,097
Loans and receivables	7,569	7,569					7,569		9,097	9,093					9,097
Other financial assets	941		276	737	28		1,982		1,021		325	450	34		1,830
Loans and receivables	823	823					823		923	923					923
Available-for-sale financial assets	22		276				298		29		325				354
Held-to-maturity financial assets	96	97					96		69	70					69
Derivatives that qualify for hedge accounting				335			335					189			189
Derivatives that do not qualify for hedge accounting				402	28		430					261	34		295
Other receivables	526					1,446	1,972		678					1,257	1,935
Loans and receivables	526	526					526		678	678					678
Non-financial assets						1,446	1,446							1,257	1,257
Cash and cash equivalents	1,662						1,662		1,853						1,853
Loans and receivables	1,662	1,662					1,662		1,853	1,853					1,853
Total financial assets	**10,698**		**276**	**737**	**28**		**11,739**		**12,649**		**325**	**450**	**34**		**13,458**
of which loans and receivables	10,580						10,580		12,551						12,551
Financial liabilities	8,720			311			9,031		21,216			644			21,860
Carried at amortized cost	8,720	8,967					8,720		21,216	22,835					21,216
Derivatives that qualify for hedge accounting				200			200					284			284
Derivatives that do not qualify for hedge accounting				111			111					360			360
Trade accounts payable	4,276					197	4,473		5,113					250	5,363
Carried at amortized cost	4,276	4,276					4,276		5,113	5,113					5,113
Non-financial liabilities						197	197							250	250
Other liabilities	620			38	35	950	1,643		790			176	59	1,852	2,877
Carried at amortized cost	620	620					620		790	790					790
Carried at fair value (non-derivative)													31		31
Derivatives that qualify for hedge accounting				15			15					156			156
Derivatives that do not qualify for hedge accounting				23	35		58					20	28		48
Non-financial liabilities						950	950							1,852	1,852
Total financial liabilities	**13,616**			**349**	**35**		**14,000**		**27,119**			**820**	**59**		**27,998**
of which carried at amortized cost	13,616						13,616		27,119						27,119
of which derivatives that qualify for hedge accounting				215			215					440			440
of which derivatives that do not qualify for hedge accounting				134	35		169					380	28		408

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 value stated for noncurrent receivables, loans, held-to-maturity financial investments and non-derivative financial liabilities is the present value of the respective future cash flows. This was determined by discounting the cash flows at a closing-date interest rate that takes 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 for identical assets (Level 1).

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.

The respective 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 in some cases to the fair values of embedded derivatives or to obligations for contingent consideration in business combinations.

Embedded derivatives were 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 fluctuations in exchange rates, commodity prices or other prices, for example. The internal measurement of embedded derivatives is mainly performed using the discounted cash flow method, which is based on unobservable inputs (Level 3). 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.

Income, expense, gains and losses on financial instruments can be assigned to the following categories:

Income, Expense, Gains and Losses on Financial Instruments [Table 4.78]

	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	111	1	1	54	122	289
Interest expense	–	–	–	(75)	(563)	(638)
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	**638**	**1**	**4**	**(234)**	**(1,037)**	**(628)**

Income, Expense, Gains and Losses on Financial Instruments (Previous Year) [Table 4.79]

	2013					
	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	77	1	2	44	151	275
Interest expense	–	–	–	(54)	(559)	(613)
Income/expenses from affiliated companies	–	–	–	–	–	–
Changes in fair value	–	–	–	(10)	–	(10)
Impairment losses	(82)	–	(2)	–	–	(84)
Impairment loss reversals	42	–	–	–	–	42
Exchange gains/losses	(506)	–	–	372	(21)	(155)
Gains/losses from retirements	–	–	77	–	–	77
Other financial income/expenses	(1)	–	(3)	–	6	2
Net result	**(470)**	**1**	**74**	**352**	**(423)**	**(466)**

The interest expense of €563 million (2013: €559 million) from non-derivative financial liabilities also included the income and expense from interest-rate swaps that qualified for hedge accounting. Interest income from financial assets not measured at fair value through profit or loss amounted to €67 million (2013: €80 million). Interest income from interest-rate derivatives that qualified for hedge accounting was €122 million (2013: €151 million). The changes in fair values of financial assets held for trading related mainly to forward commodity contracts and embedded derivatives.

The changes in the net amount of financial assets and liabilities recognized at fair value based on unobservable inputs (Level 3) were as follows:

Changes in the Net Amount of Financial Assets and Liabilities Recognized at Fair Value Based on Unobservable Inputs [Table 4.80]

	2013	2014
	€ million	€ million
Carrying amounts of net assets/(net liabilities), January 1	**22**	**(7)**
Gains (losses) recognized in profit or loss	(29)	(8)
of which related to assets/liabilities recognized in the statements of financial position	(29)	(8)
Gains (losses) recognized outside profit or loss	–	–
Additions of assets/(liabilities)	–	(31)
Settlements of (assets)/liabilities	–	21
Reclassifications	–	–
Carrying amounts of net assets/(net liabilities), December 31	**(7)**	**(25)**

The changes recognized in profit or loss were included in other operating income or expenses.

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 €360 million (2013: €685 million); the related financial liabilities (derivatives) were €242 million (2013: €140 million). Derivatives classified as financial liabilities and forming part of a master netting arrangement amounted to €773 million (2013: €299 million); the related financial assets (derivatives) were €242 million (2013: €140 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].

There was also a liquidity risk from an as yet unpaid €1,005 million (2013: €1,005 million) portion of the effective initial fund of Bayer-Pensionskasse VVaG, which may result in further payments by Bayer AG in subsequent years. This amount was reported under loan commitments.

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Maturity Analysis of Financial Instruments

[Table 4.81]

	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.

	Dec. 31, 2013	Cash flows 2014	Cash flows 2015			Cash flows 2016	Cash flows 2017	Cash flows 2018	Cash flows after 2018
	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]	4,520	1,664	1,575			330	325	570	531
Liabilities to banks	2,302	629	722			386	207	522	70
Remaining liabilities	1,898	1,236	408			55	47	42	269
Trade accounts payable	4,276	4,273	4			2	–	–	–
Other liabilities									
Accrued interest on liabilities	105	99	1			1	1	1	3
Remaining liabilities	515	441	8			6	2	4	66
Liabilities from derivatives									
Derivatives that qualify for hedge accounting	215	45	1			55	2	114	–
Derivatives that do not qualify for hedge accounting	169	140	26			1	1	1	2
Receivables from derivatives									
Derivatives that qualify for hedge accounting	335	215	67			36	14	2	2
Derivatives that do not qualify for hedge accounting	430	359	32			25	–	2	16
Loan commitments	–	1,006	–			–	–	–	–
Financial guarantees	–	25	–			–	–	–	–

[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. The principal borrowings concerned are the US$200 million bond issued in 1995, the €1.3 billion bond issued in 2005, and a portion of the €750 million bond issued in 2014 and maturing in 2021. Hedge accounting is applied to the respective borrowings and hedging instruments (fair-value hedge).

