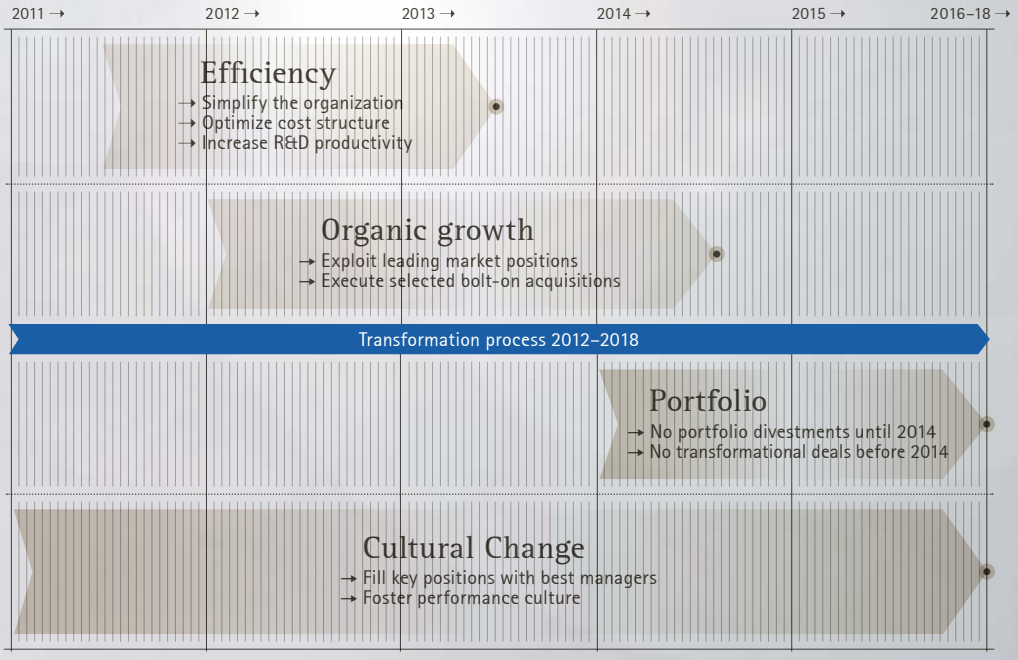
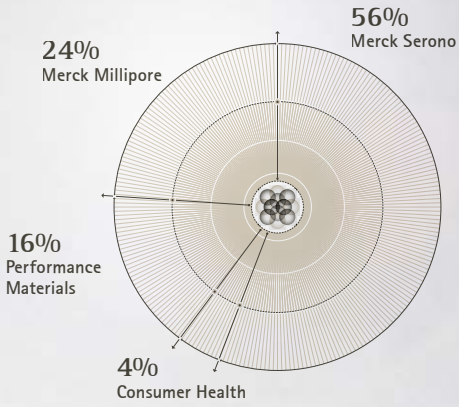
#02 Merck Group Management Report 2012

On the road to tomorrow

Group-wide transformation program

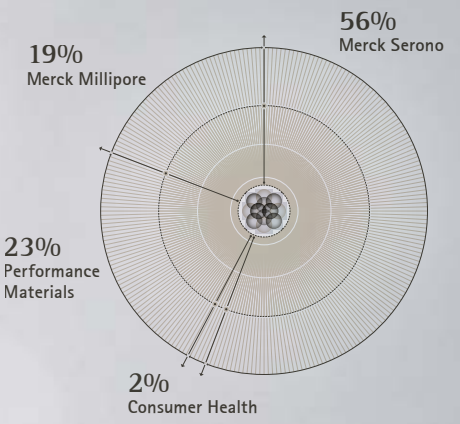


Merck Serono generates the largest proportion of sales and earnings



Sales 2012

€ 10,741 million



EBITDA pre one-time items 2012[1]

€ 2,965 million

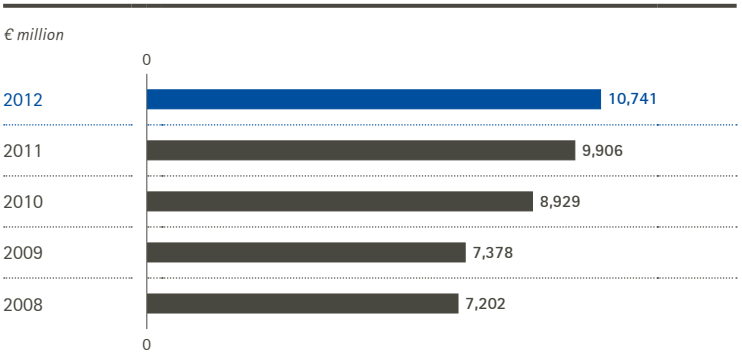
[1] Including Corporate and Other (€ –211 million)

Merck at a glance

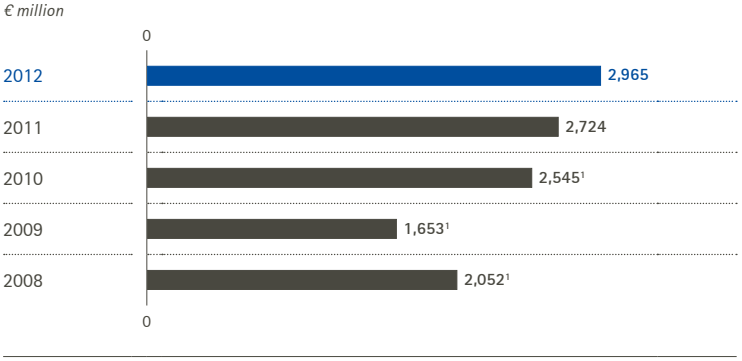
Our divisions

Merck is a global company with operations spanning innovative pharmaceutical and biopharmaceutical products, life science tools and specialty chemicals. Merck is organized around four divisions.

Group Sales



Group EBITDA pre one-time items



[1] Unaudited

Merck Serono

Merck Serono develops, manufactures and markets prescription drugs to treat cancer, multiple sclerosis (MS), infertility, growth disorders, and selected cardiovascular and metabolic diseases. In 2012, the division contributed 56% to Group sales and 56% to Group EBITDA pre one-time items (excluding Corporate and Other). The division was formed in 2007 by the merger of Merck's ethical pharmaceutical business with the biopharmaceutical company Serono.

→ *Merck at a glance*

The Merck Serono division focuses on biopharmaceuticals

Merck Serono's products are primarily prescribed by specialists and sales are dominated by drugs manufactured using biotechnology. The two main products, Rebif® and Erbitux®, generate around half of the division's sales. Rebif® is a leading drug for the treatment of relapsing multiple sclerosis, where relapses and recovery episodes alternate. The human serum albumin-free formulation of Rebif® providing improved injection tolerability has been available outside the United States since 2007. The targeted cancer drug Erbitux® is approved for the treatment of metastatic colorectal cancer. This monoclonal antibody is also a standard in the treatment of squamous cell carcinoma of the head and neck. The fertility franchise, a complete portfolio of recombinant gonadotropins delivering around 14% of sales, is an important growth contributor based on current trends of couples postponing childbearing until later in life. Additionally, increasing ability to pay and access to health care has spurred the growth of Merck Serono's infertility treatments in the Emerging Markets. The General Medicine unit contributes one third of overall sales and comprises branded products to treat diabetes and cardiovascular diseases. These drugs are no longer patent protected, yet as is the case for Glucophage® (metformin) in diabetes, they remain recognized standard treatments. Sales of this portfolio are growing in the Emerging Markets due to increasing wealth and changing lifestyles. Merck has been actively marketing pharmaceutical products in the Emerging Markets for decades and is viewed as a trusted partner by doctors and government agencies.

Injection devices offer benefits

Often, successful therapy is not just about the drug, but also how it is administered to the patient. Merck Serono has years of experience in developing novel injection devices that are easy to use, especially in the areas of Multiple Sclerosis, Fertility and Endocrinology. They offer patients the benefit of less painful and often more reliable injections than using a prefilled syringe. From the healthcare professional's perspective, these devices can enhance patient's compliance with treatment. Successful adoption of devices has proven to be a significant differentiator even with the advent of generic competition, for example in the field of growth hormone deficiency.

R&D focus on Oncology, MS and Immunology

Merck Serono invests around € 1 billion each year in research and development (R&D) focused on the core therapeutic areas of Oncology, Multiple Sclerosis, and Immunology. With three global hubs located in Europe, North America and Asia, Merck Serono is well placed to access local science and talent as well as to conduct global clinical trials.

In addition to in-house research, Merck Serono is committed to building long-term relationships with external partner companies, academic institutions and collaborative groups that enhance the productivity of its drug discovery activities, providing access to innovative and emerging technologies. The division is also seeking to strengthen its franchises by in-licensing of clinical stage compounds.

Consumer Health

The Consumer Health division manufactures and markets prescription-free drugs primarily addressing health themes such as mobility, women's and children's health, cough and cold as well as everyday health protection. The division focuses on a number of well-known brands ranking among the top three in certain markets. It has a strong base in Europe and is quickly growing in Emerging Markets. In 2012, the division contributed 4% to Group sales and 2% to Group EBITDA pre one-time items (excluding Corporate and Other).

→ *Merck at a glance*

Performance Materials

Performance Materials is a specialty chemicals business that offers high-tech performance chemicals for applications in fields such as consumer electronics, lighting, coatings, printing, plastics, and cosmetics. The division comprises the two business units Liquid Crystals and Pigments & Cosmetics. In 2012, Performance Materials contributed 16% to Group sales and 23% to the Group's EBITDA pre one-time items (excluding Corporate and Other), indicating the division's healthy and sustainable profitability.

Market leader in liquid crystals based on a broad product portfolio and R&D investments

Liquid Crystals generates more than 70% of the division's sales. Based on a market share of between 50% and 60%, this business has for many years commanded the number one market position for liquid crystal mixtures used in liquid crystal displays (LCDs). With the broadest offering in the industry, the business unit's product portfolio comprises liquid crystals tailored to match the individual requirements of the full range of LCDs, from small displays in smartphones to ultra-large televisions. The portfolio includes liquid crystals based on polymer stabilized vertical alignment (PS-VA) technologies, primarily used in mid- and large-sized televisions, as well as liquid crystals based on in-plane switching (IPS) technology, which are also used in televisions as well as increasingly in mobile devices such as tablet PCs and smartphones. The Liquid Crystals business unit operates in a highly consolidated market with a total of only three suppliers, indicating the high barriers to entry as a result of the scientific complexity of liquid crystals and their high quality requirements. Liquid Crystals supplies all seven major LCD panel manufacturers that serve television manufacturers or other consumer electronics companies. The business unit also offers materials for organic light-emitting diodes (OLED) used for new lighting applications and display technologies.

The Pigments & Cosmetics business unit develops and markets a comprehensive product portfolio of decorative and functional pigments, spanning a variety of colors and shimmer effects. These pigments are primarily processed into automotive and industrial coatings, plastics, cosmetic products and security paints. The portfolio also includes high-quality cosmetic products especially for use in skin care, oral care and hair care products, including UV filters.

To secure and strengthen its position as innovation leader in its respective fields, ongoing investments in R&D, particularly in Liquid Crystals, are a cornerstone of the division's business strategy.

Merck Millipore

Global number three supplier in the life science market

Merck Millipore offers solutions to two key customer groups: on the one hand research and analytical laboratories in the pharmaceutical/biotechnology industry or in academic institutions and on the other hand production customers manufacturing large- and small-molecule drugs. Formed in 2010 through the acquisition of the Millipore Corporation, the division has developed into the global number three supplier of tools to the life science industry. The division has a broad product portfolio with scale and geographic reach and conducts smaller bolt-on acquisitions to make effective use of its global sales channels. Merck Millipore achieves the majority of its sales with consumables, significantly more than the estimated industry average. Based on its diversified group of customers and its focus on consumables the division generates recurring sales streams that lead to stable, attractive cash flows with a low risk profile. In 2012, the division contributed 24% to Group sales and 19% to Group EBITDA pre one-time items (excluding Corporate and Other).

