

Combined Management Report

of the Bayer Group and Bayer AG

as of December 31, 2010

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Fiscal 2010:

Bayer: operating performance on track

Progress in research and development spurs optimism

- Group targets achieved
 - Strong year at MaterialScience – HealthCare and CropScience below expectations
 - Over €3 billion for research and development
 - Net income diminished by high special charges
 - Strong operating cash flow – net financial debt below €8 billion
 - Confidence for 2011: core earnings per share expected to grow by about 10%
-

1. Overview of Sales, Earnings and Financial Position

FULL YEAR 2010

Bayer achieved its targets for the Group in 2010. Sales rose by 12.6% – or by 8.0% on a currency- and portfolio-adjusted basis (Fx & portfolio adj.) – to a record €35.1 billion. EBITDA before special items improved by 9.7% to €7.1 billion. Core earnings per share advanced by 15.1% to €4.19. These increases were attributable to the strong recovery in the MaterialScience business and to positive currency effects. However, HealthCare did slightly less well than expected, while CropScience was well below our expectations, particularly in the first half of the year. We have adopted a package of selected measures to strengthen HealthCare and CropScience for the long term and enhance our innovative capability. At the same time we significantly raised our research and development (R&D) spending in 2010 to €3.1 billion (2009: €2.7 billion) to support our R&D pipeline, which continues to develop positively.

Net income, however, receded by 4.3% to €1,301 million (2009: €1,359 million), greatly hampered in 2010 by special charges of €1.7 billion, mainly for impairments and litigations. Earnings per share thus came in at only €1.57 (2009: €1.70).

Net financial debt declined by €1.8 billion to €7.9 billion, thanks to a further improvement in operating cash flow.

Change in Sales

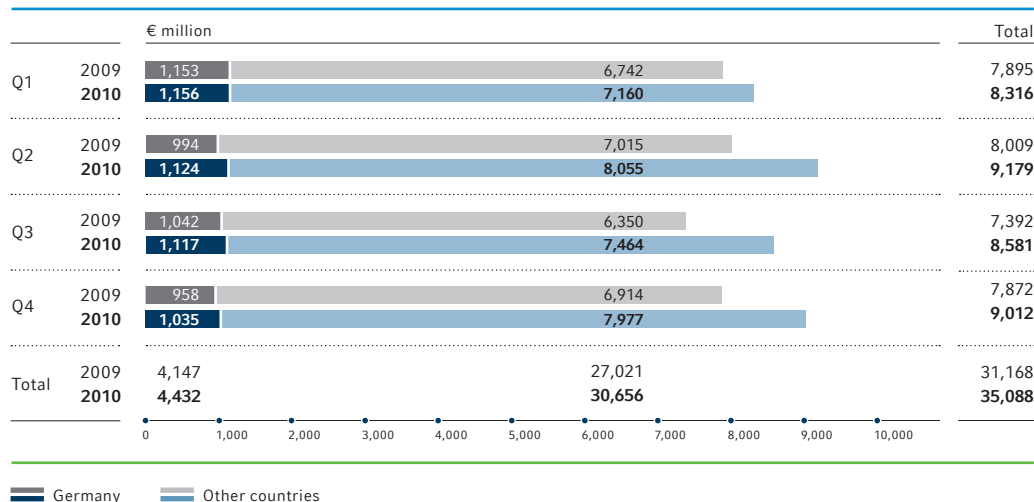
[Table 3.1]

	2009	2010
	%	%
Volume	-2.9	+6.7
Price	-2.8	+1.3
Currency	+0.6	+4.9
Portfolio	-0.2	-0.3
Total	-5.3	+12.6

Group **sales** rose to €35,088 million (2009: €31,168 million). On a currency- and portfolio-adjusted basis, business at HealthCare edged forward by 1.7%. Sales of CropScience came in slightly below the prior year (Fx & portfolio adj. -1.3%) due to the weak first-half performance. By contrast, business expanded by a substantial 30.1% (Fx & portfolio adj.) at MaterialScience due to the economic recovery, with volumes already back to 2008 levels by the second quarter.

Bayer Group Quarterly Sales

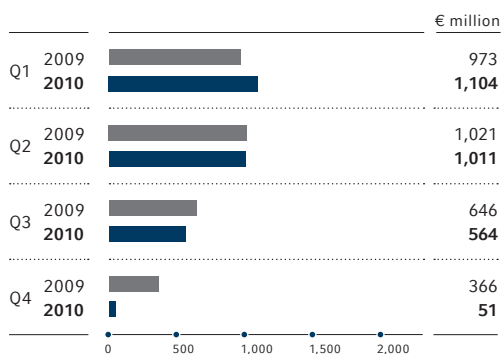
[Graphic 3.1]



Despite the positive business development at MaterialScience, **EBIT** of the Bayer Group fell by 9.2% to €2,730 million (2009: €3,006 million). Earnings were diminished by special charges of €1,722 million (2009: €766 million). Of the special charges for 2010, impairments accounted for €957 million, litigations for €703 million and restructuring for €62 million. EBIT before special items amounted to €4,452 million (2009: €3,772 million). **EBITDA** before special items advanced by 9.7% to €7,101 million (2009: €6,472 million) buoyed by some €0.4 billion in positive currency effects. EBITDA before special items of MaterialScience tripled to €1,356 million, largely on account of significantly higher volumes and selling prices. By contrast, EBITDA before special items of CropScience fell by 14.3% to €1,293 million (2009: €1,508 million) in a weak, fiercely contested market. At HealthCare, EBITDA before special items dipped to €4,405 million (2009: €4,468 million), mainly as a result of higher selling and R&D expenses, negative effects of the health system reforms in various countries, and the effects of the early genericization of YAZ® in the United States.

**Bayer Group
Quarterly EBIT**

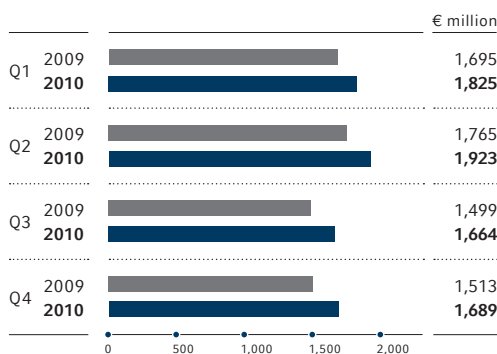
[Graphic 3.2]



Q1-3 2010 figures restated

**Bayer Group
Quarterly EBITDA Before Special Items**

[Graphic 3.3]

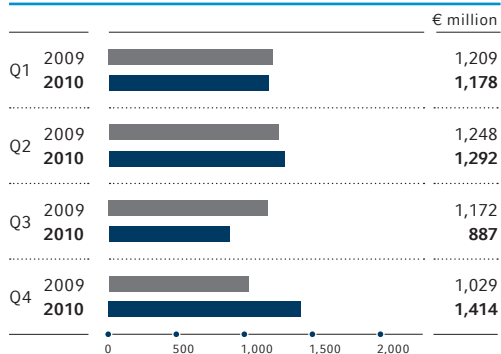


Q1-3 2010 figures restated

After a **non-operating result** of minus €1,009 million (2009: minus €1,136 million), including net interest expense of €499 million (2009: €548 million), **income before income taxes** amounted to €1,721 million (2009: €1,870 million). After tax expense of €411 million (2009: €511 million) and non-controlling interest, **net income** for 2010 was €1,301 million (2009: €1,359 million). Earnings per share came in at €1.57 (2009: €1.70). Core earnings per share increased by 15.1% to €4.19 (2009: €3.64). The calculation of core earnings per share is explained in Chapter 4.3 "Core Earnings Per Share."

Gross Cash Flow by Quarter

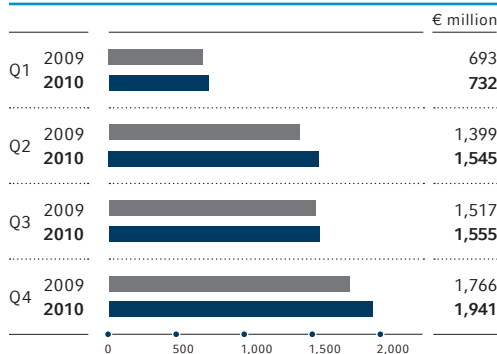
[Graphic 3.4]



Q1-3 2010 figures restated

Net Cash Flow by Quarter

[Graphic 3.5]



Gross cash flow in 2010 improved by 2.4% to €4,771 million (2009: €4,658 million). After a significant reduction in tied-up funds thanks to a further improvement in our working capital management, net cash flow advanced by 7.4% to €5,773 million (2009: €5,375 million). Net financial debt fell by €1.8 billion compared to December 31, 2009, amounting to €7.9 billion at the end of 2010. The net pension liability – the aggregate of pension obligations and plan assets – rose by €0.8 billion compared with December 31, 2009, to €7.2 billion, mainly because of lower long-term interest rates on the capital market.

FOURTH QUARTER OF 2010

The Bayer Group achieved substantial increases in sales and underlying earnings in the fourth quarter of 2010, while EBIT was held back mainly by impairments. The improvement in our operating performance was mainly due to the continued recovery in the MaterialScience business. CropScience raised sales and EBITDA before special items. At HealthCare, sales edged ahead while EBITDA before special items posted a slight year-on-year decline.

Group **sales** grew by 14.5% to €9,012 million (Q4 2009: €7,872 million). Adjusted for currency and portfolio effects (Fx & portfolio adj.), business expanded by 8.1%. HealthCare sales increased by 7.3% (Fx & portfolio adj. +1.4%), with business in the Pharmaceuticals segment advancing slightly overall on a currency- and portfolio-adjusted basis despite a decrease in North America. Consumer Health sales were level with the previous year after adjusting for currency effects. The drop in sales of blood glucose monitoring systems in the United States, caused by the difficult market situation, was offset by the positive development in the other divisions. CropScience had a strong fourth quarter, with sales advancing by 18.2% (Fx & portfolio adj. +9.7%) in a positive market environment. Sales of MaterialScience climbed by 28.2% (Fx & portfolio adj. +21.6%) from the low prior-year figure, which was due to the economic crisis.

EBIT of the Bayer Group dropped by 86.1% to €51 million (Q4 2009: €366 million). Fourth-quarter earnings in 2010 were diminished by substantial special charges totaling €954 million (Q4 2009: €451 million), which in 2010 principally included impairment losses of €825 million. Of the remaining amount, €67 million was incurred for litigations in the United States, including €41 million at HealthCare relating to YAZ®/Yasmin® and €26 million at CropScience relating mainly to an intended settlement program in connection with litigations concerning genetically modified rice (LL RICE). We also took special charges of €62 million for restructuring in HealthCare. EBIT before special items improved by 23.0% to €1,005 million (Q4 2009: €817 million).

EBITDA before special items of the Bayer Group improved by 11.6% to €1,689 million (Q4 2009: €1,513 million), driven mainly by strong earnings growth at MaterialScience and positive currency effects. HealthCare recorded EBITDA before special items of €1,138 million (Q4 2009: €1,154 million), including a €68 million gain from the settlement of a patent dispute concerning YAZ® that partially offset the margin loss during the year. EBITDA before special items of CropScience advanced to €270 million (Q4 2009: €166 million), including one-time income of €44 million from the divestment of some older active ingredients and the execution of a license agreement. At MaterialScience, EBITDA before special items came in at €297 million (Q4 2009: €203 million).

After a non-operating result of minus €237 million (Q4 2009: minus €248 million), we recorded a pre-tax loss of €186 million for the fourth quarter of 2010 (Q4 2009: income of €118 million), leading to tax income of €45 million (Q4 2009: €38 million). After non-controlling interest, this gave a net loss of €145 million (Q4 2009: net income of €153 million). Earnings per share were minus €0.18 (Q4 2009: €0.18). Core earnings per share rose to €0.95 (Q4 2009: €0.90). The calculation of core earnings per share is explained in Chapter 4.3 "Core Earnings Per Share."

Gross cash flow of the Bayer Group advanced by 37.4% year on year to €1,414 million (Q4 2009: €1,029 million) in light of the improved operating performance. Net cash flow moved ahead by 9.9% to €1,941 million (Q4 2009: €1,766 million). We significantly reduced net financial debt in the fourth quarter of 2010 to €7.9 billion (September 30, 2010: €9.1 billion).

Key Data by Subgroup and Segment, 4th Quarter

[Table 3.2]

	Sales		EBIT		EBITDA before special items*	
	4th Quarter 2009	4th Quarter 2010	4th Quarter 2009	4th Quarter 2010	4th Quarter 2009	4th Quarter 2010
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	4,164	4,468	463	(129)	1,154	1,138
Pharmaceuticals	2,698	2,897	234	(307)	789	830
Consumer Health	1,466	1,571	229	178	365	308
CropScience	1,398	1,653	(56)	118	166	270
Crop Protection	1,177	1,367	(42)	160	149	266
Environmental Science, BioScience	221	286	(14)	(42)	17	4
MaterialScience	2,016	2,584	14	156	203	297
Reconciliation	294	307	(55)	(94)	(10)	(16)
Group	7,872	9,012	366	51	1,513	1,689

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

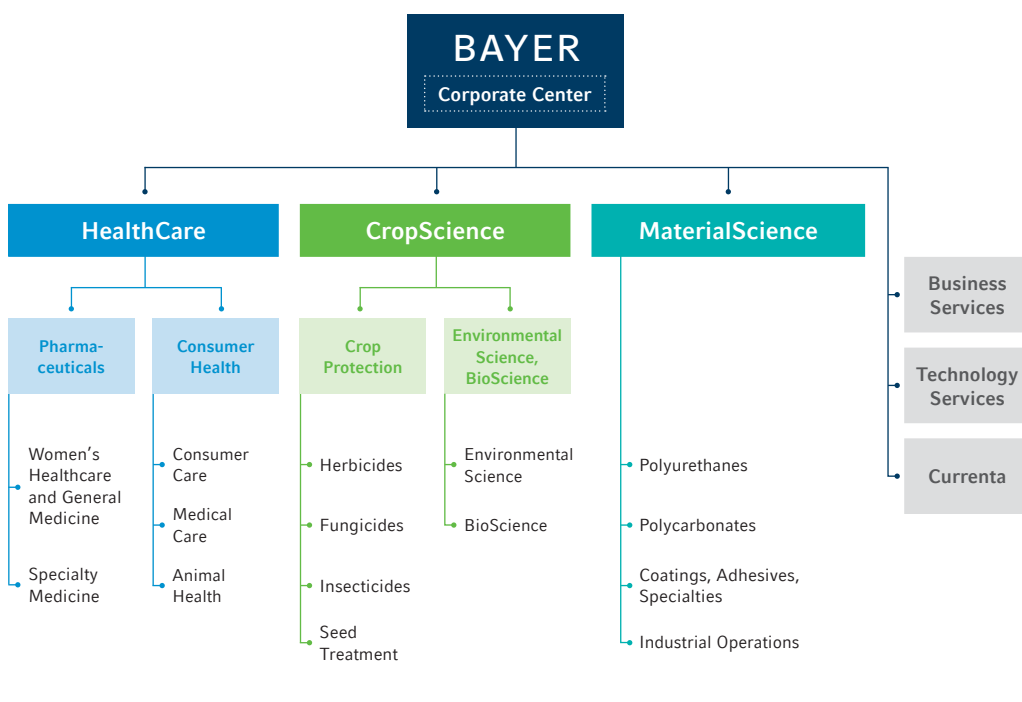
2. Business and Operating Environment

2.1 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.

Bayer Group Structure

[Graphic 3.6]



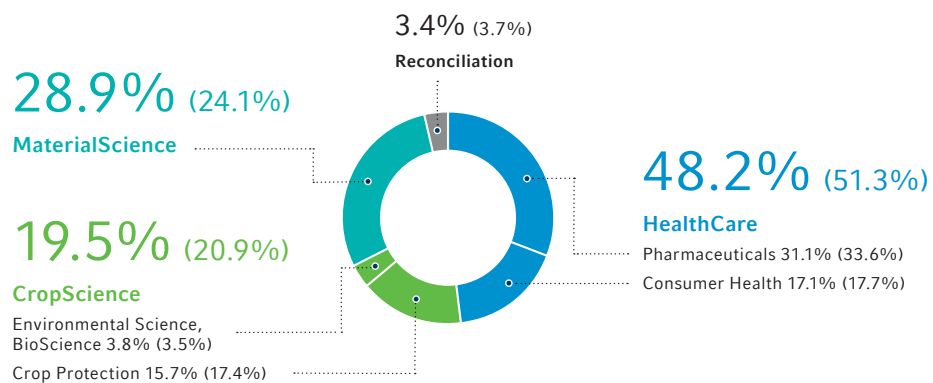
The globally operating **HealthCare** subgroup is divided into the Pharmaceuticals and Consumer Health segments. The Pharmaceuticals segment comprises two business units focusing on prescription products: Women's Healthcare and General Medicine; and Specialty Medicine. Our Consumer Health segment includes the Consumer Care, Medical Care and Animal Health divisions. The main focus of the Consumer Care Division is on non-prescription medicines and dietary supplements. Medical Care comprises the businesses with blood glucose meters, contrast-enhanced diagnostic imaging equipment, and mechanical systems for treating constricted or blocked blood vessels. The products of the Animal Health Division are destined for use in livestock and companion animals.

CropScience is active in the fields of chemical crop protection, non-agricultural pest and weed control, seed breeding and the improvement of plant traits. Organizationally, our CropScience business is divided into the Crop Protection segment and the Environmental Science, BioScience segment. Reflecting its product offering, Crop Protection is comprised of the Herbicides, Fungicides, Insecticides and Seed Treatment business units. Within the Environmental Science, BioScience segment, the Environmental Science business unit markets non-agricultural pest and weed control products while the BioScience business unit focuses on seeds and plant traits.

MaterialScience develops, manufactures and markets high-performance products in the areas of polyurethanes, polycarbonates, coating and adhesive raw materials, and functional films. This subgroup also manufactures and markets selected inorganic basic chemicals. MaterialScience is divided into the Polyurethanes, Polycarbonates, and Coatings, Adhesives, Specialties business units, and the Industrial Operations area.

Share of Sales by Segment 2010 (2009 in parentheses)

[Graphic 3.7]



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

CHANGES IN CORPORATE STRUCTURE

Effective January 1, 2010, we transferred certain products from the Specialty Medicine to the General Medicine business unit within the Pharmaceuticals segment of the HealthCare subgroup. In addition, organizational changes resulted in the merger of the General Medicine and Women's Healthcare business units and the integration of the Diagnostic Imaging business unit into the Specialty Medicine business unit in the second quarter of 2010. The prior-year figures have been restated accordingly. The Women's Healthcare and General Medicine business unit was renamed "General Medicine" effective January 1, 2011.

Key Data by Subgroup and Segment

[Table 3.3]

	Sales		EBIT		EBITDA before special items*	
	2009	2010	2009	2010	2009	2010
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	15,988	16,913	2,640	1,861	4,468	4,405
Pharmaceuticals	10,467	10,908	1,696	884	3,193	3,100
Consumer Health	5,521	6,005	944	977	1,275	1,305
CropScience	6,510	6,830	798	261	1,508	1,293
Crop Protection	5,424	5,493	713	600	1,301	1,025
Environmental Science, BioScience	1,086	1,337	85	(339)	207	268
MaterialScience	7,520	10,154	(266)	780	446	1,356
Reconciliation	1,150	1,191	(166)	(172)	50	47
Group	31,168	35,088	3,006	2,730	6,472	7,101

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

2.2 Economic Environment

GLOBAL ECONOMY

In 2010 the global economy recovered from the deep recession more quickly than expected, with economic output well ahead of the previous year. After rapid expansion in the first half, the pace of growth slowed in the second half. This was mainly due to the expiration of economic stimulus programs along with increased efforts by consumers and the public sector in a number of industrialized countries to bring high debt levels under control. Unemployment also remained persistently high in many countries. As before, the economy was held back by the effects of the financial crisis, which still have not been fully overcome, though in many countries the economy continued to be buoyed by expansionary fiscal and monetary policies.

Economic development showed wide regional variations in 2010, with growth rates declining in nearly all regions in the final months of the year. The emerging markets of Asia and Latin America expanded fairly rapidly and remained key drivers of the economic recovery. The industrialized countries also recovered distinctly compared to 2009, although some of them continued to feel the impact of the economic and financial crisis in 2010. In the United States and Japan, the increase in growth rates already slowed in the spring of 2010. However, production growth in the European Union did not fall back until the second half of the year. Moderate growth was still achieved in the European Union as a whole thanks to the robust expansion in Germany.

HEALTHCARE

In 2010 the **market for prescription medicines** posted growth in the mid-single digits. Expansion slowed in the United States and the major European countries, partly as a consequence of more restrictive health care policies. These are leading to stricter cost controls, limiting access to certain types of treatment and also resulting in mandatory rebates in some cases. Growth continued in the emerging countries, where health services are becoming available to more and more people and prescription medicines are therefore in greater demand.

The global **consumer care market** grew somewhat more slowly than in the previous year, mainly as a result of the weak flu season in Europe and North America and despite keen demand for consumer care products in China and India. Despite a good performance in Latin America and Asia, the **diabetes care market** did not achieve tangible overall growth because of strong pressure on prices in the United States. The **animal health market** regained its average long-term trend, with growth in the mid-single digits.

CROPSCIENCE

Developments in the global **seed and crop protection** market varied widely in 2010. While farmers' overall demand for high-quality seed continued to rise significantly, the global crop protection market registered only very modest growth.

The relatively long winter combined with a wet spring in many regions reduced demand for crop protection products in North America and Europe, especially in the first half of the year. As the economy recovered, business conditions for farmers also improved from mid-year onward. Higher demand, coupled with weather-related harvest shortfalls in Russia and central Asia, for example, led to an increase in producer prices for the major agricultural crops. These effects came too late to compensate for the declining market trend in the northern hemisphere, but in time to spur the use of crop protection products at the start of the main growing season in Latin America. The liquidity bottlenecks at many farms in that region caused by the financial crisis also eased markedly. The market in Asia/Pacific as a whole stagnated in 2010, with trends varying in different parts of the region. While the market contracted in Japan and held steady in China, mainly due to adverse weather, the crop protection market benefited from favorable monsoon conditions in India and from the recovery in the agriculture industry in Australia after years of drought.

MATERIALSCIENCE

The customer industries relevant to MaterialScience recovered in 2010 from the sharp drop in sales in the previous year. Despite a slight cooling of the economy in the second half of 2010, global demand remained stable.

In 2010 the **automotive industry** overcame the previous year's slump in sales faster than expected. Business with new cars trended particularly well in the Asian markets and in Russia. In the United States, too, volumes again rose significantly. In western Europe, demand for cars was down as expected compared to the incentive-driven prior-year figures, although even here the rate of decline appeared to be slowing.

Following the shrinkage in the **electrical/electronics market** in the prior crisis year, rapid growth was again registered in 2010. While the industrialized countries benefited from regional stimulus programs in areas such as infrastructure and e-mobility, the strong growth in the emerging markets continued due to rising demand for electronic consumer goods.

The global **construction industry** stagnated in 2010, with varying regional trends. While the sector continued to shrink in western Europe, the United States and Japan, it posted robust growth in the emerging markets, particularly China, India and Brazil.

The business situation in the **furniture industry** brightened increasingly over the course of 2010, though the pace of recovery varied substantially from one region to another. While production showed only a modest increase in North America and some western European countries on account of weak demand, the Asian furniture industry benefited from robust demand in China and a gradual recovery in global demand for affordable furniture.

2.3 Procurement and Production

Uniform Group directives on procurement are in place. Our production-specific procurement activities, like production itself, are organized on a decentralized basis in light of the diverse nature of our business activities. By contrast, the procurement of indirect goods and services that are not relevant to production – such as consultancy services, business travel and fleet management, computer hardware and software, laboratory and workshop equipment, safety devices and office supplies – is centrally organized within our service companies.

HEALTHCARE

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. In this way we aim to steadily reduce costs, increase our flexibility and delivery reliability, and maintain high standards of quality, safety and environmental protection on a global basis. The manufacture of pharmaceuticals is subject to exceptionally stringent quality requirements defined by the term "Good Manufacturing Practices" (GMP). Compliance with these requirements is regularly audited by internal experts, regulatory authorities and external consultants.

Production network
creates advantages

The Pharmaceuticals segment generally procures the starting materials for the active ingredients of its prescription pharmaceuticals from external suppliers. To prevent supply bottlenecks and mitigate major price fluctuations, these starting materials and the intermediates we do not produce ourselves are generally purchased under global contracts and/or from a number of suppliers we have audited and approved.

Our active ingredients for prescription medicines are manufactured primarily at the sites in Wuppertal and Bergkamen, Germany, and Berkeley and Emeryville, 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 (coated or uncoated tablets, powders), semi-solids (ointments, creams) and liquid pharmaceuticals used in injections or infusions, for example. Our hormonal contraceptives are supplied as sugar- or film-coated tablets or used in intrauterine systems (coils), for example. These formulating and packaging activities take place in Berlin, Leverkusen and Weimar, Germany; Garbagnate, Italy; Beijing, China; São Paulo, Brazil; Turku, Finland; and various other sites in Europe, Asia and Latin America. The hemophilia drug Kogenate® is manufactured by a biotechnological process at Berkeley, California, United States. Betaferon®/ Betaseron® for the treatment of multiple sclerosis is produced in Emeryville, California, United States.

For the Consumer Care Division of the Consumer Health segment we produce certain active substances, such as acetylsalicylic acid and clotrimazole, within the Bayer Group in La Felguera, Spain. The principal raw materials we purchase from third parties are naproxen, citric acid, ascorbic acid and other vitamins, and paracetamol. To minimize business risks, we diversify our raw material procurement sources worldwide and conclude long-term supply agreements. Among the division's largest production sites are the facilities in Myerstown, Pennsylvania, United States; Cimanggis, Indonesia; Gaillard, France; Bitterfeld-Wolfen and Grenzach-Wyhlen, Germany; and Madrid, Spain.

Some four fifths of the Diabetes Care products (such as blood glucose meters) of our Medical Care division are procured from original equipment manufacturers (OEMs). Material prices and availability are covered in most cases by long-term contracts and therefore are not subject to major fluctuations. We hold strategic reserves of certain materials and finished products so that we can supply our customers consistently and reliably. Our production site for Diabetes Care products is located in Mishawaka, Indiana, United States. Most of the materials needed for our medical equipment business, too, are procured from external suppliers, their availability, quality and price stability being ensured by way of long-term agreements, careful choice of suppliers and active supplier management. The majority of our medical devices are manufactured at the u.s. sites near Pittsburgh, Pennsylvania, and at Coon Rapids, Minnesota.

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

CropScience procures most of its raw materials for the manufacture of crop protection products externally. These raw materials are mainly basic chemicals such as chlorine, sodium hydroxide solution and sulfuric acid, or synthesis components. Important raw materials are usually procured on the basis of long-term supply agreements. We reduce the risk of supply failure by diversifying our raw material sources and holding strategic reserves of important raw materials. The preferred use of certified suppliers with defined quality standards for both manufactured and procured raw materials is another important selection criterion.

Global production network for agrochemical and seed products at CropScience

CropScience has 36 production sites and formulating facilities of its own around the world where its Crop Protection and Environmental Science products are manufactured. Among the largest are the facilities in Dormagen and Frankfurt am Main, Germany; Kansas City, Missouri, United States; and Vapi, India. In addition to a number of central locations for the manufacture of our active ingredients, a 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 treatments and Environmental Science products according to local requirements and application areas. Packaging of the products also takes place in these facilities. We continued to invest in our global production network in 2010, selectively expanding our capacities for important products.

In the BioScience business unit, we produce our seeds at locations close to our customers in Europe, Asia, and North and South America. Our canola, cotton, rice and vegetable seed is produced in our own centers or grown under contract on a total area of more than 100,000 hectares.

MATERIALSCIENCE

Key raw materials for our MaterialScience products are petrochemical feedstocks such as benzene, toluene and phenol. We generally purchase these materials on the procurement markets under long-term contracts. The operation of our production facilities also requires large amounts of energy, mostly in the form of electricity or steam. For steam generation, we aim for a balanced diversification of fuels and – as with electricity – a mix of external procurement and captive production to minimize the price fluctuation risk.

Mix of procurement and captive production of energies to minimize price fluctuation risk

The principal production facilities of MaterialScience for the European market are located in Dormagen, Germany; Antwerp, Belgium; Krefeld, Germany; Brunsbüttel, Germany; and Tarragona, Spain. The major production site for the North American market is at Baytown, Texas, United States. In the Asia/Pacific region, the main sites are at Shanghai, China; and Map Ta Phut, Thailand. 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 also have a large number of production facilities close to local markets in 20 countries to serve our differentiated businesses. Of these facilities, our systems houses formulate and supply customized polyurethane systems, while others carry out compounding of polycarbonate granules close to the customer or manufacture our semi-finished products (polycarbonate sheet). We also operate regional production facilities for functional films made of polycarbonate or thermoplastic polyurethane.

2.4 Products, Distribution and Markets

Marketing activities within the Bayer Group are decentralized due to the diversified business portfolio.

HEALTHCARE

HealthCare supplies more than 20,000 articles to meet the needs of patients and consumers in the various markets. The high number is due to the breadth of the product range and the various delivery forms, dosages, pack sizes, and language versions of individual products and their packaging.