Losses of €47 million (2013: €65 million) were recorded on fair-value hedging instruments in 2014. Gains of €47 million (2013: €65 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 fluctuations in the share price using derivatives contracts that are designated as cash flow hedges.

FURTHER INFORMATION ON CASH FLOW HEDGES

Accumulated other comprehensive income from cash flow hedges in 2014 decreased by €102 million (2013: increased by €157 million) due to changes in the fair values of derivatives net of tax. Gains of €46 million (2013: €156 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 expense of €13 million (2013: €46 million) was likewise reclassified to profit or loss.

No material ineffective portions of hedges required recognition in profit or loss in 2014 or 2013.

The income and expense from cash flow hedges recognized in accumulated other comprehensive income mainly comprised gains of €115 million (2013: €186 million) and losses of €156 million (2013: €15 million) from the hedging of forecasted transactions in foreign currencies. Of these gains and losses, gains of €81 million (2013: €135 million) and losses of €152 million (2013: €15 million) will be reclassifiable to profit or loss within one year and gains of €34 million (2013: €51 million) and losses of €4 million (2013: €0 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 4.82]

	Dec. 31, 2013			Dec. 31, 2014		
	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	**14,535**	**348**	**(260)**	**14,023**	**176**	**(618)**
Forward exchange contracts	10,519	286	(58)	11,754	176	(334)
of which cash flow hedges	–	–	–	–	–	–
Currency options	1,752	23	–	–	–	–
Cross-currency interest-rate swaps	2,264	39	(202)	2,269	–	(284)
of which cash flow hedges	2,132	38	(200)	2,269	–	(284)
Currency hedging of forecasted transactions	**3,925**	**194**	**(19)**	**3,743**	**117**	**(159)**
Forward exchange contracts	3,191	153	(17)	3,230	83	(151)
of which cash flow hedges	3,000	150	(15)	3,158	82	(150)
Currency options	734	41	(2)	513	34	(8)
of which cash flow hedges	407	40	–	430	33	(6)
Interest-rate hedging of recorded transactions	**3,851**	**146**	**(47)**	**2,771**	**83**	**(24)**
Interest-rate swaps	3,851	146	(47)	2,771	83	(24)
of which fair value hedges	2,745	107	–	1,665	62	–
Commodity price hedging	**16**	**2**	**(1)**	**27**	**3**	**(2)**
Forward commodity contracts	10	1	(1)	5	1	–
Commodity option contracts	6	1	–	22	2	(2)
Hedging of stock-based employee compensation programs	**–**	**–**	**–**	**14**	**12**	**–**
Share price options	–	–	–	14	12	–
of which cash flow hedges	–	–	–	14	12	–
Total	**22,327**	**690**	**(327)**	**20,578**	**391**	**(803)**
of which current derivatives	17,091	533	(106)	17,092	329	(455)
for currency hedging	15,785	446	(81)	14,494	251	(429)
for interest-rate hedging[2]	1,300	85	(24)	2,571	75	(24)
for commodity hedging	6	2	(1)	27	3	(2)
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 fair value of long-term interest-rate swaps resulting from 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 4.83]

	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million
Warranties	107	95
Guarantees	140	144
Other contingent liabilities	467	339
Total	**714**	**578**

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, 2014, amounted to €144 million (2013: €100 million).

The potential payment claims related to the partial exemption from the surcharge levied under the German Renewable Energy Act that were included in other contingent liabilities in 2013 no longer exist following the conclusion of the E.U. state-aid proceedings in 2014 (2013: €172 million).

OTHER FINANCIAL COMMITMENTS

The other financial commitments were as follows:

Other Financial Commitments [Table 4.84]

	Dec. 31, 2013	Dec. 31, 2014
	€ million	€ million
Operating leases	596	671
Orders already placed under purchase agreements	365	476
Unpaid portion of the effective initial fund	1,005	1,005
Potential payment obligations under R&D collaboration agreements	2,106	2,427
Revenue-based milestone payment commitments	2,191	2,169
Total	**6,263**	**6,748**

The non-discounted future minimum lease payments relating to operating leases totaled €671 million (2013: €596 million). The maturities of the respective payment obligations were as follows:

Operating Leases [Table 4.85]

Maturing in	Dec. 31, 2013	Maturing in	Dec. 31, 2014
	€ million		€ million
2014	174	2015	174
2015	144	2016	125
2016	81	2017	98
2017	66	2018	70
2018	42	2019	59
2019 or later	89	2020 or later	145
Total	**596**	**Total**	**671**

Financial commitments resulting from orders already placed under purchase agreements related to planned or ongoing capital expenditure projects totaled €476 million (2013: €365 million).

The unpaid capital provided to Bayer-Pensionskasse VVaG for its effective initial fund amounted to €1,005 million (2013: €1,005 million).

The Bayer Group has entered into cooperation agreements with third parties under which it has agreed to fund various research and development projects or has assumed other payment obligations based on the achievement of certain milestones or other specific conditions. If all of these payments have to be made, their maturity distribution as of December 31, 2014 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 4.86]

Maturing in	Dec. 31, 2013	Maturing in	Dec. 31, 2014
	€ million		€ million
2014	155	2015	155
2015	181	2016	198
2016	144	2017	164
2017	113	2018	130
2018	95	2019	203
2019 or later	1,418	2020 or later	1,577
Total	**2,106**	**Total**	**2,427**

In addition to the above commitments, there were also revenue-based milestone payment commitments totaling €2,169 million (2013: €2,191 million), of which €2,157 million (2013: €2,090 million) were not expected to fall due until 2020 (2013: 2019) or later. These commitments are also highly uncertain.

Should the achievement of the milestones or specific conditions become sufficiently probable, a provision or other liability is recognized in the statement of financial position, and this may also lead to the recognition of an intangible asset in the same amount. The above table includes neither current revenue-based royalty payments nor future payments that are probable and therefore already reflected in the statement of financial position.

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.

HealthCare:

PRODUCT-RELATED LITIGATION

Yasmin™/YAZ™: As of January 31, 2015, the number of claimants in the pending lawsuits and claims in the United States totaled about 5,000 (excluding claims already settled). Claimants allege that they 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 U.S. are investigating the alleged off-label promotion of Yasmin™ and YAZ™ as well as the 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 31, 2015, 13 class actions had been served upon Bayer in Canada and two in Israel.

As of January 31, 2015, Bayer had reached agreements, without admission of liability, to settle approximately 9,500 claims in the U.S. for venous clot injuries (deep vein thrombosis or pulmonary embolism) for a total amount of about US$1.9 billion. Bayer will continue to consider the option of settling such claims after a case-specific analysis of medical records. At present, about 2,000 such claims are under review.

Bayer has also settled, without admission of liability, approximately 7,200 claims for gallbladder injuries in the U.S. for a total amount of about US$21.5 million. As of January 31, 2015, only a few claims for such injuries remained pending.