→ *Merck at a glance*

Bioscience mainly serves the research sector

The Bioscience business unit, which contributes 18% to divisional sales, is focused on the needs of researchers to understand complete biological systems and identify new therapeutic targets. The product portfolio aims to simplify the work flow for researchers, offering consolidated and validated solutions. Main product groups on offer include devices and consumables for filtration and sample preparation, reagents and kits for cell biology experiments, and small instruments and consumables for cell analysis. The life science research sector is highly innovative and the business unit generates between 15% and 20% of annual sales based on new product launches.

The Lab Solutions business unit accounts for 42% of sales and supplies products to laboratories that help to identify and eliminate impurities and contaminants. It is one of the leading suppliers of laboratory water equipment and consumables. Lab water purity is critical to the success of research experiments and the market is characterized by strong customer loyalty and high barriers to entry. The unit also develops and markets test solutions that help identify microbial contamination i.e. in pharmaceuticals, food or tap water.

Process Solutions addresses the needs of pharmaceutical manufacturers

The Process Solutions business unit supplies products used by pharmaceutical and biotechnology companies to manufacture large- and small-molecule drugs safely and efficiently. It contributes 40% of the division's sales. Merck Millipore has become the leading supplier in this sector based on constant innovation, highest quality and reliable supply. In the area of small molecule production, Merck Millipore offers over more than 400 chemicals used for synthesis of active pharmaceutical ingredients in addition to products that convert drugs into their final forms, e.g. pills or injection solutions. The offering in biotech production comprises products supporting cell growth and gene expression, a wide range of filtration devices as well as salts and sugars that ensure the stability and biological activity of the final drug. Merck Millipore's single-use solutions offer increased operational flexibility and versatility to biopharmaceutical customers since they eliminate time and cost of cleaning, are easily adaptable to different products and therefore need lower capital investment.

Success of new product launches is critical to the growth and profitability of all three business units. Therefore around 6% of sales are re-invested in R&D activities.

In North America, Merck has been operating its divisions under the name EMD since 2001 to differentiate itself from Merck & Co. of the United States, an independent company.

Company strategy

Strong market positions in pharmaceuticals, life science and specialty chemicals

Merck aspires to be a successful player in the pharmaceutical, life science tools and speciality chemicals industries, with leading positions in attractive segments of these markets. To achieve this, we are building on our leading brands in all four of our divisions in order to create a revenue stream that, in our current understanding, is widely protected from economic cycles. Furthermore, Merck has a solid market position in the Emerging Markets shown by a high exposure of more than one-third of Group sales. Current and future investments are targeted to benefit from future volume growth in the Emerging Markets.

→ *Merck at a glance*

Fit for 2018: company-wide transformation program initiated

Merck is in the midst of a transformation, which started with an overhaul of the Group's organizational structures. The subsequent and first-ever company-wide efficiency program will lead to more focus on growth in the coming years. The organizational changes have been already implemented. The efficiency measures are currently being implemented with the aim of ensuring a cost structure that is competitive with that of our peers. Management expects to expand operating and net margins through to 2014, with the primary driver of this performance improvement being Merck Serono. A more far-reaching goal of Fit for 2018 consists of a cultural change leading to the creation of a strong performance-oriented culture. Elements include results orientation, efficiency, a global footprint, innovation, quality, and customer focus.

At Merck Serono, the major change is a refocused R&D organization (see page 64 et seq.). Operating costs, historically higher than industry average (in % of sales), are to be reduced. Actions facilitating these changes include the closure of the former Merck Serono headquarters in Geneva (Switzerland), reducing fixed costs in R&D, more focused spending in marketing and selling, and the consolidation of various departments and functions across the division.

Consumer Health will fundamentally improve its operational profitability, which is currently lower than industry average. This will be achieved by more focused and therefore lower spending in marketing and selling, and more targeted spending in R&D.

In contrast to the pharmaceutical divisions, Performance Materials and Merck Millipore are not viewed as major restructuring cases. However, in the context of the Group-wide program, smaller scale projects are being or will be implemented to eliminate inefficiencies, for example in Pigments & Cosmetics.

Also in Group functions (departments that are not allocatable to a single division and are reported under Corporate and Other) selected efficiency measures are planned.

Medium-term net cost savings targets for Group and divisions established

Merck expects to deliver visible margin expansion as of 2014, while continuing to generate organic sales growth. Planned net savings of € 365 million, which are to be reached annually from 2017 onwards, should lead to structurally improved Group profitability.

For Merck Serono, the company aims to generate net cost savings of € 300 million annually from 2014 onwards. Out of these savings, 40% are planned to come from lower but more effective spending in the division's R&D functions. Commercial Operations (impacting costs of marketing and selling as well as administration) will contribute around 60% of the savings, primarily through a leaner and more centralized organization. The target for Consumer Health is net cost savings of € 25 million annually from 2014 onwards, achieved through lower spending on marketing and selling, administration, research and development as well as optimized logistics. With a stable medium-term sales outlook and comparably high margins, Performance Materials remains an attractive business and a core part of Merck. For Merck Millipore, longer-term saving targets have been established. The division is expected to deliver net cost savings of approximately € 40 million annually from 2017 onwards, primarily generated through more efficient production and lower logistics costs.

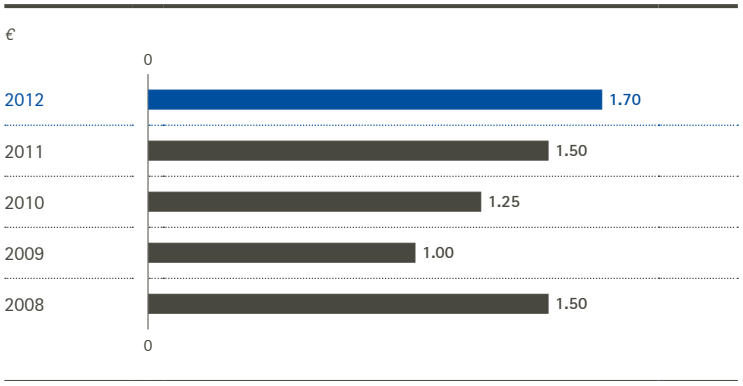
→ *Merck at a glance*

Current capital allocation strategy is focused on restructuring measures, debt reduction, in-licensing deals, smaller acquisitions and dividends

Merck has a very high free cash flow yield and is improving its capital deployment. In the context of its first company-wide efficiency program, cash is being reserved with high priority to fund restructuring measures across all divisions and regions. Around € 800 million of one-time costs related to restructuring are planned to be incurred from 2012 to 2015. Secondly, Merck aims to maintain a healthy balance sheet. The debt incurred in connection with the acquisition of Millipore in 2010 is being repaid as soon as the tranches reach maturity. In 2012 € 1 billion was used to repay maturing bonds. Thirdly, to provide for future growth cash is used for selective bolt-on acquisitions especially in the life science area (Merck Millipore) and product in-licensing (Merck Serono). Merck is not planning to make any transformational acquisitions as long as the majority of the restructuring initiatives have not been implemented.

Lastly, Merck uses its cash to pay a dividend to its shareholders. For the coming years, Merck is aiming to distribute – based on current economic and business assumptions and subject to the approval of the Annual General Meeting – a dividend that is at least stable in absolute amounts compared to the dividend paid for the year 2011.

Dividend per share



Corporate Responsibility

Our corporate culture has always been characterized by responsible behavior – whether with respect to our products, our employees, the environment, or society. That is because not only ownership, but also business success creates responsibility.

Firmly establishing responsible behavior throughout the company is one of the basic principles of company management at Merck. In order to sustainably implement these principles, a Corporate Responsibility committee discusses relevant overarching issues. This committee includes representatives from the individual divisions and Group functions such as Environment, Health, Safety, Security, Quality, as well as Communications, Humans Resources and Legal.

Against the background of the UN's endorsement of the Guiding Principles for Business and Human Rights and their integration into the principles of the Organization for Economic Co-operation and Development (OECD) for multinational companies, Merck conducted a Group-wide analysis in order to ascertain the subsequent new requirements not covered by existing guidelines and directives.

In 2012, Merck continued to be a member of the FTSE4Good Index, a leading international stock index for sustainable investment. Companies are included in this index based on criteria such as effective environmental protection as well as adherence to and support of human rights principles. As in 2011, Merck continued to be included in the sustainability index of Deutsche Börse.

Corporate responsibility activities and key issues are selected on the basis of materiality analyses. These activities and issues are described on the following pages as well as in our extensive Corporate Responsibility Report, which we publish regularly. Merck conducts these materiality analyses at regular intervals in order to identify and prioritize the sustainability topics that are most important to the company. The analysis took into account the perspectives of various stakeholder groups, including, for instance, employees, business associates, site neighbors, and investors.

Employees

Management and labor representatives agree on efficiency program

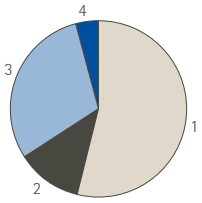
As of December 31, 2012, our company had 38,847 employees (2011: 40,676 employees). Merck was represented in 66 countries by 203 companies and had 65 production sites located in 22 countries.

The "Fit for 2018" efficiency program significantly impacted HR work in 2012. In order to implement the necessary personnel reduction measures in a socially responsible manner, the structural prerequisites and rules were set up with the respective management and labor representatives in the majority of countries in which Merck operates. In Germany, for example, a partial retirement program and a voluntary leaver program were offered. As of the reporting date, around 1,200 employees had enrolled in these programs. Overall, the number of employees decreased by 1,829 compared to 2011.

→ *Corporate Responsibility*

Merck remains committed to the vocational and advanced training of its employees. Consequently, Merck has maintained a constant level of vocational training in Darmstadt, the largest site of the Merck Group. A total of 528 young people were enrolled in vocational training programs in 23 different occupations there.

Number of employees as of December 31, 2012 / percentage of total workforce



1	Europe	20,777	54%
2	North America	4,848	12%
3	Emerging Markets	11,642	30%
4	Rest of World	1,580	4%
	Total	38,847	100%

Core topics of our international human resources work

Further development of global HR processes

Merck has increasingly been positioning itself as a global company. In order to prepare the company for the resulting new challenges in international personnel management, Human Resources also positioned itself globally in 2012. Global structures were created and uniform principles were implemented in order to establish a global HR organization. All global HR processes applied to date, such as the Global Rewards Policy, the Performance Management Process as well as Talent & Succession Management, were further developed in order to promote a performance-oriented mindset and to strengthen the corporate culture based on the Merck Values. In this connection, measures were also taken to enhance the company's attractiveness to internal and external talent, which has positively impacted the image of Merck as an employer. This was confirmed by employer ranking lists, such as the "Universum" employer ranking for scientists, in which Merck scored higher in 2012 than in 2011.

Merck is using the motto "Make great things happen" to position itself in the global job market. This communicates to potential applicants what makes Merck unique: an inspiring, motivating work environment in which innovations thrive; an environment in which everyone has the opportunity to apply their ideas and commitment to benefit customers and the company, while at the same time developing themselves further.

Performance management and career opportunities

Assessing the performance of employees is crucial to Merck's success and employee development. Key features here are clear objectives, differentiated and open feedback on performance, as well as the preparation of individual development plans. To date, around 23,800 employees have participated in the globally uniform Performance Management Process.

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Strengthening the performance culture and developing talent in a more targeted way

Identifying employee potential is directly related to performance management. Merck wants to offer its talent the opportunity to have an interesting career and to continually develop themselves within the company both personally and professionally. Therefore, in 2012, a new, integrated performance and talent process was developed that systematically combines performance management and the identification of potential. This will create a stronger performance culture and enable more targeted talent development. On this basis, internal appointments to vacant (management) positions can be steered and implemented better. In addition, the new process will help to retain talented employees and to position Merck as an attractive employer for potential new employees.