More than 20,000
articles worldwide

The Pharmaceuticals segment supplies prescription products in the areas of women's health care, general medicine and specialty medicine. In the field of medicines usually prescribed by general practitioners (General Medicine), we supply products such as Adalat® to treat high blood pressure and coronary heart disease, and Avalox®/Avelox® to treat certain infectious diseases. Our product portfolio in Women's Healthcare encompasses contraceptive products such as YAZ®/Yasmin®/Yasminelle® and Mirena®, and hormone replacement therapies such as Angeliq®. Our range of Specialty Medicine products, which are mainly prescribed by specialist physicians, includes the multiple sclerosis drug Betaferon®/Betaseron®, the hemophilia A therapy Kogenate®, and Nexavar® to treat certain types of cancer. Our contrast agents for diagnostic imaging include Ultravist®, Magnevist® and Gadovist®. In the pharmaceuticals market we are among the world's top 15 companies in terms of sales.

Our pharmaceutical products are primarily distributed through wholesalers, pharmacies and hospitals. Co-promotion and co-marketing agreements serve to optimize our distribution network. For example, the agreement with Johnson & Johnson subsidiary Ortho-McNeil concerning the joint further development and marketing of the anticoagulant Xarelto® ensures optimum progress in this area, conferring regional marketing rights that enable both partners to share in the product's expected success. Another example is the strategic alliance with Merck & Co., Inc. (formerly Schering-Plough), United States, under which that company markets selected general medicine products in the United States. On the other hand we co-market Zetia®, a product of Merck & Co., Inc., in Japan.

Our Consumer Health segment chiefly markets non-prescription products. The Consumer Care Division specializes in medicines available without a prescription, also known as over-the-counter (OTC) products. We offer products in most OTC categories, such as the pain relievers Aspirin® and Aleve® and the dermatology products Canesten® and Bepanthen®/Bepanthol®. The product range also includes nutritionals such as Supradyn®, One A Day®, Berocca® and Redoxon®, antacids and cough-and-cold products. Consumer Care is a leading player in the OTC market. The division also includes prescription dermatology products. While the division's sales and distribution channels outside Europe are typically supermarket chains, drugstores and other large retailers, pharmacies are the usual distribution channel in Europe.

Consumer Health
segment: focus on non-
prescription products

In the Medical Care Division we offer user-friendly blood glucose monitoring devices such as the single-strip Contour® system and the multi-strip Breeze® system. We also market the Contour® USB meter, which features integrated diabetes management software and direct plug-in to computers, and the A1CNow™ system for determining long-term blood glucose control (A1c). 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. As well as being among the top companies in the market for blood glucose monitoring devices, we are the world's leading supplier of contrast agent injection systems for diagnostic and therapeutic medical procedures in computed tomography, magnetic resonance imaging and molecular imaging, and of mechanical systems for removing thrombi from blood vessels. We also offer service products for these systems. Our products are marketed to cardiologists, radiologists and vascular surgeons in hospitals and out-patient clinical sites through a global direct sales organization, supplemented in some cases by local distributors.

The Animal Health Division focuses on the health of companion animals and livestock, for which we offer pharmaceuticals and grooming products. The largest product line comprises Advantix® and Advantage® for the prevention and treatment of flea infestation in dogs and cats, followed by Baytril® for the control of infectious diseases, Drontal® and Drontal® Plus wormers, and Baycox® to treat coccidiosis in pigs. We occupy leading positions in individual countries and product segments, and are the world's fourth-largest animal health company in terms of sales. Depending on local regulatory frameworks, animal health products may be available to end users as prescribed by a veterinarian or prescription-free from veterinarians, pharmacies or retail stores.

CROPSCIENCE

Integrated,
sustainable
product portfolio
at CropScience

CropScience offers a potent range of products and services in the areas of chemical crop protection, non-agricultural pest and weed control, seed breeding and plant traits. These are commercialized according to local market conditions. Our business is subject to the growing seasons for the relevant crops and the resulting sales cycles.

The Crop Protection business is based on a broad portfolio of highly effective herbicides, fungicides, insecticides and seed treatment products. Thanks to our innovative capability and many years of experience with pest control products, we are the global market leader in the insecticides market. Fungicides prevent or cure diseases caused by fungal infestation that can significantly impair harvest yields and quality. CropScience is the third-leading supplier to the global fungicides market. We occupy second position in the world market for weed control products (herbicides), including plant growth regulators. The Seed Treatment business unit focuses on the use of crop protection active ingredients specially developed for the protection of seeds and seedlings. With our insecticides, fungicides and combination products, we remain among the leading seed treatment suppliers in terms of sales. Our Crop Protection products are marketed either via wholesalers or directly through retailers by means of a two- or three-step distribution system, depending on local market conditions.

The products of our Environmental Science business unit are based on both proprietary and in-licensed crop protection active ingredients and are specially designed for non-agricultural uses. This unit markets plant care products and home and garden brands for consumers along with solutions for professional users in the green industry and the pest and vector control sector. In terms of sales, Bayer is among the world's leading suppliers of non-agricultural pest control products. The Environmental Science products are marketed through various distribution channels. Our home and garden products are sold to consumers via both wholesalers and specialist retailers. Products for professional users are sold via wholesalers. Much of our business in the vector control field is transacted in response to tendering by government agencies and non-governmental organizations.

In the BioScience business unit, our distribution activities are focused on seed production in the four core crops of cotton, canola, rice and vegetables, where we offer high-quality seed based on our own research and breeding expertise. We have achieved strong market positions in these four crops and are globally represented. Our most important markets are North America for canola seed; North and Latin America, India and southern Europe for cotton seed; and Asia for hybrid rice seed. Our vegetable seed varieties are sold in more than 100 countries throughout the world to farmers, breeders, specialist retailers and the processing industry. Traits developed using modern breeding methods are either incorporated into our own seed varieties or licensed to other seed companies for use in their products.

MATERIALSCIENCE

One of the largest companies in the global chemical industry, MaterialScience is a leading 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 in all regional markets. We also manufacture and market plastics sheet and functional films as well as selected inorganic basic chemicals such as chlorine, sodium hydroxide solution, hydrogen, hydrochloric acid and nitric acid. These chemicals serve either as raw materials (such as chlorine) for the manufacture of our products or are generated as byproducts (such as sodium hydroxide solution) and sold to external customers.

Our products are used mainly in the furniture, wood, construction, automotive, electrical/electronics, information technology and communications, chemicals, textile, sports equipment, leisure goods and medical equipment industries. Our polyurethane raw materials, such as diphenylmethane diisocyanate (MDI), toluene diisocyanate (TDI) and polyether, and the polyurethane systems based on them that are offered in the market are used, for example, in the production of mattresses, refrigerator insulations, automotive bumpers and shoe soles. Examples of applications for our polycarbonates, which we market under the Makrolon®, Bayblend®, Makroblend® and other trademarks, include housings for electrical appliances, CDs/DVDs and car headlamps. The Coatings, Adhesives, Specialties business unit manufactures raw materials for coatings used in the automobile and commercial vehicle industries and for adhesives used in footwear, for example. This business unit also produces films for applications including vehicle speedometers and computer housings.

We market our products mostly through regional and local distribution channels, making increasing use of e-commerce platforms for order processing. 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.

MaterialScience
has leading
competitive positions
in all regions



3. Performance by Subgroup, Segment and Region

3.1 HealthCare

Key Data – HealthCare

[Table 3.4]

	2009	2010	Change	
	€ million	€ million	%	Fx & p adj. %
Sales	15,988	16,913	+5.8	+1.7
Change in sales				
Volume	+1.9%	+1.9%		
Price	+1.9%	-0.2%		
Currency	+0.6%	+4.7%		
Portfolio	-0.6%	-0.6%		
Sales by segment				
Pharmaceuticals	10,467	10,908	+4.2	+0.9
Consumer Health	5,521	6,005	+8.8	+3.4
Sales by region				
Europe	6,344	6,375	+0.5	
North America	4,634	4,666	+0.7	
Asia/Pacific	2,677	3,269	+22.1	
Latin America/Africa/Middle East	2,333	2,603	+11.6	
EBIT	2,640	1,861	-29.5	
Special items	(372)	(1,169)		
EBIT before special items*	3,012	3,030	+0.6	
EBITDA*	4,148	4,116	-0.8	
Special items	(320)	(289)		
EBITDA before special items*	4,468	4,405	-1.4	
EBITDA margin before special items*	27.9%	26.0%		
Gross cash flow**	3,153	2,948	-6.5	
Net cash flow**	3,431	3,320	-3.2	

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

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

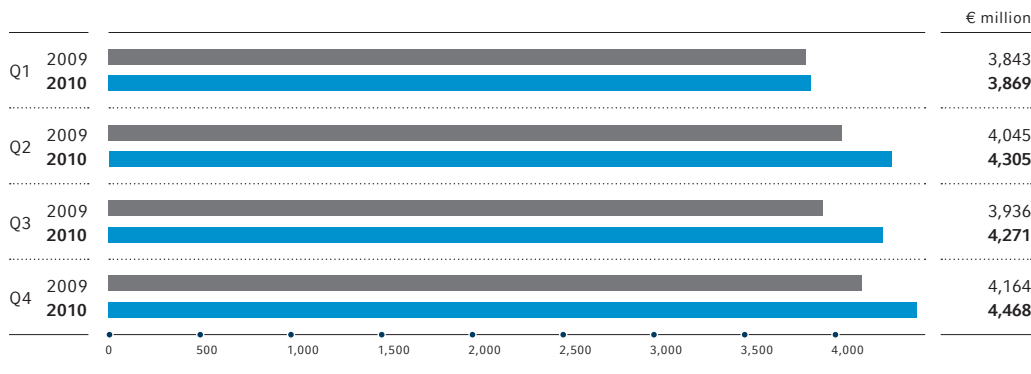
** For definition see Chapter 4.5 "Liquidity and Capital Expenditures of the Bayer Group."

Above: illustration
of blood cells

Sales of the HealthCare subgroup rose by 5.8% in 2010 to €16,913 million (2009: €15,988 million). Adjusted for currency and portfolio effects, the increase was 1.7%. The improvement was driven by the positive development of the Consumer Health segment.

HealthCare Quarterly Sales

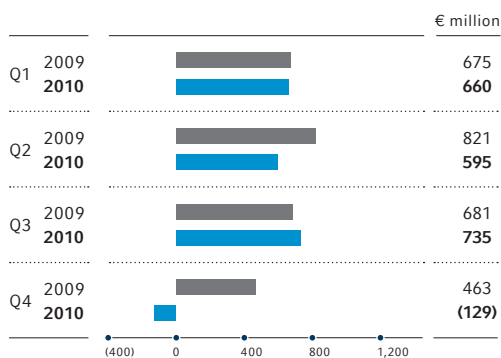
[Graphic 3.8]



EBIT of the HealthCare subgroup fell by 29.5% in 2010 to €1,861 million (2009: €2,640 million). Special items totaled minus €1,169 million (2009: minus €372 million); for details see below. EBIT before special items, at €3,030 million (2009: €3,012 million), was in line with the previous year (+0.6%), while **EBITDA** before special items declined by 1.4% to €4,405 million (2009: €4,468 million). This was largely attributable to the effects of health system reforms in various countries, the early generi-cization of YAZ® in the United States and higher selling expenses in both segments. We also raised our spending on research and development. However, earnings were supported by positive currency effects.

HealthCare
Quarterly EBIT

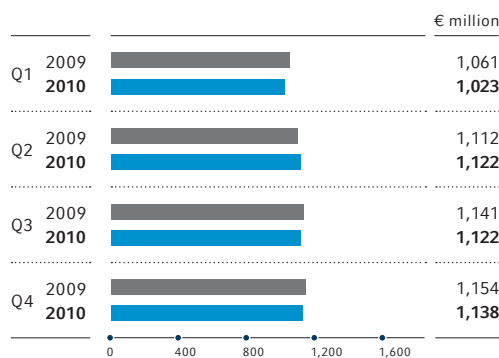
[Graphic 3.9]



Q1-3 2010 figures restated

HealthCare
Quarterly EBITDA Before Special Items

[Graphic 3.10]



Q1-3 2010 figures restated

PHARMACEUTICALS

Key Data – Pharmaceuticals

[Table 3.5]

	2009	2010	Change	
	€ million	€ million	%	Fx & p adj. %
Sales	10,467	10,908	+4.2	+0.9
Women's Healthcare and General Medicine	6,532	6,816	+4.3	+0.0
Specialty Medicine	3,935	4,092	+4.0	+2.2
Sales by region				
Europe	4,107	4,082	-0.6	
North America	2,712	2,531	-6.7	
Asia/Pacific	2,136	2,629	+23.1	
Latin America/Africa/Middle East	1,512	1,666	+10.2	
EBIT	1,696	884	-47.9	
Special items	(322)	(1,140)		
EBIT before special items*	2,018	2,024	+0.3	
EBITDA*	2,912	2,834	-2.7	
Special items	(281)	(266)		
EBITDA before special items*	3,193	3,100	-2.9	
EBITDA margin before special items*	30.5%	28.4%		
Gross cash flow**	2,186	1,983	-9.3	
Net cash flow**	2,280	2,272	-0.4	

2009 figures restated

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

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

** For definition see Chapter 4.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Pharmaceuticals** segment increased by 4.2% in 2010 to €10,908 million (2009: €10,467 million). Adjusted for currency and portfolio effects, business was up by 0.9%. Sales grew strongly in the Asia/Pacific and Latin America/Africa/Middle East regions but decreased in North America, mainly because of lower sales of **yaz**[®] in the United States. Reforms in the statutory health care systems of various countries also had a negative impact on the business.

Best-Selling Pharmaceutical Products

[Table 3.6]

	2009	2010	Change	
	€ million	€ million	%	Fx adj. %
Betaferon [®] /Betaseron [®] (Specialty Medicine)	1,214	1,206	-0.7	-5.0
YAZ [®] /Yasmin [®] /Yasminelle [®] (Women's Healthcare and General Medicine)	1,278	1,111	-13.1	-15.8
Kogenate [®] (Specialty Medicine)	888	1,004	+13.1	+10.3
Nexavar [®] (Specialty Medicine)	604	705	+16.7	+11.7
Adalat [®] (Women's Healthcare and General Medicine)	633	664	+4.9	-2.3
Mirena [®] (Women's Healthcare and General Medicine)	490	539	+10.0	+4.6
Avalox [®] /Avelox [®] (Women's Healthcare and General Medicine)	460	497	+8.0	+4.2
Levitra [®] (Women's Healthcare and General Medicine)	360	429	+19.2	+13.1
Aspirin [®] Cardio (Women's Healthcare and General Medicine)	315	358	+13.7	+10.0
Glucobay [®] (Women's Healthcare and General Medicine)	315	347	+10.2	+2.9
Ultravist [®] (Specialty Medicine)	262	313	+19.5	+12.7
Cipro [®] /Ciprobay [®] (Women's Healthcare and General Medicine)	331	262	-20.8	-22.5
Magnevist [®] (Specialty Medicine)	219	215	-1.8	-7.3
Iopamiron [®] (Specialty Medicine)	199	185	-7.0	-17.2
Kinzal [®] /Pritor [®] (Women's Healthcare and General Medicine)	164	178	+8.5	+8.0
Total	7,732	8,013	+3.6	-0.8
Proportion of Pharmaceuticals sales	74%	73%		

Fx adj. = currency-adjusted

Sales of the **Women's HealthCare and General Medicine** business unit advanced by 4.3% to €6,816 million (2009: €6,532 million). After adjusting for exchange rates, sales were level with the prior year (+0.0%). There was a distinct drop in sales of the YAZ®/Yasmin®/Yasminelle® line of oral contraceptives (Fx adj. -15.8%), mainly because a generic competitor entered the U.S. market in June 2010. We saw a positive sales trend for YAZ®/Yasmin®/Yasminelle® outside the United States, chiefly in light of higher volumes for YAZ®. Sales of the hormone-releasing intra-uterine device Mirena® (Fx adj. +4.6%) moved ahead in all regions.

Business with our erectile dysfunction treatment Levitra® (Fx adj. +13.1%) increased significantly in the United States, where we benefited from our distribution partner's new contract with a bulk customer. Sales of Aspirin® Cardio (Fx adj. +10.0%) for prevention of myocardial infarction rose appreciably thanks to higher volumes, particularly in the Asia/Pacific and Latin America/Africa/Middle East regions. The growth in sales of our antihypertensive Kinzal®/Pritor® (Fx adj. +8.0%) was primarily due to its approval in October 2009 for the prevention of cardiovascular disease, a new indication for this product. Our antibiotic Avalox®/Avelox® advanced by 4.2% (Fx adj.), thanks mainly to good business in the Asia/Pacific region. Sales of our oral antidiabetic Glucobay® (Fx adj. +2.9%) rose due to steady growth in China, while business receded elsewhere, particularly in Europe, on account of generic competition. Sales of Adalat® to treat high blood pressure (Fx adj. -2.3%) declined due to generic competition, especially in Europe, and government-imposed price reductions in Japan. By contrast, sales rose in China. Sales of our antibiotic Cipro®/Ciprobay® fell substantially (Fx adj. -22.5%), mainly because a U.S. government contract terminated in the first quarter of 2010.

Sales of the **Specialty Medicine** business unit were up by 4.0% to €4,092 million (2009: €3,935 million). Adjusted for currency and portfolio effects, the increase came to 2.2%. Business with our cancer drug Nexavar® (Fx adj. +11.7%) again moved ahead in all regions, with especially strong growth in Asia/Pacific. This was largely due to higher sales in Japan. Our blood-clotting medication Kogenate® advanced by 10.3% (Fx adj.) thanks to volume growth in all regions. Business with the multiple sclerosis drug Betaferon®/Betaseron® was down by 5.0% (Fx adj.) overall. Pleasing sales growth for this product in the Asia/Pacific and Latin America/Africa/Middle East regions was offset by a drop in business in other countries, particularly Germany, the United States and Russia, due to heightened competition. Business with the X-ray contrast agent Ultravist® (Fx adj. +12.7%) developed positively, especially in Latin America, where it replaced the older X-ray contrast agent Iopamiron®. Sales of Iopamiron® (Fx adj. -17.2%) decreased due to the resulting lower volume for the year and especially because of price reductions in Japan. Among our contrast agents for magnetic resonance imaging (MRI), Magnevist® (Fx adj. -7.3%) saw a continuing decline in sales. This was partly attributable to the change to Gadovist® (Fx adj. +14.7%), which posted strong growth, particularly in Europe.

EBIT of the Pharmaceuticals segment fell by a substantial 47.9% in 2010 to €884 million (2009: €1,696 million) after special charges of €1,140 million (2009: €322 million). Of these charges, impairment losses on intangible assets accounted for €874 million, litigations for €177 million, the write-down of a receivable relating to expected future purchase price payments for €56 million, and restructuring measures for €33 million. Of the impairment losses, an amount of €405 million was recognized on the "Schering" name in light of our new brand strategy. Following the regular review of our research and development pipeline, we also recognized impairment losses of €202 million on the sagopilone and Bonafos® research projects, and €267 million on our cancer drug Zevalin® and various Women's Healthcare products. **EBIT** before special items came in level with the previous year at €2,024 million (+0.3%). **EBITDA** before special items declined by 2.9% to €3,100 million (2009: €3,193 million). This contains positive currency effects and a €68 million gain from the settlement of a patent dispute concerning YAZ® that partially offset the margin loss during the year. On the other hand, we incurred higher research and development costs, mainly to support our Phase III projects. Earnings were also diminished by lower sales of YAZ® in the United States and the margin pressure exerted by health system reforms. In addition, we experienced an increase in selling expenses, mainly in connection with new product introductions and the reinforcement of our marketing activities as we expand the business in China.

CONSUMER HEALTH

Key Data – Consumer Health

[Table 3.7]

	2009	2010	Change	
	€ million	€ million	%	Fx & p adj. %
Sales	5,521	6,005	+8.8	+3.4
Consumer Care	3,080	3,371	+9.4	+4.2
Medical Care	1,464	1,514	+3.4	-1.3
Animal Health	977	1,120	+14.6	+7.7
Sales by region				
Europe	2,237	2,293	+2.5	
North America	1,922	2,135	+11.1	
Asia/Pacific	541	640	+18.3	
Latin America/Africa/Middle East	821	937	+14.1	
EBIT	944	977	+3.5	
<i>Special items</i>	(50)	(29)		
EBIT before special items*	994	1,006	+1.2	
EBITDA*	1,236	1,282	+3.7	
<i>Special items</i>	(39)	(23)		
EBITDA before special items*	1,275	1,305	+2.4	
EBITDA margin before special items*	23.1%	21.7%		
Gross cash flow**	967	965	-0.2	
Net cash flow**	1,151	1,048	-8.9	

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

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

** For definition see Chapter 4.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Consumer Health** segment advanced by 8.8% in 2010 to €6,005 million (2009: €5,521 million). Business expanded by 3.4% on a currency- and portfolio-adjusted basis, with all regions – particularly North America – contributing to this performance.

Best-Selling Consumer Health Products

[Table 3.8]

	2009	2010	Change	
	€ million	€ million	%	Fx adj. %
Contour® (Medical Care)	601	602	+0.2	-4.5
Aspirin®* (Consumer Care)	400	418	+4.5	+0.2
Advantage® product line (Animal Health)	336	408	+21.4	+14.6
Aleve®/naproxen (Consumer Care)	217	273	+25.8	+18.7
Bepanthen®/Bepanthol® (Consumer Care)	186	212	+14.0	+12.0
Canesten® (Consumer Care)	188	210	+11.7	+7.7
One A Day® (Consumer Care)	153	178	+16.3	+10.0
Baytril® (Animal Health)	149	166	+11.4	+5.8
Supradyn® (Consumer Care)	136	138	+1.5	+0.7
Breeze® (Medical Care)	138	125	-9.4	-13.6
Total	2,504	2,730	+9.0	+4.2
Proportion of Consumer Health sales	45%	45%		

Fx adj. = currency-adjusted

* Total Aspirin® sales = €776 million (2009: €715 million), including Aspirin® Cardio, which is reflected in sales of the Pharmaceuticals segment.

In the **Consumer Care** Division, sales climbed by 9.4% to €3,371 million (2009: €3,080 million). Adjusted for currency and portfolio effects, the increase came to 4.2%. A notable increase in demand for our products in the United States particularly benefited sales of the analgesic Aleve® (Fx adj. +18.7%) and the One A Day® line of dietary supplements (Fx adj. +10.0%). Sales of Aspirin® (Fx adj. +0.2%) were flat with the previous year. Business with the Bepanthen®/Bepanthol® line of skincare products (Fx adj. +12.0%) developed well, especially in Europe and Latin America, thanks to higher volumes and selling prices. Our antifungal Canesten® (Fx adj. +7.7%) advanced, mainly as a result of new product launches in Canada. Sales of Supradyn® multivitamins were level with the prior year (Fx adj. +0.7%).

In the **Medical Care** Division, sales gained 3.4% to €1,514 million (2009: €1,464 million). On a currency-adjusted basis, business was down by 1.3%. This was chiefly attributable to the negative development of the diabetes care market in the United States, where both prices and volumes declined. Sales of our Breeze® (Fx adj. -13.6%) and Contour® (Fx adj. -4.5%) lines of blood glucose meters were particularly affected. In Europe, however, the Contour® business performed well, due in part to new product launches. Sales of our medical equipment business (Fx adj. +7.2%) showed an overall improvement, particularly in the United States.

Sales of the **Animal Health** Division climbed by a very satisfactory 14.6% to €1,120 million (2009: €977 million), thanks to the positive development in all regions. After adjusting for currency effects, the increase came to 7.7%. The strongest growth was achieved in North America. Business with the Advantage® line of flea, tick and worm control products (Fx adj. +14.6%) expanded significantly, especially in the United States, where we benefited from the initial stocking and further expansion of a new distribution channel through pet-product retailers. Sales of our Baytril® antibiotic (Fx adj. +5.8%) rose in the United States, while business in Europe was down because of the increasing generic competition.

EBIT of the **Consumer Health** segment improved by 3.5% in 2010 to €977 million (2009: €944 million) after special charges of €29 million (2009: €50 million), which in 2010 were incurred in connection with restructuring. **EBIT** before special items rose by 1.2% to €1,006 million (2009: €994 million). **EBITDA** before special items grew by 2.4% to €1,305 million (2009: €1,275 million). This was mainly attributable to the positive business performance at Consumer Care and Animal Health and to favorable currency effects. However, earnings were held back by an increase in selling expenses that was mainly caused by Consumer Care's marketing and distribution costs returning to normal levels following a reduction in the crisis year 2009.



3.2 CropScience

Key Data – CropScience

[Table 3.9]

	2009	2010	Change	
	€ million	€ million	%	Fx & p adj. %
Sales	6,510	6,830	+4.9	-1.3
Change in sales				
Volume	+1.2%	-0.7%		
Price	+1.3%	-0.6%		
Currency	-0.6%	+6.0%		
Portfolio	+0.1%	+0.2%		
Sales by segment				
Crop Protection	5,424	5,493	+1.3	-4.7
Environmental Science, BioScience	1,086	1,337	+23.1	+15.6
Sales by region				
Europe	2,540	2,381	-6.3	
North America	1,529	1,535	+0.4	
Asia/Pacific	1,028	1,229	+19.6	
Latin America/Africa/Middle East	1,413	1,685	+19.2	
EBIT	798	261	-67.3	
<i>Special items</i>	<i>(219)</i>	<i>(526)</i>		
EBIT before special items*	1,017	787	-22.6	
EBITDA*	1,311	767	-41.5	
<i>Special items</i>	<i>(197)</i>	<i>(526)</i>		
EBITDA before special items*	1,508	1,293	-14.3	
EBITDA margin before special items*	23.2%	19.0%		
Gross cash flow**	1,043	546	-47.7	
Net cash flow**	745	1,399	87.8	

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

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

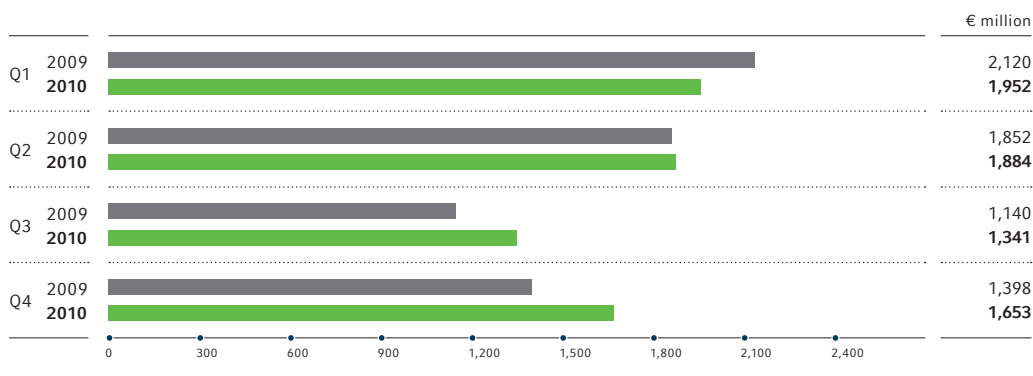
** For definition see Chapter 4.5 "Liquidity and Capital Expenditures of the Bayer Group."

Above: detail photograph
of a canola leaf

CropScience raised **sales** by 4.9% in 2010 to €6,830 million (2009: €6,510 million). Adjusted for currency and portfolio effects, however, business dipped by 1.3%. This was due to weaker sales in Crop Protection, while the Environmental Science, BioScience segment turned in a positive performance.

CropScience Quarterly Sales

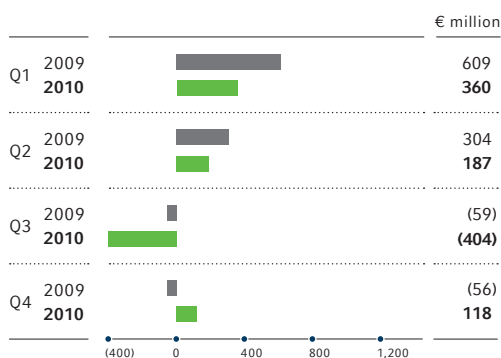
[Graphic 3.11]



EBIT of CropScience fell substantially year on year from €798 million to €261 million. Earnings were held back by special charges of €526 million (2009: €219 million), which in 2010 related to an intended settlement program and legal and defense costs in connection with litigations concerning genetically modified rice (LL RICE) in the United States. **EBIT** before special items shrank by 22.6% to €787 million (2009: €1,017 million). **EBITDA** before special items declined by 14.3% to €1,293 million (2009: €1,508 million). This decrease was due mainly to significantly lower volumes and a drop in prices in Crop Protection and increased expenses for research and development in the BioScience business unit.