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 31, 2015, lawsuits of approximately 3,000 users of Mirena™, a levonorgestrel-releasing intrauterine system providing long-term contraception, had been served upon Bayer in the U.S. 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 31, 2015, four class actions relating to Mirena™ 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 31, 2015, lawsuits of approximately 200 recipients of Xarelto™, an oral anticoagulant for the treatment and prevention of blood clots, had been served upon Bayer in the U.S. Plaintiffs allege personal injuries from the use of Xarelto™, including cerebral, gastrointestinal or other bleeding and death, and seek compensatory and punitive damages. They claim, amongst other things, that Xarelto™ is defective and that Bayer knew or should have known of the risks associated with the use of Xarelto™ and failed to adequately warn its users. Additional lawsuits are anticipated. Cases pending in U.S. federal courts have been consolidated in a multidistrict litigation for common pre-trial management. As of February 8, 2015, one class action relating to Xarelto™ was filed 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 September 2014, the United States Department of Justice, representing the United States Federal Trade Commission, filed a motion in New Jersey federal court alleging that Bayer is making unsubstantiated claims about Phillips' Colon Health, a probiotic product, and thereby violating a 2007 consent decree requiring it to have competent and reliable scientific evidence to substantiate claims made about its dietary supplements. The suit seeks relief in the form of monetary damages and an order mandating Bayer to cease from making unsubstantiated claims. In December 2014, the parties attended a court-ordered mediation, which did not resolve the matter. Discovery continues. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

PATENT DISPUTES

Beyaz™/Safyral™: In 2013, Bayer received two notices from Watson Laboratories, Inc. that Watson has filed Abbreviated New Drug Applications with a Paragraph IV certification ("ANDA IV") seeking approval of generic versions of both Beyaz™ and Safyral™, Bayer's oral contraceptives containing folate, in the United States. In response, Bayer filed two suits against Watson in U.S. federal court for infringement of the same patent. The lawsuits were consolidated.

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 2013, Bayer filed a patent infringement suit in a U.S. federal court against Glenmark Generics Ltd. Earlier that year, Bayer had received a notice from Glenmark that Glenmark had filed an ANDA IV seeking approval of a generic version of Bayer's Finacea™ topical gel in the United States.

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 2015, Bayer filed a patent infringement suit in a U.S. federal court against Mylan Pharmaceuticals Inc. and Mylan Inc. (together "Mylan"). In December 2014, Bayer had received notice of an ANDA IV pursuant to which Mylan seeks approval of a generic version of the cancer drug Nexavar™ in the United States.

Staxyn™: In 2012, Bayer filed a patent infringement suit in a U.S. federal court against Watson Laboratories, Inc. In 2013, Bayer filed a similar suit against Par Pharmaceutical, Inc. and Par Pharmaceutical Companies, Inc. (together "Par Pharmaceutical"). Earlier in 2012, Bayer had received notice of an ANDA IV 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. Earlier in 2013, Bayer had received a similar notice from Par Pharmaceutical. In 2014, Par Pharmaceutical amended its ANDA IV to no longer seek market approval prior to patent expiration whereupon the suit against Par Pharmaceutical was dismissed without prejudice. Staxyn™ is an orodispersible (orally disintegrating) formulation of Levitra™. Both drug products contain the same active ingredient, which is protected in the U.S. by two patents expiring in 2018.

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.

Bayer Pharma AG former shareholder litigation: In 2008, the squeeze-out of the former minority shareholders of Bayer Pharma AG (formerly named Bayer Schering Pharma AG), Berlin, Germany, became effective. As usual in such cases, several shareholders have initiated special court proceedings to review the adequacy of the compensation payments made by Bayer for the transfer of the shares in the squeeze-out. In another court proceeding initiated by former minority shareholders of Bayer Pharma AG (formerly Bayer Schering Pharma AG) to review the adequacy of compensation payments made by Bayer in connection with the 2006 domination and profit and loss transfer agreement, the District Court (Landgericht) of Berlin decided in 2013 that the compensation paid by Bayer at the time should be increased by about 40%. Bayer disagrees with this decision and has appealed. Appropriate accounting measures have been taken for this proceeding as well as for the parallel proceeding relating to the squeeze-out of the former minority shareholders.

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.

CropScience:

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.

MaterialScience:

Partial exemption from the surcharge under the Renewable Energy Act: Under the German Renewable Energy Act (Erneuerbare-Energien-Gesetz) of 2012 ("EEG 2012"), all consumers of electricity normally have to pay a surcharge which is used to promote the development of renewable energies in Germany ("EEG surcharge"). Some energy-intensive companies are partially exempted from this surcharge. In 2013, the European Commission had launched a formal investigation into such partial exemptions. The investigation was closed in November 2014, and the European Commission approved in principle this German state aid regulation on renewable energies (EEG 2012). Remaining claims for further payments against which Bayer has appealed are in the low one digit million euro range. Bayer believes the risks remaining in this matter are no longer material.

TAX PROCEEDINGS

Stamp taxes in Greece: In February 2014, a Greek administrative court of first instance dismissed Bayer's appeal 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 a second court proceeding of first instance before the same court, Bayer has appealed against the assessment of stamp taxes and contingent penalties in a total amount of approximately €90 million. In addition, at the end of 2014 Bayer received new assessments of stamp tax and contingent penalties in a total amount of approximately €16 million which were appealed on administrative level. 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 €72 million (2013: €119 million) had limited availability due to foreign exchange restrictions. Past experience has shown such restrictions to be of short duration. The above amount included €64 million (2013: €96 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. In the event of a devaluation of the bolivar, the carrying amount of cash and cash equivalents will therefore be reduced accordingly.

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 for 2014 of €6,820 million (2013: €5,832 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 cash of €5,810 million (2013: €5,171 million) provided by operating activities (net cash flow) also takes into account the changes in working capital and other non-cash transactions.

An income-tax-related net cash outflow of €1,835 million (2013: €1,281 million) is included in the net cash flow for 2014. 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 non-cash items."

The transfers of bonds with a total value of €250 million to pension funds in the prior year were non-cash transactions and therefore did not result in an operating cash outflow.

In 2013, the net cash flow included €200 million in receipts from sales of securities held for trading, which must be reflected under operating activities according to IAS 7.

34. Net cash provided by (used in) investing activities

Net cash outflow for investing activities in 2014 amounted to €15,539 million (2013: €2,581 million).

Additions to property, plant and equipment and intangible assets in 2014 resulted in a cash outflow of €2,371 million (2013: €2,157 million). Cash inflows from sales of property, plant and equipment and other assets amounted to €143 million (2013: €153 million).

Cash outflows of €13,545 million (2013: €1,082 million) pertained to acquisitions, primarily those of the consumer care business of Merck & Co., Inc., United States, and Algeta ASA, Norway. The prior-year figure mainly comprised the acquisitions of Conceptus, Inc., United States; Teva Animal Health Inc., United States; the soybean seed producer Wehrtec Tecnologia Agricola Ltda., Brazil; the soybean business of Agricola Wehrmann Ltda., Brazil; the soybean seed producer FN Semillas S.A., Argentina; PROPHYTA Biologischer Pflanzenschutz GmbH, Germany; and Steigerwald Arzneimittelwerk GmbH, Germany. 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 €177 million (2013: inflow of €301 million).

