

11. Future Perspectives

11.1 Opportunity and Risk Report

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. 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. 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.

Corporate Auditing is responsible for coordinating the identification and documentation of risk areas throughout the Group, enhancing the risk management system and monitoring its effectiveness at regular intervals.

In addition, the external auditor assesses the risk management system within the scope 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.

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 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 consolidation unit. 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.

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 2009. 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.

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 areas of business. 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," page 128ff.

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," page 100ff.

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

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, page 241ff.

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 cyclicalities in customer industries. A downturn in the business cycle, characterized by weak demand and overcapacities, may lead to price pressure and more intense competition.

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 the past two years can be predicted.

Holistic
portfolio management

For a summary forecast, see Chapter 11.3 "Economic Outlook," page 133f.

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. 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 net income.

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 internal research and 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 registration or 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 sciences 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.

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 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.

Increased competitive pressure following patent expiration

Hedging against raw material price risks through long-term supply contracts

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, enacting rules and regulations that define the relevant roles and responsibilities, and implementing a periodic reporting system. Technical precautions such as data recovery and continuity plans have been established together with our internal IT service provider to address this risk.

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 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 financial assets plus the risk of non-repayment of the loan capital drawn upon by Bayer-Pensionskasse for its effective initial fund represent the maximum credit risk exposure. Thanks to extensive receivables management, the Bayer Group so far has registered only a slight increase in the default risk for receivables despite the current situation on the financial markets.

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 and are 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 2010 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, 2009 and December 31, 2008. 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 euro currency zone, 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, 2009 would be €188 million (2008: €293 million). Of this €188 million, €88 million is related to the u.s. dollar, €21 million to the Japanese yen, €25 million to the Canadian dollar and €54 million to other currencies. Of the €188 million estimated hypothetical loss of cash flow, €190 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. The offsetting position of €2 million is primarily attributable to 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 €12,858 million as of December 31, 2009 (December 31, 2008: €16,647 million). The sensitivity analysis was performed on the basis of our floating-rate debt position at year end 2009, 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, 2009 would have raised our interest expense for the year ended December 31, 2009 by €58 million (2008 based on liabilities at year end 2008: €75 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. In addition, derivatives (primarily commodity swaps and commodity options) are employed to a limited extent to hedge against commodity price risks by smoothing variations in income statement items caused by changes in utility (particularly gas) prices over the long term. 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.

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, 2009 would be €31 million (2008: €30 million). Of this €31 million, €4 million would be directly disclosed in the income statement and €27 million would be recognized as a value adjustment in equity under other comprehensive income 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 achieve leadership roles and expand our already strong market positions. We will also continue our efforts to contain costs and improve efficiencies 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.

HealthCare

HealthCare continues to target above-market 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.

Within our strongest HealthCare segment in terms of sales – Pharmaceuticals – the activities of the General Medicine business unit focus on drug products that are usually prescribed by general practitioners. The Specialty Medicine, Women's Healthcare and Diagnostic Imaging business units concentrate on products that are mostly prescribed by medical specialists.

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 business, and this segment consequently accounts for the largest share of the HealthCare subgroup's R&D budget. Here we also aim to strengthen our portfolio and supplement our own research and development activities with in-licensing, alliances and collaborations. Examples in 2009 included the agreements relating to the MEK inhibitor RDEA-119 of Ardea Biosciences, Inc., United States, and the radiopharmaceutical Alpharadin™ of Algeta ASA, Norway, both of which are being developed to treat tumor diseases.

The Pharmaceuticals segment already occupies a leading position in many emerging markets, particularly China and Russia. A key element of our pharmaceuticals strategy is the selective expansion of business in the emerging markets, the in-licensing of an insulin product from Bioton S.A., Poland, for the Chinese market being a significant example.

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

Course of expansion in fast-growing regions

The goal of our 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®, Aleve®, Canesten®, Bepanthen®, One-A-Day®, Supradyn®, Rennie® and Alka-Seltzer®. 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 develop our business in new growth segments. We will continue to take advantage of external growth opportunities in the form of strategically relevant acquisitions or in-licensing. One such growth opportunity is provided by the exclusive licensing agreement with AstraZeneca PLC for the marketing of omeprazole (10 and 20 mg) as an OTC medication under the trademark Antra® that came into effect in Germany in August 2009. In the fall of 2009, we strengthened our prescription dermatologicals business with the acquisition of the U.S. product lines Desonate® and NeoBenz® Micro from SkinMedica, Inc., Carlsbad, California, United States.