In 2012, 88% of management position vacancies were filled by internal candidates. Some key positions in the organization were also filled by external executives in order to add new perspectives to the long-standing experience existing in-house.

Global Rewards Policy

The Global Rewards Policy applies to all Merck companies worldwide and ensures a systematic compensation structure. The guidelines describe the principles governing how employees are remunerated based on their performance, abilities, the situation in the respective labor market, and the specific requirements of the respective businesses. Existing remuneration systems, especially as they relate to variable compensation, are continuously further developed in order to take into account the changing needs of our global businesses.

Occupational health and safety

We apply the lost time injury rate (LTIR) as an indicator to determine the success of measures aimed at accident prevention as well as occupational health and safety. This internationally recognized key figure describes the number of workplace accidents resulting in lost time per one million working hours. Merck had set itself the goal of reducing the LTIR to 2.5 by 2015. In 2012, we again outperformed this goal, achieving an LTIR of 2.3.

The success of our BeSafe! initiative launched in 2010 encourages us to continue this program and to further strengthen our safety culture. The program has a globally uniform structure, but also consists of local programs to meet the specific requirements of the individual sites. BeSafe! focuses on anchoring the safety culture as a management task and on empowering our employees to take independent responsibility.

Incidents

	2008	2009	2010	2011	2012
LTIR (Lost Time Injury Rate)	3.9	3.5	3.0	2.0	2.3
Number of fatalities	1	0	1	0	0

→ *Corporate Responsibility*

Employee diversity

As a global company, Merck endeavors to achieve a good balance between different cultures and nationalities, between different age groups, as well as between male and female employees. We are convinced that workforce diversity promotes innovation and team performance, contributing to the company's entrepreneurial success. In order to sustainably anchor this diversity, we want to further develop existing measures.

Ratio of men and women

Increasing the percentage of female employees where they are underrepresented

Women currently make up 42% of the workforce. The ratio of female to male employees varies among individual business areas, functions and regions. In Pharmaceuticals 46%, in Group functions 42%, and in Chemicals 37% of all employees are female. In North America, 46% of all employees are female, in Europe 45%, in Emerging Markets 37%, and in Rest of World likewise 37%. Women make up 51% of the workforce in research and development, which is the highest percentage, followed by 50% in administration. The lowest percentages of women are in production (34%) and the infrastructure units (30%). Merck has set itself the goal of increasing the percentage of female employees wherever they are underrepresented.

Internationality

72% of the Merck workforce is employed outside of Germany; 26% of all employees are German citizens. One of our basic principles is to hire and develop employees from the countries in which we operate.

Age structure

Demographic change, and the associated aging of the population, is not equally apparent in all countries in which we operate. However, we must adapt to it, particularly in Germany, in some other EU countries, and in the United States. In these countries, the average age of our employees exceeds 40 – and we assume that this figure will increase further. In Europe, we are using various programs to address these demographic challenges. These include adapting workplaces to the needs of older employees and establishing a health management program to maintain their ability to perform their jobs.

Management positions

Balanced diversity among executive staff enhances career advancement opportunities for talented employees. At the same time, it also enables the company to leverage a broad base of experience and allows for more differentiated entrepreneurial decision-making.

The percentage of women in management positions, meaning Global Grade 14 and higher, is currently 24% calculated across the entire company. The percentage is higher at the legal entities in the countries than at corporate headquarters in Darmstadt; it is also higher in Pharmaceuticals than in Chemicals. The ratio of women in management positions is lower in certain Group functions, such as IT for example. We set ourselves a global objective of increasing the percentage of women in management positions to 25% to

→ *Corporate Responsibility*

30% by 2016. In order to attain this goal, various HR measures and global management training programs are used to address this topic and raise awareness among executive staff. Internal and external recruitment staff have been set the goal of focusing more on diversity when selecting candidates. Greater importance is also being given to the topic when identifying talented employees as well. In addition, local measures and offers are being expanded in order to support work-life balance.

Internationality of management levels

61% of all management positions (Global Grade 14 and higher) are held by persons of non-German nationality – altogether 57 different nationalities are represented in such positions. The internationality of our management levels reflects the global nature of our business activities.

Responsibility for products and the environment

Voluntary commitments exceed the statutory requirements

The safety of our products – for users and patients as well as the environment – is at the core of our corporate responsibility. Our product safety guidelines are oriented to statutory regulations in force around the world. Through voluntary commitments to charters and codes of practice formulated by the national and international associations of the chemical and pharmaceutical industries, we exceed these requirements. Examples include the global Responsible Care Charter in the chemical industry as well as rules governing pharmaceutical marketing practices specified by pharmaceutical industry associations. Our aim is to offer customers and patients high-quality original products.

When developing new products, we take the sustainability aspects of their entire life cycle into account. Extensive documentation of product properties and compliance with all legal requirements have a high priority for us.

We actively support our customers, for example, by providing them with comprehensive information material as well as advanced application-related training. We benefit from our broad positioning and our very extensive product range as well as a correspondingly high level of expertise.

Our quality vision points in the same direction – "Quality is in everything we do!" This vision addresses the responsibility of all employees individually – in all divisions, in all Group functions and at all levels of the hierarchy. In our view, quality has a lot to do with the trust that our customers have been placing in us for centuries.

REACH: Phase 2 is progressing according to schedule

The implementation of the EU regulation REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) is currently in the second phase. It concerns all substances that we produce or import in volumes ranging between 100 and 1,000 metric tons per year – totaling approximately 75 different substances. These substances must be completely registered with the European Chemicals Agency (ECHA) by June 1, 2013. We have begun all the necessary processes for this and are fully on schedule with our activities. In parallel, we have already started to register the first substances for Phase 3, which will run from 2013 to 2018 and comprises all substances produced or imported in volumes exceeding one metric ton per year.

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Merck Bioethics Advisory Panel

The Merck Bioethics Advisory Panel, comprising renowned, independent scientists and bioethicists from various countries, convened again in 2012. The panel specifically addresses bioethical topics that arise at Merck, such as questions regarding biopharmaceuticals or stem cells. In extensive discussions and working groups, the experts focused on aspects such as clinical trial design in developing countries as well as clinical research in countries with limited resources.

Access to Medicine Index: Improved ranking

Improving access to medicines in developing countries

Merck ranks eighth in the current Access to Medicine Index published by the Access to Medicine Foundation in November 2012. Compared to 2010, Merck thus improved its ranking by nine places. The Index compares 20 pharmaceutical companies every two years based on a ranking of various activities focused on improving access to medicines in countries with low and middle incomes.

We aim to create the conditions for sustainable access to high-quality, safe medicines and health solutions in developing countries. In order to further the goal of making our health solutions accessible and affordable to patients in developing countries, Merck has further expanded its Access to Health initiative. This constitutes a framework spanning all divisions and functions of the company, helping us to more effectively address issues relating to access to medicines in developing countries.

Fight against counterfeit products: MACON Network

Merck is resolute in its fight against counterfeit products. Counterfeit medicines endanger the life and health of patients. Furthermore, counterfeit medicines that are illegally marketed under the Merck brand name also damage the good reputation of Merck products. In order to fight this particularly unscrupulous form of organized crime, various departments within Merck and all subsidiaries abroad are cooperating in MACON (Merck Anti-Counterfeiting Operational Network). Contacts to local, regional and international authorities are actively maintained, training courses for employees and agency staff are conducted, and resources are made available for forensic product analyses. Merck is also actively involved in issues concerning the anticounterfeiting protection of its packaging and offers innovative solutions that meet market needs.

Environmental protection expenditure

Expenditure on environmental protection, health and safety totaled € 146 million in 2012. This figure includes investments made during the reporting period.

EHS management system and ISO group certificate

The Corporate EHS Policy defines our principles and strategies for the environment, health and safety. It is implemented through internal guidelines and instructions for compliant behavior, such as the Merck Group EHS, Security and Quality Manual.

Since our businesses are constantly changing, our environmental management system must also remain flexible and adaptable. For this reason, internal and external audits are conducted on a regular basis to determine whether the ISO 14001 requirements are still being met. In the course of the annual surveillance, the ISO 14001 group certificate was confirmed for our environmental management system for 2012 as well.

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Energy

	2008	2009	2010	2011	2012
Energy consumption (in GWh)	1,435.0	1,322.1	1,454.7	1,445.6	1,437.8
Purchased energy					
Natural gas (in million m³)	77.8	71.9	77.3	76.2	78.2
Liquid fossil fuels (in kilotons)	7.8	5.6	7.9	7.9	7.4
Electricity (in GWh)	504.2	468.0	508.8	507.0	487.6

Portfolio-adjusted in accordance with the Greenhouse Gas Protocol

CO_2eq emissions (eq=equivalents)

Emissions in kilotons	2008	2009	2010	2011	2012
Direct CO_2eq emissions	303	302	352	318	319
Indirect CO_2eq emissions	210	187	204	203	197
Total CO_2eq emissions	513	489	556	521	516

Portfolio-adjusted in accordance with the Greenhouse Gas Protocol

Air emissions

Emissions in kilotons	2008	2009	2010	2011	2012
Nitric oxides	0.2	0.1	0.2	0.1	0.2
Sulfur dioxide	0.05	0.03	0.03	0.02	0.02
Dust	0.02	0.02	0.02	0.03	0.03
VOC (volatile organic compounds)	1.9	0.2	0.2	0.2	0.2

Not portfolio-adjusted

EDISON: 200 climate protection projects

Merck aims to continually improve its performance while using energy, water and materials economically and efficiently. The objective is to reduce the impact on the environment as well as to achieve cost savings. The current focus is on climate protection: By 2020, Merck aims to reduce its total direct and indirect greenhouse gas emissions by 20% – measured against 2006 levels.

→ *Corporate Responsibility*

In order to achieve its climate goals, Merck launched a climate protection program called EDISON. This initiative pools all Merck Group activities worldwide that are aimed at climate protection and energy efficiency. In 2013, as in 2012, the Executive Board will additionally earmark around € 10 million for measures to conserve energy and reduce greenhouse gas emissions. With the EDISON program, which consists of around 200 individual projects, Merck aims to save around 64 kt of CO_2 equivalents per year in the medium term. Around one-third of these globally planned projects have already been implemented or are ongoing, including also major projects on energy generation and heat recovery.

New power plants under construction

Highly efficient combined heat and power plant

A new power plant is being constructed in Goa, India, for example, which will use climate-neutral biomass as fuel to supply the site with electricity and steam. Another EDISON project is the combined heat and power plant at the Gernsheim site in Germany that is currently under construction. This uses a high-efficiency gas turbine-driven co-generation system to produce electricity, while almost completely preventing the loss of unused heat.

Energy management plays an important role in sustainable energy efficiency and climate protection. In 2012, the two Merck production sites of Darmstadt and Gernsheim, which account for around 40% of the global energy consumption at Merck, were certified to the ISO 50001 standard for energy management systems.

Carbon Performance Leadership Index: Rating improved

The Carbon Disclosure Project is an independent non-profit organization that aims to improve transparency with respect to climate-harming greenhouse gas emissions. In the related Carbon Performance Leadership Index, which measures corporate performance in reducing emissions, we improved our rating from C to B, which clearly places us in a high performance band among all companies included in the category for Germany, Austria and Switzerland. Around 350 companies are rated for their performance in reducing emissions. Only nine of them received a rating of A or A-, and 29 a rating of B.

Green³ concept

With its Green³ concept, the Liquid Crystals business unit is playing a key role in helping to promote eco-friendly, economical, safe technologies. We are developing innovative, environmentally friendly materials for energy-efficient LC and OLED displays and are helping our customers to design ecological production processes. The Green³ concept was expanded to also include cosmetics products from our Performance Materials division. The concept evaluates all possibilities for sustainably procuring and producing cosmetic ingredients and for optimizing the related production processes. In dialogue with our customers from the cosmetics industry, we also develop proposals for cosmetic formulations that meet the strict sustainability criteria and are in line with the current trend toward more natural cosmetics.