The transfers of bonds with a total value of €250 million to pension funds in the prior year were non-cash transactions and therefore did not result in an investing cash inflow.

35. Net cash provided by (used in) financing activities

In 2014 there was a net cash inflow of €9,736 million (2013: outflow of €2,535 million) for financing activities. Net borrowings amounted to €11,838 million (2013: net loan repayments of €619 million).

Cash outflows for dividend payments amounted to €1,739 million (2013: €1,574 million). Net interest payments – including payments for and receipts from interest-rate swaps – rose to €362 million (2013: €338 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 4.87]

	PwC		Of which PwC AG WPG	
	2013	2014	2013	2014
	€ million	€ million	€ million	€ million
Financial statements auditing	10	12	3	4
Audit-related services and other audit work	4	4	3	3
Tax consultancy	2	2	–	–
Other services	1	6	1	–
Total	**17**	**24**	**7**	**7**

The fees for the auditing of financial statements mainly comprise those for the audits of the consolidated financial statements of the Bayer Group and the financial statements of Bayer AG and its subsidiaries. The fees for audit-related services and other audit work comprise those for audits of the internal control system – including project audits in connection with the implementation of new IT systems – along with interim financial statement reviews and other assurance services. The increase in other services is mainly the result of PwC's acquisition of Strategy& (formerly Booz & Company) effective April 1, 2014.

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, non-consolidated 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 non-consolidated 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 4.88]

	2013				2014			
	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
Non-consolidated subsidiaries	24	9	6	28	21	4	8	18
Joint ventures	25	–	5	2	29	–	4	–
Associates	8	703	3	1	33	758	5	5
Post-employment benefit plans	–	–	825	66	–	–	803	64

Goods and services in the amount of €737 million (2013: €703 million) were purchased from the associate PO JV, LP, Wilmington, United States, mainly in the course of day-to-day business operations.

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 for Bayer-Pensionskasse VVaG. The entire amount remained drawn as of December 31, 2014. Loan capital was first provided to Bayer-Pensionskasse VVaG in 2008 for its effective initial fund. This capital amounted to €595 million as of December 31, 2014 (2013: €595 million). The outstanding receivables, comprised of different tranches, are subject to a multi-year interest-rate adjustment mechanism. Bayer AG recognized €22 million in interest for the year 2014 and €32 million for 2013.

No impairment losses were recognized on receivables from related parties in 2014 (2013: €2 million).

38. Total compensation of the Board of Management and the Supervisory Board, advances and loans

The compensation of the Board of Management comprises short-term payments, stock-based payments and post-employment benefits.

The following table shows the individual components of the Board of Management's compensation according to IFRS:

Board of Management Compensation according to IFRS [Table 4.89]

	2013	2014
	€ thousand	€ thousand
Fixed annual compensation	3,774	4,118
Fringe benefits	182	443
Total short-term non-performance-related compensation	**3,956**	**4,561**
Short-term performance-related cash compensation	4,712	5,051
Total short-term compensation	**8,668**	**9,612**
Stock-based compensation (virtual Bayer shares) earned in the respective year	3,976	5,058
Change in value of existing entitlements to stock-based compensation (virtual Bayer shares)	5,030	1,559
Stock-based compensation (Aspire) earned in the respective year	2,925	3,602
Change in value of existing entitlements to stock-based compensation (Aspire)	2,312	687
Total stock-based compensation (long-term incentive)	**14,243**	**10,906**
Service cost for pension entitlements earned in the respective year	1,805	1,716
Total long-term compensation	**16,048**	**12,622**
Aggregate compensation (IFRS)	**24,716**	**22,234**

In addition to the above compensation, actuarial losses of €11,311 thousand (2013: gains of €1,437 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 sharp decline in interest rates (2013: rise in interest rates).

Further details are provided in the Compensation Report, which forms part of the Combined Management Report.

In addition to the provisions of €4,771 thousand (2013: €4,712 thousand) for the short-term variable cash compensation, an amount of €17,775 thousand (2013: €18,310 thousand) is 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, 2014.

An amount of €7,155 thousand (2013: €6,813 thousand) is 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, 2014.

The present value of the defined benefit pension obligation for the members of the Board of Management serving as of December 31, 2014, was €32,248 thousand (2013: €23,473 thousand).

Pension payments to former members of the Board of Management and their surviving dependents amounted to €13,457 thousand (2013: €12,871 thousand). The defined benefit obligation for former members of the Board of Management and their surviving dependents amounted to €187,759 thousand (2013: €150,148 thousand).

The compensation of the Supervisory Board amounted to €3,286 thousand (2013: €3,309 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 2014 was €737 thousand (2013: €727 thousand).

Pension obligations for employee representatives on the Supervisory Board amounted to €3,623 thousand (2013: €2,218 thousand).

There were no advances or loans to members of the Board of Management or the Supervisory Board outstanding as of December 31, 2014, or at any time during 2014 or 2013.

Leverkusen, February 13, 2015

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 13, 2015
Bayer Aktiengesellschaft

The Board of Management

Dr. Marijn Dekkers
Chairman

Werner Baumann

Johannes Dietsch

Michael König

Kemal Malik

Independent Auditor's Report

Report of the independent auditors of the consolidated financial statements

To Bayer Aktiengesellschaft, Leverkusen

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, 2014 to December 31, 2014.

Board of Management's Responsibility for the Consolidated Financial Statements

The Board of Management of Bayer Aktiengesellschaft is responsible for the preparation of these consolidated financial statements. This responsibility includes that these consolidated financial statements are prepared in accordance with International Financial Reporting Standards, as adopted by the E.U., and the additional requirements of German commercial law pursuant to § (Article) 315a Abs. (paragraph) 1 HGB ("Handelsgesetzbuch": German Commercial Code) and that these consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The Board of Management is also responsible for the internal controls as the Board of Management determines are necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW) and additionally observed the International Standards on Auditing (ISA). Accordingly, we are required to comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing audit procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The selection of audit procedures depends on the auditor's professional judgment. This includes the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In assessing those risks, the auditor considers the internal control system relevant to the entity's preparation of consolidated financial statements that give a true and fair view. The aim of this is to plan and perform audit procedures that are appropriate in the given circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Board of Management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Audit Opinion

According to § 322 Abs. 3 Satz (sentence) 1 HGB, we state that our audit of the consolidated financial statements has not led to any reservations.

In our opinion based on the findings of our audit, the consolidated financial statements comply, in all material respects, with IFRSs, as adopted by the E.U., and the additional requirements of German commercial law pursuant to § 315a Abs. 1 HGB and give a true and fair view of the net assets and financial position of the Group as at December 31, 2014 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, 2014 to December 31, 2014, 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 14, 2015

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Dr. Peter Bartels
Wirtschaftsprüfer

Anne Böcker
Wirtschaftsprüferin

03
Further Information

For direct access to a chapter, simply click on its name.