The goal of the Medical Care Division is to build on its competitive positions in the fields of blood glucose monitoring, diabetes management and injection systems for contrast agents, along with vascular intervention systems, such as thrombectomy systems for treating constricted or blocked blood vessels. We also plan to add to our portfolio by investing in more business areas and geographic regions and entering into strategic partnerships. We intend to continuously improve our products, reduce costs and deploy resources more efficiently. We want to expand our product range by developing new blood glucose measurement systems and innovative solutions that help people with diabetes to better manage the disease. In our medical equipment business, we are continuing to develop our core business in radiology as well as new IT-based services 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 position in the companion animals market, serving as a preferred supplier and partner. 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 in-licensing. We plan to focus more on developing new products ourselves in order to safeguard our long-term success. For this reason, the Animal Health Division has restructured its innovation process to more closely align its research and development activities to the market in the future and ensure earlier and more efficient prioritization of our development projects.

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 integrated solutions to meet the growing demand for affordable, high-quality food, feed, fiber and energy crops. Against the 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.

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

Innovation forms 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 products offering superior performance properties, environmental compatibility and user safety along with greater customer value. Our new products are crucial to increasing sales and achieving attractive margins, to which our strict cost management also contributes.

Innovation forms the basis for value creation

In Crop Protection, the larger of its business segments, CropScience aims to safeguard and further expand the market-leading positions in the Herbicides, Fungicides, Insecticides and Seed Treatment businesses 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. In addition, we engage 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.

The Environmental Science business unit makes use of the development and production capacities of Crop Protection and its innovative active ingredients. Our strategy is to expand our leading market position by developing and marketing innovative and sustainable products tailored to the specific needs of consumers and professional users. Such products are designed to be easy to use and safe to handle while satisfying society's increasing requirements in the growing and greening, and health and hygiene areas.

Our BioScience business unit comprises the research, development and commercialization of seeds and solutions based on modern breeding methods and plant biotechnology. We will continue to expand our activities in seeds and plant traits with the aim of raising BioScience sales to about €1.4 billion by 2018. Our seed business has traditionally focused on four core-crop growth areas: canola, rice, cotton and vegetables. We aim to build on the strong market positions we have achieved in these crops by introducing new varieties and expanding into new regional markets. In 2009 we embarked on research into improved cereal varieties and defined soybeans as an additional research focus. As in other crops, our goals here include increasing yields and making plants more resistant to adverse weather conditions. Furthermore, we not only market our technologies in our own seed products, but also increasingly offer them for other crops through out-licensing.

CropScience markets its products in more than 120 countries worldwide. In the coming years we intend to further expand our business particularly in fast-growing markets such as eastern Europe, Russia, India, China and Brazil. In these countries there is major potential for the agriculture industry to cover the increasing 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 based on safeguarding its existing competitive position in its traditional markets, supplementing the portfolio with innovative new businesses and achieving profitable growth in the emerging markets. The financial and economic crisis has presented a major challenge to our customer industries, particularly in North America and Europe, to which we have responded appropriately. However, we believe that the long-term market trends remain unaffected by the crisis and continue to be relevant to our business strategy.

Our aim is to maintain our position in the isocyanates market and continue improving profitability. To achieve this, we endeavor to steadily boost the efficiency of our production and administration processes. We continuously evaluate potential investments in additional production capacities against the background of a constantly changing market situation. We are also working to strengthen our downstream business activities such as BaySystems® in the Polyurethanes business unit and compounding in the Polycarbonates business unit in order to increase the share of sales contributed by our differentiated business. At the same time, we are grasping new business opportunities based on the competencies of MaterialScience. This means driving forward our newly formed Functional Films, Carbon Nanotubes and Medical Coatings & Adhesives businesses, in which we are positioning ourselves as a focused technology leader.