Life cycle analyses for selected products

Product life cycle analyses (also called eco-balance sheets or life cycle assessments) are used to determine the impact that products have on the environment. A product carbon footprint, for example, quantifies the total amount of greenhouse gas emissions that a product causes throughout its entire life cycle. A product water footprint is an indicator of the total water used throughout a product's life cycle.

→ *Corporate Responsibility*

In view of the growing importance of the topic, our Performance Materials division has determined the product carbon footprint for liquid crystal mixtures and pearl effect pigments as well as the product water footprint for liquid crystal mixtures. Here we are pursuing a cradle-to-gate approach, meaning from raw material sourcing and production through to delivery to customers. In addition, the Merck Millipore division is working intensively on this topic and has carried out a number of life cycle analyses and comparative product studies. Merck Millipore is also using these to further reduce the environmental impact of products as part of its Design for Sustainability program.

Responsibility for society

Our social commitment comprises local and regional charitable projects that the Merck subsidiaries implement independently as part of the existing Corporate Responsibility concept, as well as global projects. The latter include the Merck Praziquantel Donation Program, the Global Pharma Health Fund (GPHF) and the Deutsche Philharmonie Merck.

Merck Praziquantel Donation Program: Combating the tropical disease schistosomiasis

In 2007, we entered into a partnership with the World Health Organization (WHO) to combat the worm disease schistosomiasis in African school children. As part of this collaboration, Merck is donating Cesol® 600 tablets containing the active ingredient praziquantel. Schistosomiasis is the most common tropical disease in Africa after malaria, causing primarily children to suffer. Since the partnership began, more than 28 million children have been treated in 11 African countries.

Program to fight schistosomiasis expanded

We have made a commitment to WHO to continue donating Cesol® 600 until the disease has been eliminated in Africa and will increase our drug donation ten-fold in the medium term. Apart from this, we are also supporting an awareness program in African schools to educate pupils about the causes of schistosomiasis and ways to prevent the disease. Furthermore, we entered into a public-private partnership with TI Pharma, Astellas Pharma Inc. and the Swiss Tropical and Public Health Institute in July 2012 in order to develop a pediatric formulation of praziquantel for preschool children. At the present time, infants and small children who are infected with schistosomiasis cannot be adequately treated since the standard therapy is available only as tablets for adults and children as of the age of six.

Global Pharma Health Fund: Protection from counterfeit medicines

The Global Pharma Health Fund (GPHF), which is exclusively funded by Merck, is combating counterfeit medicines in developing and emerging countries. According to estimates by the International Criminal Police Organization (Interpol), between 10% and 30% of the medicines offered worldwide are either counterfeit or of inferior quality. Many African and Asian countries are especially affected by this since they lack effective regulatory and enforcement systems for medicines. In order to identify counterfeits and quickly remove them from circulation, more than 570 compact mobile laboratories, or GPHF-Minilabs, were in use in more than 80 countries at the end of 2012. These Minilabs make it possible to rapidly identify 58 different drug active ingredients and to immediately detect inferior or ineffective medicines.

Deutsche Philharmonie Merck: Cultural promotion

The Deutsche Philharmonie Merck is one example of how we promote culture. With up to 80 professional musicians and a very diverse concert repertoire, this orchestra is not only an integral part of the cultural life in the vicinity of our corporate headquarters in Darmstadt – it also tours internationally.

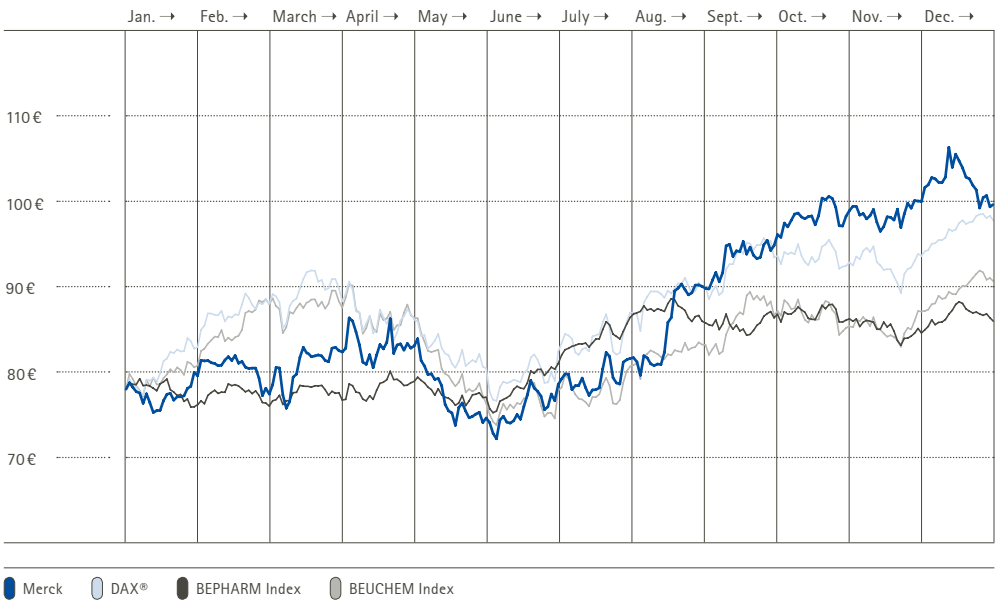
Merck Shares

At a glance

During 2012, the Merck share price rose 30%. Thus, Merck outperformed the DAX® by 1% and the relevant pharmaceutical and chemistry industry indices by 13% and 19%, respectively. Reaching an annual high of € 106.55 in December 2012, the price neared the all-time high of € 109.26 in September 2007.

The average daily trading volume decreased by 38% from just under 500,000 in 2011 to just over 300,000 shares. The North America region continued to dominate with more than 50% of shares in free float, slightly down compared to 54% in 2011. By investor type, GARP (growth at reasonable price) investors continue to dominate. Together, the top five investors held around 30% of the free float at year-end.

The performance of Merck shares vs. the DAX®, the Bloomberg Europe 500 Pharmaceuticals Index (BEPHARM) and the Bloomberg EMEA Chemicals Index (BEUCHEM) – 2012

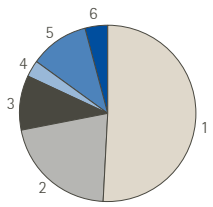


Share data [1]

		2012	2011
Dividend	/ in €	1.70	1.50
Share price high	/ in €	106.55	78.47
Share price low	/ in €	72.37	56.82
Year-end share price	/ in €	99.83	77.03
Daily average number of Merck shares traded [2]	/ in units	310,601	498,784
Market capitalization [3] (at year-end)	/ in € million	21,702	16,745
Market value of authorized shares [4] (at year-end)	/ in € million	6,451	4,978

[1] Share-price relevant figures relate to the closing price in XETRA® trading on the Frankfurt Stock Exchange
[2] Based on the floor trading systems of all German exchanges and the regulated market on XETRA®
[3] Based on the theoretical number of shares (217.4 million)
[4] Based on the number of shares in free float (64.6 million)
Source: Bloomberg

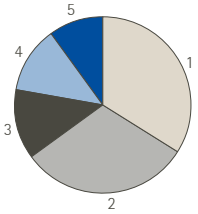
Identified investors by region 2012[1]



1	United States	51%
2	United Kingdom	21%
3	Germany	10%
4	France	3%
5	Rest of Europe	11%
6	Rest of World	4%

[1] represents 85% of free float
Source: King Worldwide (as of December 2012)

Identified investors by type 2012[1]



1	GARP (Growth at reasonable price)	34%
2	Value	31%
3	Growth	13%
4	Index	12%
5	Other	10%

[1] represents 85% of free float
Source: King Worldwide (as of December 2012)

Overall Economic Situation

2012 was significantly marked by the euro crisis, which led to a recession in a number of eurozone countries. The U.S. economy grew, albeit at a lower rate than expected one year ago. As in 2011, growth impetus for the global economy mainly came from emerging economies and developing countries, whereby the dynamism slowed down here as well.

According to the International Monetary Fund (IMF), global gross domestic (GDP) increased by 3.3% in 2012. While the industrialized countries generated an increase of only 1.3%, the GDP of emerging economies and developing countries grew by 5.3%. The GDP of the United States, the world's largest economy, grew by 2.2% in 2012. For the eurozone, the International Monetary Fund noted a decline in gross domestic product of 0.4%. Merck operates in the pharmaceutical, chemical and life science sectors.

Pharmaceutical market

Subdued growth in the pharmaceutical market

IMS Health, a provider of market analyses for the health care industry, points to an increase in sales in the prescription drugs segment of between 3% and 4% in 2012, the lowest market growth in years. The increase corresponds to global growth of US$ 30 billion worldwide to a market volume of nearly US$ 1 trillion in 2012.

The market for patented, prescription drugs (excluding generics), which is crucial to research-based pharmaceutical companies, declined. According to Evaluate Pharma, a further pharmaceutical market research firm, this market achieved a global market volume of US$ 709 billion, corresponding to a decline of 0.9% compared to 2011. According to a survey by this institute, R&D spending in 2012 by the global pharmaceutical and biotech industry was well over US$ 134 billion, which represents a decline of 0.3% compared to 2011.

The market researchers from Nicholas Hall reported a 4.2% increase in the global market for over-the-counter drugs to a volume of € 88 billion. In terms of market share, Europe dominates, followed by Asia (excluding Japan) and North America.

Chemical market

In 2012, the dynamism of the chemical business abated worldwide; chemical industry output even declined in the European Union. According to data from various chemical industry associations (American Chemistry Council (ACC)/European Chemical Industry Council (CEFIC) global chemical production output grew by only 2% in 2012 after increasing by nearly 5% in 2011.

According to the German Chemical Industry Association (VCI), production in the German chemical industry declined by 3%. The debt crisis in Europe was the reason stated for this decline. CEFIC therefore also lowered its forecast for 2012. Chemical sales in Germany remained constant at € 184 billion.

Life science market

Subsequent to the acquisition of Millipore in 2010, Merck is well-positioned in the global life science market. The life science sector also includes laboratory products and services as well as products for research and pharmaceutical and biotech industry production offered by Merck Millipore.

The market for Merck products represents a segment accounting for a volume of around € 20 billion within the worldwide life science market, which has an estimated market volume of € 50 billion (Source: Bank of America). The markets in which Merck operates show growth rates of more than 5%.

Financial Position and Results of Operations

Highlights 2012

→ Sales grow to exceed the € 10 billion for the first time driven by solid organic growth rates of the three largest divisions as well as changes from foreign exchange rates
→ Strong operational performance while substantially advancing with the transformation of the company
→ Good profitability and strong working capital management lead to increased free cash flow
→ Merck Serono generates solid top and bottom-line results while implementing major restructuring programs and efficiency initiatives across global administrative functions, R&D operations and country organizations
→ Performance Materials delivers exceptional performance driven by liquid crystal materials, while the Pigments business remains sluggish
→ Sales growth of Merck Millipore driven by all business units, predominantly through biotech manufacturing products in Process Solutions
→ Net financial debt significantly lowered to below € 2 billion
→ Proposal to increase dividend by 13% to € 1.70 demonstrates the current and future strength of the underlying business

Merck Group | Key figures

€ million	2012	2011	Change in %
Total revenues	11,172.9	10,276.4	8.7
Sales	10,740.8	9,905.9	8.4
Operating result (EBIT)	963.6	1,132.1	–14.9
Margin (% of sales)	9.0	11.4	–
EBITDA	2,360.2	2,730.9	–13.6
Margin (% of sales)	22.0	27.6	–
EBITDA pre one-time items	2,964.9	2,723.8	8.9
Margin (% of sales)	27.6	27.5	–
EPS pre one-time items (in €)	7.61	6.79	12.1
Free cash flow	2,039.9	1,436.4	42.0

→ *Financial position and results of operations*

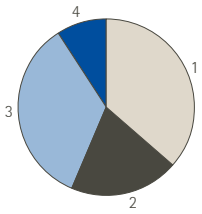
In 2012, Merck delivered a strong business performance while significantly transforming the company. Total revenues of the Merck Group rose 8.7% to € 11,173 million (2011: € 10,276 million). This increase reflects 4.8% organic growth, a 3.6% benefit from changes in foreign exchange rates, and a 0.3% effect from acquisitions. At € 432 million (2011: € 370 million), royalty, license and commission income, which is disclosed as part of total revenues, was € 62 million higher than in 2011. This was primarily due to higher royalty income related to Humira® and the stronger U.S. dollar.