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, 2014 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)

THOMAS DE WIN
Cologne, Germany
(born November 21, 1958)

Vice Chairman of the Supervisory Board, Member of the Supervisory Board effective April 2002

Chairman of the Bayer Group Works Council

Chairman of the Bayer Central Works Council (until February 2015)

Memberships on other supervisory boards:

- Bayer MaterialScience AG

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

Chairman 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 (Chairman)
- Heraeus Holding GmbH

Memberships in comparable supervising bodies of German or foreign corporations:

- Henkel AG & Co. KGaA (Chairman 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) (effective July 2014)

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 of Bayer

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 Group Managerial Employees' Committee of Bayer

Memberships on other supervisory boards:

- Bayer MaterialScience AG

PETER HAUSMANN
Winsen/Aller, Germany
(born February 13, 1954)

Member of the Supervisory Board effective April 2006

Member of the Executive Committee of the German Mining, Chemical and Energy Industrial Union

Memberships on other supervisory boards:

- 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

Memberships on other supervisory boards:

- Evonik Services GmbH (Vice Chairman) (until June 2014)
- SASOL Germany GmbH (Vice Chairman) (until October 2014)

YÜKSEL KARAASLAN
Hohen Neuendorf, Germany
(born March 1, 1968)

Member of the Supervisory Board effective April 2012

Chairman of the Works Council of the Berlin site of Bayer

Vice Chairman of the Bayer Central Works Council

Memberships on other supervisory boards:

- Bayer Pharma AG

DR. RER. POL. KLAUS KLEINFELD
New York, U.S.A.
(born November 6, 1957)

Member of the Supervisory Board until September 2014

Chairman and Chief Executive Officer of Alcoa Inc.

Memberships in comparable supervising bodies of German or foreign corporations:

- Member of the Board of Directors of Morgan Stanley
- Member of the Board of Directors of Hewlett-Packard Company (effective July 2014)

PETRA KRONEN
Krefeld, Germany
(born August 22, 1964)

Member of the Supervisory Board effective July 2000

Chairman of the Works Council of the Uerdingen site of Bayer

Memberships on other supervisory boards:

- Bayer MaterialScience AG (Vice Chairman)

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

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 (non-executive) of Cabot Corporation, Boston, U.S.A.

PETRA REINBOLD-KNAPE
Berlin, Germany
(born April 16, 1959)

Member of the Supervisory Board effective April 2012

Northeast District Secretary of the German Mining, Chemical and Energy Industrial Union

Memberships on other supervisory boards:

- envia Mitteldeutsche Energie AG
- Vattenfall Europe Generation AG

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 of Bayer

Memberships on other supervisory boards:

- Bayer Pharma AG (until May 2014)

PROF. DR.-ING. EKKEHARD D. SCHULZ
Krefeld, Germany
(born July 24, 1941)

Member of the Supervisory Board until April 2014

Member of various supervisory boards

Memberships on other supervisory boards:

- MAN SE (Vice Chairman)
- RWE AG

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 Rückversicherung AG (Vice Chairman)

Memberships in comparable supervising bodies of German or foreign corporations:

- Sulzer AG

PROF. DR. DR. H.C. OTMAR D. WIESTLER
Heidelberg, Germany
(born November 6, 1956)

Member of the Supervisory Board effective October 2014

Chairman and Scientific Member of the Management Board of the German Cancer Research Center

PROF. DR. DR. H.C. MULT. ERNST-LUDWIG WINNACKER
Munich, Germany
(born July 26, 1941)

Member of the Supervisory Board effective April 1997

Secretary General of the Human Frontier Science Program, Strasbourg

Memberships on other supervisory boards:

- Wacker Chemie AG

OLIVER ZÜHLKE
Solingen, Germany
(born December 11, 1968)

Member of the Supervisory Board effective April 2007

Chairman of the Bayer Central Works Council (effective February 2015)

Chairman of the Works Council of the Leverkusen site of Bayer

Chairman of the Bayer European Forum

Memberships on other supervisory boards:

- Bayer Pharma AG (effective May 2014)

Standing committees of the Supervisory Board of Bayer AG
(as at Dec. 31, 2014)

PRESIDIAL COMMITTEE/ MEDIATION COMMITTEE
Wenning (Chairman), Achleitner, Hausmann, de Win

AUDIT COMMITTEE
Sturany* (Chairman), Fischer, Hoffmann, Panke, Wenning, de Win

HUMAN RESOURCES COMMITTEE
Wenning (Chairman), Achleitner, Kronen, Zühlke

NOMINATIONS COMMITTEE
Wenning (Chairman), Achleitner

* 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, 2014 or the date on which they ceased to be members of the Board of Management of Bayer AG):

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 Business Services GmbH (Chairman) (until September 30, 2014)
- Bayer CropScience AG (Chairman)
- Bayer MaterialScience AG (Chairman) (effective April 30, 2014)

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) (effective October 1, 2014)

MICHAEL KÖNIG
(born September 3, 1963)

Member of the Board of Management effective April 1, 2013, appointed until March 31, 2016

Labor Director

- Bayer HealthCare AG (Chairman)
- Bayer Pharma AG (Chairman)
- Bayer Technology Services GmbH (Chairman effective June 13, 2014)
- Currenta Geschäftsführungs-GmbH (Chairman)

KEMAL MALIK
(born September 29, 1962)

Member of the Board of Management effective February 1, 2014, appointed until January 31, 2017

PROF. DR. WOLFGANG PLISCHKE
(born September 15, 1951)

Member of the Board of Management until April 29, 2014

- Bayer MaterialScience AG (Chairman)
- Bayer Technology Services GmbH (Chairman)

Organization Chart

[Graphic 5.1]

BAYER AG (HOLDING COMPANY)

Group Management Board

Marijn Dekkers
Chairman

Werner Baumann[1]
Strategy and Portfolio Management

Johannes Dietsch
Finance

Michael König*
Human Resources, Technology, Sustainability

Kemal Malik
Innovation

Corporate Center

Corporate Office
M. Arnold
Corporate Brand, Communications and Government Relations
H. Heitmann
Investor Relations
A. Rosar
Corporate Audit
R. Schwarz

Mergers & Acquisitions
F. Rittgen
Corporate Development
T.-P. Hausner

Law, Patents & Compliance
R. Hartwig
Regional Coordination
I. Paterson
Group Accounting & Controlling
U. Hauck[2]
Finance
P. Müller
Global Taxes
B.-P. Bier

Environment & Sustainability
W. Grosse Entrup
Corporate Human Resources & Organization
H.-U. Groh
Technology & Manufacturing Strategy
T. Kirchner