CropScience
Quarterly EBIT

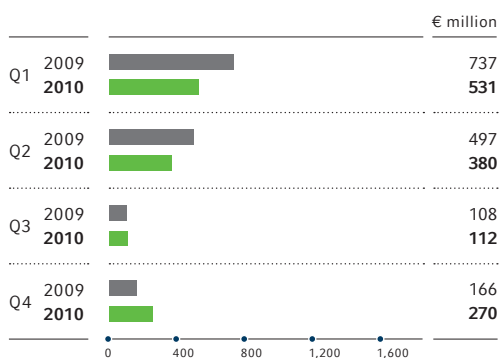
[Graphic 3.12]



Q1-3 2010 figures restated

CropScience
Quarterly EBITDA Before Special Items

[Graphic 3.13]



Q1-3 2010 figures restated

Best-Selling CropScience Products*

[Table 3.10]

	2009	2010	Change	
	€ million	€ million	%	Fx adj. %
Confidor®/Gaucho®/Admire®/Merit® (Insecticides/Seed Treatment/Environmental Science)	606	597	-1.5	-7.0
Flint®/Stratego®/Sphere®/Nativo® (Fungicides)	400	453	+13.3	+6.6
Basta®/Liberty®/Rely®/Ignite® (Herbicides)	323	270	-16.4	-24.6
Proline®/Input®/Prosaro® (Fungicides)	267	259	-3.0	-7.0
Atlantis® (Herbicides)	231	210	-9.1	-10.7
Folicur®/Raxil® (Fungicides/Seed Treatment)	210	206	-1.9	-8.3
Poncho® (Seed Treatment)	183	192	+4.9	-2.1
Decis®/K-Othrine® (Insecticides/Environmental Science)	170	184	+8.2	+1.2
Fandango® (Fungicides)	146	140	-4.1	-4.9
Puma® (Herbicides)	167	139	-16.8	-24.0
Total	2,703	2,650	-2.0	-7.6
Proportion of CropScience sales	42%	39%		

Fx adj. = currency-adjusted

* Figures are based on active ingredient class. For the sake of clarity, only the principal brands of the Crop Protection and Environmental Science business units are listed.

CROP PROTECTION

Key Data – Crop Protection

[Table 3.11]

	2009	2010	Change	
	€ million	€ million	%	Fx & p adj. %
Sales	5,424	5,493	+1.3	-4.7
Herbicides	1,986	1,944	-2.1	-8.3
Fungicides	1,564	1,570	+0.4	-5.0
Insecticides	1,234	1,370	+11.0	+4.2
Seed Treatment	640	609	-4.8	-10.2
Sales by region				
Europe	2,206	2,030	-8.0	
North America	1,081	956	-11.6	
Asia/Pacific	862	1,021	+18.4	
Latin America/Africa/Middle East	1,275	1,486	+16.5	
EBIT	713	600	-15.8	
Special items	(162)	0		
EBIT before special items*	875	600	-31.4	
EBITDA*	1,161	1,025	-11.7	
Special items	(140)	0		
EBITDA before special items*	1,301	1,025	-21.2	
EBITDA margin before special items*	24.0%	18.7%		
Gross cash flow**	924	743	-19.6	
Net cash flow**	591	1,079	+82.6	

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

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

** For definition see Chapter 4.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales in the **Crop Protection** segment rose by 1.3% in 2010 to €5,493 million (2009: €5,424 million). Adjusted for shifts in currency parities, sales were down by 4.7%. Business with our seed treatments, herbicides and fungicides trended downward in a shrinking market. By contrast, business with our insecticides expanded.

In the **Europe** region, sales fell by 8.0% to €2,030 million (2009: €2,206 million). The currency-adjusted decline was 9.6%. The negative development in Europe affected all business units and was largely due to the exceptionally weak business performance in France. This in turn resulted mainly from considerable market shrinkage caused by an extremely competitive environment and adverse weather conditions.

Sales of our crop protection products in **North America** receded by 11.6% to €956 million (2009: €1,081 million). Adjusted for currency effects, the decrease came to 18.4%. This decline was primarily due to a disappointing performance by our herbicides business, with price declines for our principal products in the first half of the year. Heavy competitive pressure from generic manufacturers and high inventory levels in the distribution channels also led to a sharp decline in fungicide sales in the United States and to lower volumes for our products Prosaro® and Stratego®. Sales of seed treatments in the United States, however, improved, largely because of the successful launch of Poncho®/Votivo™. This new product contains the bacterium *Bacillus firmus*, a biological component that provides better protection against threadworms in the soil (nematodes).

Sales in the **Asia/Pacific** region advanced by 18.4% to €1,021 million (2009: €862 million). Adjusted for currency effects, business improved by 5.3%. Market development in this region was impacted by extreme weather conditions. Business in Japan receded considerably for weather-related reasons. However, this was more than offset by a good performance in other countries, particularly India, Australia and China. Driven by a rise in prices for agricultural raw materials and favorable monsoon conditions, the insecticides, fungicides and herbicides businesses in India each saw double-digit growth. The main contributors to the positive development were the herbicide Balance® in Australia, where it was used particularly in sugarcane, and the insecticide Belt® in China.

In the **Latin America/Africa/Middle East** region, sales climbed by 16.5% to €1,486 million (2009: €1,275 million). Adjusted for currency effects, business expanded by 8.8%. Business developed very well in Latin America, especially in fungicides, herbicides and insecticides. The growth driver in the fungicides business was our innovative product Sphere® Max in Brazil and Argentina. We saw impressive growth in insecticides, especially in Brazil, with the new product Belt®, which has already been extremely well received by the market, and the insecticide Connect®. Herbicide sales rose again, mainly due to pleasing volume levels for Finale® and the corn herbicide Soberan® in Brazil. Business with seed treatments, however, was distinctly below the prior year due to weak sales in Brazil. The good growth in business in the Middle East region was partly the result of an especially strong performance in Turkey. We achieved moderate sales growth in Africa.

EBIT of the **Crop Protection** segment declined by 15.8% to €600 million (2009: €713 million). There were no special items in 2010 (2009: minus €162 million). **EBIT** before special items thus fell 31.4% short of the prior year's €875 million. **EBITDA** before special items for the segment fell by 21.2% to €1,025 million (2009: €1,301 million). Earnings were hampered by the lower volumes and the resulting drop in capacity utilization in the first half, and by price erosion in North America.

ENVIRONMENTAL SCIENCE, BIOSCIENCE

In the **Environmental Science, BioScience** segment, sales climbed by 23.1% in 2010 to €1,337 million (2009: €1,086 million). Adjusted for currency and portfolio effects, business increased by a substantial 15.6%.

Key Data – Environmental Science, BioScience

[Table 3.12]

	2009	2010	Change	
	€ million	€ million	%	Fx&p adj. %
Sales	1,086	1,337	+23.1	+15.6
Environmental Science	583	650	+11.5	+5.4
BioScience	503	687	+36.6	+27.4
Sales by region				
Europe	334	351	+5.1	
North America	448	579	+29.2	
Asia/Pacific	166	208	+25.3	
Latin America/Africa/Middle East	138	199	+44.2	
EBIT	85	(339)		
Special items	(57)	(526)		
EBIT before special items*	142	187	+31.7	
EBITDA*	150	(258)		
Special items	(57)	(526)		
EBITDA before special items*	207	268	+29.5	
EBITDA margin before special items*	19.1%	20.0%		
Gross cash flow**	119	(197)		
Net cash flow**	154	320		

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

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

** For definition see Chapter 4.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Environmental Science** business unit rose by 11.5% to €650 million (2009: €583 million). Adjusted for currency effects, this represented a 5.4% improvement, to which all regions contributed. Business with consumer products expanded considerably, thanks above all to the positive development in Germany. Sales of products for professional users advanced, especially those of the insecticide Ficam® and other products in Africa and the new insecticide Temprid® in the United States. Sales in France, however, were markedly lower year on year due to adverse changes in the business environment.

BioScience saw a 36.6% rise in sales to €687 million (2009: €503 million). Adjusted for currency and portfolio effects, business moved ahead strongly by 27.4%. We achieved double-digit sales growth in each of the main crops: cotton, canola, rice and vegetables. The largest increase was in our cotton seed business in North America as a result of product innovations and the recovery in the cotton market. Sales of InVigor® canola seed in North America also continued to advance, due partly to the rise in our seed prices – accompanied by price reductions for the respective canola herbicides – and partly to the higher volumes that resulted from increased crop acreages. Sales of our Arize® rice seed showed particularly good growth in Asia despite adverse weather conditions. Business with vegetable seeds moved ahead in all regions, particularly Latin America/Africa/Middle East and Asia/Pacific.

EBIT of the Environmental Science, BioScience segment fell by €424 million to minus €339 million (2009: €85 million). Special charges of €526 million in 2010 (2009: €57 million) related to an intended settlement program and legal and defense costs in connection with litigations concerning genetically modified rice (LL RICE) in the United States. **EBIT** before special items rose by 31.7% to €187 million (2009: €142 million). **EBITDA** before special items for the segment, at €268 million, exceeded the prior-year figure of €207 million by 29.5%, mainly on account of volume growth in both business units. BioScience also saw an overall rise in selling prices and a resulting improvement in margins, which more than offset the higher expenses for the expansion of our research and development activities.



3.3 MaterialScience

Key Data – MaterialScience

[Table 3.13]

	2009	2010	Change	
	€ million	€ million	%	Fx&p adj. %
Sales	7,520	10,154	+35.0	+30.1
Change in sales				
Volume	-12.4%	+23.8%		
Price	-12.3%	+6.3%		
Currency	+1.6%	+4.9%		
Portfolio	+0.3%	0.0%		
Sales by business unit				
Polyurethanes	3,783	5,024	+32.8	+27.8
Polycarbonates	1,873	2,791	+49.0	+42.9
Coatings, Adhesives, Specialties	1,364	1,791	+31.3	+27.2
Industrial Operations	500	548	+9.6	+7.7
Sales by region				
Europe	3,054	3,950	+29.3	
North America	1,536	2,022	+31.6	
Asia/Pacific	1,951	2,907	+49.0	
Latin America/Africa/Middle East	979	1,275	+30.2	
EBIT	(266)	780		
<i>Special items</i>	<i>(140)</i>	<i>0</i>		
EBIT before special items*	(126)	780		
EBITDA*	341	1,356		
<i>Special items</i>	<i>(105)</i>	<i>0</i>		
EBITDA before special items*	446	1,356		
EBITDA margin before special items*	5.9%	13.4%		
Gross cash flow**	319	1,058		
Net cash flow**	849	763	-10.1	

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

* For definition see Chapter 4.2 "Calculation of EBIT(DA) Before Special Items."

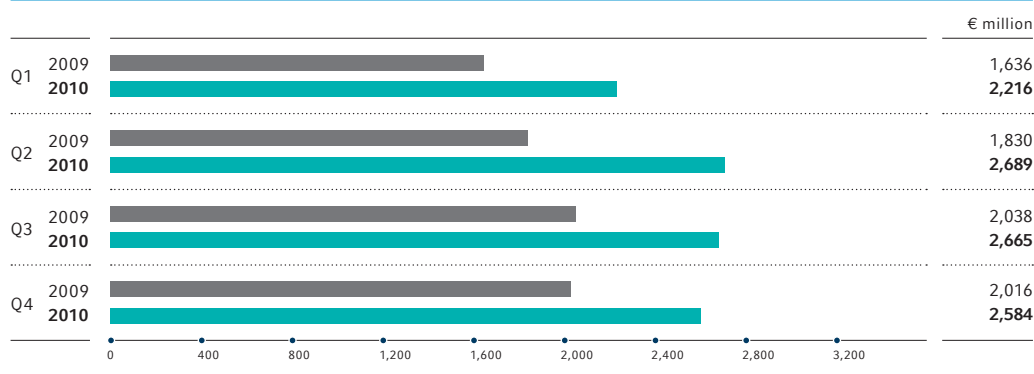
** For definition see Chapter 4.5 "Liquidity and Capital Expenditures of the Bayer Group."

 Above: granules of Makrolon®
 high-performance polycarbonate

The positive business performance of MaterialScience in 2010 was driven by the marked recovery in the economy following the global financial and economic crisis. While business continued to be held back at the beginning of the year, sales in the final three quarters returned to pre-crisis levels. **Sales** in 2010 came in at €10,154 million, up 35.0% (Fx & portfolio adj. +30.1%) against the prior-year figure of €7,520 million. This substantial growth resulted from double-digit volume increases in all business units and regions due to considerably higher demand from all of our main customer industries. Volumes, too, thus regained pre-crisis levels. We also achieved higher selling prices overall compared with the previous year, implementing significant increases in the Asia/Pacific, Europe and Latin America/Africa/Middle East regions. Prices in North America were level with the previous year.

MaterialScience Quarterly Sales

[Graphic 3.14]



Sales of the **Polyurethanes** business unit advanced by 32.8% to €5,024 million (2009: €3,783 million). On a currency- and portfolio-adjusted basis, business improved by 27.8%. Growth was mainly attributable to significantly higher volumes in all product groups – diphenylmethane diisocyanate (MDI), toluene diisocyanate (TDI) and polyether – and in all regions. The largest increases in absolute terms were registered in Europe and Asia/Pacific, where we also significantly raised selling prices. As a result, we recorded a positive price effect overall despite price stagnation in Latin America/Africa/Middle East and North America.

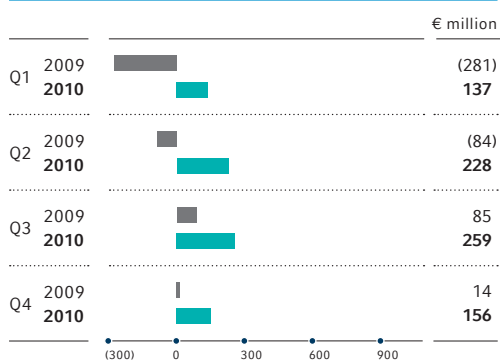
Sales of the **Polycarbonates** business unit climbed by 49.0% (Fx adj. +42.9%) to €2,791 million (2009: €1,873 million). This was largely the result of the gratifying business trend in our granules product group, which saw substantial growth in volumes and selling prices in all regions. Sales of polycarbonate sheet/semi-finished products also increased. Here we benefited from higher volumes in all regions, which more than offset the overall drop in selling prices.

The **Coatings, Adhesives, Specialties** business unit posted sales of €1,791 million, up 31.3% (Fx adj. +27.2%) from the prior-year figure of €1,364 million. Growth was driven by significantly higher volumes in all product groups and regions, with rising demand in Asia/Pacific and Europe having a particularly positive effect. While selling prices were low in the first quarter, we were able to raise them as the year progressed, restoring prices for the year as a whole to 2009 levels.

Sales of **Industrial Operations** gained 9.6% (Fx adj. +7.7%) to €548 million (2009: €500 million). In the two primary regional markets – Europe and North America – we achieved significant volume increases that more than offset the drop in prices.

MaterialScience
Quarterly EBIT

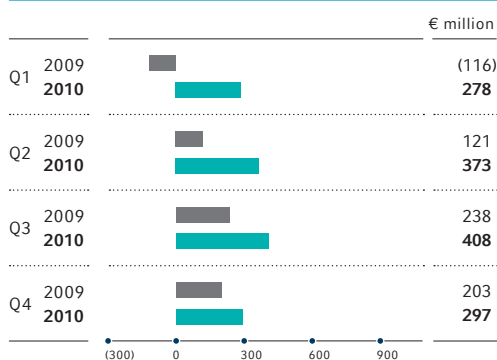
[Graphic 3.15]



Q1-3 2010 figures restated

MaterialScience
Quarterly EBITDA Before Special Items

[Graphic 3.16]



Q1-3 2010 figures restated

The markedly improved business situation was also reflected in earnings. **EBIT** rose to €780 million (2009: minus €266 million). There were no special items (2009: minus €140 million). **EBITDA** before special items came in well ahead of the prior year at €1,356 million (2009: €446 million), thanks mainly to substantial volume growth. We also benefited from increased selling prices for our products, which more than offset the price increases on the raw material markets. Efficiency improvements had a further positive impact.

3.4 Performance by Region

Sales by Region and Segment (by Market)

	Europe				North America			
	2009	2010			2009	2010		
	€ million	€ million	% yoy	Fx adj. % yoy	€ million	€ million	% yoy	Fx adj. % yoy
HealthCare	6,344	6,375	+0.5	-1.1	4,634	4,666	+0.7	-4.9
Pharmaceuticals	4,107	4,082	-0.6	-2.0	2,712	2,531	-6.7	-11.5
Consumer Health	2,237	2,293	+2.5	+0.8	1,922	2,135	+11.1	+4.4
CropScience	2,540	2,381	-6.3	-7.7	1,529	1,535	+0.4	-6.4
Crop Protection	2,206	2,030	-8.0	-9.6	1,081	956	-11.6	-18.4
Environmental Science, BioScience	334	351	+5.1	+4.5	448	579	+29.2	+22.7
MaterialScience	3,054	3,950	+29.3	+29.2	1,536	2,022	+31.6	+24.5
Group (incl. reconciliation)	12,968	13,751	+6.0	+5.0	7,705	8,228	+6.8	+0.7

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

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

4.1 Earnings Performance of the Bayer Group

Bayer Group Summary Income Statements

[Table 3.15]

	2009	2010	Change
	€ million	€ million	%
Sales	31,168	35,088	+12.6
Cost of goods sold	15,135	17,103	+13.0
Selling expenses	7,923	8,803	+11.1
Research and development expenses	2,746	3,053	+11.2
General administration expenses	1,623	1,647	+1.5
Other operating income and expenses – net	(735)	(1,752)	.
EBIT [operating result]	3,006	2,730	-9.2
Non-operating result	(1,136)	(1,009)	+11.2
Income before income taxes	1,870	1,721	-8.0
Income taxes	(511)	(411)	-19.6
Income after taxes	1,359	1,310	-3.6
of which attributable to non-controlling interest	0	9	.
of which attributable to Bayer AG stockholders (net income)	1,359	1,301	-4.3

Sales of the Bayer Group rose by 12.6% from the previous year to €35,088 million (2009: €31,168 million), thanks largely to the recovery in the MaterialScience business. Adjusted for currency and portfolio effects, sales grew by 8.0%.

[Table 3.14]

	Asia/Pacific				Latin America/Africa/Middle East				Total			
	2009	2010			2009	2010			2009	2010		
	€ million	€ million	% yoy	Fx adj. % yoy	€ million	€ million	% yoy	Fx adj. % yoy	€ million	€ million	% yoy	Fx adj. % yoy
	2,677	3,269	+22.1	+9.7	2,333	2,603	+11.6	+8.9	15,988	16,913	+5.8	+1.1
	2,136	2,629	+23.1	+10.8	1,512	1,666	+10.2	+9.3	10,467	10,908	+4.2	-0.2
	541	640	+18.3	+4.9	821	937	+14.1	+8.3	5,521	6,005	+8.8	+3.5
	1,028	1,229	+19.6	+6.4	1,413	1,685	+19.2	+10.9	6,510	6,830	+4.9	-1.1
	862	1,021	+18.4	+5.3	1,275	1,486	+16.5	+8.8	5,424	5,493	+1.3	-4.7
	166	208	+25.3	+12.3	138	199	+44.2	+30.4	1,086	1,337	+23.1	+16.5
	1,951	2,907	+49.0	+39.3	979	1,275	+30.2	+23.6	7,520	10,154	+35.0	+30.1
	5,712	7,481	+31.0	+19.3	4,783	5,628	+17.7	+12.5	31,168	35,088	+12.6	+7.7

The cost of goods sold advanced by 13.0% to €17,103 million. This was mainly due to a considerable increase at MaterialScience, which in turn resulted chiefly from the growth in volumes and higher average raw material prices for the year. The ratio of the cost of goods sold to total sales was 48.7% (2009: 48.6%). Selling expenses rose by 11.1% year on year to €8,803 million (2009: €7,923 million), and were thus equivalent to 25.1% (2009: 25.4%) of sales. HealthCare accounted for the greater part of the increase. We raised our research and development expenses in 2010 by a further 11.2% to €3,053 million (2009: €2,746 million). The ratio of R&D expenses to sales was 8.7% (2009: 8.8%). General administration expenses were just 1.5% higher at €1,647 million (2009: €1,623 million). The negative balance of other operating income and expenses, at €1,752 million, resulted mainly from special charges related to impairments, litigations and restructuring measures (see also Chapter 4.2 "Calculation of EBIT(DA) Before Special Items").

EBIT for 2010 came in at €2,730 million (2009: €3,006 million).

The non-operating result improved by €127 million to minus €1,009 million (2009: minus €1,136 million). It included lower net interest expense of €499 million (2009: €548 million), interest cost of €372 million (2009: €436 million) for pension and other provisions, a €59 million (2009: €59 million) net loss from investments in affiliated companies and a €70 million (2009: €92 million) net exchange loss. The improvement in the net interest position was mainly due to the reduction in financial debt. The decrease in interest expense for pension and other provisions was mainly the result of higher returns on pension plan assets, which are offset against the interest cost for defined benefit plans.

Tax expense in 2010 amounted to €411 million (2009: €511 million). Income after taxes came in at €1,310 million (2009: €1,359 million). Income attributable to non-controlling interest amounted to €9 million (2009: €0 million). Bayer Group net income for 2010 was €1,301 million (2009: €1,359 million).

4.2 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 and should therefore be regarded only as supplementary information. The company considers EBITDA before special items to be a more suitable indicator of operating performance since it is not affected by depreciation, amortization, impairments or special items. By reporting this indicator, the company aims to give readers a clearer picture of the results of operations and ensure greater 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 impairments rose by 26.6% in 2010 to €3,556 million (2009: €2,809 million), comprising €2,308 million (2009: €1,537 million) in amortization and impairments of intangible assets and €1,248 million (2009: €1,272 million) in depreciation and impairments of property, plant and equipment. Included here were impairments of €985 million, of which €78 million did not constitute special items. Impairments and write-downs also included a €56 million write-down of other receivables.

Special Items Reconciliation

[Table 3.16]

	EBIT* 2009	EBIT* 2010	EBITDA** 2009	EBITDA** 2010
	€ million	€ million	€ million	€ million
After special items	3,006	2,730	5,815	6,286
HealthCare	372	1,169	320	289
Schering integration	87	0	79	0
of which gain from divestitures	(114)	0	(114)	0
Impairments and write-downs	32	930	0	56
Restructuring	47	62	35	56
Litigations	180	177	180	177
Additional funding for the pension assurance association	26	0	26	0
CropScience	219	526	197	526
Restructuring	177	0	155	0
Litigations	35	526	35	526
Additional funding for the pension assurance association	7	0	7	0
MaterialScience	140	0	105	0
Restructuring	130	0	95	0
Additional funding for the pension assurance association	10	0	10	0
Reconciliation	35	27	35	0
Litigations	10	0	10	0
Additional funding for the pension assurance association	25	0	25	0
Impairments and write-downs	0	27	0	0
Total special items	766	1,722	657	815
Before special items	3,772	4,452	6,472	7,101

* EBIT = operating result as per income statements

** EBITDA = EBIT plus amortization and impairment losses on intangible assets and depreciation and impairment losses on property, plant and equipment, minus impairment loss reversals

4.3 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 impairments of intangible assets, impairments of property, plant and equipment, and special items in EBITDA including 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 2010 amounted to €4.19 (2009: €3.64).

Core Earnings Per Share

[Table 3.17]

	2009	2010
	€ million	€ million
EBIT as per income statements	3,006	2,730
Amortization and impairment losses on intangible assets	1,537	2,308
Impairment losses on property, plant and equipment	88	53
Special items (other than impairment losses)	657	815
Core EBIT	5,288	5,906
Non-operating result (as per income statements)	(1,136)	(1,009)
Income taxes (as per income statements)	(511)	(411)
Tax effects related to impairments and special items	(685)	(1,012)
Income after taxes attributable to non-controlling interest (as per income statements)	0	(9)
Core net income	2,956	3,465
Financing expenses for the mandatory convertible bond, net of tax effects	47	0
Adjusted core net income	3,003	3,465
	Shares	Shares
Weighted average number of issued ordinary shares	801,050,237	826,947,808
(Potential) shares (to be) issued upon conversion of the mandatory convertible bond	24,955,936	0
Adjusted weighted average total number of issued and potential ordinary shares	826,006,173	826,947,808
Core earnings per share (€)	3.64	4.19

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

4.4 Value Management

CASH VALUE ADDED-BASED SYSTEM

One of the prime objectives of the Bayer Group is to sustainably increase enterprise value. We use a Group-wide value management system to plan, control and monitor our businesses. An important value-based indicator is the cash value added (CVA), which shows the degree to which the cash flows needed to cover the costs of equity and debt and of reproducing depletable assets have been generated. If the CVA is positive, the respective company or business entity has exceeded the minimum requirements. If it is negative, the anticipated capital and asset reproduction costs have not been earned. The CVA is an indicator for a single reporting period. For a year-on-year comparison we therefore use our second central steering parameter for value management, the delta CVA, which is the difference between the CVAs of two consecutive periods. A positive delta CVA denotes an increase in the company's value.

The value-based indicators aid management's decision-making, especially regarding strategic portfolio optimization and the allocation of resources for acquisitions and capital expenditures. The focus at the operational level is on the key drivers of enterprise value: growth (sales), cost efficiency (EBITDA) and capital efficiency (working capital, capital expenditures), since these directly affect value creation.

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

Weighted average cost
of capital for the
Bayer Group

7.8%

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. In 2010 these were 8.1% (2009: 8.0%) for HealthCare, 7.5% (2009: 7.5%) for CropScience and 7.1% (2009: 7.0%) for MaterialScience. The minimum return required for the Group in 2010 was 7.8% (2009: 7.7%).

GROSS CASH FLOW, CASH VALUE ADDED AND CASH FLOW RETURN ON INVESTMENT AS PERFORMANCE YARDSTICKS

The gross cash flow as published in our statement of cash flows 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.

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 equaled or exceeded, the CVA is positive and thus the required return on equity and debt plus the cost of asset reproduction has been earned.

In calculating the hurdle we made methodical changes compared to the previous year, mainly relating to the reproduction requirements for intangible assets. In addition, material participating interests of direct relevance to business operations are included in the capital invested starting in 2010. The figures for 2009 have been restated accordingly.

The profitability of the Group and of its individual business entities is measured by the cash flow return on investment (CFROI). This is the ratio of the gross cash flow to the capital invested, which is derived from the statement of financial position and basically comprises the property, plant and equipment and intangible assets required for operations – stated at cost of acquisition or construction – plus working capital, less interest-free liabilities (such as current provisions). To reduce fluctuations in the capital invested, the CFROI is computed on the basis of the average figure for the respective year.

The CFROI hurdle for 2010 was 10.0% (2009: 9.9%), while the corresponding gross cash flow hurdle was €4,384 million (2009: €4,280 million).

Actual gross cash flow came in at €4,771 million, exceeding the hurdle by 8.8%. Thus in 2010 we earned our entire capital and asset reproduction costs, and the positive CVA of €387 million shows that Bayer not only exceeded the minimum return and reproduction requirements but earned a premium on the capital invested. Given the previous year's CVA of €378 million, the Bayer Group therefore recorded a positive delta CVA of €9 million, showing that it created slightly more value than in the previous year. The CFROI for 2010 amounted to 10.9% (2009: 10.7%).

Positive delta CVA
=
value created

HealthCare and MaterialScience exceeded their target returns including asset reproduction, while CropScience was €335 million below the gross cash flow hurdle. The CFROI for HealthCare was 12.8% (2009: 13.6%). CropScience was below the previous year with a CFROI of 5.9% (2009: 11.6%). MaterialScience recorded a CFROI of 11.0% (2009: 3.4%).

Value Management Indicators by Subgroup

[Table 3.18]

	HealthCare		CropScience		MaterialScience		Bayer Group	
	2009	2010	2009	2010	2009	2010	2009	2010
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Gross cash flow hurdle (GCF hurdle)	2,258	2,291	822	881	960	973	4,280	4,384
Gross cash flow* (GCF)	3,153	2,948	1,043	546	319	1,058	4,658	4,771
Cash value added (CVA)	895	657	221	(335)	(641)	85	378	387
Delta cash value added (delta CVA)	(13)	(238)	(150)	(556)	(582)	726	(836)	9
CFROI hurdle	9.7%	9.9%	9.6%	9.4%	9.9%	10.6%	9.9%	10.0%
Cash flow return on investment (CFROI)	13.6%	12.8%	11.6%	5.9%	3.4%	11.0%	10.7%	10.9%
Average capital invested	23,261	23,022	8,967	9,189	9,442	9,589	43,566	43,622

2009 figures restated

*For definition see Chapter 4.5 "Liquidity and Capital Expenditures of the Bayer Group."

4.5 Liquidity and Capital Expenditures of the Bayer Group

Bayer Group Summary Statements of Cash Flows

[Table 3.19]

	2009	2010
	€ million	€ million
Gross cash flow*	4,658	4,771
Changes in working capital/other non-cash items	717	1,002
Net cash provided by (used in) operating activities (net cash flow)	5,375	5,773
Net cash provided by (used in) investing activities	(1,501)	(2,414)
Net cash provided by (used in) financing activities	(3,246)	(3,230)
Change in cash and cash equivalents due to business activities	628	129
Cash and cash equivalents at beginning of period	2,094	2,725
Change due to exchange rate movements and to changes in scope of consolidation	3	(14)
Cash and cash equivalents at end of period	2,725	2,840

2009 figures restated

*Gross cash flow = income after taxes, plus income taxes, plus non-operating 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 the operating result (EBIT). It also contains benefit payments during the year.

OPERATING CASH FLOW

Gross cash flow rose by 2.4% in 2010 to €4,771 million (2009: €4,658 million). It improved significantly at MaterialScience due to the growth in business, but declined markedly at HealthCare and CropScience, partly due to higher litigation-related expenses. We reduced funds tied up in working capital by a substantial €1.0 billion. Net cash flow of the Group rose by 7.4% to €5,773 million (2009: €5,375 million). Net cash flow reflected income tax payments of €838 million (2009: €500 million).