Sales growth driven by organic growth and foreign exchange rates

Sales grew by 8.4% to € 10,741 million (2011: € 9,906 million) reflecting a 4.5% organic increase, 3.6% growth based on changes in foreign exchange rates and 0.3% growth due to acquisitions. On an absolute basis, Merck Serono was the strongest contributor to organic sales growth followed by Merck Millipore and Performance Materials.

Merck Group | Sales by region – 2012

€ million / in %



1	Europe	3,943	37%
2	North America	2,128	20%
3	Emerging Markets	3,712	34%
4	Rest of World	958	9%

North America and Emerging Markets expand their share of total sales

From a regional perspective, North America generated low double-digit organic sales growth, expanding its contribution to 20% of Group sales (2011: 18%). This resulted from strong organic sales growth of the Merck Serono prescription medicines portfolio, particularly the MS treatment Rebif® and to a smaller extent recovering sales of Pigments & Cosmetics products in the Performance Materials division. The Emerging Markets region, consisting of Latin America and Asia (excluding Japan), also slightly increased its share of sales to 35% (2011: 33%). The region grew organically by a high single-digit rate to which all four divisions contributed. Europe reported a 1.6% decline in organic sales triggered by flat to declining organic sales in all divisions except for Merck Millipore. Accordingly, Europe's contribution to Group sales decreased to 37% in 2012, representing a continuous decline from 46% three years ago. This development is primarily due to the Millipore acquisition which included a strong U.S. franchise, a revised U.S. marketing and pricing strategy of Merck Serono as well as softening economic conditions and pricing pressures in the eurozone. Sales in the Rest of World region, which comprises Japan, Africa, and Australia/Oceania, increased by 9.6%, generating an unchanged 9% of Group sales.

→ *Financial position and results of operations*

Merck Group | Sales growth components by region – 2012

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Reported sales growth
Europe	3,942.7	–1.6	0.5	0.6	–0.4
North America	2,128.3	10.3	8.3	0.3	19.0
Emerging Markets	3,712.2	8.8	4.3	–	13.0
Rest of World	957.6	3.5	5.7	0.3	9.6
World in total	**10,740.8**	**4.5**	**3.6**	**0.3**	**8.4**

Gross profit increased by 7.0% to € 8,015 million (2011: € 7,491 million), or 74.6% as a percentage of sales (2011: 75.6%). Higher start-up costs for Merck Serono's Large-Scale-Biotech (LSB) manufacturing site in Vevey (Switzerland) as well as idle costs in production and selected factory shut-downs as a result of initiatives to lower inventories in the Performance Materials and Merck Millipore divisions lowered the gross margin compared to 2011.

Marketing and selling expenses grow less than sales, demonstrating first efficiency gains

Group marketing and selling expenses increased moderately by 1.1% to € 2,411 million (2011: € 2,386 million) but at a significantly lower growth rate than sales, reflecting the first results of the ongoing restructuring initiatives and indicating more focused discretionary spending. Through this, the ratio of marketing and selling expenses to total sales declined from 24.1% to 22.4%.

Royalty, license and commission expenses increased by 15.8% to € 580 million (2011: € 500 million), reflecting the strong performance of Rebif® as well as changes in foreign exchange rates, most notably the U.S. dollar.

Administration expenses rose by 3.1% to € 552 million (2011: € 536 million). This increase was primarily due to the fact that Merck Millipore is headquartered in the United States and the related translation effect stemming from the U.S. dollar. In addition, administration expenses in Corporate and Other increased due to higher bonus accruals.

Restructuring costs related to "Fit for 2018" lead to significant increase in other operating expenses

Other operating income and expenses amounted to € –1,127 million (2011: € –417 million). Of this amount, € –664 million was classified as one-time items. Within the scope of its "Fit for 2018" efficiency program, the Group incurred € 504 million in restructuring costs (excluding impairments), incurred mainly in the Merck Serono division. In relation to in prior years discontinued businesses, reported under Corporate and Other, follow-up expenses of € 60 million were booked in 2012, in contrast to the previous year, when Merck reported a gain of € 152 which included the proceeds from the sale of the CropBioscience business. During 2012, impairments of € 59 million were classified as one-time items, with the majority related to site closures as a consequence of the restructuring. In 2011, asset impairments of € 332 million were recognized, including € 165 million for the LSB manufacturing site in Vevey.

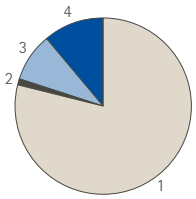
Stable R&D spending

At € 1,511 million, R&D spending remained roughly at last year's level (2011: € 1,514 million). At 14.1%, the ratio of R&D expenses to total sales fell around one percentage point compared to 2011. Lower R&D expenses in the Merck Serono and Consumer Health divisions more than offset higher investments by Merck Millipore and Performance Materials.

→ *Financial position and results of operations*

Merck Group | R&D by division – 2012

€ million / in %



1	Merck Serono	1,187	79%
2	Consumer Health	19	1%
3	Performance Materials	137	9%
4	Merck Millipore	166	11%

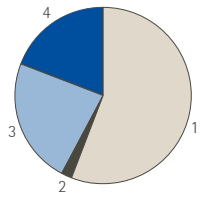
Amortization of intangible assets, mainly including amortization of intangible assets in connection with the purchase price allocations of the Serono and Millipore acquisitions, declined by 13.3% to € 872 million (2011: € 1,005 million). In 2011, in addition to amortization, impairments related to three Merck Serono development products were recorded, amounting to € 149 million. The current amount more typically reflects normal levels.

Restructuring costs lead to decline in EBIT

The Group reported a decline in the operating result (EBIT) of 14.9% to € 964 million (2011: € 1,132 million) while the operating result excluding depreciation and amortization (EBITDA) was down 13.6% to € 2,360 million (2011: € 2,731 million) primarily due to the one-time restructuring costs. Adjusted for one-time items, however, EBITDA pre one-time items increased 8.9% to € 2,965 million, or 27.6% of sales (2011: € 2,724 million, or 27.5% of sales).

Merck Group | EBITDA pre one-time items by division – 2012

€ million / in %



1	Merck Serono	1,785	56%
2	Consumer Health	63	2%
3	Performance Materials	731	23%
4	Merck Millipore	596	19%

Not shown: Group EBITDA pre one-time items lowered by € 211 million in Corporate and Other

Increase in EBITDA pre one-time items driven by all divisions

All divisions contributed to the increase in EBITDA pre one-time items, more than offsetting the higher costs reported by Corporate and Other, which mainly resulted from currency hedging losses. Merck Serono was by far the largest contributor to the EBITDA pre increase based on growing sales as well as improved profitability. In addition, Performance Materials contributed strongly thanks to an exceptionally strong business momentum. The EBITDA pre contribution of Merck Millipore of 19% slightly declined (2011: 20%, excluding Corporate and Other) as the division invested in both R&D and marketing and selling to ensure future growth.

→ *Financial position and results of operations*

During 2012, the Group already realized around € 115 million in net savings as a result of the restructuring. The majority of savings were achieved in Merck Serono followed by Consumer Health, which delivered substantial savings relative to its size. Two-thirds of the restructuring costs incurred were reported in the Merck Serono division. The restructuring costs booked in Corporate and Other mainly related to several divisions at the same time and cannot be directly allocated.

Reduced financing costs mainly due to lower interest expenses on debt and pension provisions

The Group's financial result improved by 13.2% to € –255 million (2011: –293 million). Lower interest expenses on debt following the repayment of € 500 million worth of bonds in March 2012 (followed by another € 500 million repaid in December 2012) as well as lower interest expenses on pension provisions more than offset reduced interest income due to low interest rate yields. In addition, gains related to the fair value of foreign exchange options benefited the financial result. Merck began using foreign exchange options as hedging instruments in the fourth quarter of 2011 and books fluctuations of corresponding fair values under the financial result. As a consequence, this line may continue to be impacted by the volatility of foreign exchange rates.

Income tax amounted to € –130 million (2011: € –221 million). One-time items substantially distorted the reported income tax ratio in 2012. The adjusted income tax ratio of 25.5% continues to be at the mid-point of the company's underlying tax ratio of 25% to 26%.

Profit after tax amounted to € 579 million (2011: € 618 million), a decrease of 6.3% mainly due to the one-time items which were incurred in 2012. One-time items (including impairments) of € 664 million also weighed on reported net income (profit after tax attributable to Merck KGaA shareholders) of € 567 million (2011: € 607 million) or earnings per share (EPS) of € 2.61 (2011: € 2.79). However, adjusted for one-time items, EPS pre one-time items (EPS adjusted by net of tax effect of one-time items and amortization of purchased intangible assets) increased 12.1% to € 7.61 (2011: € 6.79).

We will propose to the Annual General Meeting on April 26, 2013 to raise the dividend from € 1.50 to € 1.70 per share.

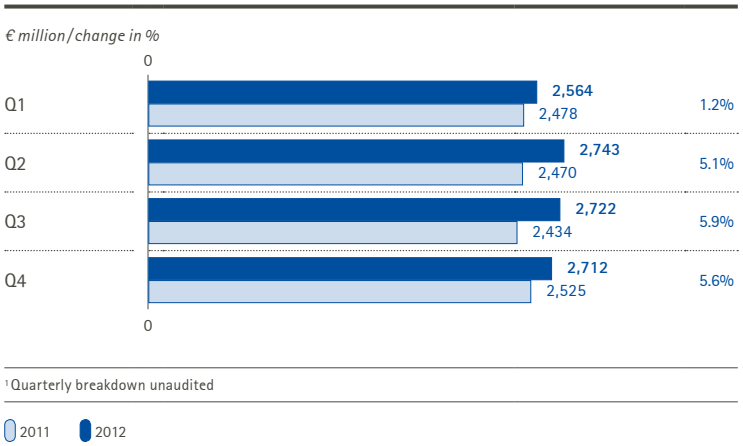
Efficiency initiatives lead to good growth rates especially in the second half of 2012

Merck got off to a moderate start in 2012 since in the first quarter the Performance Materials division faced a difficult year-on-year comparison. In the first quarter of 2011, this division generated organic sales growth of 15% due to unusually high customer demand for its liquid crystal materials. Group organic sales growth in the first quarter of 2012 was entirely driven by Merck Serono and Merck Millipore. During the following quarters of 2012, Group sales grew consistently between 5% and 6% organically compared to the year-ago-quarter due to healthy demand in the Merck Serono, Performance Materials and Merck Millipore divisions. All regions contributed to growth with the exception of Europe, where organic sales declined between 1% and 2% each quarter compared to 2011 mainly due to weakening economic conditions.

As of the second quarter of 2012, Merck started to focus primarily on organizational changes and optimizing its cost structure across all businesses. While the full amount of savings will be realized during 2014, growth in EPS pre one-time items was already realized in 2012 based on improved top-line performance and tighter cost management.