Digital Strategy
J. Federer
Innovation Strategy
M. Lessl

BUSINESS AREAS

Bayer HealthCare

O. Brandicourt[2] (photo)
Chairman
M. Vehreschild
Chief Financial Officer
D. Ehle
Animal Health
E. Mann
Consumer Care
A. Main
Medical Care
D. Weinand
Pharmaceuticals
A. Busch
Global Drug Discovery
J. Möller
Global Development
M. Devoy
Chief Medical Officer
H. Klusik*
Product Supply
N. Sheail
Business Development & Licensing
S. Gehring
General Counsel
A. Günther
Human Resources
O. Renner
Communications and Public Affairs

Bayer CropScience

L. Condon (photo)
Chairman
M. A. Schulz
Chief Financial Officer
B. Naaf*
Business Management
M. Reichhardt
Agricultural Commercial Operations
G. Riemann[3]
Environmental Science
M. Haug
Human Resources
S. Kurzawa
Communications
G. Marchand
General Counsel
A. Percy
Research & Development
D. Backhaus
Product Supply
M. Kremer
Strategy

Bayer MaterialScience

P. Thomas (photo)
Chairman
F. H. Lutz
Chief Financial Officer
J. Wolff
Polyurethanes
M. Steilemann
Polycarbonates
D. Meyer
Coatings, Adhesives, Specialties
K. Schäfer
Industrial Operations
G. Harnier
General Counsel
M. Bernhardt*
Human Resources
R. Northcote
Communications, Public Affairs & Sustainability

*Labor Director

[1] also Chairman of Bayer HealthCare effective April 1, 2015
[2] until March 31, 2015
[3] J. Applegate from April 1, 2015

SERVICE AREAS

Bayer Business Services

Executive Board
D. Hartert (photo)
Chairman
W. Oehlschläger*

Bayer Technology Services

D. Van Meirvenne
Managing Director

Currenta

Executive Board
G. Hilken (photo)
Chairman
J. Waldi*

as of February 1, 2015

Index of the Global Reporting Initiative (GRI) and the 10 UN Global Compact Principles

UNGC principles	GRI Core Indicators according to the G3.1 Guidelines		Level of reporting	Page reference	Online annex
	VISION & STRATEGY				
1-10	**1.1**	Statement from the most senior decision-maker of the organization	full	1-7	
	1.2	Description of key impacts, risks, and opportunities	full	49-52, 54, 57-59, 77f., 87f., 175, 177-179	3-6-1, 3-6-4
	ORGANIZATIONAL PROFILE				
	2.1	Name of the organization	full	46	
	2.2	Primary brands, products, and/or services	full	46, 55, 91-95, 241	
	2.3	Operational structure of the organization	full	55, 216-219	
	2.4	Location of organization's headquarters	full	46	
	2.5	Number of countries where the organization operates, and names of countries with major operations Vision & Strategy	full	47, 130f.	3-15.5-1
	2.6	Nature of ownership and legal form	full	43, 46	
	2.7	Markets served	full	47, 91-95, 130f.	
	2.8	Scale of the reporting organization	full	46, 132, 140	
	2.9	Significant changes during the reporting period	full	57, 72-74, 220-227	
	2.10	Awards received in the reporting period	full	42, 79	
	REPORT PARAMETERS				
	3.1	Reporting period for information provided	full	front cover	
	3.2	Date of most recent previous report	full	Annual Report: Feb. 28, 2014	
	3.3	Reporting cycle	full	annually	
	3.4	Contact point for questions regarding the report or its contents	full	inside cover	
	3.5	Process for defining report content	full	31, 77f.	
	3.6	Boundary of the report	full	31	
	3.7	State any specific limitations on the scope or boundary of the report	full	31	
	3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities	full	31	
	3.9	Data measurement techniques and the bases of calculations	full	31, 105, 201-216	
	3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement	full	47, 62, 80, 86, 166, 190, 196, 201	
	3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	full	none	
	3.12	Table identifying the location of the Standard Disclosures in the report	full	302f.	
	3.13	Policy and current practice with regard to seeking external assurance	full	31, 295f.	
	GOVERNANCE, COMMITMENTS, AND ENGAGEMENT				
1-10	**4.1**	Governance structure of the organization	full	32-38, 147-151	
	4.2	Indicate whether the Chair of the highest governance body is also an executive officer	full	34-38, 149	
	4.3	Number and gender of members of the highest governance body that are independent and/or non-executive members	full	n.a.	
	4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	full	43, 152, Financial Calendar	
	4.5	Linkage between compensation of the highest governance body, senior managers, and executives and the organization's performance	full	81, 153, 156, 158, 166	
	4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided	full	150f., 153	
1-10	**4.7**	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity	full	77, 149f.	
1-10	**4.8**	Statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance	full	47f., 77	3-6-2
	4.9	Procedures of the highest governance body for overseeing the organization, identification and management of sustainability performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles	full	77, 100, 149, 153, 176, 178	3-11-2
	4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to sustainability	full	166f.	
7	**4.11**	Explanation if precautionary approach or principle is addressed	full	95	3-10-1
1-10	**4.12**	Support of externally developed economic, environmental, and social charters, principles, or other initiatives	full	43, 77, 95, 104, 107, 109, 153	3-3-BHC-1
	4.13	Principal memberships in industry associations and/or national/international advocacy organization's	full		3-6-2, 3-6-4, 3-10-2, 3-10-BCS-1, 3-11-5, 3-12.3-1
1-10	**4.14**	List of stakeholder groups engaged by the organization	full	54	3-6-4
	4.15	Basis for identification and selection of stakeholders with whom to engage	full	54, 78	3-6-4
	4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	full	43, 77f., 82, 152	3-6-4, 3-7-7
1-10	**4.17**	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded	full	31, 54, 77f., 177	3-6-3, 3-6-4