Our goal in the Polyurethanes business unit is to expand our global market leadership in isocyanates, at the same time ensuring cost leadership in all areas. In 2010 we will complete the construction of our 250,000 tons-per-year TDI plant in Shanghai, China, which is due on stream in the second half of 2011. This facility is designed to support our long-term growth in Asia. We also intend to consolidate the production of isocyanates in Europe, stepping up our output in line with market trends. Our polyether polyols will primarily support growth in the isocyanates business in order to bolster our portfolio of customer solutions. In the BaySystems® business we aim to generate profitable growth and further expand our global market share. We will therefore proceed with our successful systems house strategy.

The polycarbonate industry currently faces significant overcapacities on the world market. We are addressing this trend with a two-pronged strategy. On the one hand, we aim to achieve cost leadership by operating world-scale facilities in all regions. At the same time, as a leading development and technology partner, we are offering our customers differentiated solutions in all polycarbonate applications.

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-screen televisions. We also plan to sustainably improve the performance of the Polycarbonates business unit by increasing distribution efficiency in standard segments, sharpening the focus of our research and continuing to improve cost structures.

The Coatings, Adhesives, Specialties business unit seeks to defend and selectively expand its market position in the strategic business entity "Basic and Modified Isocyanates." With this goal in mind, we plan to meet rising demand in the growth regions by increasing production capacities and expanding our technical centers. We aim to further improve profitability in the strategic business entity "Resins" by narrowing the focus of our portfolio toward modern waterborne and uv-curing coating and adhesive systems. The cost structures for our conventional systems are being improved, mainly by consolidating production capacities.

We have combined our activities in innovative surfaces and substrate materials into a new strategic business entity "Functional Films and Specialties." This includes applications in cosmetics, medical technology, carbon nanotubes for improving the properties of plastics and metals, and the area of functional films. The focuses of this business, which is still at an early stage of development, include formable coated films for electronic and automotive applications and forgery-proof Makrofol® films for identification and bank cards.

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 creditworthiness. This involves optimizing the capital structure and effectively managing risks. The management of currency, interest rate, raw material price and default risks helps to reduce the volatility of our earnings.

The contracted rating agencies assess Bayer as follows:

Rating [Table 3.38]

| | 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," page 118ff.

11.3 Economic Outlook

The worldwide economic recovery is expected to continue in 2010. However, the impact of the global business downturn in 2009 will continue to be felt for some time to come, making it unlikely that the global economy will return to its pre-crisis condition in 2010.

The economic perspectives for 2010 are marked by considerable uncertainty. The risks jeopardizing the prospects for a sustained upswing remain in place for the time being, with investor and consumer reticence likely to continue initially in 2010 in view of global overcapacities and continuing problems on the international financial markets. In addition, the effects of fiscal stimulus measures will come to an end in most industry sectors. As a result, economic growth in both Europe and the United States will probably be only modest at first. By contrast, a stronger recovery is likely in the emerging markets, particularly those of Asia and Latin America. For 2010 as a whole we expect to see a moderate expansion of the world economy.

HealthCare

We expect growth in the **pharmaceutical market** in 2010 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 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 increasing cost pressure being exerted by health organizations. The overall economic environment is unlikely to provide significant growth stimuli for the pharmaceutical market.

We expect the global **consumer health market** to continue growing moderately in 2010, bolstered by a slight improvement in economic conditions in western Europe and North America compared with 2009.

CropScience

We believe the **seed and crop protection market** as a whole will recover in 2010. Although prices for agricultural crop commodities and energy are still expected to fluctuate and uncertainty in the financial markets will persist, agricultural activity is likely to intensify. This is mainly because of long-term factors shaping world agriculture markets, such as steadily rising demand for food and feed products and a shortage of arable land.

Assuming normal weather conditions, we expect currency-adjusted world market growth of approximately 3% for agrochemicals and over 5% for high-quality seeds and plant traits in 2010. We believe this growth will result from both rising prices and positive volume effects. Compared to the very strong first quarter of 2009, we anticipate market shrinkage initially, followed by a recovery over the course of the year. In regional terms, we expect the largest growth stimulus to come from Latin America, where soybean cultivation in particular should increase considerably compared with 2009. Crop production is also expected to increase in the Asia/Pacific region. This applies particularly to rice and cereals, and also to specialty crops such as fruit and vegetables. As far as the industrialized countries are concerned, however, we predict stagnation in western European crop protection markets in 2010, with slight declines possible in North America.