→ *Financial position and results of operations*

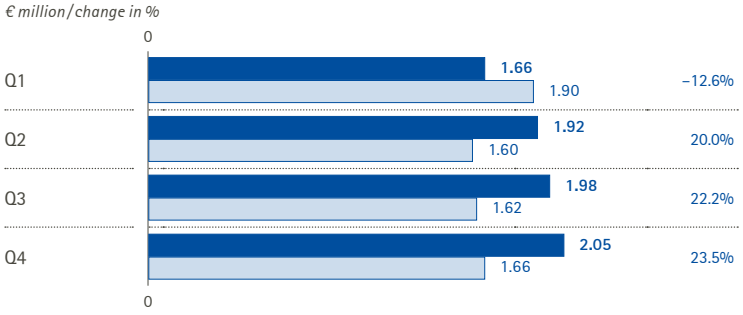
Merck Group | Sales and organic growth by quarter[1]



[1] Quarterly breakdown unaudited

2011 2012

Merck Group | EPS pre one-time items and growth by quarter[1]



[1] Quarterly breakdown unaudited

2011 2012

Total assets of the Merck Group amounted to € 21,643 million as of December 31, 2012 (December 31, 2011: € 22,122 million). This decrease was driven by the increased focus on working capital management and resulted in both lower trade accounts receivable and inventories. Non-current assets, mainly intangibles and property, plant and equipment, also decreased during the year.

Financial liabilities decreased during 2012 as bonds due for repayment totalling € 1 billion related to the 2010 acquisition of Millipore were repaid in March and December, respectively. On the other hand, provisions increased mainly as a result of the ongoing restructuring initiatives.

→ *Financial position and results of operations*

Further reduction of net financial debt

Financial liabilities were reduced by a further € 1,086 million to € 4,453 million as of December 31, 2012 (December 31, 2011: € 5,539 million) primarily as a result of the aforementioned bond repayment. Net financial debt (financial liabilities minus cash and cash equivalents as well as short-term securities and financial assets) decreased to € 1,926 million as of December 31, 2012 (December 31, 2011: € 3,484 million). Moody's, a corporate financial rating agency, upgraded Merck's long-term issuer and senior unsecured ratings to 'Baa1' with stable outlook from 'Baa2' in December 2012, citing the substantial deleveraging underpinned by solid cash flow generation. Standard & Poor's raised the long-term credit rating to 'A-' with stable outlook from 'BBB+' in November 2012, expecting significant free operating cash flow to increase gradually over the next few years, in line with increasing sales and profit margins on the back of the efficiency program. Both ratings ensure that Merck will be able to benefit from attractive financing terms in the future. The factor of net financial debt to net cash flow from operating activities lessened from 2.7x as of December 31, 2011 to below 1x as of December 31, 2012, driven by both the reduction of financial debt as well as a strong operating cash flow.

Merck Group | Working capital [1]

million €	as of December 31, 2011	as of March 31, 2012	as of June 30, 2012	as of September 30, 2012	as of December 31, 2012	Change Dec 31, 2011 – Dec 31, 2012
Trade accounts receivable	2,328.3	2,343.5	2,284.8	2,206.7	2,114.6	
Inventories	1,691.1	1,658.9	1,667.6	1,609.6	1,533.9	
Trade accounts payable	–1,100.8	–1,112.8	–1,216.5	–1,297.9	–1,288.3	
Working capital	**2,918.6**	**2,889.6**	**2,735.9**	**2,518.4**	**2,360.2**	**–19.1%**
as % of sales (last 12 months)	29.5%	28.9%	26.7%	23.9%	22.0%	

[1] Quarterly breakdown unaudited

Working capital declines

The focus on improving working capital (trade accounts receivable plus inventories minus trade accounts payable) resulted in working capital declining to 22.0% (in % of sales) as of December 31, 2012 (29.5% as of December 31, 2011).

Investments in property, plant and equipment amounted to € 329 million in 2012 (2011: € 366 million). This included for example investments in the Merck Millipore GMP bioproduction facility in Martillac (France), which provides customers with access to single-use process technologies. Due to the 2012 focus on implementing efficiency and restructuring measures, investments in property, plant and equipment remained behind projections (€ 360 million to € 380 million).

The equity ratio was 48.1% as of December 31, 2012 (December 31, 2011: 47.4%).

→ *Financial position and results of operations*

Record level of free cash flow

Merck's strong operational performance in 2012 as well as effective working capital management generated a record free cash flow of € 2,040 million (2011: € 1,436 million), up 42.0%.

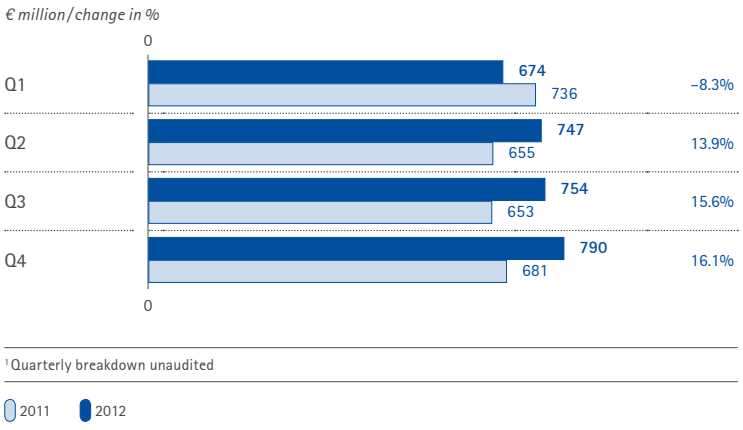
Merck Group | Free cash flow

€ million	2012	2011	Change
Profit after tax	579.0	618.0	–39.0
Depreciation/amortization/impairment losses/write-ups	1,396.6	1,597.4	–200.8
Changes in working capital	525.6	–198.3	723.9
Changes in provisions	378.6	–418.7	797.3
Changes in other assets/liabilities	–383.5	–150.0	–233.5
Others[1]	–24.1	–177.2	153.1
Net cash flow from operating activities	**2,472.2**	**1,271.2**	**1,201.0**
Investments in property, plant and equipment	–329.1	–366.3	37.2
Others[2]	–103.2	531.5	–634.7
Free cash flow	**2,039.9**	**1,436.4**	**603.5**

[1] Neutralization of gain/loss on disposal of assets, other non-cash income and expenses
[2] Investments in intangible assets, acquisitions, investments in non-current financial assets, disposal of non-current assets, purchase/sale of marketable securities

EBITDA pre one-time items is the main profitability measure of ongoing operational performance used internally and externally. It excludes from the operating result depreciation and amortization in addition to one-time items largely related to restructuring measures. It allows for an understanding of the underlying operational performance of the Merck Group and the four divisions.

Merck Group | EBITDA pre one-time items and growth by quarter[1]



[1] Quarterly breakdown unaudited

→ *Financial position and results of operations*

Apart from EBITDA pre, a new cash flow performance indicator was introduced in 2012 to be used as the second key indicator for internal target agreements and individual incentive plans. Broken down to the divisional level, it sums up EBITDA pre and main cash items such as investments in property, plant, equipment and software as well as changes in inventories and changes in trade accounts receivable, all of which are under full control of the individual businesses. Consequently, increases in inventory and trade accounts receivable have an adverse impact on individual incentive plans, while conversely decreases are positively incentivized. The introduction of this performance indicator has led to considerable improvements in cost awareness as well as reduced working capital requirements.

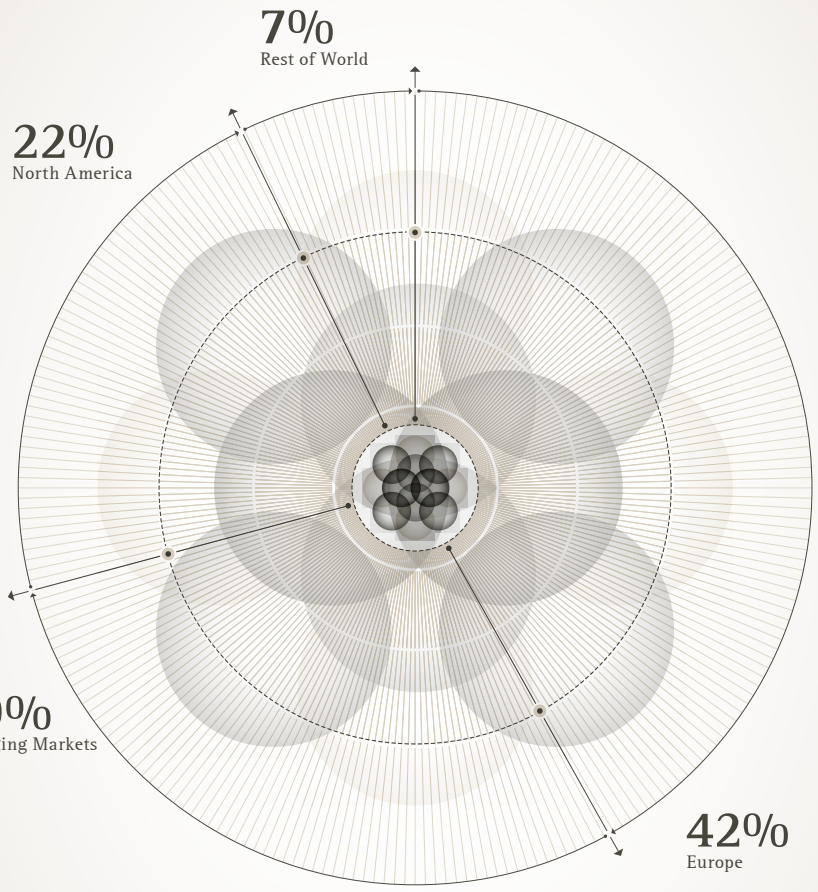
Socially responsible job reductions and site closures being assessed

In February 2012, Merck announced its global efficiency program, which spans all regions and businesses. During the year, more than 100 individual initiatives were implemented in countries such as Spain, Italy, and the United Kingdom. For the German operations, which account for more than one-quarter of all Merck employees, an agreement was signed in September 2012 with the employee representatives aiming to eliminate around 1,100 of the 10,900 positions by the end of 2015. By making the reductions in a socially responsible manner, mainly through voluntary leaver and partial retirement programs across all divisions and functions, Merck will refrain from forced redundancies until the end of 2017, with the exception of possible site closures and transfers that are still being assessed. Further cost savings will be realized by a reduction in personnel costs as the result of a realignment of the compensation system. Merck plans to invest a total of at least € 250 million in Darmstadt and other sites within Germany during the next two years.

Solid business performance during a year of significant change

In conclusion, in 2012 total revenues grew to € 11,173 million, slightly exceeding the guidance of up to € 11 billion. Merck implemented its first Group-wide efficiency program and already realized first savings. EBITDA pre one-time items amounted to € 2,965 million, including around € 115 million in savings from the efficiency program. This was slightly above guidance of up to € 2.95 billion, including € 55 million in net savings. Merck generated record cash flow due to good profitability and strong working capital management. The Group was able to again reduce net financial debt, also evidenced by an improved credit rating (Baa1/A-).

The above tables as well as those in the divisional reviews may contain rounding differences.



Merck Serono

Sales by region 2012

Merck Serono → 1/4

Strong franchises generate solid growth

Rebif®, Gonal-f® and Glucophage® sales grow significantly

In 2012, Merck Serono's total revenues rose to € 6,405 million (2011: € 5,920 million). Sales increased 7.8% to € 5,996 million (2011: € 5,564 million). This absolute increase of more than € 400 million was driven by organic sales growth of 4.9% and positive exchange rate effects of 2.8%, primarily owing to a stronger U.S. dollar. The solid performance was based predominantly on our multiple sclerosis (MS) treatment Rebif®, our fertility product Gonal-f®, and our diabetes drug Glucophage®. These key products delivered organic growth rates ranging from 8% to 15%. Royalty, license and commission income increased 15.2% to € 409 million (2011: € 356 million), mainly driven by higher income from the strong sales performance of Humira® in addition to a positive impact from foreign exchange rates.