UNGC principles		GRI Core Indicators according to the G3.1 Guidelines	Level of reporting	Page reference	Online annex
1, 6, 7		**ECONOMIC PERFORMANCE INDICATORS – MANAGEMENT APPROACH**	full	46-48, 50, 52f., 87, 112	
	EC1	Direct economic value generated and distributed	full	52f., 84f., 111, 233-236	3-13-1
7	**EC2**	Financial implications and other risks and opportunities due to climate change	full	104, 180, 182	
1, 6	**EC3**	Coverage of the organization's defined benefit plan obligations	full	84f., 86, 253-261	
	EC4	Significant financial assistance received from government	full	62	3-5-2
	EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	partial	87f., 97	3-8-1, 3-8-2
6	**EC7**	Local hiring: policy and proportion of senior management hired from the local community	full	83	
	EC8	Infrastructure investments and services provided primarily for public benefit	full	112	3-3-BHC-1, 3-8-6, 3-10-BCS-2, 3-13-4
7, 8, 9		**ENVIRONMENTAL PERFORMANCE INDICATORS – MANAGEMENT APPROACH**	full	51, 76, 89-91, 102-110, 153, 181-183	3-12.5-2
8, 9	**EN1**	Materials used by weight or volume	partial	89, 91, 109	
8, 9	**EN2**	Percentage of materials used that are recycled input materials	partial		3-12.4-2
8	**EN3/ EN4**	Direct and indirect energy consumption by primary energy source	full	103f.	
8	**EN8**	Total water withdrawal by source	full	107	3-12.3-3
8	**EN11**	Use of land in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	partial	109	3-12.5-1
8	**EN12**	Significant impacts of activities, products, and services on biodiversity in protected areas	full	109	3-12.5-1, 3-12-5.2
8, 9	**EN16**	Total direct and indirect greenhouse gas emissions by weight	full	105	
8	**EN17**	Other relevant indirect greenhouse gas emissions by weight	full	106	3-12.2-6
8	**EN19**	Emissions of ozone-depleting substances by weight	full	106	
8	**EN20**	NOx, SOx, and other significant air emissions by type and weight	full	106	3-12.2-7
8	**EN21**	Total water discharge by quality and destination	full	107f.	
8	**EN22**	Total weight of waste by type and disposal method	full	109	3-12.2-4, 3-12.4-1, 3-12.4-2
8	**EN23**	Total number and volume of significant spills	full	110	3-12.6-2
7, 8, 9	**EN26**	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	full	76, 98f., 104f.	3-10-BHC-2, 3-10-BCS-2, 3-12.2-1, 3-12.2-2
	EN27	Percentage of products sold and their packaging materials that are reclaimed by category	partial		3-12.4-2
	EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	full	183, 261f., 284, 286f.	
		SOCIAL PERFORMANCE INDICATORS			
1, 3, 6		**Labor Practices and Conditions – Management Approach**	full	49, 51f., 79, 82-87, 100, 182	3-7-7
	LA1	Total workforce by employment type, employment contract, and region, broken down by gender	full	79-81, 84	3-7-2, 3-7-4, 3-7-10
6	**LA2**	Total number and rate of new employee hires and employee turnover by age group, gender, and region	partial	79, 81	3-7-1, 3-7-3
1, 3	**LA4**	Employees covered by collective bargaining agreements	full	85f.	
1, 3	**LA5**	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	full	82	3-6-4, 3-7-6, 3-7-7
1	**LA7**	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender	partial	100f.	3-11-1
	LA8	Prevention and risk-control programs in place regarding serious diseases	full	86f., 100f.	3-7-15, 3-11-2, 3-11-3
	LA10	Average hours of training per year per employee by gender, and by employee category	full	82f.	
1,6	**LA13**	Composition of governing bodies and breakdown of employees according to age group/gender/culture	partial	80, 83, 86, 150f., 298-301	3-7-9
1,6	**LA14**	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	partial	84	3-7-13
1,6	**LA15**	Return to work and retention rates after parental leave, by gender	full	84	3-7-11
1-6		**Human Rights – Management Approach**	full	50, 52, 77, 85, 87-89, 103, 153, 181	3-8-6
1-6	**HR1**	Significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening (percentage and total number)	partial	103	
1-6	**HR2**	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken	full	87f.	3-8-4
1-6	**HR3**	Employee training on human rights, including the percentage of employees trained	partial	85, 88	3-8-5
1, 2, 6	**HR4**	Total number of incidents of discrimination and corrective actions taken	partial	154, 177	3-18.3-3
1-5	**HR5-7**	Operations and significant suppliers: support of freedom of association and collective bargaining, abolition of child labor, elimination of all forms of forced or compulsory labor	full	85, 87-89	3-8-6
	HR10	Percentage/Number of operations verified for observance of human rights	partial	85, 87-89, 153f.	
	HR11	Number of grievances relating to human rights and measures taken	partial	85, 87f., 153f., 177	3-18.3-3
10		**Society – Management Approach**	full	51, 101f., 106f., 111f., 153f., 177, 183	3-6-4, 3-9-BHC-2, 3-13-2, 3-18.3-3
	SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	full	111	3-6-4
10	**SO2**	Corruption: Percentage and total number of business units analyzed	partial	153	3-18.3-1
10	**SO3**	Corruption: Percentage of employees trained in anti-corruption	full	154	3-18.3-2
10	**SO4**	Actions taken in response to incidents of corruption	partial	154, 177, 183, 261f., 284	3-18.3-3
1-10	**SO5**	Public policy positions and participation in public policy development and lobbying	full	97	3-5-3, 3-6-4
	SO8	Monetary value of significant fines and sanctions for non-compliance with laws and regulations	full	183, 261f., 284-287	
	SO9	Operations with (potential) negative impacts on local communities	full	101f., 107, 110	3-11-4
	SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities	full	101f., 107, 110	3-12.3-2, 3-12.6-2
1, 8		**Product Stewardship – Management Approach**	full	51f., 91-99, 153, 181-183	3-9-BHC-1, 3-9-BHC-2, 3-9-BHC-3, 3-9-BMS-1
1, 8	**PR1**	Product life cycle stages for which health and safety impacts are assessed and percentage of products subject to such procedures	full	64, 95-99	3-10-1, 3-10-4, 3-10-BMS-1
8	**PR3**	Type of product information required by procedures, and percentage of products subject to such information requirements	full	95-97, 99	3-10-BHC-1, 3-10-BMS-1
10	**PR6**	Programs for adherence to laws, standards, and voluntary codes related to marketing communications	full	91-95	3-9-BHC-1, 3-9-BHC-2, 3-10-6
	PR9	Significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	full	183, 261f., 284-287	

Glossary

C

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 return on investment (CFROI) The CFROI is the difference between the gross cash flow in the 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 period.

Cash value added (CVA) This is the difference between the gross cash flow and 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).

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.

(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) Credit default swaps are tradable insurance contracts used to hedge against the default of a borrower.

D

Diversity designates the variation within the workforce in terms of gender, origin, nationality, age, religion and physical capability.

E

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.

Environmental aspect analysis involves identifying the aspects of the activities, products or services of an organization that can impact the environment.

F

Fluoroquinolones are a group of antibiotics.

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 chains, as well as emissions resulting from third-party and acquired upstream services (Scope 3).

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.

GRI (Global Reporting Initiative) is a charitable organization that works on behalf of 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 the Ceres Coalition of environmentally responsible economies and the United Nations Environment Programme (UNEP).

Gross cash flow 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

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, issuer bankruptcy carries a lower likelihood of repayment than a normal bond.

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.

L

Life Sciences Field of activities comprising particularly health care and agriculture. At Bayer this refers to the activities of the HealthCare and CropScience subgroups.

N

Neonicotinoids Chemical class of systemic insecticides

O

OTC At Bayer HealthCare, 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

Phase I-III studies are clinical phases in the development of a drug product. The active ingredient candidate is tested in healthy subjects (with the exception of oncology) in Phase I, and in sick patients in Phases II and III. 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/EPS ratio (price/earnings ratio) This is the ratio of the current share price to earnings per share. A high price/EPS ratio indicates that the market assigns a high value to the stock in the expectation of future earnings growth.