INVESTING CASH FLOW

Net cash outflow for investing activities in 2010 totaled €2,414 million (2009: €1,501 million). Cash outflows for property, plant and equipment and intangible assets were 3.9% lower at €1,514 million (2009: €1,575 million). Of this amount, HealthCare accounted for €573 million (2009: €528 million), CropScience for €302 million (2009: €341 million) and MaterialScience for €498 million (2009: €504 million). These outflows included expenditures for the expansion of our polymers production site in Shanghai, China, and our production capacities in Berkeley, California, United States, as well as expenses related to a licensing and development agreement in the area of aesthetic dermatology and a strategic alliance in the field of cancer research. The €31 million in cash outflows for acquisitions included MaterialScience's purchase of Artificial Muscle, Inc., United States, in March 2010. The cash outflows for acquisitions in the previous year came to €308 million. Among the cash inflows in 2010 were €101 million (2009: €70 million) from divestitures and €53 million (2009: €56 million) in interest and dividends received. The increase in cash outflows for current financial assets mainly resulted from €623 million (2009: €11 million) in monetary investments on the capital market.

The principal strategically relevant capital expenditures for property, plant and equipment in the operating segments of the Bayer Group in 2010 and 2009 are listed in the following table:

Capital Expenditures for Property, Plant and Equipment

[Table 3.20]

Segment	Description
Capital expenditures 2010	
Pharmaceuticals	Expansion of production capacities for new Kogenate [®] formulations in Berkeley, California, U.S.A. Installation of packaging capacities for the YAZ [®] product family, Berlin, Germany Capacity expansion for contrast media, Bergkamen, Germany
Consumer Health	Expansion of production and packaging capacities for vitamin tablets, Myerstown, Pennsylvania, U.S.A.
Crop Protection	Expansion of production capacity for fungicides in Kansas City, Missouri, U.S.A. and Dormagen, Germany Capacity expansions for insecticidal active ingredients in Dormagen, Germany
Environmental Science, BioScience	Expansion of research facilities in Nunhem, Netherlands Extension to a research laboratory in Ghent, Belgium Capacity expansion for the production of vegetable seeds in Parma, Idaho, U.S.A.
MaterialScience	Construction of a "world-scale" TDI production complex in Shanghai, China MakroColor production plant in Noida, India Construction of a polyurethanes systems house in Moscow, Russia Installation of an NaCl electrolyzer with an oxygen depolarized cathode for demonstration purposes in Uerdingen, Germany
Capital expenditures 2009	
Pharmaceuticals	Expansion of the production facility for contrast agents in Bergkamen, Germany Expansion and modernization of the Kogenate [®] facility in Berkeley, California, U.S.A. Expansion of production capacities for the YAZ [®] product family in Berlin, Germany Expansion of production capacity in Jakarta, Indonesia
Consumer Health	Expansion of the production facility for vitamins in Myerstown, Pennsylvania, U.S.A. Construction of a new distribution center in Lerma, Mexico, to consolidate storage capacities existing in different parts of Mexico
Crop Protection	Capacity expansions for herbicidal active ingredients in Frankfurt am Main and Knapsack, Germany, and Muskegon, Michigan, U.S.A. Expansion of production capacity for fungicides in Dormagen, Germany and Kansas City, Missouri, U.S.A. Expansion of production capacity for high-activity herbicides in Dormagen, Germany and Kansas City, Missouri, U.S.A. Expansion of formulating capacity for non-herbicides in Belford Roxo, Brazil Expansion of production capacity for fungicides in Muttenz, Switzerland
Environmental Science, BioScience	Capacity expansion for the production of vegetable seeds in Parma, Idaho, U.S.A. Extension to a BioScience research laboratory in Ghent, Belgium
MaterialScience	Construction of a "world-scale" TDI production complex in Shanghai, China Production facility for polyisocyanates in Ankleshwar, India Roll-to-roll coating line in Leverkusen, Germany Construction of a systems house in Guangzhou, China Nitrous oxide reduction unit at the nitric acid production facility in Dormagen, Germany Construction of a pilot plant for carbon nanotubes in Leverkusen, Germany EcoCommercial Building in Noida, India

FINANCING CASH FLOW

Net cash outflow for financing activities in 2010 amounted to €3,230 million (2009: €3,246 million), including net loan repayments of €1,544 million (2009: €1,442 million). Net interest payments were 34.1% lower at €517 million (2009: €785 million), partly due to the reduction in financial debt. There was a €1,160 million outflow for “dividend payments and withholding tax on dividends” (2009: €973 million).

LIQUID ASSETS AND NET FINANCIAL DEBT

Net Financial Debt

[Table 3.211]

	Dec. 31, 2009	Dec. 31, 2010
	€ million	€ million
Bonds and notes / promissory notes	8,301	8,209
of which hybrid bond	1,267	1,303
Liabilities to banks	3,251	2,271
Liabilities under finance leases	550	562
Liabilities from derivatives	578	529
Other financial liabilities	178	196
Positive fair values of hedges of recorded transactions	(426)	(331)
Financial debt	12,432	11,436
Cash and cash equivalents	(2,725)	(2,840)
Current financial assets	(16)	(679)
Net financial debt	9,691	7,917

Net financial debt of the Bayer Group declined substantially in 2010, from €9.7 billion to €7.9 billion (-18.3%). This was attributable to cash inflows from operating activities, while negative currency effects came to €0.5 billion. As of December 31, 2010 the Group had cash and cash equivalents of €2.8 billion (2009: €2.7 billion). Financial liabilities amounted to €11.4 billion (2009: €12.4 billion), including the €1.3 billion subordinated hybrid bond issued in July 2005. 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 as equity. Unlike conventional borrowings, the hybrid bond thus only has a limited effect on the Group's rating-specific debt indicators. Our noncurrent financial liabilities declined in 2010 from €11.5 billion to €9.9 billion, while current financial liabilities rose from €1.5 billion to €1.9 billion.

4.6 Asset and Capital Structure of the Bayer Group

Bayer Group Summary Statements of Financial Position

[Table 3.22]

	Dec. 31, 2009	Dec. 31, 2010	Change
	€ million	€ million	%
Noncurrent assets	34,049	33,188	-2.5
Current assets	16,993	18,318	+7.8
Total assets	51,042	51,506	+0.9
Equity	18,951	18,896	-0.3
Noncurrent liabilities	23,118	21,775	-5.8
Current liabilities	8,973	10,835	+20.8
Liabilities	32,091	32,610	+1.6
Total equity and liabilities	51,042	51,506	+0.9

Total assets increased in 2010 by 0.9% to €51.5 billion. Noncurrent assets declined by €0.9 billion to €33.2 billion, mainly due to amortization and impairments of intangible assets. Noncurrent assets included goodwill of €9.0 billion (2009: €8.7 billion), the increase being mainly due to shifts in exchange rates. Current assets rose by €1.3 billion compared with the previous year, to €18.3 billion.

Equity was almost level with the prior year at €18.9 billion, bolstered mainly by the €1.3 billion net income and €0.6 billion in positive currency effects. The €1.2 billion dividend payment made in 2010 and the €0.7 billion increase in pension obligations – recognized outside profit or loss – had the opposite effect. Our equity ratio (equity coverage of total assets) was 36.7% as of December 31, 2010 (2009: 37.1%).

Liabilities increased by €0.5 billion compared with December 31, 2009, to €32.6 billion, largely because of the increase in pension obligations and the allocations to provisions for litigations. Current and noncurrent financial liabilities declined by €1.1 billion to €11.8 billion.

Net Pension Liability

[Table 3.23]

	Dec. 31, 2009	Dec. 31, 2010
	€ million	€ million
Provisions for pensions and other post-employment benefits	6,517	7,305
Benefit plan assets in excess of obligation	(100)	(76)
Net pension liability	6,417	7,229

The net pension liability increased from €6.4 billion to €7.2 billion in 2010, due especially to lower long-term capital market interest rates. Provisions for pensions and other post-employment benefits rose from €6.5 billion to €7.3 billion. Benefit plan assets in excess of obligations, reflected in the statement of financial position as "Other receivables," came to €0.1 billion (2009: €0.1 billion).

[Table 3.24]

Ratios		2009	2010
Cost of sales ratio (%)	Cost of goods sold	48.6	48.7
	Sales		
R&D expense ratio (%)	Research and development expenses	8.8	8.7
	Sales		
Return on sales (%)	Income after taxes	4.4	3.7
	Sales		
EBIT margin (%)	EBIT	9.6	7.8
	Sales		
EBITDA margin before special items (%)	EBITDA before special items	20.8	20.2
	Sales		
Asset intensity (%)	Property, plant and equipment + intangible assets	60.6	58.2
	Total assets		
D&A/capex ratio (%)	Depreciation and amortization*	159.4	156.8
	Capital expenditures*		
Liability structure (%)	Current liabilities	28.0	33.2
	Liabilities		
Gearing	Net debt + pension provisions	0.9	0.8
	Equity		
Free operating cash flow (€ million)	Net operating cash flow	3,800	4,259
	less cash outflows for property, plant and equipment and intangible assets		
Inventory turnover	Cost of goods sold	2.5	2.8
	Inventories		
Receivables turnover	Sales	5.1	5.3
	Trade accounts receivable		
Payables turnover	Cost of goods sold	5.5	4.9
	Trade accounts payable		
Equity ratio (%)	Equity	37.1	36.7
	Total assets		
Return on equity (%)	Income after taxes	7.7	6.9
	Average equity		
Return on assets (%)	Income before taxes and interest expense	6.1	5.1
	Average total assets for the year		

* property, plant and equipment + intangible assets

5. 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 were prepared in accordance with the German Commercial Code (HGB) and Stock Corporation Act (AktG). The provisions of the German Accounting Law Modernization Act (BilMoG), which came into force in 2009, were applied as in the previous year.

5.1 Earnings Performance of Bayer AG

Bayer AG Summary Income Statements according to the German Commercial Code

[Table 3.25]

	2009	2010
	€ million	€ million
Income from investments in affiliated companies – net	2,984	2,045
Interest expense – net	(683)	(516)
Other non-operating income – net	276	128
Other operating income	169	165
General administration expenses	177	200
Other operating expenses	142	173
Income before income taxes	2,427	1,449
Income taxes	(201)	(204)
Net income	2,226	1,245
Allocation to retained earnings	(1,068)	(5)
Distributable profit	1,158	1,240

The earnings performance of Bayer AG essentially depends on the earnings of its subsidiaries and on the income and expenses relating to corporate financing activities.

In fiscal 2010, income from investments in affiliated companies was €2,045 million (2009: €2,984 million). Of this amount, Bayer Schering Pharma AG accounted for €1,163 million (2009: €2,349 million), Bayer CropScience AG for €569 million (2009: €604 million) and Bayer MaterialScience AG for €30 million (2009: minus €234 million). The decline at Bayer Schering Pharma AG was due to the fact that the prior-year figure included a €608 million gain in connection with the agreement with Genzyme on the sale of intangible assets. In addition, business operations in 2010 resulted in a €154 million rise in selling expenses and a €230 million increase in research and development expenses. One-time charges related to the transfer of pension obligations diminished income by €80 million. At Bayer CropScience AG, a decrease in the operating result was largely offset by an improvement in the non-operating result. Income transferred from Bayer MaterialScience AG increased as a result of the improvement in the economic situation. Further significant earnings components were €266 million (2009: €219 million) from Bayer Gesellschaft für Beteiligungen mbH, our holding company for foreign subsidiaries; €177 million (2009: €107 million) from Bayer Animal Health GmbH; and minus €135 million (2009: minus €135 million) from Bayer HealthCare AG, the holding company for the global HealthCare business.

Net interest expense amounted to €516 million, which was €167 million less than in the previous year. This was mainly due to the further drop in interest rates and partly to a decline in net debt. Of the net interest expense, €382 million (2009: €459 million) was attributable to transactions with third parties and €134 million (2009: €224 million) to intra-Group transactions.

Other non-operating income and expenses yielded a positive balance of €128 million, down from €276 million in the previous year. This was mainly due to a €136 million decline in income from the translation of foreign currency receivables and payables and from currency derivatives.

The balance of miscellaneous operating income and expenses relating to Bayer AG's performance of its functions as a holding company was minus €8 million (2009: plus €27 million), while general administration expenses amounted to €200 million (2009: €177 million). Whereas the increase in administration expenses was caused by higher pension expenses and an increase in personnel expenses resulting from the temporarily larger number of members of the Board of Management, the other items were impacted by a write-down on buildings.

Pre-tax income declined by €978 million to €1,449 million. Tax expense amounted to €204 million (2009: €201 million). After deduction of taxes, net income came in at €1,245 million. Of this amount, €5 million was allocated to other retained earnings and €1,240 million was recognized as the distributable profit.

Proposed dividend

€1.50

per share

The Board of Management and Supervisory Board will propose to the Annual Stockholders' Meeting on April 29, 2011 that the distributable profit be used to pay a dividend of €1.50 per share (826,947,808 shares) on the capital stock of €2,117 million entitled to the dividend for 2010.

5.2 Asset and Financial Position of Bayer AG

Bayer AG Summary Statements of Financial Position according to the German Commercial Code

[Table 3.26]

	Dec. 31, 2009	Dec. 31, 2010
	€ million	€ million
ASSETS		
Noncurrent assets		
Intangible assets, property, plant and equipment	395	347
Financial assets	34,594	34,267
	34,989	34,614
Current assets		
Receivables from subsidiaries	1,928	2,040
Remaining receivables, other assets	400	464
Cash and cash equivalents, marketable securities	1,862	2,131
	4,190	4,635
Total assets	39,179	39,249
EQUITY AND LIABILITIES		
Equity	14,391	14,478
Provisions	3,258	3,328
Other liabilities		
Bonds and notes, liabilities to banks	7,029	5,842
Payables to subsidiaries	13,965	15,149
Remaining liabilities	536	452
	21,530	21,443
Total equity and liabilities	39,179	39,249

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 receivables from, and payables to, Group companies.

Total assets of Bayer AG were at the previous year's level of €39.2 billion. A €0.4 billion decline in noncurrent assets was offset by an increase of the same amount in current assets.

Property, plant and equipment and intangible assets remained virtually unchanged, while financial assets declined by just €0.3 billion to €34.3 billion. Financial assets included investments in subsidiaries amounting to €33.7 billion (2009: €34.1 billion), or 85.9% (2009: 87.1%) of total assets.

Receivables from subsidiaries amounted to €2.0 billion (2009: €1.9 billion), while payables to subsidiaries totaled €15.1 billion (2009: €14.0 billion). These amounts accounted for 5.2% of total assets and 38.6% of total equity and liabilities, respectively.

Of the unchanged amount of €39.2 billion in total assets, €14.5 billion (2009: €14.4 billion) was equity-financed. The equity ratio rose from 36.7% to 36.9%. Equity was increased by the €1,245 million net income, but diminished by the €1,158 million dividend payment for 2009.

Provisions increased by €0.1 billion compared with the start of the year to €3.3 billion because of higher provisions for taxes.

Other liabilities were almost unchanged at €21.4 billion (net of deductible receivables; 2009: €21.5 billion). However, the financial debt included here declined by €1.3 billion to €23.0 billion. The decrease included a €1.2 billion drop in external financial debt, comprising a €0.9 billion reduction in liabilities to banks and the repayment of a €0.3 billion bond issued in 2007.

6. Takeover-Relevant Information

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, 2010 to €2,117 million, divided into 826,947,808 no-par bearer shares. The capital stock and the number of shares were thus unchanged from the end of the previous year. Each share confers one voting right.

A small number of shares may be subject to temporary trading restrictions, such as retention periods, in connection with employee stock participation programs.

We received no notifications in 2010 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.

Pursuant to Section 84, Paragraph 1 of the German Stock Corporation Act (AktG), 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. If no such majority is achieved, the appointment may be approved 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 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 Board of Management must comprise at least two members. The

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Supervisory Board may appoint one member to be Chairman of the Board of Management pursuant to Section 84, Paragraph 2 of the German Stock Corporation Act or Section 6, Paragraph 1 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 or, where a capital majority is required, by a simple majority of the capital.

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 29, 2015, 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 shares issued out of the Authorized Capital I that do not represent more than 20% of the existing capital stock. Absent a further resolution on the exclusion of stockholders' subscription rights, the Board of Management also may only exclude stockholders' subscription rights to shares issued under other authorizations regarding capital measures (Authorized Capital II, bonds with warrants or convertible bonds, purchase and sale of own shares) provided that such shares do not in total represent more than 20% of the existing capital stock.

With the approval of the Supervisory Board and until April 29, 2015, the Board of Management is also authorized to increase the capital by up to €212 million in one or more installments by issuing shares out of the Authorized Capital II in exchange for 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 capital increase out of the Authorized Capital II does not exceed 10% of the capital stock existing at the time this authorization becomes effective or the time this authorization is exercised and the issue price of the new shares is not significantly below the market price of the already listed shares.

The 2010 Annual Stockholders' Meeting adopted a resolution creating conditional capital of €212 million in connection with an authorization for the issuance of 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 amount of the shares required to service the bonds does not exceed 10% of the capital stock. 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, the 2010 Annual Stockholders' Meeting authorized the Board of Management to purchase and sell company shares representing up to 10% of the capital stock. This authorization expires on April 29, 2015.

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 on March 31, 2005, which is available until 2012. 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.

In addition, the terms of the €3.8 billion (as of December 31, 2010) in notes issued by Bayer in the years 2006 to 2010 under its multi-currency Euro 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.

Agreements exist for 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.

The above arrangement does not apply to the service contract of a Board of Management member that was concluded prior to the entry into force of the relevant amendments to the German Corporate Governance Code in 2008. In this case, payments would be made in line with the provisions of the severance indemnity clause referred to in Chapter 7.2 ("Compensation Report") if a change of control were to lead to the termination of this member's service contract and his leaving the Bayer Group prior to his 60th birthday.

7. Corporate Governance Report

THIS CORPORATE GOVERNANCE REPORT ALSO CONSTITUTES THE REPORT PURSUANT TO SECTION 3.10 OF THE GERMAN CORPORATE GOVERNANCE CODE.

7.1 Declaration on Corporate Governance*

* not part of the audited management report

DECLARATION BY THE BOARD OF MANAGEMENT AND SUPERVISORY BOARD

concerning the German Corporate Governance Code (May 26, 2010 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 electronic 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 2009.

With respect to the past, the following declaration refers to the June 18, 2009 version of the Code. With respect to present and future corporate governance practices at Bayer AG, the following declaration refers to the recommendations in the May 26, 2010 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 2009 with the temporary exception stated in the compliance declaration of December 2009: Until March 31, 2010, the amount of the deductible for the D&O insurance for the members of the Supervisory Board was not in compliance with the recommendation given in Section 3.8 Paragraph 2 of the Code because the D&O insurance is a group policy for which a deductible in the recommended amount was only agreed when the policy came up for renewal on April 1, 2010.
2. The company is in compliance with the recommendations of the Code with the exception of the recommendation given in Section 5.4.5, which temporarily is not being complied with in full.

The deviation from the recommendation given in Section 5.4.5 of the Code results from the fact that the Supervisory Board member Dr.-Ing. Ekkehard D. Schulz, Chairman of the Executive Board of ThyssenKrupp AG, is a member of the supervisory boards of more than three listed companies or companies with similar requirements (Bayer AG, MAN SE, RWE AG and AXA Konzern AG). Dr. Schulz will retire from the Executive Board of ThyssenKrupp AG at the end of the General Stockholders' Meeting of ThyssenKrupp AG on January 21, 2011. All the members of the Board of Management and the Supervisory Board will be in compliance with the recommendation given in Section 5.4.5 of the Code from that date. Since Dr. Schulz has been a member of the three other supervisory boards mentioned above for many years and will now remain a member of the Executive Board of the above listed company for only a brief period, the temporary deviation from the recommendation given in Section 5.4.5 of the Code is considered acceptable.


Leverkusen, December 2010

For the Board of Management:


DR. DEKKERS


BAUMANN

For the Supervisory Board:


DR. SCHNEIDER

**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.

BAYER IN COMPLIANCE WITH RECOMMENDATIONS OF THE CORPORATE GOVERNANCE CODE

Bayer has always placed great importance on responsible corporate governance and will continue to do so. In 2010 the company was able to issue a declaration that it has been compliant with the recommendations of the German Corporate Governance Code in the past with one temporary exception and intends to be fully compliant again in the future with one temporary exception.

The Board of Management and Supervisory Board last year again addressed the question of compliance with the Corporate Governance Code, particularly in light of the new recommendations included in the amended version of the Code published on May 26, 2010. The resulting declaration of compliance, reproduced above, was issued in December 2010 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 sub-groups 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 schedule of duties also assigns particular areas of specialist responsibility to the other members who served on the Board of Management in 2010. Each of these members also represents certain geographical regions. The previous Chairman of the Board of Management and the former Chief Financial Officer retired in 2010. The new Chairman of the Board of Management and the new Chief Financial Officer both had transition periods of several months in which to prepare for their new duties with the support of their respective predecessors.

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.


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Board of Management
directs the Group's
operations

Supervisory Board
oversees corporate
management

SUPERVISORY BOARD: OVERSIGHT AND CONTROL FUNCTIONS

The role of the 20-member Supervisory Board is to oversee and advise the Board of Management. Under the German Codetermination Act, half 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 2010, Dr. Klaus Sturany, satisfies the statutory requirements concerning the independence and 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 10ff. 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 endeavors at all times to have several members who have international business experience or an international background. A further objective concerning the composition of the Supervisory Board is that, absent special circumstances, its members should not hold office beyond the end of the next Annual Stockholders' Meeting following their 72nd birthday, and that at least 75% of the Supervisory Board members must be independent. The Supervisory Board assesses the independence of its members according to the recommendation contained in Section 5.4.2 of 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 to gradually increase the proportion of women on the Supervisory Board to at least 20% in the medium term. The aim is to have at least 15% female members following the elections to the Supervisory Board in 2012. It is intended to achieve the medium-term goal at the subsequent Supervisory Board election due to take place in 2017. These targets refer to the Supervisory Board as a whole, and are designed to be achieved evenly among the stockholder and employee representatives. 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. This assumes that suitable female candidates can be found for election as stockholder representatives.

IMPLEMENTATION STATUS OF THE OBJECTIVES

The Supervisory Board has several members with international business experience and other international connections. No member of the Supervisory Board is older than the target maximum age. One member, Hubertus Schmoldt, has been a member of the Supervisory Board since 1995, and thus has served more than three terms of office. However, Mr. Schmoldt has no business ties to the company or its Board of Management that in the opinion of the Supervisory Board could result in a conflict of interest. Currently, 10% of the Supervisory Board members are women. An increase in the proportion of women on the Supervisory Board is targeted for the next regular elections to be held at the Annual Stockholders' Meeting in 2012.

PERSONAL LIABILITY IN PLACE OF A DEDUCTIBLE

Until March 31, 2010 the company met the recommendation in the German Corporate Governance Code regarding deductibles for any Directors' & Officers' (D&O) liability insurance by obtaining personal declarations from each member of the Board of Management and Supervisory Board. According to these declarations, the members of the Board of Management undertook, should they cause damage to the company or third parties through gross negligence (as defined by German law) in the performance of their duties, to pay for such damage up to the equivalent of half their total annual compensation for the year in which any such damage occurred; the members of the Supervisory Board undertook until March 31, 2010, to pay for such damage, if caused by them, up to the equivalent of the variable portion of their respective annual compensation as Supervisory Board members for the relevant year.

The company agreed the statutory deductible for members of the Board of Management when the D&O insurance was renewed effective April 1, 2010. It also agreed a deductible for the members of the Supervisory Board in the amount recommended by the German Corporate Governance Code, effective on the same date. The personal declarations referred to above thus became obsolete as of April 1, 2010.

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).

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 transaction was reported to Bayer AG in 2010:

Securities Transactions by Members of the Board of Management or Supervisory Board

[Table 3.27]

Werner Baumann, Board of Management						
Date/Place	Security/Right	ISIN	Transaction	Price/Currency	Quantity	Total transaction volume
Jan. 4, 2010/Xetra	Shares	DE000BAY0017	Sale	€56.30	8,000	€450,400.00

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.

SYSTEMATIC MONITORING OF ALL BUSINESS ACTIVITIES

Bayer has a control system in place enabling it 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 timely and accurate accounting for all business transactions and the constant availability of reliable data on the company's financial position.

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.

CORPORATE COMPLIANCE

Our corporate activity is governed by national and local laws and statutes that place a range of obligations on the Bayer Group and its employees throughout the world. Bayer manages its business responsibly in compliance with the statutory and regulatory requirements of the countries in which it operates.

Bayer expects legally and ethically impeccable conduct from all of its employees in daily business operations, as the way they carry out their duties affects the company's reputation. By ensuring regular dialogue between employees and their supervisors and providing training courses involving the responsible Compliance Officers, the company endeavors to acquaint its employees with the numerous statutory and regulatory requirements of the countries where they work that are of relevance to them. This lays the foundation for managing the business responsibly and in compliance with the respective applicable laws.

The Board of Management states in the Corporate Compliance Policy that Bayer is unreservedly committed to corporate compliance and will forgo any business transactions that would violate

compliance principles. The Policy also details the organizational framework for corporate compliance and specifies areas in which violations of applicable law can have particularly serious adverse consequences, both for the entire enterprise and for individual employees. The principles set forth in the Corporate Compliance Policy are designed to guide employees in their business-related actions and protect them from potential misconduct. Its core requirements are:

- adherence to antitrust regulations,
- integrity in business transactions and the ban on exerting any kind of improper influence,
- the observance of product stewardship and the commitment to the principle of sustainability,
- the strict separation of business and personal interests, and
- the commitment to ensure fair and respectful working conditions across the enterprise.

Employees may contact either their respective supervisors or the local Compliance Officers for support and advice on ensuring legally compliant conduct in specific business situations.

Each Group company with business operations has at least one Compliance Officer. Some foreign companies have several local Compliance Officers with clearly defined responsibilities for the different business units within the respective companies. The main responsibilities of each local Compliance Officer include:

- providing advice to the operational business units,
- assessing risks,
- running or arranging compliance training programs,
- investigating any reports of possible compliance violations and initiating appropriate corrective action, and
- meeting Group-level reporting obligations toward the Chief Subgroup Compliance Officers at the Group management companies.

The Chief Subgroup Compliance Officers in turn report to the Group Compliance Officer, who is appointed by the Group Management Board. At least once a year, the Group Compliance Officer and the Head of Corporate Auditing report to the Audit Committee of the Supervisory Board on any compliance violations that have been identified.

The issue of corporate compliance is a permanent part of the performance targets agreed with the members of the Group Leadership Circle (GLC). By virtue of their positions, these executives have a special obligation to set an example for their employees, spread the compliance message increasingly within their companies and take organizational measures to implement it. As of 2010, a GLC member may be required to repay the STI awards granted for up to five of the preceding years if a systematic violation of applicable law that caused financial loss to Bayer was committed in one or more years by a direct report and appropriate action by the GLC member could have prevented the violation.

COMMON VALUES AND LEADERSHIP PRINCIPLES

To complement the Corporate Compliance Policy, Bayer has committed itself to specific values. These values – Leadership, Integrity, Flexibility and Efficiency, or “LIFE” for short – 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.

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 as of the end of 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.

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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 and interim reports 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.

7.2 Compensation Report

COMPENSATION OF THE BOARD OF MANAGEMENT

In 2010 the compensation of the Board of Management basically comprised five components: a fixed annual salary, a short-term incentive award on a yearly basis in relation to a target amount, a long-term incentive award for a four-year period in relation to a target amount, a further long-term compensation component introduced in 2010 involving a grant of virtual Bayer shares subject to a three-year retention period, and a company pension plan conferring pension entitlements that increase with years of service. Compensation in kind and other benefits are also provided, such as the use of a company car for private purposes or reimbursement of the cost of health screening examinations.

The short-term incentive (STI) award for 2010 is calculated according to the Group's EBITDA margin before special items and the weighted average target attainment of the HealthCare, CropScience and MaterialScience subgroups. The Supervisory Board can adjust this award according to individual performance. The target attainment of the subgroups is measured chiefly in terms of their EBITDA before special items. A qualitative appraisal in relation to the market and competitors is also taken into account. Serving members of the Board of Management as of the closing date receive 50% of the STI as direct compensation and 50% in the form of the new long-term compensation component.

The amount of Werner Wenning's STI award for 2010 was set at the Supervisory Board's discretion. In consideration of Mr. Wenning's duties as Chairman of the Board of Management in 2010, and especially their successful transfer to Marijn Dekkers, the Supervisory Board specified a sum of €1,863 thousand, which was paid out in January 2011 as agreed. The STI award for Klaus Kühn was finalized upon his retirement from the Board of Management and paid out in May 2010.

The directly effected compensation for the service of the members of the Board of Management in 2010 totaled €10,019 thousand (2009: €8,830 thousand). Of this amount, fixed salaries accounted for €3,936 thousand (2009: €3,223 thousand), the part of the STI awards to be paid out in 2011 to the members of the Board of Management holding office on December 31, 2010 for €4,928 thousand (2009: €5,442 thousand), and compensation in kind and other benefits for €1,155 thousand (2009: €165 thousand), the latter item consisting mainly of amounts assigned to compensation in kind and other benefits in accordance with German taxation guidelines.

Since 2010 the long-term compensation of the members of the Board of Management holding office on December 31, 2010 has consisted of two components: a grant of virtual Bayer shares for which parts of the STI award – which was previously paid out in full – are used, and the long-term stock-based compensation program *Aspire*.

The 2010 Annual Stockholders' Meeting approved the compensation system for the members of the Board of Management by way of a consultative resolution. This system remains in effect.