Merck Serono | Key figures

€ million	2012	2011	Change in %
Total revenues	6,405.2	5,920.0	8.2
Sales	5,995.8	5,564.4	7.8
Operating result (EBIT)	508.3	342.2	48.5
Margin (% of sales)	8.5	6.1	–
EBITDA	1,440.6	1,526.9	–5.7
Margin (% of sales)	24.0	27.4	–
EBITDA pre one-time items	1,785.3	1,569.0	13.8
Margin (% of sales)	29.8	28.2	–

Production costs rose 16.0% to € 1,193 million (2011: € 1,028 million) reflecting higher sales volumes as well as higher start-up costs for the Large-Scale Biotech production plant (LSB) in Vevey (Switzerland) in addition to one-time expenses related to the FDA warning letter. Gross profit increased 6.5% to € 5,212 million (2011: € 4,892 million), translating into a lower gross margin (in % of sales) of 86.9% (2011: 87.9%), reflecting the ongoing pricing pressure and growing volumes of our General Medicine portfolio.

Focused resource allocation in marketing and selling as well as in R&D

Marketing and selling costs declined by 2.9% to € 1,371 million (2011: € 1,412 million) thanks to focused resource allocation. Royalty, license and commission expenses, however, rose 17.3% to € 562 million (2011: € 479 million) owing to the strong performance of Rebif® in the United States compounded by positive foreign exchange rate effects, which resulted in higher commission payments to our co-marketing partner Pfizer.

Net other operating expenses and income increased by more than 75% to € –675 million (2011: € –382 million) due to restructuring charges amounting to € 339 million. These charges were related to the efficiency program, in particular to the preparations for the closure of the Merck Serono site in Geneva. In addition, impairments of € 46 million were incurred on site closures and obsolete software. In 2011, other operating expenses were especially impacted by the impairment loss of € 165 million on the LSB plant.

→ *Merck Serono*

R&D expenses decreased slightly to € 1,187 million (2011: € 1,225 million) representing 19.8% of sales (2011: 22.0%). This decline reflects initial structural savings achieved in connection with the Geneva site closure.

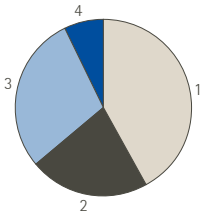
Amortization of intangible assets resulting mainly from the 2007 acquisition of Serono accounted for charges of € 659 million (2011: € 799 million). In 2011, impairments of € 149 million related to the discontinuation of three products in development were recognized in addition to amortization. Furthermore, in the second quarter of 2011, the estimated remaining useful life of Rebif® was shortened by two years, which led to higher amortization expenses of € 17 million in 2012 compared to the previous year.

EBITDA pre one-time items amounts to 29.8% of sales

The division's EBIT was € 508 million compared to € 342 million in 2011. Adjusting for one-time items and adding back depreciation and amortization, divisional EBITDA pre one-time items increased 13.8% to € 1,785 million (2011: 1,569 million) reflecting a margin (in % of sales) of 29.8% (2011: 28.2%). This increase already includes savings related to the efficiency program.

Merck Serono | Sales by region – 2012

€ million / % of divisional sales



1	Europe	2,502	42%
2	North America	1,335	22%
3	Emerging Markets	1,737	29%
4	Rest of World	422	7%

Organic growth in all regions except for Europe

In 2012, the proportion of sales generated outside Europe grew to 58% (2011: 54%), largely driven by the strong sales growth in North America. Contributing to the 16.8% organic increase in sales were Rebif®, benefiting from year-on-year price increases, as well as the products from the Fertility and Endocrinology franchises. Sales in the Emerging Markets region developed favorably and grew 6.8% organically, based on the continued strong performance of the General Medicine franchise as well as Fertility products. Challenging business conditions in Europe, the division's biggest geographic market, where pressures on health care budgets led to continuous price cuts across the industry, resulted in a 2.1% decline in organic sales. This was primarily due to lower sales of General Medicine products. Sales in the Rest of World region grew 12.0%, mainly thanks to the good performance of Glucophage® and Erbitux®.

Merck Serono | Sales growth components by region – 2012

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Reported sales growth
Europe	2,501.6	–2.1	0.4	–	–1.7
North America	1,334.8	16.8	8.8	–	25.6
Emerging Markets	1,737.1	6.8	2.2	–	9.0
Rest of World	422.3	12.0	4.7	–	16.6
World in total	**5,995.8**	**4.9**	**2.8**	**–**	**7.8**

→ *Merck Serono*

Rebif® sales increase to around € 1.9 billion

Merck Serono's largest single product, Rebif® (interferon beta-1a), for the treatment of relapsing forms of MS grew 7.5% organically to € 1,893 million (2011: € 1,691 million). The main contributors were growing sales in the United States, as a result of price increases made in January, May and November. North America remained the largest market for Rebif®, accounting for 52% of sales. In Europe, where Rebif® continues to be the most frequently prescribed MS treatment in major markets, sales declined slightly from the previous year's level. Stable volumes could not offset continued pricing pressure. Sales in the Emerging Markets and Rest of World regions, which account for less than 10% of global sales, remained roughly at the previous year's level.

Rebif® is marketed by Merck Serono worldwide. In 2002, Serono entered into a co-promotion agreement with Pfizer for Rebif® in the United States. The term of the agreement ends on December 31, 2013 unless extended. EMD Serono (a subsidiary of Merck KGaA) and Pfizer are in a dispute about the term of the agreement based on the parties' interpretations of the provisions governing extension. During 2011, a lower court in the United States agreed with Pfizer and ruled that the Pfizer agreement extends through 2015. Subsequently, EMD Serono appealed this decision. The ruling from the appellate court is still pending. If EMD Serono prevails on appeal, this case will proceed before the lower court.

Increasing sales in Emerging Markets drive Erbitux® growth

Erbitux®, a monoclonal antibody targeting the epidermal growth factor receptor (EGFR), is approved for the treatment of metastatic colorectal cancer (mCRC) and squamous cell carcinoma of the head and neck (SCCHN). Sales grew 1.9% organically in 2012, amounting to € 887 million (2011: € 855 million). The majority of sales continue to be generated by use in first-line mCRC. In Europe, accounting for 56% of global sales, sales declined 1.5% organically due to increasing competition in the second-line mCRC segment as well as public budget constraints. Across the Emerging Markets region, sales grew 7.4% organically as a result of increasing patient numbers, mainly in mCRC. In Japan, which belongs to the Rest of World region and generates 13% of total sales, intensifying competitive pressure in the mCRC indication led to an organic sales decline of 6.5%.

Merck licensed the right to market Erbitux® outside the United States and Canada from ImClone LLC, a wholly-owned subsidiary of Eli Lilly and Company, in 1998. In Japan, ImClone, Bristol-Myers Squibb Company and Merck jointly develop and commercialize Erbitux®.

Merck Serono | Major products by region, organic growth rates – 2012

		Total	Europe	North America	Emerging Markets	Rest of World
Rebif®	€ million	1,892.6	730.8	982.7	145.3	33.8
	org. growth in %	7.5	–2.1	18.1	–0.3	11.5
	% of sales	100	39	52	8	2
Erbitux®	€ million	887.4	500.1	–	235.6	151.7
	org. growth in %	1.9	–1.5	–	7.4	5.7
	% of sales	100	56	–	27	17

→ *Merck Serono*

All regions report higher volumes for Gonal-f®

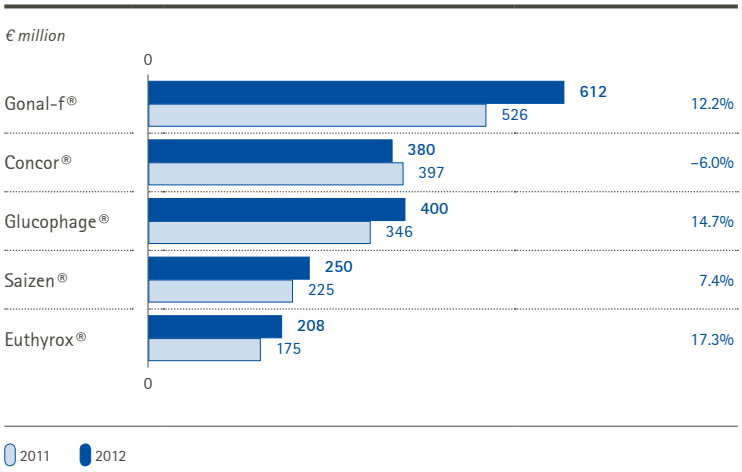
Sales of Merck Serono's medications to treat infertility amounted to € 817 million in 2012, corresponding to organic growth of 13.4%. The complete portfolio of gonadotropins consists of recombinant hormones for injection used at different stages from follicular development to early pregnancy. Gonal-f® (follitropin alfa) inducing ovarian follicular growth and maturation, continued to perform strongly in all regions, growing by a total of 12.2% organically to € 612 million. In the United States, sales were further boosted by year-on-year price increases. The division continued the worldwide rollout of the pre-filled pen injectors for Gonal-f® as well as Ovidrel® and Luveris® (family of pens) designed to facilitate easy daily administration during fertility treatment. Since 2009, Merck Serono has been sponsoring the Grant for Fertility Innovation dedicated to research projects focused on clinical research that can help to increase the take-home baby rate of patients undergoing fertility treatment. The program was expanded to € 4 million for 2012/2013.

Sales of the Endocrinology portfolio rise to around € 400 million

The Endocrinology portfolio, comprising a range of products to treat endocrine and metabolic disorders, reported sales of € 399 million, increasing 11.9% organically with contributions coming from all regions. Sales of Saizen® (somatropin for injection) indicated for the treatment of growth hormone deficiency, were up 7.4% organically, amounting to € 250 million. Supported by the Merck Serono injection devices, Saizen® maintained its average market share despite broad-based competition. Particular growth drivers included higher volumes in Emerging Markets and price increases in the United States. Kuvan® (sapropterin dihydrochloride) is indicated for the treatment of hyperphenylalaninemia or a deficiency of tetrahydrobiopterin. Sales continue to grow rapidly. The rollout in Asia and Latin America is ongoing. Egrifta® (tesamorelin for injection), which is used as a therapy for reducing excess abdominal fat in HIV patients with lipodystrophy, also contributed to growth. We market this product only in the United States.

The General Medicine business comprises drugs for treating diabetes, cardiovascular diseases and thyroid disorders, as well as other globally and regionally marketed products. In 2012, sales increased by € 69 million (3.8% organically) to € 1,886 million. Strong volume growth in the Emerging Markets region, which accounted for 56% of sales, was offset by pricing declines as well as lower volumes in Europe, especially in southern European markets and France.

Merck Serono | Key products, organic growth rates



→ *Merck Serono*

Glucophage® and other brands in the General Medicine portfolio grow especially in the Emerging Markets region

Globally, around 366 million people have diabetes, and the prevalence of this disease is rising. Glucophage® (metformin) remains the drug of choice for first-line treatment of type 2 diabetes. Thanks to the strong performance of this oral antidiabetic franchise, it became the third-largest absolute growth contributor to Merck Serono's 2012 top-line performance. Sales rose by 14.7% organically to € 400 million, supported by strong sales in the Emerging Markets region and Japan.

The branded Concor® products such as Concor® COR and Lodoz®, which contain the active ingredient bisoprolol, achieved sales of € 380 million. This translates into an organic decline of 6.0%, which was primarily the result of price cuts in addition to lower volumes in France and southern European markets. By contrast, sales of Concor® in Emerging Markets grew by around 10%.

Merck Serono is the world's largest supplier of drugs to treat thyroid disorders. Globally, more than 300 million people suffer from hypothyroidism. Sales of products to treat thyroid disorders, including Euthyrox®, posted double-digit sales growth, driven primarily by higher volumes in Emerging Markets.

On December 15, 2011, Merck received a Warning Letter from the United States Food and Drug Administration (FDA) related to inspections of production facilities in Tiburtina, Italy, and Aubonne and Vevey, Switzerland. These sites contribute to the production of Rebif® and other products for distribution in the United States. The letter primarily addressed several processes related to the manufacturing of Rebif®, which the FDA concluded were not in full compliance with good manufacturing practice standards. Merck is working closely with the FDA to address its observations. The agency completed its initial evaluation of the company's responses. In its reply, the FDA stated that "We agree that your proposed corrective actions, if implemented appropriately, should adequately address the violations at issue." Since that initial evaluation, all commitments to the corrective action plan submitted to the FDA have been completed on schedule and a final update was provided to the FDA in September, 2012. FDA re-inspections took place during the fourth quarter of 2012 and are expected to be completed in the first half of 2013 to confirm the complete implementation of the proposed corrective actions.