MaterialScience

Growth expectations for 2010 in the main customer industries of **MaterialScience** are moderately optimistic. The extent of the economic recovery will depend mainly on a sustained increase in demand in North America and Europe and continued growth in Asia.

The **automotive industry** will probably experience strong regional variations in 2010. Western Europe could be hardest hit by the slump in volumes, as unit sales in 2009 were propped up in all major vehicle-producing countries by massive stimulus programs and demand for automobiles may therefore be partially saturated. In North America, a recovery is expected in 2010 following an extremely weak year. However, we do not expect production to return to pre-crisis levels in the foreseeable future. Asia – led by China – will probably remain the growth engine for the automotive industry. There the government stimulus programs are continuing and are targeted very much toward boosting Chinese output.

The **electrical and electronics industry** should emerge quickly from the crisis thanks to the variety of segments it includes. Factors making robust growth likely in the coming years include the continuing high demand for modern infrastructure, particularly in the emerging markets, the highly competitive innovation climate in the industry, the challenges presented by climate change and the expansion of regenerative energies.

We expect a slight recovery in the global **construction industry** in 2010, partly because of the massive government stimulus programs. Continuing robust development in China and India and an improvement in eastern Europe should support a return to positive growth rates. By contrast, we predict a hesitant recovery in building investment in western Europe, North America and Japan.

We believe that the **furniture industry** will stabilize increasingly during 2010 following a phase of market shrinkage in 2009. However, many of the countries heavily impacted by the economic crisis will probably see only low rates of growth. The industry is likely to benefit from a sustained market rebound in subsequent years. The emerging economies of Asia, eastern Europe and Latin America should harbor development potential.

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 2010. We are targeting currency- and portfolio-adjusted sales growth of more than 5% and aim to increase EBITDA before special items toward €7 billion. Core earnings per share (calculated as explained in Chapter 4.3, page 75) are expected to improve by about 10%. Our estimates are based on an exchange rate of US\$1.40 (2009 average: US\$1.39) to the euro.

We do not expect to incur special charges for restructuring programs in 2010.

Our capital expenditure budget is €1.4 billion. Depreciation and amortization are expected to total about €2.6 billion, including €1.3 billion in amortization of intangible assets. We plan to spend some €2.9 billion on research and development.

Having largely achieved our current target margins, our main focus for the future is on creating value through profitable growth. To do this we plan to continue investing primarily in our research and development pipeline, in BioScience and in the emerging markets. We expect to achieve steady currency- and portfolio-adjusted sales growth of approximately 5% annually through 2012 and plan to raise EBITDA before special items to around €8 billion within this period. We are targeting an average 10% annual improvement in core earnings per share, which would mean an increase to around €5 per share.

HealthCare

HealthCare plans to grow at least with the market in 2010. This corresponds to a currency- and portfolio-adjusted expansion of about 5%. We also intend to increase EBITDA before special items.

We aim to continue growing at least with the market through 2012 and to steadily improve EBITDA before special items.

CropScience

For CropScience we anticipate slightly above-market growth in 2010, equivalent to a currency- and portfolio-adjusted increase of approximately 4%. We are targeting a small increase in EBITDA before special items. However, the business environment is currently more difficult than expected.

We aim to grow at least with the market through 2012 and to further improve EBITDA before special items.

MaterialScience

We anticipate a continuing recovery in the markets relevant to our MaterialScience business. In light of this we aim to increase sales by more than 10% on a currency- and portfolio-adjusted basis in 2010. We are targeting a substantial increase in EBITDA before special items.

We expect to report somewhat higher sales in the first quarter of 2010 than in the fourth quarter of 2009. In light of further increases in raw material costs, we expect first-quarter EBITDA before special items to be roughly level with the preceding quarter.

Provided the economic recovery continues, we expect MaterialScience to return to its pre-crisis sales level of more than €10 billion by 2012. We plan to considerably increase EBITDA before special items.

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.