According to the changes resolved by the Supervisory Board in December 2009 and confirmed by the Annual Stockholders' Meeting, 50% of the STI was granted in the form of virtual Bayer shares subject to a three-year retention period, thereby creating a new long-term compensation component. The value of these shares depends on the trend in the price of Bayer stock during the retention period. The basis for the conversion of this former part of the STI payment into virtual shares was the average official closing price of Bayer shares over the last 30 trading days of 2010 (November 18 – December 30, 2010) in the Xetra system of the Frankfurt Stock Exchange; this average price was €56.95. Wolfgang Plischke and Richard Pott receive one additional virtual Bayer share for every 20 virtual shares granted under the new system to compensate them for the conversion of part of the former STI into a long-term compensation component. The additional virtual shares are subject to the same retention period and value development.

In addition, the members of the Board of Management participate in the long-term stock-based compensation program Aspire I (annual tranches 2008 through 2010). Under this program, awards are paid out provided that the performance of Bayer stock (both in absolute terms and relative to the EURO STOXX 50 benchmark index) meets defined criteria over a period of three years (four years starting with the 2010 tranche). Further details of this program are provided in Note [26.6] to the consolidated financial statements. The fair value of the stock-based compensation newly granted in 2010 as of its grant date is included in the calculation of total compensation (see table below), although the award entitlement was only partially earned as of the closing date.

The following table shows the compensation components of the individual members of the Board of Management in 2010:

Board of Management Compensation – Aggregate Compensation

[Table 3.28]

		Serving members of the Board of Management				Former members		Total
		Marijn Dekkers (Chairman)	Werner Baumann	Wolfgang Plischke	Richard Pott	Werner Wenning	Klaus Kühn	
		€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Fixed salary	2010	900	633	633	633	873	264	3,936
	2009	-	-	633	633	1,165	792	3,223
Compensation in kind and other benefits	2010	1,010*	42	35	30	27	11	1,155
	2009	-	-	49	39	36	41	165
Total non-performance-related compensation	2010	1,910	675	668	663	900	275	5,091
	2009	-	-	682	672	1,201	833	3,388
Short-term incentive	2010	903	554	554	554	1,863	500	4,928
	2009	-	-	1,010	1,010	2,158	1,264	5,442
Total directly effected compensation	2010	2,813	1,229	1,222	1,217	2,763	775	10,019
	2009	-	-	1,692	1,682	3,359	2,097	8,830
Fair value of stock-price-indexed compensation based on the short-term incentive	2010	903	554	582	582	-	-	2,621
	2009	-	-	-	-	-	-	-
Fair value of newly granted stock-based compensation as of grant date	2010	261	206	291	291	184	33	1,266
	2009	-	-	151	151	208	84	594
Aggregate compensation (according to the German Commercial Code)	2010	3,977	1,989	2,095	2,090	2,947	808	13,906
	2009	-	-	1,843	1,833	3,567	2,181	9,424

* including one-time relocation expenses

The award entitlements earned in 2010 – both from the 2010 tranche and from previous years' tranches on which the entitlements were only partially earned – are shown separately in the following table along with the changes in the value of entitlements from previous years' tranches based mainly on the performance of Bayer stock in 2010. The evaluation of stock performance is based on the average official closing price of Bayer shares over the last 30 trading days of 2010 (November 18 – December 30, 2010) in the Xetra system of the Frankfurt Stock Exchange; this average price was €56.95. The fair value of the award entitlement already earned in 2010 from the 2010 tranche is included under "Stock-based compensation entitlements earned in the respective year." Since certain components of the award entitlements are included in both tables, the figures in the following and the preceding table should not be added together.

Board of Management Compensation – Stock-Based Compensation

[Table 3.29]

		Serving members of the Board of Management				Former members		Total
		Marijn Dekkers (Chairman)	Werner Baumann	Wolfgang Plischke	Richard Pott	Werner Wenning	Klaus Kühn	
		€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Long-term incentive (stock-based compensation entitlements earned in the respective year)	2010	67	124	234	234	322	98	1,079
	2009	-	-	319	319	587	398	1,623
Change in value of existing entitlements	2010	-	(21)	(44)	(44)	(61)	(56)	(226)
	2009	-	-	212	212	390	265	1,079

The current members of the Board of Management are generally entitled to receive a pension upon leaving the Bayer Group, though not before the age of 60, in an annual amount equal to at least 30% of the last yearly fixed salary. This percentage increases depending on years of service as a member of the Board of Management and is capped at 60% except in the case of the member appointed prior to 2006, whose pension entitlement can rise to a maximum of 80% of his last yearly fixed salary. The respective surviving dependents' benefit is set at 60% of this pension level.

The current service cost for the pension entitlements of the members of the Board of Management is shown in the following table. The current service cost for pension entitlements according to the German Commercial Code (HGB) also includes any past service cost resulting from new entitlements or variations in existing entitlements. The change in the present value of pension entitlements also reflects the interest cost for entitlements earned in prior years, along with actuarial gains and losses. Expenses for the pension entitlements of the members of the Board of Management who retired during the year are included up to the respective retirement dates. Since HGB and IFRS prescribe different methods for calculating pension provisions, the table contains both the amounts disclosed in the financial statements of Bayer AG prepared according to HGB and those published in the consolidated financial statements of the Bayer Group prepared according to IFRS. The figures in each case represent divergent disclosures of one and the same pension entitlement.

Pension Entitlements

[Table 3.30]

		Serving members of the Board of Management				Former members		Total
		Marijn Dekkers (Chairman)	Werner Baumann	Wolfgang Plischke	Richard Pott	Werner Wenning	Klaus Kühn	
		€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Change in the present value of pension entitlements (IFRS)	2010	2,612	621	1,017	1,074	823	426	6,573
	2009	-	-	834	707	405	1,433	3,379
<i>Current service cost for pension entitlements earned in the respective year (IFRS)</i>	2010	2,175	111	203	217	-	141	2,847
	2009	-	-	181	198	-	985	1,364
Present value of pension entitlements at the closing date (IFRS)*	2010	2,612	2,868	6,594	6,552	-	-	18,626
	2009	-	-	5,577	5,478	14,675	6,335	32,065
Change in the present value of pension entitlements (German Commercial Code)	2010	2,481	298	602	577	187	255	4,400
	2009	-	-	482	279	(452)	1,048	1,357
<i>Current service cost for pension entitlements earned in the respective year (German Commercial Code)</i>	2010	2,292	117	209	225	3	148	2,994
	2009	-	-	200	223	4	1,090	1,517
Present value of pension entitlements at the closing date (German Commercial Code)	2010	2,481	2,690	6,392	6,301	-	-	17,864
	2009	-	-	5,794	5,728	15,128	6,597	33,247

* after deducting plan assets

Unlike the aggregate compensation according to the German Commercial Code, the aggregate compensation according to IFRS does not include the fair value of newly granted stock-based compensation, but rather the stock-based compensation entitlements earned in the respective year plus the change in the value of stock-based compensation entitlements from previous years that have not yet been paid out. It also contains the current service cost for pension entitlements.

The components of the Board of Management's compensation are summarized in the following table:

Board of Management Compensation according to IFRS

[Table 3.311]

	2009	2010
	€ thousand	€ thousand
Directly effected compensation	8,830	10,019
Fair value of stock-price-indexed compensation based on the short-term incentive	-	2,621
Long-term incentive (stock-based compensation entitlements earned in the respective year)	1,623	1,079
Change in value of existing entitlements	1,079	(226)
Current service cost for pension entitlements earned in the respective year	1,364	2,847
Aggregate compensation (IFRS)	12,896	16,340

For the only Board of Management member whose service contract was concluded prior to the entry into force of the amendments to the German Corporate Governance Code in June 2008, a general severance indemnity clause applies if the service contract is terminated at the company's instigation prior to his 60th birthday. The basic principles according to this clause are as follows:

If a member of the Board of Management is not offered a new service contract upon expiration of his existing service contract because he is not reappointed to the Board of Management, or if the member is removed from the Board of Management prematurely during the term of his contract in the absence of grounds for termination without notice, he will receive a monthly bridging allowance amounting to 80% of his last monthly fixed salary for a maximum period of 60 months from the date of expiration of his service contract less the period for which he was released from his duties on full pay or otherwise compensated. (If he were removed during the term of his contract, he would also receive the payment due for the rest of the term, though this would be reduced to the amount of his annual fixed salary plus the target amount for the STI payment for at least twelve months.) His earnings from any new employment elsewhere would be offset against the bridging allowance. In the case of premature termination at the instigation of the company, further years of service might be credited under certain circumstances for the purpose of computing his Board of Management pension entitlement, though not beyond his 60th birthday.

The Supervisory Board has decided to follow the recommendation of the German Corporate Governance Code, as amended in June 2008, and limit severance payments under new service contracts. Under only one existing member's contract could the clause still be invoked. In the case of the remaining contracts, it has been agreed that payment claims can only arise in the event of premature contract termination by the company without cause. Such claims, including ancillary benefits, are then limited to the value of two years' compensation and may not compensate more than the remaining term of the contract. The severance payment cap is to be calculated on the basis of the total compensation (fixed salary plus the target value of the STI) for the previous year and, if appropriate, also the expected total compensation for the current year.

Post-contractual non-compete agreements have been concluded with the members of the Board of Management, providing for compensatory payments to be made by the company for the two-year duration of the post-contractual non-compete clause. For members appointed prior to 2010, this payment amounts to 50% of the average contractually agreed salary for the preceding three years. For the members newly appointed to the Board of Management as of January 1, 2010, the compensatory payment is 100% of the average fixed salary for the twelve months preceding their departure. It is offset against any severance payments.

Since his retirement from the Board of Management, Klaus Kühn has received regular payments as compensation for such a non-compete clause. The payments made to him in 2010 totaled €764,780.

Special supplementary arrangements apply in the event of a change of control, see Chapter 6 "Takeover-Relevant Information."

Members of the Board of Management – in common with all employees – who joined the company prior to January 1, 1979, are entitled to six months' pre-retirement leave. A payment may be made in lieu of this leave in certain circumstances. In 2010 this arrangement applied only to Werner Wenning, to whom a payment of €1,850 thousand was made in settlement of his claim to pre-retirement leave. This amount is included in the total of pensions paid to retired members of the Board of Management given below.

There were no loans to members of the Board of Management outstanding as of December 31, 2010, nor any repayments of such loans during the year.

We currently pay retired members of the Board of Management a monthly pension equal to 80% of the last monthly base salary received while in service. The pensions paid to former members of the Board of Management or their surviving dependents have been reassessed annually since January 1, 2009 and adjusted taking into account the development of consumer prices. These benefits are in addition to any amounts they receive under previous employee pension arrangements. The pensions paid to former members of the Board of Management and their surviving dependents amounted to €13,351 thousand (2009: €11,273 thousand). Pension provisions for former members of the Board of Management and their surviving dependents at the closing date amounted to €131,599 thousand (2009: €107,223 thousand) according to IFRS and €129,121 thousand (2009: €110,069 thousand) according to HGB.

COMPENSATION OF THE SUPERVISORY BOARD

The Supervisory Board is compensated according to the relevant provisions of the Articles of Incorporation, which provisions have not been altered since the resolution of the Annual Stockholders' Meeting on April 29, 2005. This provides that, in addition to reimbursement of their expenses, each member of the Supervisory Board receives fixed annual compensation of €60,000 and a variable annual compensation component. The variable compensation component is based on corporate performance in terms of the gross cash flow reported in the consolidated financial statements of the Bayer Group for the respective fiscal year. The members of the Supervisory Board receive €2,000 for every €50 million or part thereof by which the gross cash flow exceeds €3.1 billion, but the variable component for each member may not exceed €30,000.

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 three times the basic compensation, while the Vice Chairman receives one-and-a-half times the basic compensation. Members of the Supervisory Board who are also members of a committee receive an additional one quarter of the amount, with those chairing a committee receiving a further quarter. However, no member of the Supervisory Board may receive total compensation exceeding three times the basic compensation. It has been agreed that no additional compensation shall be paid for membership of the Nominations Committee. If changes are made to the Supervisory Board and its committees during the fiscal year, members receive compensation on a pro-rated basis.

No member of the Supervisory Board received compensation or any other benefits 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.

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 was €603 thousand (2009: €605 thousand).

There were no loans to members of the Supervisory Board outstanding as of December 31, 2010, nor any repayments of such loans during the year.

Compensation of the Members of the Supervisory Board of Bayer AG in 2010

[Table 3.32]

	Fixed Compensation	Variable Compensation	Total
	€ thousand	€ thousand	€ thousand
Dr. Paul Achleitner	75	38	113
André Aich	60	30	90
Willy Beumann	64	32	96
Dr. Clemens Börsig	60	30	90
Karl-Josef Ellrich ¹	37	19	56
Dr.-Ing. Thomas Fischer	75	38	113
Peter Hausmann	75	38	113
Prof. Dr.-Ing. e.h. Hans-Olaf Henkel	75	38	113
Reiner Hoffmann	60	30	90
Dr. rer. pol. Klaus Kleinfeld	60	30	90
Petra Kronen	75	38	113
Dr. rer. nat. Helmut Panke	60	30	90
Hubertus Schmoldt	75	38	113
Dr. Manfred Schneider (Chairman)	180	90	270
Dr.-Ing. Ekkehard D. Schulz	60	30	90
Roswitha Süsselbeck ²	30	15	45
Dr. Klaus Sturany	90	45	135
Dipl.-Ing. Dr.-Ing. e.h. Jürgen Weber	75	38	113
Thomas de Win	120	60	180
Prof. Dr. Dr. h.c. Ernst-Ludwig Winnacker	60	30	90
Oliver Zühlke	60	30	90

¹ Member of the Supervisory Board until June 30, 2010

² Member of the Supervisory Board effective July 1, 2010

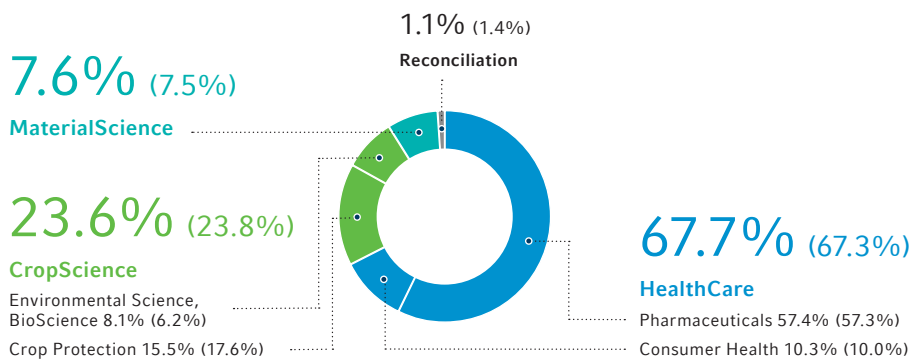
8. Research and Development

Our mission “Bayer: Science For A Better Life” underscores Bayer’s belief that innovation has a major role to play in addressing the global challenges of providing health care and nutrition for the world’s growing population and conserving dwindling resources. Innovation will therefore remain a key driver of the company’s growth in the future. Bayer has the resources at its disposal to continuously renew and expand its portfolio and optimize production processes through research and development. In 2010 we invested the record sum of €3,053 million – equivalent to 8.7% of sales – in research and development, compared with €2,746 million in the previous year. Our research and development activities are closely aligned to market needs and geared toward continuous improvement. Our own activities are supplemented by an international network of collaborations with leading universities, public-sector research institutes and partner companies that we continue to expand in alignment with our main areas of research and development. This network allows the pooling of expertise, helping us to rapidly translate new ideas into successful products. Another core element of our activities is the continuous development of the 13,200 individuals working in research and development throughout the Bayer Group.

€3.1 billion
for research and development

Share of Research and Development Expenses by Segment (2009 in parentheses)

[Graphic 3.17]



HEALTHCARE

In 2010 we invested €2,066 million (2009: €1,847 million) in research and development (R&D) in the Pharmaceuticals and Consumer Health segments. This represented 67.7% of the Bayer Group’s entire research and development expenditures and was equivalent to 12.2% of HealthCare sales. The number of HealthCare subgroup employees working in research and development at the time this report was finalized was 7,700.

€2,066 million
for research and development at HealthCare

In the Pharmaceuticals segment we increased our R&D expenditures to €1,751 million (2009: €1,572 million), or 16.1% (2009: 15.0%) of sales. Drug discovery in the Pharmaceuticals segment focuses on the areas of cardiology, diagnostic imaging, oncology and women’s healthcare. The respective research activities and capacities are concentrated at three main sites in Berlin and Wuppertal, Germany, and Berkeley, California, United States. Work in Berlin and Wuppertal centers largely on identifying molecular targets and developing and optimizing lead compounds. Research is also carried out at these sites in the fields of drug metabolism, pharmacokinetics, toxicology and clinical pharmacology. Berkeley is a major research and development center in which protein-based biological research on the active ingredient Kogenate® takes place. In 2010 the global research network was strengthened by the opening of an innovation center near San Francisco, California, United States, for hematology research and the development of novel biological active substances. At this center, university research institutes and young biotechnology companies will work closely with our scientists. In addition, we established a new international R&D center in Beijing, China, to contribute to the research and development of medicines for China and other Asian countries. At both centers we are seeking strategic alliances with selected research and development partners.

To drive the development of new substances for treating diseases with a high unmet medical need, we conducted clinical studies with several drug candidates from our research and development pipeline during 2010. Following the completion of all necessary studies, we submitted applications to one or more authorities for registration or registration extensions for some of these drug candidates. The most important drug candidates currently in the registration process are:

Products in Registration

[Table 3.33]

	Indication
Gadovist®	U.S.A., magnetic resonance imaging, central nervous system
Qlaira®/Natazia™ (E2V/DNG)	U.S.A., treatment of heavy and/or prolonged menstrual bleeding
Valette® Plus	E.U., oral contraception, combination product with folate
Xarelto®	Stroke prevention in atrial fibrillation
Xarelto®	E.U., treatment and secondary prevention of deep vein thrombosis
Xarelto®	U.S.A., prevention of venous thromboembolism following elective hip or knee replacement surgery
YAZ® Flex	E.U., oral contraception, flexible dosage regimen

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

Research and Development Projects (Phases III and II)*

[Table 3.34]

	Indication	Status
Alemtuzumab	Multiple sclerosis	Phase III
Alpharadin™	Treatment of bone metastases in hormone-refractory prostate cancer	Phase III
ATX-101	Reduction of submental fat	Phase III
FC Patch low	Contraception	Phase III
Florbetaben	PET imaging in diagnosis of Alzheimer's disease	Phase III
Gadovist®	Magnetic resonance imaging	Phase III
LCS (ULD LNG contraceptive system)	Contraception	Phase III
Nexavar®	Breast cancer	Phase III
Nexavar®	Thyroid cancer	Phase III
Nexavar®	Non-small-cell lung cancer	Phase III
Regorafenib (DAST inhibitor)	Treatment of metastatic or inoperable gastrointestinal stromal tumors	Phase III
Regorafenib (DAST inhibitor)	Colon cancer	Phase III
Riociguat (sGC stimulator)	Pulmonary hypertension (CTEPH)	Phase III
Riociguat (sGC stimulator)	Pulmonary hypertension (PAH)	Phase III
Xarelto®	Prevention of venous thromboembolism in medically ill, immobilized patients	Phase III
Xarelto®	Treatment and secondary prevention of venous thromboembolism	Phase III
Xarelto®	Secondary prevention of acute coronary syndrome/myocardial infarction	Phase III
Vaginorm®	Vulvovaginal atrophy and female sexual dysfunction (FSD)	Phase III
VEGF Trap-Eye	Wet age-related macular degeneration	Phase III
VEGF Trap-Eye	Abnormal retinal angiogenesis following pathological myopia	Phase III
VEGF Trap-Eye	Central retinal vein occlusion	Phase III

Research and Development Projects (Phases III and II)*

[Table 3.34 (continued)]

	Indication	Status
Alpharadin™	Treatment of bone metastases in breast cancer	Phase II
Amikacin Inhale	Pulmonary infection	Phase II
BAY 60-4552/vardenafil	Erectile dysfunction	Phase II
Cinaciguat (sGC activator)	Acute heart failure	Phase II
Ciprofloxacin Inhale	Pulmonary infection	Phase II
Mapracorat (ZK 245186, SEGRA)	Atopic dermatitis	Phase II
MEK inhibitor	Cancer	Phase II
Nexavar®	Breast cancer	Phase II
Nexavar®	Colon cancer, combination therapy	Phase II
Nexavar®	Ovarian cancer	Phase II
Nexavar®	Additional indications	Phase II
Regorafenib (DAST inhibitor)	Cancer	Phase II
Riociguat (sGC stimulator)	Pulmonary hypertension (COPD)	Phase II
Riociguat (sGC stimulator)	Pulmonary hypertension (ILD)	Phase II
Riociguat (sGC stimulator)	Pulmonary hypertension (LHD)	Phase II
VEGF Trap-Eye	Diabetic macular edema	Phase II

*as of February 15, 2011

PAH = pulmonary arterial hypertension; CTEPH = chronic thromboembolic pulmonary hypertension

COPD = chronic obstructive pulmonary disease; ILD = interstitial lung disease; PET = positron emission tomography

LHD = left heart disease

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 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 and advance the most promising pharmaceutical projects.

Our novel anticoagulant Xarelto®, a direct Factor Xa inhibitor in tablet form, was launched onto the market in September 2008 for prophylaxis of venous thromboembolism (VTE) in adult patients following elective hip or knee replacement surgery. Bayer has received marketing authorization for this indication from health authorities in more than 100 countries around the world, including the E.U. member states, Australia, China, Canada and Mexico. Xarelto® is now on the market in over 75 countries. In a Phase III trial investigating Xarelto® in long-term treatment and secondary prevention of deep vein thrombosis, a novel, simplified therapeutic approach based on Xarelto® as a single-entity therapy demonstrated comparable efficacy to the current standard therapy and thus met the primary efficacy endpoint. In January 2011, based on the positive results of the registration-relevant, double-blind Phase III ROCKET AF trial, we submitted Xarelto® to the European Medicines Agency (EMA) for E.U. marketing authorization for stroke prevention in non-valvular atrial fibrillation and the treatment and secondary prevention of deep vein thrombosis, and our cooperation partner Johnson & Johnson submitted a New Drug Application to the U.S. Food and Drug Administration (FDA) for market authorization for stroke prevention in non-valvular atrial fibrillation. The extensive clinical trial program supporting Xarelto® makes it probably the most intensively studied oral, direct Factor Xa inhibitor in the world today. More than 65,000 patients will be enrolled into the clinical development program for this drug substance, which will evaluate the product in the prevention and treatment of thrombosis in a broad range of indications (see also Table 3.34).

Xarelto®:
applications submitted
for new indications

Based on positive Phase II trial outcomes with riociguat, the first member of a new class of vasodilating agents known as soluble guanylate cyclase (sGC) stimulators, we moved into Phase III trials with this substance in December 2008. Administered in tablet form, riociguat is currently being investigated as a new approach for the treatment of various forms of pulmonary hypertension.

Our development projects also include the innovative cancer drug Nexavar[®], which we are jointly further developing with Onyx Pharmaceuticals, Inc., United States. The promising active substance sorafenib, which attacks both cancer cells and the vascular system of the tumor, is already being marketed worldwide to treat advanced renal cell carcinoma and hepatocellular carcinoma. Nexavar[®] is currently in various stages of clinical testing for the treatment of further tumor types. A Phase III study involving Nexavar[®] in combination with two chemotherapeutics commonly used in Europe compared to chemotherapy alone did not reach its primary endpoint – extension of overall survival – in patients with advanced non-small-cell lung carcinoma. Nexavar[®] continues to be investigated by Bayer and Onyx as well as independent scientists in the treatment of lung cancer in a variety of settings (see also Table 3.34).

With regorafenib we launched a Phase III program in April 2010 for treatment of advanced colorectal cancer. Regorafenib is a novel, oral multi-kinase inhibitor that inhibits various signaling pathways responsible for tumor growth. We are enrolling patients with metastatic colorectal carcinoma whose disease is progressing despite previous standard treatments.

In the field of women's healthcare we are conducting research in the field of gynecological therapies to expand the range of contraceptive options. Phase III clinical trials began in April 2009 with a contraceptive patch, intended to become the only transparent product of its kind and the smallest, lowest-dosed contraceptive patch on the market. Vaginorm[®], a development product of our new collaboration with EndoCeutics, is being developed for the treatment of vaginal atrophy and female sexual dysfunction. Vaginorm[®] is currently being investigated in a Phase III trial program in Canada and the United States. It contains dehydroepiandrosterone (DHEA), a precursor of female and male sex hormones. Also undergoing Phase III development is the new hormone-releasing intrauterine device LCS, which is smaller than Mirena[®], contains a lower hormone dose and is effective for up to three years.

The contraceptives YAZ[®] Plus and Yasmin[®] Plus, which each contain folate in addition to the hormonal components, were registered in the United States under the trade names Beyaz[®] and Safyral[™], respectively. Our new oral contraceptive, marketed in Europe since May 2009 under the name Qlaira[®], was registered in the United States as Natazia[™] in the second quarter of 2010. The additional indication for treatment of heavy and/or prolonged menstrual bleeding was registered in Europe in October and has also been submitted for registration in the United States. Qlaira[®]/Natazia[™] is the first product in a new class of oral contraceptives whose estrogen component is based on estradiol.

Our research activities in the area of diagnostic imaging are focused on the development of positron emission tomography (PET) tracers that could enable earlier and more accurate diagnosis of diseases in the future. Here, we are concentrating on three indications: central nervous system disorders, oncology and cardiovascular disease. With the development of the PET tracer florbetaben, we aim to contribute to earlier and more accurate diagnosis of Alzheimer's disease. Bayer launched the global Phase III program for florbetaben in November 2009.

We supplement our development product portfolio from our own R&D activities through targeted inlicensing.

Inlicensing complements
our development
portfolio

In June 2010 we formed a strategic alliance with OncoMed Pharmaceuticals, Inc., United States, to research, develop and market novel therapeutics to control cancer stem cells, which are believed to play a significant role in the emergence, metastasis and recurrence of cancer.

The collaboration formed in March 2010 with the U.S. specialty pharmaceutical and diagnostics company Prometheus Laboratories Inc. is aimed at the development of a diagnostic platform in cancer therapy. The purpose of the platform is to match patients with suitable drug candidates, thereby opening up new options for personalized cancer therapy in the future.

In collaboration with Genzyme Corp., United States, we are developing the humanized monoclonal antibody alemtuzumab, which is currently being tested in two global Phase III studies for the treatment of multiple sclerosis (MS).

The VEGF Trap-Eye joint developmental project with Regeneron Pharmaceuticals, Inc., United States, has achieved positive results in two parallel Phase III studies in wet age-related macular degeneration (AMD). Based on these data, we plan to file for marketing authorization in Europe and the United States together with Regeneron in the first half of 2011. VEGF Trap-Eye is also currently undergoing Phase III clinical development for the treatment of central retinal vein occlusion (CRVO), another frequent cause of blindness. In addition, a Phase II study in the treatment of diabetic macular edema (DME) is being conducted. VEGF (vascular endothelial growth factor) is a natural growth factor that stimulates the formation of new blood vessels (angiogenesis). VEGF Trap-Eye blocks this growth factor specifically and very effectively, thus preventing the abnormal formation of new blood vessels that tend to leak blood. The medication is administered directly into the eye. Once the product has been granted regulatory approval, Bayer will market it outside the United States. Regeneron Pharmaceuticals, Inc., United States, retains exclusive commercialization rights to VEGF Trap-Eye in the U.S.

In September 2009 Bayer licensed Alpharadin™, an alpha-emitting radiopharmaceutical, from Algeta ASA, Norway, for joint development and marketing as a potential cancer therapy. The substance is currently being evaluated in a global Phase III trial for the treatment of bone metastases in prostate cancer patients who no longer respond to hormone therapy. In 2010 the development program for Alpharadin™ was expanded to include a Phase II study in breast cancer patients with bone metastases.

We also invest in continuous life-cycle management to identify possible additional indications and improved delivery forms for products already on the market. For example, the U.S. Food and Drug Administration (FDA) has approved STAXYN™, a new formulation of our drug Levitra®. This is an orodispersible tablet that can therefore be taken without liquid. We have also received marketing authorization for the new formulation in Europe under the trade name Levitra®.

Life-cycle management
for products already on
the market

In the Consumer Health segment we increased our R&D expenditures to €315 million (2009: €275 million), or 5.2% (2009: 5.0%) of sales. In our Consumer Care Division, research and development activities at our product development centers in Morristown, New Jersey, United States, and Gaillard, France, concentrate on identifying, developing and commercializing non-prescription (over-the-counter = OTC) products. These efforts center on supporting both existing and new brands by implementing product-specific, clinical and regulatory development strategies that enable the successful exploitation of new technologies, the expansion of indications for existing products or the reclassification of current prescription medicines as OTC products. We introduced a variety of new product line extensions to several markets in 2010, such as the combination product Bayer® AM (active ingredients: acetylsalicylic acid and caffeine), new nutritionals (especially for menopausal women and performance-oriented men) sold under the One A Day® brand in the United States, and the antacid Mopralpro® in France. In the area of prescription dermatology products, we entered into a licensing and development agreement with U.S.-based KYTHERA Biopharmaceuticals, Inc., concerning the joint development of a substance for use in aesthetic dermatology.