S

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 anti-corruption. 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

Water stewardship is the sustainable use of water as a natural resource.

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.

WHO Class I The World Health organization (WHO) divides crop protection products into various hazard classes. Class I products are deemed to be extremely hazardous.

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Five-Year Summary

[Table 1.2]

	2010	2011	2012	2013	2014
	€ million	€ million	€ million	€ million	€ million
Bayer Group					
Sales	35,088	36,528	39,741	40,157	42,239
Sales outside Germany	87.4%	87.3%	88.3%	87.9%	88.2%
EBIT[1]	2,730	4,149	3,928	4,934	5,506
EBIT before special items[2]	4,452	5,025	5,639	5,773	5,944
EBITDA[2]	6,286	6,918	6,916	7,830	8,442
EBITDA before special items[2]	7,101	7,613	8,280	8,401	8,812
Income before income taxes	1,721	3,363	3,176	4,207	4,525
Income after income taxes	1,310	2,472	2,453	3,186	3,443
Earnings per share (€)[3]	1.57	2.99	2.91	3.86	4.14
Core earnings per share (€)	4.19	4.83	5.30	5.61	6.02
Noncurrent assets	**33,188**	**32,697**	**32,308**	**32,289**	**48,007**
of which goodwill and other intangible assets	20,163	19,455	18,757	18,776	31,821
of which property, plant and equipment	9,835	9,823	9,898	10,015	11,428
Current assets	**18,318**	**20,068**	**19,010**	**19,028**	**22,227**
Inventories	6,104	6,368	6,991	7,129	8,478
Receivables and other current assets	9,374	11,846	10,321	10,237	11,896
Cash and cash equivalents	2,840	1,770	1,698	1,662	1,853
Financial liablities	**11,833**	**11,679**	**9,530**	**9,031**	**21,860**
Noncurrent	9,944	7,995	6,962	5,590	18,484
Current	1,889	3,684	2,568	3,441	3,376
Interest expense – net	(499)	(335)	(252)	(355)	(356)
Return on equity	6.9%	13.0%	13.0%	16.2%	16.8%
Gross cash flow[4]	4,771	5,172	4,556	5,832	6,820
Capital expenditures (total)	1,621	1,666	1,929	2,157	2,371
Depreciation and amortization	2,571	2,521	2,641	2,611	2,713
Research and development expenses	3,053	2,932	3,013	3,406	3,574
Equity including non-controlling interest (total)	**18,896**	**19,271**	**18,551**	**20,804**	**20,218**
Capital stock	2,117	2,117	2,117	2,117	2,117
Reserves	16,779	17,154	16,434	18,687	18,101
Net income	1,301	2,470	2,403	3,189	3,426
Non-controlling interest	63	59	100	86	112
Liabilities (total)	**32,610**	**33,494**	**32,767**	**30,513**	**50,016**
Total assets	**51,506**	**52,765**	**51,318**	**51,317**	**70,234**
Equity ratio	**36.7%**	**36.5%**	**36.1%**	**40.5%**	**28.8%**
Bayer AG					
Net income	1,245	1,125	889	2,498	2,454
Allocation to (withdrawal from) retained earnings	5	(239)	(682)	761	593
Total dividend payment	1,240	1,364	1,571	1,737	1,861
Dividend per share (€)	1.50	1.65	1.90	2.10	2.25

[Table 1.2 (continued)]

	2010	2011	2012	2013	2014
Employees					
Number of employees[5] (Dec. 31)	111,400	111,800	110,000	112,400	118,900
Personnel expenses (including pension expenses) (€ million)	8,099	8,726	9,194	9,430	9,845
Proportion of women in senior management (%)	21	22	23	25	26
Number of nationalities in the Group Leadership Circle	21	22	23	31	35
Proportion of employees with health insurance (%)	94	94	94	95	96
Proportion of employees covered by collective agreements on pay and conditions (%)	55	54	53	54	52
Safety					
Recordable Incident Rate for Bayer employees (RIR)	0.62	0.56	0.49	0.47	0.43
Lost Time Recordable Incident Rate for Bayer employees (LTRIR)	0.34	0.31	0.27	0.26	0.22
Loss of Primary Containment Incident Rate (LoPC-IR)[6]	–	–	0.38	0.35	0.23
Number of transport incidents	8	7	6	11	12
Environmental Protection					
Direct greenhouse gas emissions (CO_2 equivalents in million t)[7]	4.80	4.23	4.24	4.09	4.02
Indirect greenhouse gas emissions (CO_2 equivalents in million t)[7]	3.70	3.92	4.12	4.29	4.70
Volatile organic compounds (VOC) (thousand t/a)[8]	2.54	2.69	2.60	2.27	2.12
Ozone-depleting substances (ODS) (t/a)[9]	20.77	16.31	16.28	15.65	14.79
Total organic carbon (TOC) (thousand t/a)	1.42	1.50	1.42	1.53	1.20
Total phosphorus in wastewater (thousand t/a)	0.09	0.08	0.15	0.11	0.10
Total nitrogen in wastewater (thousand t/a)	0.49	0.53	0.70	0.69	0.76
Hazardous waste generated (thousand t/a)	354	474	603	467	487
Hazardous waste landfilled (thousand t/a)	56	122	175	53	65
Water use (million m^3/a)	474	411	384	361	350
Primary energy consumption (petajoules/a)[10]	51.63	50.10	49.05	47.58	45.57
Secondary energy consumption (petajoules/a)[10]	34.08	34.85	34.14	33.27	39.74
Energy efficiency (MWh/t)[11]	3.77	3.63	3.50	3.44	3.37

2013 figures restated; figures for 2010–2012 as last reported

[1] EBIT = earnings before financial result and taxes

[2] For definition see Combined Management Report, Chapter 16.2 "Calculation of EBIT(DA) Before Special Items."

[3] 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.

[4] For definition see Combined Management Report, Chapter 16.5 "Liquidiy and Capital Expenditures of the Bayer Group."

[5] Full-time equivalents

[6] 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. LoPC-IR has been recorded since 2012.

[7] Portfolio-adjusted in accordance with the Greenhouse Gas Protocol

[8] Volatile organic compounds (VOC) excluding methane

[9] Ozone-depleting substances (ODS) in CFC-11 equivalents

[10] 1 petajoule = 10^{15} joules

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

Financial Calendar

Q1 2015 Interim Report	**April 30, 2015**
Annual Stockholders' Meeting 2015	**May 27, 2015**
Planned dividend payment date	**May 28, 2015**
Q2 2015 Interim Report	**July 29, 2015**
Q3 2015 Interim Report	**October 29, 2015**
2015 Annual Report	**February 24, 2016**
Q1 2016 Interim Report	**April 26, 2016**
Annual Stockholders' Meeting 2016	**April 29, 2016**

Masthead

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This Annual Report contains forward-looking statements based on current assumptions and forecasts made by Bayer Group or subgroup management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual financial position, 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 www.bayer.com. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.