The research and development activities of our Medical Care Division focus on blood glucose monitoring and the continuing development of medical equipment used in the diagnosis or treatment of various diseases. At the four U.S. research and development centers for our diabetes care business, the largest of which is in Tarrytown, New York, we are working to strengthen our product lines and continue our expansion into attractive segments of the diabetes market. In 2010 we progressed with the launch of several innovative products in key markets to meet specific needs of individuals with diabetes, including Contour® USB with integrated diabetes management software and the option of direct computer connection (plug & play), the diabetes management software Glucofacts® Deluxe, and A1CNow™ SelfCheck, which is used to determine long-term blood glucose values (A1c). The research and development activities for our medical equipment business focus on continuous enhancement of our contrast injection, thrombus removal and other vascular intervention systems. We also aim to enter additional attractive segments such as medical data management tools for contrast injection systems, and drug-eluting balloon catheters to treat vascular disease. The respective research and development centers are located near Pittsburgh, Pennsylvania, and Minneapolis, Minnesota, in the United States and in Sydney, Australia.

The Animal Health Division focuses its research and development activities in Monheim, Germany, on anti-infectives and parasiticides along with active substances for the treatment of non-infectious disorders in animals. Besides the development of new products to control parasites in companion animals and livestock, we continue to expand the product portfolio to treat chronic kidney diseases, cardiovascular disease and cancer in dogs and cats. A number of product line extensions also received approval in various markets. In the United States, for example, Advantage® was registered additionally for the prevention and treatment of flea and tick infestation in dogs.

€722 million

for research and
development
at CropScience

CROPSCIENCE

In 2010, €722 million (2009: €653 million) in research and development expenditures, or 23.6% of the Bayer Group total, were made in the CropScience subgroup. This was equivalent to 10.6% of subgroup sales.

CropScience maintains a global network of research and development facilities employing some 4,300 people. Our largest R&D sites for crop protection products are located in Monheim and Frankfurt am Main, Germany, and in Lyon, France. The major research centers of the BioScience unit, which focuses on seed technology and breeding, are located in Ghent, Belgium; Haelen, Netherlands; and Morrisville, North Carolina, United States.

While research is carried out centrally at a small number of sites, our development and seed breeding activities take place both at these sites and at field testing stations across the globe so that future active substances and crop varieties can be tested according to specific regional requirements.

As part of our integrated research approach, scientists in the fields of agricultural chemistry and seed technology are increasingly collaborating to pool the knowledge acquired through chemical, biological and genetic research and field development, aligning this expertise to our long-term research objectives and business strategies for the various crops.

In the Crop Protection segment we spent €476 million (2009: €482 million) for research and development in 2010. In this segment we identify and develop innovative, safe and sustainable products for use in agriculture as insecticides, fungicides, herbicides or seed treatments, and carry out research projects across all indications in new areas of future importance, such as plant health or stress tolerance. In addition to conventional chemistry, biology and biochemistry, modern technologies such as genomics, high-throughput screening and bioinformatics play an important role in identifying new chemical lead structures. Collaborations with external partners complement our own activities.

We broaden the range of uses for our products by developing new mixtures or innovative formulations of products already on the market so that they can be applied in additional crops or be made easier to handle.

The active ingredient pipeline of Crop Protection currently contains 13 development projects, of which nine are at an advanced stage and four at an early stage of development. A further 38 projects are in earlier research stages.

In 2010 we successfully commercialized our new rice fungicide isotianil (major brand: Routine[®]), a member of the isothiazole chemical class, in South Korea and Japan. This product will strengthen our portfolio in Asia. The active ingredient originating from our research pipeline was further developed in collaboration with Sumitomo Chemical Co., Ltd. of Japan. Isotianil protects rice against *Pyricularia oryzae*, the fungus that causes rice blast, by stimulating the plants' natural defense mechanisms.

We also successfully launched *Bacillus firmus* (major brand: Votivo[™]), a biological pest control agent for seed treatment applications, in the u.s. market. This product adds to our portfolio of conventional seed treatments to combat nematodes – threadworms that live in the soil.

We plan to launch four more promising new active ingredients in 2011-2012, subject to their successful registration:

Planned Product Launches

[Table 3.35]

New active ingredient	Use	Planned launch
Bixafen	Fungicide	2011
Fluopyram	Fungicide	2011
Indaziflam	Herbicide	2011
Penflufen	Seed treatment fungicide	2012

CropScience anticipates a peak sales potential totaling in excess of €1 billion for isotianil, *Bacillus firmus* and the four substances listed above that are expected to be commercialized by 2012.

Fluopyram (major brand: Luna[®]) has been developed to combat problematic plant diseases caused by fungal pathogens. It is planned to market this active ingredient – a member of the new pyridinyl-ethyl-benzamide class – worldwide for foliar application and seed treatment in more than 70 crops. Key benefits are better storability and longer shelf life of harvested produce.

Bixafen (major brands: Aviator[®], Xpro[®]) is a new cereal fungicide that boosts yields thanks to its positive impact on plant physiology. This active ingredient, a member of the pyrazole class, was developed specifically for foliar application to combat speckled leaf blotch (*Septoria tritici*) and brown rust (*Puccinia recondita*). Representing a new group of active ingredients, bixafen is well suited as a component of resistance management.

Indaziflam (Alion[®], Specticle[®]) is a new alkyazine herbicide with a long duration of action that is effective against a broad spectrum of difficult-to-control broad-leaf weeds and grasses. It is intended for use in agricultural specialty crops, such as fruit and grapes, and in numerous non-agricultural markets including weed control on paths and other paved areas.

Penflufen (Emesto[®], Emerion[®]) is a novel pyrazole fungicide for use as a seed treatment in various crops, such as potatoes, oilseed rape/canola, soybeans, corn and cotton. This substance is effective against a number of seed-borne pathogens and features particularly broad action and efficacy against the fungus genus *Rhizoctonia*. Penflufen contributes to particularly strong seedling development due to its good seed tolerance.

In the Environmental Science, BioScience segment, we considerably raised our spending for research and development to €246 million (2009: €171 million). This increased expenditure was directed mainly toward expanding our research and development capabilities in BioScience.

The Environmental Science unit tests the compounds developed by Crop Protection and evaluates them for possible non-agricultural uses. In addition, we carry out tests with active ingredients from other companies and may purchase such ingredients if results are positive. Current development projects include gels and baits to combat insect pests, new herbicide and fungicide mixtures, biological solutions and products for insect vector control.

In 2010 the Natria™ product line was successfully launched in the United States and Germany. This new line of products based on natural or nature-derived ingredients complements the Bayer Advanced range in the United States and our 'Bayer Garten' portfolio in Germany. We plan to expand the product line and introduce it in France and other European markets during 2011. Following the submission of our Lifenet® mosquito net to the Pesticide Evaluation Scheme of the World Health Organization (WHOPEs) in 2010, we plan to start with the launch of this product in selected countries in 2011. A new insecticide formulation with residual action to control mosquitoes was also submitted to the WHO in 2010. As part of a further research collaboration between Crop Science and the Innovative Vector Control Consortium (IVCC) in Liverpool, United Kingdom, a new insecticides research platform was successfully established and yielded first results.

Research in our BioScience unit is dedicated to optimizing plant traits. We are developing new seed varieties of our established core crops – cotton, canola, rice and vegetables. We have expanded our research activities to include cereals and soybeans as additional core crops, and are conducting research to develop sugarcane varieties with an increased sugar content. Our research and development work focuses on improving the agronomic traits of these crops. For example, our scientists are working to develop crop plants with high tolerance against stress factors such as extreme temperatures and drought. We also aim to increase the plants' yield potential and quality of harvested materials. Examples here include improving the profile of canola oil or enhancing the properties of cotton fibers. Further areas of focus include developing new herbicide tolerance technologies based on alternative mechanisms of action, and improving the resistance of plants to damage from insects and disease. To do this we employ all modern breeding methods, including plant biotechnology techniques. Our BioScience research and development pipeline presently contains more than 60 promising lead projects and is complemented by around 80 current research agreements with public- and private-sector partners.

Business growth in BioScience is supported by new product introductions. An example is our LibertyLink® herbicide tolerance technology, marketed in the United States for soybean seeds in partnership with leading seed producers. In 2011 we plan to introduce several innovative seed varieties, including cotton with our proprietary glyphosate herbicide tolerance trait.

MATERIALSCIENCE

In 2010, MaterialScience spent €231 million (2009: €207 million) on research and development (not including joint development activities with customers). MaterialScience thus accounted for 7.6% of the Bayer Group's total research and development expenses. The subgroup's expenses in this field amounted to 2.3% of sales. 1,000 employees were entrusted with research and development tasks.

€231 million

for research and
development
at MaterialScience

Our focus in the field of Polyurethanes is on broadening the application areas for our products and improving their properties. A key area of application is in the construction industry, where rigid polyurethane foam serves as a highly efficient insulating material, making an active contribution to reducing energy consumption and protecting the climate. With many countries tightening their laws to reduce energy consumption in buildings, we anticipate growing demand for the relevant polyurethane foams in all climate zones, especially as they can provide significantly better thermal insulation than conventional insulating materials.

Polyurethane frames for photovoltaic units are another example of a groundbreaking application. Furthermore, in close cooperation with Puren GmbH of Überlingen, Germany, we have developed a system combining energy generation from solar radiation with highly efficient thermal insulation – thus satisfying two of today's key requirements for home construction.

The use of renewable raw materials also plays an important part in research and development activities. For example, a concept has been developed for a "green shoe," up to 90% of which consists of components manufactured by particularly environmentally friendly processes or using renewable raw materials. For example, the shoe sole is made of polyurethane produced mainly from soybean oil, and the toecap of a polycarbonate blend based partly on vegetable starch.

The focus of innovation in process development is on the production of new and improved raw materials and formulations. Specifically, MaterialScience is working with internal and external partners on ways to put climate-damaging carbon dioxide to good use in the manufacture of poly-ether polycarbonate polyol (PPP) feedstock for polyurethanes. Such intelligent use of CO₂ reduces our consumption of fossil raw materials and thus helps to protect the environment. This is made possible by a breakthrough in catalysis research based on the results of intensive cooperation between RWTH Aachen University and the CAT Catalytic Center in Aachen, Germany, operated jointly by MaterialScience and Bayer Technology Services.

Research and innovation in the area of polycarbonates focuses on the development of new polycarbonate products such as those for weight-saving applications, which set new efficiency and safety standards and allow greater design freedom.

We use the term "focused innovation" for activities in which we focus our resources on satisfying unmet customer needs in clearly defined growth areas. We refer to our activities in developing new solutions jointly with external partners as "open innovation." One example is the collaborative project to develop new, LED-based automotive lighting technologies that could significantly improve the energy efficiency of headlamp systems. Here we are working closely with a major automotive parts supplier, a producer of injection molding tools and the Fraunhofer Society, Europe's largest applied research organization. The "global innovation" concept denotes the intensive support provided by our polycarbonate product and applications development center in Leverkusen, Germany, for our development activities around the world.

Growth areas the focus of innovation

Our strategy focuses on selected development areas such as polycarbonate glazing and other lightweight solutions for the transportation sector, LED illumination management (for use in street lighting, for example), safety applications (such as safety glazing), and improvements in the cost efficiency of manufacturing processes. We also place importance on the continued development of highly eco-friendly materials, such as polycarbonate blends containing recycled plastics or bio-based substances. In this way we aim to help our customers achieve their sustainability goals.

The research and development departments of the Coatings, Adhesives, Specialties business unit drive forward the development of polyurethane raw materials for high-performance coatings, adhesives and sealants. A further objective of this business unit is to open up new technology-driven markets for our businesses with cosmetic and medical applications, functional films and nanotechnology. To this end we also maintain strategic alliances with partners from industry and academia.

The research and development activities serving our core businesses in conventional coating, adhesive and sealant raw materials are focused on the continued development of eco-friendly systems that are based on water rather than solvents or that can be efficiently radiation-cured. One example of a new market segment we have opened up for our products is our high-performance coating raw materials for wind turbines that can significantly improve the weather resistance of rotor blades.

Customized applications are also to be found in medical technology. In 2010 we combined our coating and adhesive materials portfolio for this sector under the brand name Baymedix®. Our offer includes highly functional coatings, special adhesive raw materials for wound care and closures, and thermoplastic polymers for surgical and diagnostic apparatus. In the field of cosmetics – where we develop precursors for facial and body care, hair styling and sun protection products – the new Baycusan® C product line satisfies important requirements for “green” raw materials, such as the absence of preservatives.

We have streamlined our research portfolio for functional films. Future activities will center partly around films based on polycarbonates or thermoplastic polyurethanes. Combining these with additional technologies or specific property profiles leads to new products such as multifunctional or holographic films, which open up new fields of application in a variety of industries. A modern coating line has been started up in Leverkusen for this purpose. Another area of focus is on electroactive polymers, where we have further strengthened our activities through the acquisition of the u.s. company Artificial Muscle, Inc. In 2010 we opened a new research center for functional films in Singapore, particularly to meet growing demand from the electronics market in Asia/Pacific for innovative film-based products.

Technology Services supports all Bayer subgroups with technology platforms

BAYER TECHNOLOGY SERVICES

All Bayer subgroups work closely with our service company Bayer Technology Services worldwide on technology solutions, particularly in the fields of process technology, plant engineering, automation and product development. For example, this service company cooperates with MaterialScience in the development of new production processes that make efficient use of energy and raw materials, thereby helping the subgroup to safeguard its technological and cost leadership. Examples include the new TDI production process being used for the first time at the MaterialScience site in Shanghai and the catalytic conversion of carbon dioxide to polymers. Centralized development work on technologies relevant to more than one subgroup, such as nanotechnology and biotechnology, along with expertise in mathematical simulation and statistical data analysis, helps HealthCare and CropScience to shorten development times for new products. This also includes the future development of entirely new production concepts, for example at the INVITE research center, a collaborative venture between Bayer Technology Services and Dortmund Technical University, which is currently under construction. Another key strategic factor here is international knowledge sourcing in areas ranging from country-specific expertise in the handling of capital expenditure projects to the global exploitation of innovations.

Bayer Innovation develops new businesses adjacent to core activities

BAYER INNOVATION

Bayer Innovation investigates and evaluates innovative areas adjacent to the subgroups’ current core activities and develops them into viable new businesses for the Group. An example is the manufacture of plant-made pharmaceuticals. In 2010 a Phase I clinical study was launched with a personalized cancer vaccine to treat non-Hodgkin’s lymphoma. In the agriculture sector, novel hybrid concepts based on the combination of polymer technologies and crop protection products are under development. The full potential of these technologies is being evaluated in close cooperation with the subgroups and external partners.

TRIPLE-I: INSPIRATION, IDEAS, INNOVATION

The innovation campaign entitled “Triple i: Inspiration, Ideas, Innovation” motivates Bayer employees worldwide to submit ideas for new products and thereby add to the company’s innovative capability. More than 11,000 ideas have been submitted since the initiative was launched. Several products resulting from employees’ ideas have already been successfully commercialized. In 2010, Triple-i focused on two main areas: the “Your Heart” campaign, designed to identify new opportunities in cardiovascular medicine, and the Triple-i-Vietnam campaign, aimed at the development of new applications for MaterialScience products in Vietnam.

9. Sustainability

9.1 Sustainability Strategy

The overriding goal of our sustainability strategy is that our company’s actions be guided by long-term values. We are convinced that we can only be commercially successful over the long term if we balance economic growth with ecological and social responsibility. That responsibility is clearly expressed in our mission statement “Bayer: Science For A Better Life,” our commitment to the ten principles of the United Nations Global Compact and our support for the Responsible Care® initiative of the chemical industry.

We aim to achieve sustainability on three levels:

1. Products and innovation: our products are the basis of our value creation, and innovations are the driver of sustainability.
2. Business activities: our relations with stakeholders, especially employees, suppliers and customers, are based on sustainable business activity. Core aspects are corporate compliance, responsible human resources policies, product stewardship and sustainable procurement management.
3. Social commitment: through our foundations and voluntary social initiatives, we focus on issues of particular social relevance with a clear link to our company.

Sustainability essentially means future viability and as such forms an integral part of our business strategy (see Chapter 11.2). Our innovative solutions address market opportunities and are aimed at solving global challenges. These are at the focus of our sustainability strategy. Based on this strategy we developed a Sustainability Program in 2009. The program places special importance on alliances for sustainable health care, innovative partnerships to improve the supply of high-quality food, and new solutions for climate protection and use of resources. We have selected eight lighthouse projects that clearly illustrate the focus of our sustainability strategy.



For more information on the Bayer Sustainability Program, go to:
WWW.SUSTAINABILITYPROGRAM.BAYER.COM

Bayer Sustainability Program

[Graphic 3.18]

Challenge	Global access to health care	Nutrition for a growing population	Climate and environmental protection
Focus	Alliances for sustainable health care	More high-quality food	Solutions for climate protection and resource use
Projects	<ul style="list-style-type: none"> • Family Planning • Neglected Diseases 	<ul style="list-style-type: none"> • Food Chain Partnership Vegetables • Direct-Seeded Rice 	<ul style="list-style-type: none"> • EcoCommercial Building Program • Energy Efficiency (2 projects) • Resource Efficiency

The alignment and steering of our Group-wide sustainability strategy have been assigned to a Group committee headed by the member of the Board of Management responsible for Innovation, Technology and Environment. This committee defines objectives and initiatives, decides on the relevant Group regulations and monitors their implementation.

Sustainability is also something we expect from our suppliers. At the end of 2009, therefore, we adopted and communicated a Supplier Code of Conduct as part of our "sustainability in procurement" strategy. This code contains our fundamental sustainability standards and requirements and is used to evaluate and select suppliers. In 2010 a total of 147 suppliers worldwide were evaluated from the risk point of view. Additional suppliers are evaluated in the course of country- and subgroup-specific projects.

In 2010 Bayer launched a Group-wide process and plant safety initiative to sharpen the focus of our commitment to safety. The most important principles and related organizational structures were set forth in the Group regulation "Process and Plant Safety." Adjustments to the organization were made in 2010 and the first measures, including special training programs, were implemented.

We pursue our sustainability commitment with the aid of objectives and indicators. In 2006 we defined specific objectives for the period through 2010 in several fields of activity: innovation, product stewardship, management excellence, social commitment and environmental responsibility. In our Sustainable Development Report 2010, we will publish a final report on this target program, publish new goals and describe in detail our accomplishments in the area of sustainability. There we will also outline our progress in implementing the 10 principles of the U.N. Global Compact by showing our activities, management systems and achievements. The Global Reporting Initiative (GRI) has certified that our most recent report meets the highest standard (Level A+) under the current GRI guidelines (G3).


 INTERNET

The Sustainable Development Report can be found at:
WWW.BAYER.COM/EN/SUSTAINABLE-DEVELOPMENT-REPORT.ASPX

9.2 Employees

Employee Data

[Table 3.36]

	Dec. 31, 2009	Dec. 31, 2010
	FTE	FTE
Employees by region		
Europe	54,600	54,300
North America	16,600	16,400
Asia/Pacific	23,000	24,600
Latin America/Middle East/Africa	16,800	16,100
Employees by corporate function		
Production	48,400	47,200
Marketing and distribution	40,200	41,100
Research and development	12,800	13,200
General administration	9,600	9,900
Total	111,000	111,400
Trainees	2,700	2,600
	%	%
Percentage of women in the Group Leadership Circle	5.5	6.5
Number of nationalities in the Group Leadership Circle	22	21
Proportion of full-time employees with contractually agreed working time not exceeding 48 hours per week	100	100
Proportion of employees with health insurance	95	94
Proportion of employees eligible for a company pension plan or company-financed retirement benefits	74	73
Proportion of employees covered by collective agreements on pay and conditions	56	55

2009 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-rata basis in line with their contractual working hours. By contrast to the previous year, the figures in the above table include fixed-term employees but not trainees.

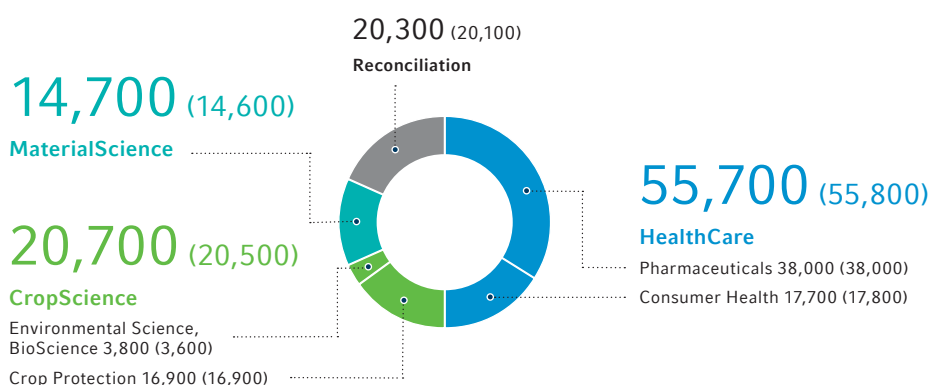
EMPLOYEE DATA

On December 31, 2010, the Bayer Group had 111,400 employees worldwide (2009: 111,000). Thus headcount remained virtually steady in 2010 (+0.4%). In Germany we had 36,200 employees (2009: 36,000), who made up 32.5% of the Group workforce. HealthCare had 55,700 employees (2009: 55,800), CropScience 20,700 (2009: 20,500), and MaterialScience 14,700 (2009: 14,600). The remaining 20,300 (2009: 20,100) employees worked mainly for the service companies. This figure also includes the 700 (2009: 700) employees of Bayer AG. There were an additional 2,600 (2009: 2,700) trainees on the closing date who are not included in the Group total.

Personnel expenses rose in 2010 by 4.2% to €8,099 million (2009: €7,776 million), chiefly as a result of currency effects and regular salary increases.

Employees by Segment (2009 in parentheses)

[Graphic 3.19]



2009 figures restated

EMPLOYEE COMPENSATION AND BENEFITS

Compensation in the Bayer Group is based on a globally standardized system that ensures transparent and performance-oriented remuneration and incentives for all employees. Regular benchmarking against competitors helps in setting base salaries in line with the demands and responsibilities of each position. These are supplemented by attractive performance-related compensation components and extensive ancillary benefits.

For example, more than €500 million is earmarked for variable bonus awards to employees for the year 2010 under the Group-wide short-term incentive (STI) program alone. Included in our extensive range of ancillary benefits in many countries are various stock participation programs that enable employees to purchase Bayer stock at a discount, giving them a further opportunity to share in the company’s economic success. Since 2005 we have offered senior and middle managers throughout the Group uniform stock-based compensation programs known as “Aspire” (see Note [26.6] to the consolidated financial statements) that are based on ambitious earnings targets and – in the case of Group Leadership Circle members – require an appropriate personal investment in Bayer stock.

Employee bonuses total more than
€500 million

ENGAGED AND LOYAL EMPLOYEES

Employee engagement drives the implementation of Bayer’s strategy. Continuously promoting and developing the motivation and skills of our employees is thus a fundamental objective of our human resources policy. We gained valuable information and ideas in this area from our first ever global employee survey, which was carried out in 2010. In their responses to this anonymous poll, nearly 70% of employees in all countries and all areas of the company shared with us their perceptions of the strategy, culture and working conditions within the enterprise.

The survey results show that the overwhelming majority of the employees – well over 80% – feel close ties to Bayer and consider the company to be an attractive employer overall. Almost 85% of employees are highly motivated and particularly committed to the company's success. These results are confirmed by the low rate of voluntary terminations. At the main Group companies in Germany, this rate was just 0.4%. The Group-wide attrition rate, which also includes retirements and other reasons for people leaving our employment, was about 9% in 2010. We will take specific action in areas where the employees' responses to the survey revealed scope for improvement.

This action will be based on the Bayer Group's revised values and leadership principles, now expressed by the new succinct acronym "LIFE." The goal is to more firmly anchor and apply company policies in everyday business. LIFE stands for Leadership, Integrity, Flexibility and Efficiency.

RESPONSIBLE HUMAN RESOURCES POLICIES

Sustainability and social responsibility are also integral to our company policy – and more than 80% of our employees worldwide confirm this. Nearly all Group employees either have statutory health insurance or can obtain health insurance through the company, and 73% have access to a company pension plan. Involving the employee representatives is part of what partnership and responsibility mean to us as a company. The working conditions for 55% (2009: 56%) of our employees are governed by collective or company agreements. In China, for example, the employees of our Group companies have already elected union representation at six sites, with three more to follow shortly. Most of the Group-wide job cuts announced in November 2010 will be implemented so as to minimize social hardship. In Germany, which remains the company's largest base of operations with 36,200 employees, dismissals for operational reasons are prohibited through the end of 2012 under an agreement with the employee representatives.

DIVERSITY AND INTERNATIONALISM

As a global enterprise, it is Bayer's aim to have as diverse and as international a workforce as possible. For example, a total of 21 nations are represented in the Group Leadership Circle, the company's most senior management level. Nearly 70% of these executives are native to the countries in which they work. A further focus of our efforts to achieve greater employee diversity is on increasing the proportion of female employees, especially in management positions, over the long term. In 2010, 35% of Bayer Group employees worldwide were women. The Group Management Board has set a medium-term target for increasing the proportion of women in leadership positions. Accordingly, we aim to raise the proportion of female executives in the Group as a whole toward 30% by 2015.

Bayer Group Workforce Structure 2010

[Table 3.37]

	Women	Men	Total
Non-payscale employees including managerial staff	10,200	22,100	32,300
Skilled employees	29,100	50,000	79,100
Total	39,300	72,100	111,400
Trainees	800	1,800	2,600

VOCATIONAL TRAINING AND RECRUITING

Diversity, international career opportunities, a modern work environment and social commitment make Bayer an attractive employer throughout the world. This enabled us to attract a total of over 4,000 specialists and managers with academic qualifications as new employees in 2010. In India alone, we recruited more than 750 university graduates, in Germany about 700 and in the United States over 350. To alert high school graduates and students to career opportunities at Bayer from an early stage, we expanded our university recruiting activities in 2010 to include corporate presentations on social networking sites. These communication activities were supplemented by the more than 2,700 challenging occupational internships that we awarded to students of various disciplines in the reporting period.

Apart from the hiring of university graduates, our own training programs for young people are among the most important measures we undertake to guard against a possible shortage of specialists resulting from demographic change. Once again in 2010, more than 900 young people began training courses in a total of over 20 occupations at our German sites.

Employees by Age Group in %

[Graphic 3.20]

Age in years	%
< 20	0.2
20-29	15.6
30-39	29.9
40-49	31.1
50-59	21.0
> 60	2.2

CONTINUING EDUCATION AND KNOWLEDGE RETENTION

We are responding in a number of ways to the challenge posed by demographic change in many industrialized countries. We provide extensive continuing education programs to enhance employees' knowledge and adapt it to changing requirements. In 2010 we set up the Bayer Senior Experts Network (BaySEN), an initiative designed to harness retired managers' many years of experience for the company's benefit and pass it on to the next generation.

Another focus of our measures to address the demographic trend is the steady expansion of occupational health management. With employees now tending to retire later than in the past, we offer a range of programs in many countries to promote and maintain the health and employability of our people. For example, under the collective bargaining agreement on life worktime and demographic change, we now offer non-managerial employees in Germany a thorough medical check-up and enable people with jobs that are especially demanding to significantly reduce their working hours in the years prior to retirement.

9.3 Environment, Climate Protection and Safety

Bayer traditionally places great importance on protecting the environment and using natural resources responsibly. We use our expertise and experience both to optimize technologies and processes and to develop innovative products that help protect the environment, nature and the climate. We develop new solutions to optimize the use of resources, reduce emissions and avoid waste. Bayer has designed a method – the resource efficiency check – to analyze the total use of resources such as energy, water and raw materials and determine ways to minimize consumption. This check is currently being piloted in the MaterialScience and CropScience subgroups.

Key Performance Indicators

[Table 3.38]

Category	Key Performance Indicators for Health, Safety and Environment	2009	2010
Health and Safety	Industrial injuries to Bayer employees resulting in at least one day's absence (number of injuries per million hours worked)	2.0	1.7
	Reportable industrial injuries to Bayer employees (number of injuries per million hours worked)	3.1	3.1
	Environmental incidents	13	7
	Transportation incidents	10	8
Emissions	Direct greenhouse gas emissions (CO ₂ equivalents in million metric tons)*	4.57	4.80
	Indirect greenhouse gas emissions (CO ₂ equivalents in million metric tons)*	3.53	3.70
	Volatile organic compounds (VOC) (thousand metric tons/year)	2.59	2.54
	Total phosphorus in waste water (thousand metric tons/year)	0.74	0.09
	Total nitrogen in waste water (thousand metric tons/year)	0.64	0.49
Waste	Total organic carbon (TOC) (thousand metric tons/year)	1.35	1.42
	Hazardous waste generated (million metric tons/year)	0.38	0.35
Use of resources	Hazardous waste landfilled (million metric tons/year)	0.09	0.06
	Water use (million m ³ /year)	407	474
	Energy use (petajoules [10 ¹⁵ joules]/year)	77.33	85.71

2009 figures restated

*as per Greenhouse Gas Protocol

Further
reduction in
industrial injury rate

We regularly review our performance in the areas of health, safety and environment on the basis of key performance indicators – nearly all of which we improved in 2010, despite an approximately 20% increase in manufactured sales volume. Water and energy use increased as a result, along with total organic carbon (TOC) emissions. The industrial injury rate again declined and was well below our target of <2.0.

In 2010 there was also a decline in the number of environmental and transportation incidents. According to our internal voluntary commitment, we report even minor product releases. For substances with a high hazard potential, we report quantities greater than 100 kg. Unfortunately, even our extensive safety precautions and training procedures cannot entirely prevent environmental incidents or traffic accidents from occurring. Any such events are carefully analyzed and evaluated so that adequate steps can be taken to prevent a recurrence.

Bayer's aim is to achieve an appropriate and uniform standard of HSEQ (health, safety, environmental protection and quality) throughout the Bayer Group and steadily improve it. To meet this goal, the company has established HSEQ management systems in all subgroups and service companies that are based on recognized international standards and are regularly reviewed and updated. In 2010 about 90% of all Bayer production sites had an HSE management system audited by Bayer. More than 60% of our business activity (in relation to production volume and energy input, respectively) takes place at sites that are certified or validated externally according to recognized international standards such as ISO 14001, EMAS or OHSAS 18001. All subgroups and service companies have industry-specific quality management systems in place, such as ISO 9001 or GMP (Good Manufacturing Practice). The subgroups have additional systems and standards that address product-specific requirements.

Our highest priorities are the health and safety of everyone who handles our products and the protection of the environment. For us, product stewardship entails a thorough evaluation of health and environmental risks – from product research and development to production – and includes responsible product marketing, use and disposal. Nearly all products manufactured by Bayer are subject to wide-ranging statutory obligations concerning the publication of information, such as those imposed by the European Union chemicals policy “REACH.” We completed the mandatory pre-registration with the chemicals agency ECHA in 2009. In 2010 we submitted within the deadline registration dossiers for 125 of the substances that Bayer manufactures or imports in very large quantities (> 1,000 tons per year) or that are particularly hazardous. For many of these substances, Bayer has formed registration consortia with competitors in order to share data and avert the need for additional animal studies.

CLIMATE PROTECTION

The Bayer Climate Program, announced in 2007, which forms a cornerstone of the Bayer Sustainability Program, addresses one of the major global challenges: climate change. We examine the energy efficiency of our processes and offer solutions for protecting the climate and coping with the effects of climate change. In 2010 Bayer was again named the best company in our sector in the global Carbon Disclosure Leadership Index, honoring our transparent reporting of the company’s climate strategy and greenhouse gas emissions. The company is also represented in the newly created Carbon Performance Leadership Index (CPLI) with an “A” ranking. The CPLI evaluates companies’ specific actions and achievements in protecting the climate and addressing the consequences of climate change.

Improving energy efficiency is a major factor in reducing our own greenhouse gas emissions. More than 140 production facilities and buildings – accounting for about 85% of production-related CO₂ emissions – throughout the Bayer Group were examined using the “Bayer Climate Check” analysis tool to determine the potential for reducing energy consumption and therefore CO₂ emission. We expect to have a realizable energy reduction potential of up to 10% by 2013. The results of the Climate Check completed in 2010 will be integrated into the STRUCTese® (Structured Efficiency System for Energy) management system to ensure that this potential is sustainably realized and the efficiency of our production processes steadily increased. It is planned to establish STRUCTese® at 60 of our most energy-intensive production facilities by the end of 2012 to support the realization of the reduction targets.

Bayer Climate Check
completed

Process innovations are a further focus of our efforts to reduce greenhouse gas emissions. One example is an innovative, climate-friendly chlorine production process developed by Bayer together with its partners: in the future the oxygen depolarized cathode technology using common salt as a resource will make it possible to reduce energy consumption in chlorine production by 30%. In 2011 Bayer plans to bring a plant on stream in Germany that will use this process and have an initial capacity of 20,000 tons per year. In 2010 we also continued with process engineering modifications to further reduce nitrous oxide emissions.

The Bayer Climate Program also adopts other approaches, including measures such as the “Eco-Fleet” program to reduce CO₂ emissions caused by company cars, the use of new telecommunications technology to reduce business travel, and the improvement of energy efficiency in the IT environment. The steps taken as part of the Eco-Fleet program already cut CO₂ emissions by 15% between 2007 and the end of 2010.

Bayer bases its reporting of greenhouse gas emissions on the international standard of the Greenhouse Gas (GHG) Protocol. The company aims to hold total emissions to 2007 levels through 2020 despite growth in production. Despite the roughly 20% increase in manufactured sales volume in 2010, mainly at MaterialScience, we were able to limit the increase in direct greenhouse gas emissions to 5%. This was mainly driven by process improvements and energy-saving measures. Energy-related indirect greenhouse gas emissions also rose by 4.8%. The total of direct and indirect greenhouse gas emissions increased by 4.9%.

To track our target achievement more transparently, we publish detailed information on emission levels in our Sustainable Development Report.


INTERNET

Detailed information
 can be found at:
WWW.CLIMATE.BAYER.COM

Bayer also provides solutions for climate protection. Energy usage in buildings accounts for some 30% of global CO₂ emissions. Climate protection in the construction sector is already achievable with Bayer's EcoCommercial Building (ECB) Program. With the help of a partner network of suppliers, construction firms, architects and building owners, Bayer and its partners develop customized solutions for energy-optimized commercial and public buildings, including even zero-emissions buildings. Apart from our offerings to customers, we are also implementing the ECB program within the Bayer Group itself. At the end of 2010, for example, we completed another Bayer building as part of the ECB Program, this time at Bayer's site in Greater Noida, India.

9.4 Social Commitment

€57 million
 for social innovations

Bayer's social commitment is an established part of our sustainability strategy and corporate policy. The company considers itself part of society and sees its commitment to corporate citizenship as an investment in society's future viability and a long-term contribution to a favorable business environment. Bayer's social commitment is exemplified by numerous projects in many parts of the world, some of which the company has been organizing or supporting for years. In 2010 the company provided some €57 million (2009: €44 million) in funding in the four main areas of focus.

Expenses for Social Initiatives

[Table 3.39]

Main sponsorship areas	2009	2010
	€ million	€ million
Education and research	5	7
Environment and nature	3	3
Health and social needs	15	26
Sports and culture	21	21

Our funding strategy is constantly evolving. We place special emphasis on projects addressing important needs of society as a whole to which we can contribute our technological and commercial expertise.

EDUCATION AND RESEARCH

Bayer traditionally places great importance on support for education and research because, as a research-based company, we depend heavily on recruiting highly trained scientists and on society's acceptance of technology.

Support for talented
 young researchers and
 leading scientists

The funding programs of the Bayer Science & Education Foundation cover the entire scientific training and career path. In 2010 the foundation provided total funding of some €1 million – on the one hand to engaged school students and trainees and for innovative school projects, and on the other to outstanding university students, young scientists and leading researchers. The focus of this funding in both cases is on the natural sciences and medicine.

In 2010 the fourth “Baylab” student laboratory opened at the company’s Leverkusen headquarters. Some 3,400 school students took advantage of the instruction offered in the areas of health care, nutrition and plastics during the first year. In all, some 11,500 schoolchildren and teachers benefited from the “Baylabs” program, which, apart from the new student laboratory with its more general focus, includes the subject-specific “Baylab health,” “Baylab plants” and “Baylab plastics.” Bayer won the 2010 Enterprise Award of the German state of North Rhine-Westphalia for this educational project.

The “Humboldt Bayermobile,” a research laboratory on wheels, began visiting schools in 2010. The Bayer foundation is supporting this joint science education project of Bayer and Humboldt University in Berlin with funding of €300,000 for an initial period of three years. The international Bayer education initiative “Making Science Make Sense” was again implemented in 12 countries in 2010. This project targets elementary school students, to whom Bayer employees convey the fascination of science through hands-on experiments.

As part of our campaign to prevent child labor in our supply chain in India, we are implementing an integrated package of measures – entitled “Learning for Life” – that enables children and young people to attend school or vocational training courses and is designed to prevent cotton seed suppliers from employing them as laborers. The focus of the program is currently on vocational training. In the state of Karnataka, for example, more than 1,900 young people regularly attended the vocational training we introduced in conjunction with local non-governmental organizations, initially at five government schools, in the 2009/2010 and 2010/2011 academic years.

ENVIRONMENT AND NATURE

Another focus of our social commitment is on educating young people about environmental issues.

In 2010 Bayer and the United Nations Environment Programme (UNEP) again organized about a dozen environmental projects for children and young people as part of their global partnership. These activities centered on the International Children’s Conference on the Environment in Nagoya, Japan, attended by some 250 participants from 40 countries, which focused on biodiversity. Thanks once again to particularly strong interest from China, the annual children’s painting competition run jointly by Bayer and UNEP received a record 3.2 million entries from 95 countries. In 2010, a total of about 50 young people from 18 countries took part in a week-long study trip to Germany to learn more about environmental protection – the annual highlight of Bayer’s “Young Environmental Envoys” program. In 2010 Bayer and UNEP extended their partnership by a further three years until the end of 2013. Bayer will continue to support the joint projects with annual funding of €1.2 million.

Among the activities of the research group of Professor Jianfu Zhao at the Bayer-Tongji Chair for Sustainable Development at Tongji University in Shanghai, China, in 2010 were four research projects dealing with topics such as the correlation between efficient energy and water use. The Bayer Science & Education Foundation supported the research and teaching activities of this endowed professorship with total funding of €150,000 in 2010.

Involving
 young people
 in environmental
 protection

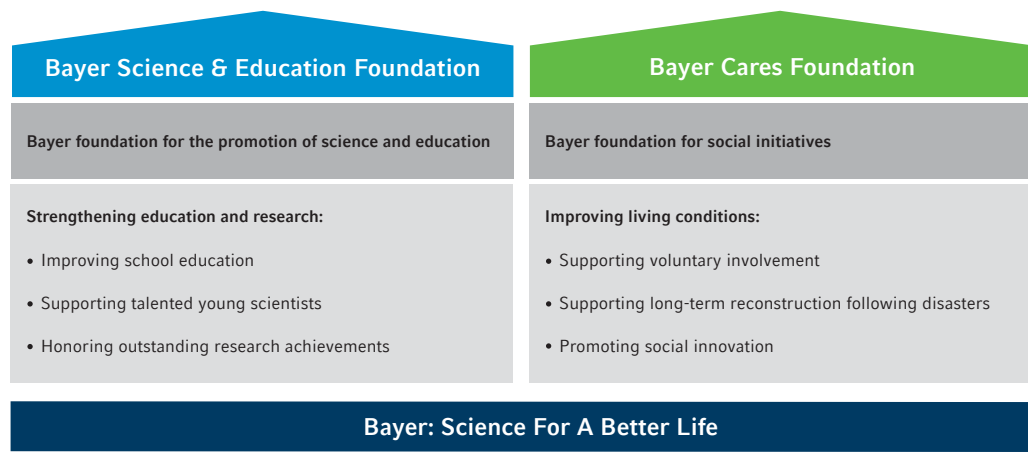
HEALTH AND SOCIAL NEEDS

Bayer is globally committed to improving social conditions and health care with the dual aim of promoting social stability in the communities near its sites and helping to solve global health challenges.

As part of our ongoing aid programs, we again supported the World Health Organization (WHO) in 2010 in the fight against neglected tropical diseases. The company donated free supplies of medicines included on the WHO Essential Drug List, such as drugs to combat Chagas disease, an infection widespread in Latin America that is transmitted via the bite of the assassin bug.

Foundations

[Graphic 3.21]



The Bayer Cares Foundation, dedicated to promoting our social commitment, spent a total of more than €140,000 in 2010 to support 54 charitable volunteering programs in the communities near the company's sites in Germany and Latin America. In this way the Foundation rewarded volunteerism by employees and other citizens who actively participate in projects aimed at addressing social needs.

In 2010 the Foundation also presented for the first time the "Aspirin Social Award" – worth a total of €35,000 – for innovative aid and consultancy programs in the area of health care.

The Bayer Cares Foundation joined with Caritas International in funding a health center that will provide medical care to 30,000 victims of the earthquake in Haiti. This was made possible by Bayer employees in 34 countries, who donated a total of €250,000 in response to the company's global appeal. Bayer AG added a further €100,000 to this amount for a total of €350,000. In the immediate aftermath of the earthquake, the company donated emergency relief in the form of antibiotics and painkillers worth over €650,000, bring the total value of Bayer's aid to Haiti to more than €1 million.

SPORTS AND CULTURE

Bayer has been sponsoring sports and culture for over a century.

We support a wide variety of clubs for recreational, youth and disabled sports. Bayer has joined with the German Soccer Federation (DFB) in a new initiative to help schoolchildren with mental and learning disabilities play soccer. Dubbed "Simply Soccer," the initiative establishes and supports partnerships between special-needs schools and soccer clubs with the aim of giving more children and young people with disabilities access to club-level soccer and promote mutual learning among people with and without disabilities.

The Bayer Arts&Culture program and our clubs and societies traditionally contribute to the cultural life of the communities near our sites, enhancing their attractiveness to employees and other citizens alike.

10. Events After the Reporting Period

Since January 1, 2011, 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.

11. Future Perspectives

11.1 Opportunity and Risk Report

11.1.1 Opportunity and Risk Management

Business operations necessarily involve opportunities and risks. Effective management of opportunities and risks is therefore a key factor in sustainably safeguarding a company's value.

Management of opportunities and risks is essential for steering the company

Managing opportunities and risks is an integral part of the corporate governance system in place throughout the Bayer Group, not the task of one particular organizational unit. Thus the organizational units are closely interlinked in this respect. Key elements of the opportunity and risk management system are the planning and controlling process, Group regulations and the reporting system.

At regular conferences held to discuss business performance, the opportunities and risks that are evaluated both qualitatively and quantitatively in determining the strategies of the strategic business entities and the regions are updated, and targets and necessary actions are agreed upon.

Opportunity management in the Bayer Group is based on the detailed observation and analysis of individual markets and the early recognition and evaluation of trends from which opportunities can be identified. Macroeconomic, industry-specific, regional and local trends are taken into account. It is the task of the subgroups and strategic business entities to make use of strategic opportunities arising in their respective markets. The strategic framework necessary for them to do this is set, and the necessary financing and liquidity ensured, at the Group level. Opportunity-based projects involving more than one subgroup are centrally coordinated and accounted for.

The principles of the Bayer Group's risk management system are set forth in a directive published on the Group-wide intranet. The directive explains the fundamentals of risk management in compliance with the German Law on Corporate Supervision and Transparency and includes the principles for the early identification, communication and addressing of risks. These principles relate to the areas of statutory requirements, risk management policies at Bayer and risk management activities.

Risk assessment based on the extent of possible damage and probability of occurrence

In the Bayer Group, risks are systematically and continuously identified, analyzed and documented in a database. Risks are defined as events and possible developments within or outside of the company that could jeopardize a sustained increase in enterprise value. Risk-relevant information is compiled at least quarterly and also on an ad hoc basis where necessary.

The documentation contains a description of the risk, an assessment of the extent of possible damage and the probability of occurrence, along with measures to monitor and counteract the risk.

Materiality limits for the subgroups and service companies are defined by the Bayer Group in consultation with the respective units. To transparently present risk issues at an early stage and allow potential risks to be countered in a timely manner, the risk documentation prescribes action thresholds that are well below the materiality limits.

The members of the Group Leadership Circle have unrestricted access to the risk database, which is mapped to the management information system.

Risk management at the Group level is assigned to the Chief Financial Officer. The subgroups, service companies and the units of the holding company have nominated persons responsible for risk management at the upper managerial level as well as risk management coordinators to ensure that an effective system for the early identification of risks is implemented and maintained. The risk management coordinators and specialists in the organizational units are responsible for the risk inventory, including the identification, evaluation and documentation of risks, and for explain-

ing the risk strategy. The annual risk report to the Supervisory Board covers the risk management system, legal risks, compliance issues, the reports by Corporate Auditing and the report on the internal control system.

Corporate Auditing is responsible for coordinating the identification and documentation of risk areas throughout the Group and for enhancing the risk management system.

The effectiveness of the risk management system is monitored by Corporate Auditing at regular intervals. Corporate Auditing adopts a risk-based approach to audit planning. In addition, the external auditor assesses the early warning system as part of the annual financial statements audit and informs the Group Management Board and the Supervisory Board of the findings. These findings are taken into account as part of the continuous enhancement of our risk management system. The risk management system is monitored by the Supervisory Board, especially its Audit Committee.

Clear organizational structure for risk management

11.1.2 Internal Control and Risk Management 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 (HGB))

Bayer has an internal control and risk management system in place under which appropriate structures and processes for (Group) accounting and financial reporting are defined and implemented throughout the organization. This system is designed to guarantee timely, uniform and accurate accounting for all business processes and transactions. It ensures compliance with statutory regulations, accounting and financial reporting standards and the internal accounting directive, which is binding upon all the companies included in the consolidated financial statements. The relevance and consequences for the consolidated financial statements of any amendments to laws, accounting or financial reporting standards or other pronouncements are continually analyzed, and the Group directives and systems are updated accordingly.

Apart from defined control mechanisms such as system-based and manual reconciliation processes, the fundamental principles of the internal control system include the separation of functions and compliance with directives and operating procedures. The accounting and financial reporting process for the Bayer Group is managed by the Group Accounting and Controlling department of Bayer AG.

The Group companies prepare their financial statements either locally or using the Group's shared service centers and transmit them with the aid of a data model that is standardized throughout the Group and based on the Group accounting directive. The Group companies are responsible for their compliance with the directives and procedures applicable throughout the Group and for the proper and timely operation of their accounting-related processes and systems. The employees involved in the accounting and financial reporting process for the consolidated financial statements of the Bayer Group and the financial statements of Bayer AG receive regular training, and the Group companies are supported by headquarters personnel throughout the process. As part of the process, measures are implemented that are designed to ensure the regulatory compliance of the consolidated financial statements. These measures serve to identify and evaluate risks, and to limit and monitor any risks that may be identified. For example, material new contractual relationships are systematically tracked and analyzed.

The consolidated financial statements are prepared centrally on the basis of the data supplied by the included subsidiaries. The consolidation, certain reconciliation operations and monitoring of the related time schedules and procedures are performed by a dedicated Group Financial Statements department. System-based controls are monitored by personnel and supplemented by manual inspection. At least one additional check by a second person is carried out at every level. Defined approval procedures must be observed at all stages in the accounting process. There is also a dedicated unit, separate from the financial statements preparation process, for clarification of specific accounting-related questions or particularly complex issues.

Bayer's internal control system for financial reporting is based on the framework issued by COSO (Committee of the Sponsoring Organizations of the Treadway Commission). For IT processes, the COBIT (Control Objectives for Information and Related Technology) framework is used accordingly. The standards for the mandatory Group-wide internal control system (ICS) were derived from these frameworks, defined centrally and implemented by the Group companies. The management of each company is responsible for the implementation and oversight of the local ICS. All ICS-relevant business processes, together with the related risks and controls, are documented in a uniform and audit-proof manner in a Group-wide system and clearly mapped in a central IT system at the Group level.

The role of Corporate Auditing includes verifying the accuracy of the accounting at German and foreign companies, especially with regard to the following aspects:

- compliance with statutory regulations, directives of the Board of Management, and other internal regulations and procedures
- formal and substantial correctness of accounting and the corresponding reporting
- functioning and effectiveness of the internal control system to protect the company against financial loss
- correctness of working procedures and adherence to economic principles.

Bayer AG has a standardized, Group-wide procedure to monitor the efficacy of the accounting-related internal control system. This procedure is systematically aligned to the potential risks of misreporting in the consolidated financial statements and is based on the strict requirements of the U.S. capital market set forth in Section 404 of the Sarbanes-Oxley Act.

The appraisal of the effectiveness of the accounting-related ICS is based on a cascaded self-assessment system that starts with the persons directly involved in the process, then involves the principal responsible managers and ends with the Group Management Board. Corporate Auditing performs an independent review of random samples of these self-assessments.

Internal control system
for accounting and
financial reporting based
on COSO framework

The Group Management Board has examined the effectiveness of the internal control system for accounting and financial reporting on the basis of the COSO framework and its criteria. The examination confirmed the functionality of this internal control system for fiscal 2010. The effectiveness of the internal control system is monitored by the Audit Committee of the Bayer AG Supervisory Board in compliance with the German Accounting Law Modernization Act, which came into effect in May 2009. 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.

11.1.3 Opportunities

As an international enterprise, Bayer is exposed to a wide variety of developments in the various national and international markets in which it operates in its three business areas. Different potential risks and opportunities arise within the existing operational framework according to the business performance described in this report and the company's overall situation.

We aim to take maximum advantage of the opportunities that present themselves in our various fields of activity. We continuously evaluate potential additional opportunities in all areas as an integral part of our strategy, which is described in detail in Chapter 11.2 "Strategy."

Research and development present major opportunities, and we are working continuously to find new products and improve existing ones. These activities are presented in detail in Chapter 8 "Research and Development."

Various risks described in the following – particularly financial risks – are counterbalanced by the opportunities that could result from positive trends.

11.1.4 Risks

RISK EXPOSURE

As a global company with a diverse business portfolio, the Bayer Group is exposed to numerous risks. We have purchased insurance coverage – where it is available on economically acceptable terms – in order to minimize related financial impacts. The level of this coverage is continuously re-examined.

Significant risks for the Bayer Group are outlined in the following sections. The order in which the risks are listed is not intended to imply any assessment as to the likelihood of their materialization or the extent of any resulting damages.

LEGAL RISKS

We are exposed to numerous legal 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 disputes, tax assessments and environmental matters. The outcome of any current or future proceedings cannot be predicted. It is therefore possible that legal or regulatory judgments 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 described in Note [32] to the consolidated financial statements.

INDUSTRY-SPECIFIC RISKS

Pharmaceutical product prices are subject to regulatory controls in many markets. Some governments intervene directly in setting prices. In addition, in some markets major purchasers of pharmaceutical products have the economic power to exert substantial pressure on prices. Price controls, as well as price pressure from generic manufacturers as a result of government reimbursement systems favoring less expensive generic pharmaceuticals over brand-name products, diminish earnings from our pharmaceutical products and could potentially render the market introduction of a new product unprofitable. We expect the current extent of regulatory controls and market pressures on pricing to persist or increase.

Regulatory changes are continuously monitored, especially in our key markets. If necessary, we adjust our business plans according to the significance of governmental intervention.

Sales of the Bayer Group are subject to seasonal fluctuations. This applies particularly in the CropScience business, which is also affected by factors such as weather conditions. The performance of our MaterialScience subgroup is affected by cyclicity in customer industries. A downturn in the business cycle, characterized by weak demand and overcapacities, may lead to price pressure and more intense competition.

Holistic portfolio
 management

The early identification of trends in the economic or regulatory environment and active portfolio management are important elements of our business management. Our analyses of the global economy and forecasts of medium-term economic development are documented in detail on a quarterly basis and used to support operational business planning. However, even our detailed analyses may not ensure that a massive economic downturn of the kind that occurred in 2008 and 2009 can be predicted.

For a summary forecast, see Chapter 11.3 “Economic Outlook.”

Where it appears strategically advantageous, we may acquire a company or part of a company and combine it with our existing business. The amount of goodwill and other intangible assets reflected in the Bayer Group’s consolidated statement of financial position has increased significantly in recent years as a result of acquisitions. Failure to successfully integrate a newly acquired business or unexpectedly high integration costs could jeopardize the achievement of quantitative or qualitative targets, such as synergies, and adversely impact earnings.

The integration processes associated with our acquisitions are steered by integration teams. Appropriate resources are provided to support the integration processes.

PRODUCT DEVELOPMENT RISKS

The Bayer Group’s competitive position, sales and earnings depend significantly on the development of commercially viable new products and production technologies. We therefore devote substantial resources to research and development. Because of the lengthy development processes, technological challenges, regulatory requirements and intense competition, we cannot assure that all of the products we will develop in the future or are currently developing will actually reach the market and achieve commercial success as scheduled or at all.

Furthermore, adverse effects of our products that may be discovered after regulatory approval or registration despite thorough prior testing may lead to a partial or complete withdrawal from the market, due either to regulatory actions or our voluntary decision to stop marketing a product. Also litigations and associated claims for damages due to negative effects of our products may materially diminish our earnings.

To ensure an effective and efficient use of resources in research and development, the Bayer Group has implemented an organizational structure and process organization comprising functional departments, working groups and reporting systems that monitor development projects.

REGULATORY RISKS

Our life science businesses, in particular, are subject to strict regulatory regimes relating to the testing, manufacturing and marketing of many of our products. In some countries regulatory controls have become increasingly demanding. We expect this trend to continue, particularly in the United States and the European Union. Increasing regulatory requirements, such as those governing clinical or (eco-)toxicological studies, may increase product development costs and/or delay product (re-)registration.

To counter risks arising from legal or other requirements, we make our decisions and engineer our business processes on the basis of comprehensive legal advice provided both by our own experts and by acknowledged external specialists. Projects have been initiated to coordinate the implementation of new regulatory controls and mitigate any negative implications for the business.

PATENT RISKS

A large proportion of our products, mainly in our life science businesses, is protected by patents. We are currently involved in lawsuits to enforce patent rights in our products. Generic manufacturers and others 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.

 Increased competitive
 pressure following
 patent expiration

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. Details of related litigation are provided as part of the description of legal risks in Note [32] to the consolidated financial statements.

In some areas of activity we may also be required to defend ourselves against charges that products infringe patent or proprietary rights of third parties. This could impede or even halt the development or manufacturing of certain products or require us to pay monetary damages or royalties to third parties.

Our life science businesses, in particular, have a comprehensive product life-cycle management system in place. In addition, our legal department, in conjunction with the relevant functional departments, regularly reviews the patent situation. Potential infringements of our patents by other companies are carefully monitored so that legal action can be taken if necessary.

PRODUCTION, PROCUREMENT MARKET AND ENVIRONMENTAL RISKS

Production capacities at some of our manufacturing facilities could be adversely affected by, for instance, technical failures, natural disasters, regulatory rulings or disruptions to supplies of key raw materials or intermediates, as in the case of dependence on a single source for critical materials. This applies particularly to our biotech products because of the highly complex manufacturing processes. If in such cases we are unable to meet demand by shifting sufficient production to other plants or drawing on our inventories, we may suffer declines in sales revenues.

The supply of strategically important raw materials is ensured wherever possible through long-term contracts and/or by purchasing from multiple suppliers. Furthermore, all stages of our production processes and our material inputs are continuously monitored by the respective expert function within the company.

Moreover, the manufacturing of chemical products is subject to risks associated with the production, filling, storage and transportation of raw materials, products and wastes. These risks may result in personal injury, property damage, environmental contamination or business interruptions and liability for compensation payments.

Furthermore, the possibility of accidental cross-contamination among our crop protection products or the presence of unintended trace amounts of genetically modified organisms in agricultural products and/or foodstuffs cannot be completely excluded.

We address product and environmental risks by way of suitable quality assurance measures. An integrated quality, health, environmental and safety management system ensures process stability. In addition, we are committed to the international Responsible Care initiative of the chemical industry, are driving forward our sustainable development and climate program and report regularly on our sustainability management, which also covers the areas of environmental protection and safety.

IT RISKS

Business and production processes and the internal and external communications of the Bayer Group are increasingly dependent on information technology systems. Major disruptions or failure of global or regional business systems may result in loss of data and/or impairment of business and production processes.

The foundations for a continuous and sustainable IT risk management system have been laid by establishing a comprehensive organization, issuing regulations that define the relevant roles and responsibilities, and implementing a periodic reporting system. For this purpose a committee has been established at the Group level to resolve upon the basic strategy, architecture and IT security features, which are implemented accordingly by the subgroups and service companies in consultation with this central organization. Technical precautions such as data recovery and continuity plans have been established together with our internal IT service provider to address this risk.

Long-term supply contracts to hedge against raw material price risks

RISK TO PENSION OBLIGATIONS FROM CAPITAL MARKET DEVELOPMENTS

The Bayer Group has obligations to current and former employees related to pensions and other post-employment benefits. Changes in relevant valuation parameters such as interest rates, mortality and rates of increases in compensation may raise the present value of our pension obligations. This may lead to increased pension costs or diminish stockholders' equity due to actuarial losses being recognized directly in equity. 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. This in turn may diminish equity, and/or it may necessitate additional contributions 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 prudent strategic investment, and we constantly monitor investment risks in regard to our global pension obligations.

FINANCIAL RISKS

Management of financial and commodity price risks

As a global enterprise, Bayer is exposed in the normal course of business to credit risks, liquidity risks and various market price risks that could materially affect its net assets, financial position and results of operations.

It is company policy to use derivatives to minimize or eliminate the market price risks associated with operating activities and the resulting financing requirements. Derivatives are used almost exclusively to hedge realized or forecasted transactions. The use of derivatives is subject to strict internal controls based on centrally defined mechanisms and uniform guidelines. The derivatives used are mainly over-the-counter instruments, particularly forward exchange contracts, foreign currency options, interest rate swaps, cross-currency interest rate swaps, commodity swaps and commodity option contracts concluded with banks. We set counterparty limits for such banks depending on their creditworthiness.

The various risks associated with financial instruments are outlined below together with the relevant risk management systems.

Credit risks

Credit risks arise from the possibility of the value of receivables or other financial assets being impaired because counterparties cannot meet their payment or other performance obligations. Since the Bayer Group does not conclude master netting arrangements with its customers, the total of financial assets represents the maximum credit risk exposure.

To effectively manage the credit risks from trade receivables, Bayer has put in place a standardized risk management system, which is the subject of a Group directive. Customers' creditworthiness is regularly analyzed; these receivables are partly secured. Credit limits are set for all customers. All credit limits for debtors where total exposure is €10 million or more are evaluated by our operational credit management and submitted to the Group's Central Financial Risk Committee.

To minimize credit risks, financial transactions are only conducted with banks and other partners of first-class credit standing in line with predefined exposure limits. All risk limits are based on methodical models. Adherence to the risk limits is continuously monitored.

Country risks relating to trade receivables and intra-Group loans are continuously monitored, systematically evaluated and centrally managed.

Liquidity risks

Liquidity risks – those arising from the possibility of not being able to meet current or future payment obligations because insufficient cash is available – are centrally managed in the Bayer Group. Sufficient liquid assets are held to meet all of the Group's payment obligations when they fall due, thereby ensuring solvency at all times. Payment obligations result both from operating cash flows and from changes in current financial liabilities. In addition, a reserve is maintained for unbudgeted shortfalls in cash receipts or unexpected disbursements. For this purpose, budget deviation analyses are performed on the basis of historical time series, adjusted for variations in business structure. The liquidity reserve is then determined which, with a defined probability, will cover a negative deviation from budgeted cash flows. The size of this reserve is regularly reviewed and adjusted as necessary to current conditions. Liquid assets are kept 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.

We intend to service the bonds maturing in 2011 out of liquidity and free operating cash flow.

Market risks

Market risks relate to the possibility that the fair value or future cash flows of financial instruments may fluctuate due to variations in market prices. Market risks include currency, interest rate and other price risks, especially commodity price risks.

Sensitivity analysis is a widely used risk measurement tool that allows our management to make judgments regarding the potential loss in future earnings, fair values or cash flows of market-risk-sensitive instruments resulting from one or more selected hypothetical changes in interest rates, foreign currency exchange rates, commodity prices or other relevant market rates or prices over a selected period of time. We use sensitivity analysis because it provides reasonable risk estimates using straightforward assumptions (for example, an increase in interest rates). The risk estimates we provide below assume:

- a simultaneous, parallel shift in foreign exchange rates in which the euro depreciates against all currencies by 10%,
- a parallel shift of 100 basis points in the interest rate yield curves of all currencies, and
- a simultaneous 20% decline in the prices of all the commodities underlying the derivatives we hold.

We use market information and additional analytics to manage our risk exposure and mitigate the limitations of our sensitivity analysis. We have found sensitivity analysis to be a useful tool in achieving some of our specific risk management objectives. Sensitivity analysis offers an easy-to-understand risk exposure estimate that allows an approximation of the effect that changing market conditions could have on our business. It also allows our management to take the necessary steps to address such risks.

We continually refine our risk measurement and reporting procedures. This includes periodically re-examining the underlying assumptions and parameters utilized.

The sensitivity analyses included in the following sections of this Risk Report present the hypothetical loss in cash flows of financial instruments and derivatives that we held as of December 31, 2010 and December 31, 2009. The range of sensitivities that we chose for these analyses reflects our view of the changes in foreign exchange rates, commodity prices and interest rates that are reasonably possible over a one-year period.

Currency risks

Since the Bayer Group conducts a significant portion of its operations outside the eurozone, fluctuations in currency exchange rates can materially affect earnings. Currency risks from financial instruments exist with respect to receivables, payables, cash and cash equivalents that are not denominated in a company's functional currency. In the Bayer Group these risks are particularly significant for the u.s. dollar, the Japanese yen, the Canadian dollar and the Chinese renminbi.

Currency risks are identified, analyzed and managed centrally and systematically. The scope of hedging is evaluated regularly and defined in a corporate directive. Recorded foreign currency operating items, receivables and payables are normally fully hedged.

The anticipated foreign currency exposure from forecasted transactions in the next twelve months is hedged on a basis agreed between the Group Management Board, the central finance department and the operating units. A significant proportion of contractual and foreseeable currency risks is hedged, mainly through forward exchange contracts and currency options.

The Group Management Board has provided clear guidance on how to limit and monitor cash flow risks that result from this approach.

We applied a hypothetical adverse scenario in which the euro simultaneously 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 derivatives and non-derivatives as of December 31, 2010 would be €279 million (2009: €188 million). Of this €279 million, €120 million is related to the u.s. dollar, €41 million to the Japanese yen, €30 million to the Canadian dollar, €34 million to the Chinese renminbi and €54 million to other currencies. Of the €279 million estimated hypothetical loss of cash flow, €296 million results from derivatives used to hedge anticipated exposure from planned sales denominated in foreign currencies. Such transactions qualify for hedge accounting, and the respective changes in value are recognized in equity under other comprehensive income (OCI). The offsetting position of €17 million is primarily attributable to account balances in foreign currencies and unhedged currency derivatives embedded in supply contracts. The impact of exchange-rate fluctuations on our anticipated sales in foreign currencies is not included in this calculation.

Interest rate risks

The Bayer Group's interest rate risks arise primarily from financial assets and liabilities with maturities exceeding one year. In the case of fixed-rate financial instruments, such as fixed-rate bonds, the risk of fluctuations in capital-market interest rates results in a fair value risk because the fair values fluctuate as a function of interest rates. In the case of floating-rate instruments, a cash flow risk exists because interest payments could increase in the future.

Interest rate risks in the Bayer Group are analyzed centrally and managed by the central finance department. This is done in line with the duration set by the Board of Management, which implicitly also includes the ratio of fixed-rate to floating-rate debt. The duration is subject to regular review. Derivatives – mainly interest rate swaps, cross-currency interest rate swaps and interest options – are employed to preserve the target structure of the portfolio.

Financial debt including derivatives amounted to €11,767 million as of December 31, 2010 (December 31, 2009: €12,858 million). The sensitivity analysis was performed on the basis of our floating-rate debt position at year end 2010, taking into account the interest rates relevant to our liabilities in all principal currencies. A hypothetical increase of 100 basis points, or 1 percentage point per annum, in these interest rates (assuming constant currency exchange rates) as of January 1, 2010 would have raised our interest expense for the year ended December 31, 2010 by €45 million (2009 based on liabilities at year end 2009: €58 million).

Other price risks (especially commodity price risks)

The Bayer Group requires significant quantities of petrochemical feedstocks and energy for its various production processes. The prices of these inputs may fluctuate considerably depending on market conditions. As in the past, there may be times when it is not possible for us to pass on increased raw material costs to customers through price adjustments. This applies particularly to our MaterialScience business.

We have addressed this risk by concluding long-term contracts with multiple suppliers. The procurement departments of the subgroups are responsible for managing these price risks on the basis of internal directives and centrally determined limits, which are subject to constant review. The operation of our production facilities requires large amounts of energy, mostly in the form of electricity and steam. To minimize our exposure to energy price fluctuations, we aim for a balanced diversification of fuels for steam production and a mix of external procurement and captive production for power generation.

We applied a hypothetical adverse scenario in which all commodity and energy prices simultaneously decrease by 20%. Under this scenario the estimated hypothetical loss of cash flows from derivatives as of December 31, 2010 would be €8 million (2009: €31 million). Of this €8 million, €0 million would be directly disclosed in the income statement and €8 million would be recognized as a value adjustment in equity under other comprehensive income (OCI) according to hedge accounting rules. In considering sensitivities for commodity futures and commodity option contracts, we have made a small allowance for the fact that forward rates are less volatile than spot rates. The stated long-term contract volumes are therefore based on somewhat smaller price changes. The derivatives used by the Bayer Group to mitigate the risk of changes in exchange rates, interest rates and commodity prices are described in Note [30.3] to the consolidated financial statements.

Assessment of the overall risk situation

Compared with the previous year, the overall risk situation did not change significantly in the reporting period. The overall risk assessment is based on a consolidated view of all significant individual risks. At present, no potential risks have been identified that either individually or in combination could endanger the continued existence of the Bayer Group.

No risks that could endanger the company's existence

11.2 Strategy

BUSINESS STRATEGY

The Bayer Group focuses on the rapidly growing, innovation-driven health care, nutrition and high-tech materials businesses in line with its mission statement "Bayer: Science For A Better Life." Our strategic alignment toward these attractive markets and our concentration on core competencies enable us to invest in growth areas and innovative technologies. We aim to continue playing leadership roles and to steadily expand our already strong market positions. We will also continue our efforts to contain costs and improve efficiency in order to further increase the company's value. We are pursuing a long-term growth strategy, mindful of the need to manage the business sustainably.

To facilitate investment in further growth, annual cost savings of €800 million are planned by 2013. About half of this amount is to be reinvested. By the end of 2012 the company is likely to take one-time charges in the region of €1 billion, part of this amount having already been incurred in the fourth quarter of 2010. In connection with this program, it is planned to reduce the global headcount of 111,400 by an aggregate of about 2,000 by the end of 2012. Approximately 4,500 positions – including roughly 1,700 in Germany – are to be cut, while some 2,500 new jobs will be created over the same period, particularly in the emerging markets.

HEALTHCARE

HealthCare continues to aim for a market or above-market rate of growth in all of its businesses. We aim to further strengthen this subgroup and grow it into a world-leading diversified health care company. For example, we plan to continue strengthening our Consumer Health segment for the long term, sharpen our focus in the Pharmaceuticals segment on specialty pharmaceuticals, further increase the overall productivity of research and development and place even greater importance on the emerging markets. This will require a high level of investment in the coming years. Among the ways we will raise the funds needed for this expansion are by carefully redistributing resources and introducing efficiency and cost saving measures. For this reason, we plan to cut the number of positions at HealthCare by around 1,800 by the end of 2012. Most of the reductions will be in our Pharmaceuticals Division, the Medical Care Division in the United States and in the platform functions within HealthCare. However, we will create 1,500 new positions in the emerging markets and in connection with product launches.

Activities in our strongest segment – Pharmaceuticals – are focused on medicines prescribed mainly by specialist physicians in the areas of women's healthcare, cardiology, oncology, hematology, diagnostic imaging and multiple sclerosis. Our portfolio also includes drug products that are usually prescribed by general practitioners.

We will maintain our focus on diseases where there is a high unmet medical need and major potential exists for improving diagnosis and therapy. Research and development is thus an important growth engine for our Pharmaceuticals segment, which consequently accounts for the largest share of the R & D budget. Here we also aim to strengthen our portfolio and supplement our own research and development activities with inlicensing, alliances and collaborations. An example in 2010 was the discovery, development and commercialization agreement signed with Californian company OncoMed Pharmaceuticals, Inc. in the area of novel therapeutics to target cancer stem cells.

We already hold leading positions in the pharmaceuticals markets of many emerging countries, particularly China and Russia. A key element of our pharmaceuticals strategy is the selective expansion of business in the emerging markets. An example in 2010 was the market launch of Betaferon® in China to treat the relapsing-remitting form of multiple sclerosis (MS).

Our Consumer Health segment includes non-prescription medicines, dermatology products, blood glucose meters, medical devices and the animal health business.

Expansion
in fast-growing
regions

The goal of the Consumer Care Division is to build on our position in the global over-the-counter (OTC) medicines market. The division's strategy is aimed at fully leveraging the growth potential of proven brands such as Aspirin®. We are pursuing a clear course of expansion in fast-growing regions such as central and eastern Europe and Asia/Pacific and aim to further strengthen our business in areas with potential for growth. We will continue to take advantage of external growth opportunities in the form of strategically relevant acquisitions or inlicensing. One such growth opportunity is provided by the exclusive licensing agreement with AstraZeneca PLC for the marketing of omeprazole under the Losec® Pro, Antra® or Mopralpro® trademarks as an OTC medication to treat heartburn. Currently this product has been introduced in seven markets, and launches are planned in additional countries.

The strategy of the Medical Care Division is to build on its competitive positions in the fields of blood glucose monitoring, diabetes management, injection systems for contrast agents, and vascular intervention systems such as thrombectomy systems for treating constricted or blocked blood vessels. We also plan to continue expanding our portfolio by investing in additional business areas and geographic regions and entering into strategic partnerships. It is our intention to steadily improve our products, reduce costs and deploy resources even more efficiently. We are aiming to expand our product range by developing new blood glucose monitoring systems and innovative solutions that help people with diabetes to better manage the disease. In the medical equipment business, we are continuing to develop our core radiology portfolio of contrast agent

injection and thrombectomy systems. We are also developing new software products and IT-based service solutions to optimize both contrast media dosage and the clinical workflows involved in processing diagnostic data and images.

In the Animal Health Division, we aim to build on our strong positions in the companion animals and livestock markets. Our strategy is directed toward achieving organic growth by focusing on countries and markets with long-term sales potential and successfully managing the life cycles of existing core brands. In addition, we are pursuing external growth opportunities through acquisitions and inlicensing. For example, in 2010 we acquired an innovative, oral administration technology for animal health products from the U.S. company Piedmont Pharmaceuticals, LLC. Our acquisition of the New Zealand-based Bomac Group, an innovative manufacturer of animal health products used mainly in livestock, is aimed at strengthening our business, particularly in the Asia/Pacific region. We aim to step up the development of new proprietary products to safeguard our long-term success.

CROPSCIENCE

CropScience, one of the leading innovation-driven companies in its industry, aligns its corporate planning to long-term trends in agricultural markets. It aims to offer products and customer-oriented solutions for the production of affordable, high-quality food, feed, fiber and energy crops. Against a background of limited arable land, advancing climate change and a steadily increasing global population, it is essential to safeguard and further increase crop yields. We manage our business responsibly, in keeping with our commitment to sustainable development and our goal of achieving long-term growth and attractive returns.

We are committed to offering our customers comprehensive, single-source solutions and therefore evolve coordinated and sustainable concepts – from seed to harvest – for specific crops in different regions. Our customer-oriented approach comprises seed, optimized plant traits and crop protection products as well as related services and partnerships along the food value chain.

Innovation is the basis for value creation at CropScience. The development of new active ingredients and formulations and high-quality seed enables us to replace older products and technologies with those that offer superior performance properties, environmental compatibility and user safety along with higher added value for the customer. Our new products are crucial to increasing sales and achieving attractive margins. In November 2010 we announced a package of measures, to be largely implemented by 2012, which will make necessary funds available for further investment and optimize our cost structures. We will make a net cut of approximately 600 positions at CropScience by 2012, mainly in Germany and the United States. The measures are aimed at making CropScience more efficient in all areas so that freed-up resources can be invested in our BioScience business, the commercialization of new products and the expansion of strategic growth markets while we continue to defend our positions in the well developed markets.

In the Crop Protection segment, CropScience aims to safeguard and expand the market-leading positions of its Herbicides, Fungicides, Insecticides and Seed Treatment business units by maintaining a broad regional presence and offering innovative, highly effective products. To achieve this strategic goal, we are steadily enhancing our product mix by launching new active ingredients and products from our research and development pipeline as well as successfully managing product life cycles while also engaging in complementary research activities in breeding, plant traits and new growth areas. For example, we are currently working on new integrated methods and solutions in the areas of plant health and quality, stress tolerance, nutrient uptake, diagnostics and biological pest control.

Innovation forms
the basis for
value creation

Our Environmental Science business unit primarily relies on the development and production capacities of Crop Protection and its innovative active ingredient portfolio and pipelines. Our strategy is to build on our leading market positions by developing and commercializing innovative solutions that are tailored to the specific needs of consumers and professional users and are designed to be easy to use and safe to handle. The Environmental Science business unit has growth potential, particularly in the emerging markets. Our strategic alignment also emphasizes systematic customer orientation, including the expansion of marketing activities, and the continued development of specific market segments such as forestry or industrial vegetation management.

The BioScience business unit researches, develops and commercializes seeds and technology based on modern breeding methods. We aim to continue expanding our activities in seeds and plant traits with the aim of raising BioScience sales to about €1.4 billion by 2018 while increasing the share of our research and development expenditures allocated to BioScience. Our seed business has traditionally focused on four rapidly expanding core crops: cotton, vegetables, canola and rice. We aim to build on our strong market positions in these crops by introducing new varieties and expanding into new regional markets. Since 2009 we have been conducting research into improved cereal varieties, with soybeans defined as an additional area of research focus. The goals of our Bioscience research include increasing yields and making plants more resistant to adverse weather conditions and certain insect pests. We are also conducting research into sugarcane with a higher sugar content. We not only market our technologies in our own seed products, but also increasingly outlicense them for other crops.

CropScience markets its products in more than 120 countries worldwide. In the coming years we intend to continue expanding our business, particularly in fast-growing markets such as Brazil, India, China, Russia and eastern Europe. In these countries there is major potential for the agriculture industry to react to the increasing global demand for high-quality food and feed by deploying innovative, leading-edge technologies. In this environment we aim to steadily expand our business and help farmers raise productivity by providing them with comprehensive solutions from seed to harvest.

MATERIALSCIENCE

The strategy of MaterialScience is directed primarily toward safeguarding existing competitive positions in its traditional markets, adding innovative new businesses to the portfolio and achieving profitable and sustainable growth in the emerging markets. In this way we plan to ensure high profitability and contribute to a long-term increase in enterprise value. Our products are intended to provide long-term solutions for conserving global energy resources and protecting the climate. They are also designed to help in improving the quality of life for as many people as possible. The above-average growth of the Asian markets represents a major challenge in this respect, at the same time offering a business potential that we plan to develop. Our capital expenditure policy, which is aligned to medium- and long-term market trends, remains in keeping with this. We also aim to continuously improve the efficiency of our production processes.

In the Polyurethanes business unit (PUR), we intend to expand our global market leadership in isocyanates, a key precursor particularly for rigid and flexible foams. It remains our goal to achieve cost leadership in these areas in the long term. We also want to expand our distribution channels and global competence networks.

We expect our new large-scale plant for toluene diisocyanate (TDI) in Shanghai, China, with an annual capacity of 250,000 tons, to support sustained growth in Asia. Mechanical completion of the facility will take place in sections in the first quarter of 2011, with commercial production due to start in the second half of 2011. In Europe, MaterialScience plans to erect a new "world-scale" TDI production facility in Dormagen, Germany, with a permitted capacity of 300,000 tons per year and bring it on stream in 2014. The company's European production activities for TDI will then be concentrated in Dormagen. MaterialScience's innovative, patented TDI process technology, which will be used in both facilities, sets new global standards for efficient, climate-friendly production. A facility based on the new technology saves substantial amounts of energy and solvents, reduces CO₂ emissions by up to 60,000 tons per year compared with a conventional plant of the same size, and costs about 15% less to build.

Focus on increasing
enterprise value at
MaterialScience

In the diphenylmethane diisocyanate (MDI) product group, we aim to achieve sustained growth thanks to the increasing demand for insulating materials from key customer industries. The need for thermal insulation of buildings is expected to boost demand in the construction and other sectors. To meet this growing demand, Bayer plans to increase MDI capacity at the site in Shanghai, China, to 1,000,000 tons per year.

Polyether polyols will mainly support growth in the isocyanates business, complementing our system solutions. Our systems houses facilitate growth in the isocyanates business by providing an important distribution channel to serve specific customer needs.

We are currently experiencing strong demand in the world market for the products of our Polycarbonates (PCS) business unit. Demand for polycarbonates in Asia, especially China, is substantial, and the region currently accounts for more than 60% of the global market. We are responding by enlarging our manufacturing capacities for polycarbonate. In Shanghai we plan to raise annual capacity to 500,000 tons as we continue to exploit the efficiency of our world-scale production facilities. We also plan to relocate the headquarters of this business unit to Shanghai in order to steer the business in close proximity to the markets in light of the region's growing importance. At the same time, as a leading development and technology partner, we offer customers individual solutions for various polycarbonate applications. Among our objectives is to expand our network of "Color Competence and Design Centers" for customized plastics compounding.

Relocation of PCS
 headquarters to
 Shanghai, China

In the field of semi-finished products, substantial market potential lies in the use of polycarbonate diffuser sheets in liquid-crystal displays for large-format flat screens. Growth in demand for polycarbonates is also being driven by the trend in the automotive industry toward lightweight components such as for glazing.

The Coatings, Adhesives, Specialties (CAS) business unit seeks to defend and selectively expand its current market position in basic and modified isocyanates. We will therefore raise our production capacities in Europe and the Asia/Pacific growth region to meet rising demand. It is planned to expand production of hexamethylene diisocyanate (HDI) in Shanghai, including the construction there of an additional facility with a capacity of 50,000 tons per year. We also intend to build a multi-purpose facility in Leverkusen for the production of HDI and isophorone diisocyanate (IPDI). In addition, we aim to improve profitability by sharpening the focus of our portfolio on modern coating and adhesive raw material systems.

We are developing functional films, carbon nanotubes, and products for medical applications with the aim of opening up new business opportunities and positioning ourselves as a focused technology leader in these areas.

We also generate innovative business ideas by looking at our materials more from an application-technology perspective. For example, high-quality components combining polyurethane with polycarbonate can be produced by a one-step injection molding process known as "DirectSkinning."

MaterialScience also uses novel processes for its own production. The efficiency of chlorine production, for example, can be greatly increased using oxygen depolarized cathode technology. This technology enables energy savings of some 30% compared to a membrane process, along with a corresponding indirect reduction in greenhouse gas emissions.

FINANCIAL STRATEGY

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 credit-worthiness. 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 3.40]

	Long-term rating	Outlook	Short-term rating
Standard & Poor's	A-	negative	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 rating in order to maintain our financial flexibility. Accordingly, we plan to use part of our operating cash flows to reduce net financial debt.

We pursue a prudent debt management strategy to ensure flexibility, drawing on a balanced financing portfolio. Chief among these resources are a multi-currency Euro 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 11.1 "Opportunity and Risk Report."

11.3 Economic Outlook

GLOBAL ECONOMY

We expect the global economic recovery to continue in 2011. However, the pace of expansion is likely to be slower than in 2010. Many countries will retain expansionary monetary policies that will buoy their economies, while most countries' fiscal policies are not expected to provide any further growth stimulus. Renewed tension on the financial markets and sharp rises in the prices of oil and raw materials could pose a risk to economic development in 2011. At the end of 2010, however, these downside risks appeared comparatively slight.

The emerging markets are again expected to greatly stimulate the economic recovery in 2011. We anticipate that growth rates in the emerging markets will decline in the coming months but generally remain at a high level. The major emerging economies, especially China, appear set to continue driving global economic growth in 2011. We expect that the economic recovery in the industrialized countries will continue at a slow pace overall, though with considerable differences from one country to another. The prospects for the U.S. economy brightened considerably around the turn of the year 2010/2011, although the anticipated economic expansion is unlikely to significantly improve the situation on the employment market for the time being. Growth perspectives for Japan are more moderate. The eurozone economy in 2011 is likely to remain weighed down by the debt crisis in some countries. We therefore foresee only moderate growth overall. In the more dynamically performing E.U. countries – especially Germany – the economy should strengthen due to a recovery in domestic demand. In other eurozone countries, however, the consolidation measures triggered by public debt crises will continue to markedly dampen domestic demand.

HEALTHCARE

We expect the growth rate for the **pharmaceutical market** in 2011 to be in the mid-single digits. This expansion is likely to be driven increasingly by countries such as China, Brazil, Mexico, South Korea, India and Russia. However, we foresee only low-single-digit growth rates in the traditional markets such as the United States and the major European countries due to patent expirations for major products of various pharmaceutical companies, a decline in new product launches and the increasing cost pressure being exerted by health organizations.

In 2011 we expect the **consumer care market** to grow more rapidly than in 2010 as a result of greater market penetration in eastern Europe and North America. The **diabetes care market** will probably see only very slight growth in 2011 due to continuing pressure on prices in the United States. We expect the **animal health market**, on the other hand, to again grow at an above-average rate in 2011.

CROPSCIENCE

We foresee a positive trend for the global **seed and crop protection market** in 2011. Assuming normal weather patterns, we anticipate robust market growth for agrochemicals as well as for seed and traits. This growth is likely to come mainly from higher volumes.

Despite the fluctuations in global agricultural markets, the substantially higher prices for agricultural raw materials mean we are now operating in an increasingly conducive market environment. Given the limited availability of arable land, this is mainly due to steadily rising demand for food and feed products and plant-based energy raw materials.

The positive overall conditions are likely to stimulate demand for high-quality seed and thus for crop protection products, and spur farmers toward more intensive production.

In regional terms, we expect the largest growth stimulus to come from Latin America, where soybean cultivation in particular should further increase compared with 2010. Crop production is also expected to increase in the Asia/Pacific region. This applies particularly to rice, cereals and cotton, and also to specialty crops such as fruit and vegetables. By contrast, we again see only limited potential for market growth in the industrialized regions of the northern hemisphere in 2011.

MATERIALSCIENCE

For 2011 MaterialScience expects a further strengthening of its main customer industries worldwide. We will focus particularly on the rapidly expanding markets of Asia, such as China and India. At the same time, we are counting on an ongoing recovery in demand in North America and Europe.

The **automotive industry** will remain on a path of recovery. New car sales in 2011 are likely to exceed 60 million – an all-time high. In nearly all markets except western Europe, demand and production are expected to increase considerably faster than experts predicted just a few months ago. China will remain the most important production base worldwide, with automakers planning to step up capacities again in 2012 to 17 million vehicles – more than are made in the entire European Union.

We anticipate robust expansion in the global **electrical/electronics industry**, where China and India will remain the principal growth drivers in 2011. The industrialized countries will also continue to benefit from the global economic recovery, however, carrying some of the many orders remaining from 2010 into 2011.

We predict a distinct recovery in the **construction industry** in 2011. Continuing strong growth in the emerging markets, coupled with a return to positive growth rates in mature markets such as Europe and North America, will likely lead to a gratifying global trend overall.

We believe that the market for the **furniture industry** will continue to brighten as it already did in 2010. The major growth regions in Asia will probably show a positive trend once again, benefiting not only from rising domestic demand, but also from an increasing recovery in global consumption. In the emerging markets of eastern Europe, the Middle East and Latin America, too, an upward trend in incomes should open up added sales potential for the furniture industry.

11.4 Sales and Earnings Forecast

The following forecasts are based on the business performance described in this report, taking into account the potential risks and opportunities.

BAYER GROUP

The Bayer Group is confident for 2011. Provided that the economy continues to improve, we expect to see growth in sales and EBITDA before special items in all subgroups. For the full year 2011, we are targeting a currency- and portfolio-adjusted sales increase of between 4% and 6%. Based on our currency assumptions – including a rate of US\$1.40 (2010 average: US\$1.32) to the euro – we therefore expect to report Group sales of between €35 billion and €36 billion.

We aim to increase EBITDA before special items toward €7.5 billion. Core earnings per share (calculated as explained in Chapter 4.3) are expected to improve by about 10%. We anticipate taking special charges of about €0.5 billion for ongoing restructuring programs.

We are planning capital expenditures of €1.5 billion for property, plant and equipment and €0.3 billion for intangible assets. Depreciation and amortization are expected to total about €2.5 billion, including €1.3 billion in amortization of intangible assets. We expect our research and development expenditures to match the record level of 2010 (€3.1 billion).

We can confirm our targets for 2012. If the economic environment remains positive, we continue to expect Bayer Group sales to grow by approximately 5% – after adjusting for currency and portfolio changes – in 2012. We plan to achieve EBITDA before special items in 2012 of approximately €8 billion and core earnings per share of around €5.

HEALTHCARE

In 2011 HealthCare plans to increase sales by a low- to mid-single-digit percentage after adjusting for currency and portfolio effects and to achieve a small improvement in EBITDA before special items.

In the Pharmaceuticals segment, we do not yet expect sales to resume growing with the market in 2011. We plan to increase sales by a low- to mid-single-digit percentage after adjusting for currency and portfolio effects and to raise the EBITDA margin before special items.

In the Consumer Health segment, we anticipate above-market growth in sales after adjusting for currency and portfolio effects. We expect sales and EBITDA before special items to increase by mid-single-digit percentages.

In 2012 we aim to accelerate the pace of growth, especially in Pharmaceuticals, thanks to our new products and to improve EBITDA before special items in both HealthCare segments.

CROPSCIENCE

Following a difficult year in 2010, we now anticipate more favorable market conditions for CropScience and are therefore optimistic for 2011. We expect to improve sales in both CropScience segments on a currency- and portfolio-adjusted basis and to grow by at least a mid-single-digit percentage overall. We intend to further reinforce our market positions in Environmental Science, BioScience, and we expect to at least maintain our existing position in Crop Protection. We plan to expand EBITDA before special items at a higher rate than sales.

In 2012 we again aim to grow sales at least with the market and further improve EBITDA before special items.

MATERIALSCIENCE

We expect that the business environment for MaterialScience will continue to recover. Against this background we plan to raise sales in 2011 by a mid-single-digit percentage on a currency- and portfolio-adjusted basis, and to increase EBITDA before special items at a higher rate than sales.

We expect sales in the first quarter of 2011 to be roughly in line with the fourth quarter of 2010 on a currency- and portfolio-adjusted basis. Despite higher raw material prices, we expect EBITDA before special items in the first quarter of 2011 to exceed the level of the fourth quarter of 2010.

Provided that the market environment remains favorable, we plan to further increase sales and EBITDA before special items in 2012.

BAYER AG

As the holding company for the Bayer Group, Bayer AG derives most of its income from its subsidiaries. Under profit and loss transfer agreements with the major operating subsidiaries in Germany, their earnings are transferred directly to Bayer AG. The positive expectations for the Group's business development outlined above are also likely to be reflected in the earnings of Bayer AG. In addition, the net interest position should continue to improve in light of the reduction in financial debt. We therefore expect to maintain a level of after-tax income that allows the payment of an appropriate dividend.