Research & Development strategy

During the year, the main operational focus was on implementing the new organizational structure of Merck Serono in R&D, which now comprises two major functions. The Global Research and Early Development function is responsible for projects in discovery and pre-clinical stages through to Proof of Confidence, when the available clinical data are judged sufficient to justify significant investment in large-scale clinical development. In this function teams are clustered around certain therapeutic areas as well as platform technologies. The Global Development and Medical function is responsible for the late-stage clinical development of products, managing their submissions to regulatory authorities and then overseeing the post-approval lifecycle management. The main disciplines included in this function are clinical development regulatory, safety, as well as medical and scientific affairs. It also includes the quality function which ensures compliance with state-of-the-art Good Practices (Laboratory, Clinical and Manufacturing).

→ *Merck Serono*

Merck Serono pipeline, as of January 2013

Therapeutic area	Compound	Indication	Status
Neurodegenerative diseases	ONO-4641 (oral S1P receptor modulator)	Multiple sclerosis	Phase II
	ATX-MS-1467 (immune tolerazing agent)	Multiple sclerosis	Phase I
	PI-2301 (second generation peptide copolymer)	Multiple sclerosis	Phase I
Oncology	Erbitux® (cetuximab, anti-EGFR mAb)	Head and neck cancer	Filed in China
	Cilengitide (integrin inhibitor)	Glioblastoma	Phase III
	Cilengitide (integrin inhibitor)	Non-small cell lung cancer	Phase II
	L-BLP25 (MUC1-antigen-specific cancer immunotherapy)	Non-small cell lung cancer	Phase III (in Asia)
	TH-302 (hypoxia targeted alkylating drug)	Soft tissue sarcoma	Phase III
	TH-302 (hypoxia targeted alkylating drug)	Pancreatic cancer	Phase III
	TH-302 (hypoxia targeted alkylating drug)	Hematological malignancies and combination trials in solid tumors	Phase I
	DI17E6 (Anti-integrin mAb)	Colorectal cancer	Phase II
	DI17E6 (Anti-integrin mAb)	Prostate cancer	Phase II
	Pimasertib (MEK inhibitor)	Pancreatic cancer	Phase II
	Pimasertib (MEK inhibitor)	Cutaneous melanoma	Phase II
	Pimasertib/PI3K inhibitor combination	Solid tumors	Phase I [1]
	C-Met kinase inhibitor	Solid tumors	Phase I
	Sym004 (anti-EGRF Ab mixture)	Head and neck cancer	Phase II
	Sym004 (anti-EGRF Ab mixture)	Solid tumors	Phase I
	MEK inhibitor 2	Solid tumors	Phase I
	NHS-IL 12 (cancer immunotherapy)	Solid tumors	Phase I [2]
Immunology	Atacicept (anti-Blys/anti-APRIL fusion protein)	Systemic lupus erythematosus	Phase II
	Sprifermin (fibroblast growth factor 18)	Cartilage injury repair	Phase II
	Sprifermin (fibroblast growth factor 18)	Osteoarthritis	Phase I
Endocrinology	Kuvan® (sapropterin dihydrochloride)	PKU in pediatric patients < 4 years	Phase III [3]

[1] PI3K/mTOR inhibitor (SAR245409) of Sanofi, conducted under the responsibility of Merck
[2] Sponsored by the National Cancer Institute (USA)
[3] Post approval request by the European Medicines Agency

More information on the ongoing clinical trials can be found at www.clinicaltrials.gov

S1P: Sphingosin-1-phosphate
IFN: Interferon
mAb: Monoclonal Antibody
MEK: Mitogen Activated Protein Kinase
PI3K: Phosphoinositide 3-Kinase
EGFR: Epidermal Growth Factor Receptor
PKU: Phenylketonuria

→ *Merck Serono*

The goals of the "Fit for 2018" efficiency program in R&D

Historically at Merck Serono, both the length and costs of all stages of clinical development were higher than industry average. In response to this, Merck Serono is striving to both speed up drug development and make it more cost efficient. In order to achieve this, the organization is in the process of simplifying its structure, reducing the number of decision-making bodies and outsourcing certain functions and tasks. A net decrease in R&D costs by € 120 million by 2014 is planned. Processes are underway to shift relative spending away from fixed costs towards mainly project-related expenditure in order to increase the value of the pipeline and its output.

Focus and simplifying our global footprint

In order to improve the interface with scientists, clinicians and regulators worldwide, the division is increasing its focus on North America and Asia by further developing the R&D hubs in Boston (United States), Beijing (China) and Tokyo (Japan). At our R&D headquarters in Darmstadt, Merck Serono will continue to build upon the legacy of strength in areas such as oncology and immunology. In North America, Merck Serono will build upon its current Boston footprint at EMD Serono in Rockland, Massachusetts as well as developing the new state-of-the-art research facility in Billerica, Massachusetts. The three global R&D hubs of the division will optimize the ability to deliver innovative science and medicines globally and importantly will enhance the ability to attract and grow biopharma talent for the future development of the Merck Serono division.

Research: creating an early-stage pipeline of clearly differentiated molecules

Research at Merck Serono is strongly committed to innovation. In the new structure, teams are given enhanced freedom to operate. The cost structure is being adapted in order to free up resources for projects. A Scientific Peer Review process has been put in place in the form boards of external advisors in order to discuss, challenge and thereby improve research projects and plans. To broaden its capabilities, Merck Serono will continue to expand its external networks beyond the many collaborations it already has in place.

Oncology, Multiple Sclerosis and Immunology are key areas of focus

Oncology remains the key pillar of Merck Serono's research strategy, focusing on differentiated molecules in selected clusters both in solid tumors and hematological malignancies. The division also aims to leverage novel-novel combinations and it will continue with its biomarker strategy in order to drive personalized health care solutions. Immuno-Oncology has the potential to strengthen the existing oncology pillar by adding innovative treatment approaches like therapeutic cancer vaccines and immunomodulation. A medical consortium made up of world-class centers offering access to state-of-the-art clinical development in this field has been established.

Multiple sclerosis (MS) remains an important focus area in which Merck Serono has extensive development expertise; however, other neurological disorders are also being investigated depending on the unmet medical need they represent and their strategic fit. Merck Serono will continue to use innovative ideas whether internally or externally generated, through collaborations like Fast Forward™ (founded by the National Multiple Sclerosis Society, USA) with smaller biotech companies, as well as the recently announced Grant for MS Innovation with academia.

→ *Merck Serono*

Given its in-house expertise in the field of immunology and perceived scientific opportunities Merck Serono plans to establish the study of immune-mediated diseases as a significant new pillar of its research strategy.

Entrepreneur Partnership Program (EPP) leads to four start-ups

In April 2012, Merck Serono launched the Entrepreneur Partnership Program (EPP) to support former employees in the creation of start-up companies focused on continuing activities and compounds that originated at Merck Serono. During 2012, more than eighty proposals were assessed. Four viable endeavors were approved, including small companies founded around pre-clinical work in Alzheimer's and Parkinson's disease. Selected investments will be managed by Merck Serono Ventures, which will be represented on each of the companies' board of directors.

Development: Build a Biopharma culture of performance, execution and leadership

The Global Development and Medical function aims to become globally competitive on productivity, value, cost and speed in conducting clinical development. Merck Serono aims to attract and retain key talents to build up world class capabilities. Simplified processes are being put in place in compliance with highest quality standards in order to improve efficiency. Consolidated worldwide regulatory, safety, quality and clinical operation functions are being implemented and a lean and flexible organization well connected with all relevant external stakeholders is being built. Merck Serono aims to increase the value of its development pipeline and become more efficient and effective at developing new products.

Merck Serono to develop biosimilars

Biosimilars, which according to IMS Health will represent a strongly growing market of US$ 11 billion to US$ 25 billion by 2020, aim to be similar to marketed biological drugs. In contrast to classic generic drugs, which are made from relatively easily duplicated chemical-based active ingredients, biosimilars are much more complex molecular structures and usually differing slightly from the original. As a result their development, manufacturing and approval processes are much more demanding and complex. Merck Serono aims to participate in this growing market, by taking advantage of its biopharmaceutical expertise in the area of development, regulatory and manufacturing. In 2012, Merck Serono and Dr. Reddy's Laboratories announced that the two companies will collaborate to jointly develop and globally market follow-on biologics, with a primary focus on monoclonal antibodies. The strategic rationale of this collaboration is to leverage Merck Serono's biopharma strengths with Dr. Reddy's strong expertise in biosimilars.

→ *Merck Serono*

Clinical pipeline update

The Merck Serono pipeline has a strong focus on oncology. Currently, 16 projects are in various phases of clinical development.

In late 2012, approval was obtained in Japan from the Ministry of Health, Labor and Welfare for the use of Erbitux® in adult patients with head and neck cancer. The division also announced the decision to voluntarily withdraw the marketing authorization application to the European Medicines Agency (EMA) of a label extension for Erbitux® in combination with standard first-line platinum-based chemotherapy in patients with advanced or metastatic non-small cell lung cancer (NSCLC) with high epidermal growth factor receptor (EGFR) expression. The decision to withdraw the application was based on feedback from the EMA, indicating that further clinical data would be required. Merck Serono reported a negative outcome of the EXPAND trial, which assessed Erbitux® as a first-line treatment for patients with advanced gastric cancer, and the PETACC-8 trial, assessing Erbitux® for the adjuvant treatment of stage III colon cancer. Merck will not pursue further development of Erbitux® in the lung, gastric or adjuvant colon indications. These results do not alter the current utility of Erbitux® in patients with KRAS wild-type mCRC and in patients with locally advanced or recurrent and/or metastatic SCCHN in those markets where Erbitux® is currently registered in these indications.

Late-stage pipeline strengthened through the in-licensing of TH-302 and Sym004

The division continued to strengthen its early- and mid-stage pipeline via strategic transactions. Two oncology projects were in-licensed during 2012. A global agreement to license and co-develop TH-302, an investigational small molecule hypoxia-targeted drug, was followed by an exclusive worldwide license agreement for Sym004, potentially complementing and building upon Merck's existing Erbitux® franchise.

At the time of in-licensing, TH-302, a molecule designed to be activated under severe tumor hypoxic conditions was already being investigated in a Phase III in patients with soft tissue sarcoma (STS). Following the positive outcome in a Phase IIb trial in patients with advanced pancreatic cancer (PaCa), presented at the Association for Cancer Research meeting in April 2012, the decision was made later in the year to proceed to Phase III. For both indications (STS and PaCa), an agreement was reached with the FDA regarding a Special Protocol Assessment (SPA). The STS indication has also been assigned orphan drug status in the United States as well as in the EU. In addition, the use of TH-302 in other solid tumors and hematological malignancies is being evaluated in several Phase I trials.

Sym004 is an investigational product comprised of two antibodies that are designed to block ligand binding, receptor activation and downstream signaling as well as to elicit removal of EGFR from the cancer cell surface by inducing their internalization and degradation. Sym004 is currently being evaluated in a Phase I/II trial in patients with advanced KRAS wild-type mCRC. In addition, a single-arm, open-label Phase II trial is underway in patients with SCCHN who have failed anti-EGFR-based therapy.

→ *Merck Serono*

Pimasertib moved to Phase II development

Pimasertib, Merck Serono's MEK inhibitor, is an investigational small molecule inhibitor of MEK1/2, which is part of the MAPK signaling pathway. This pathway is up-regulated in various types of cancer. Pimasertib moved to Phase II in PaCa as well as in N-Ras mutated cutaneous melanoma. Around 25% of melanoma patients have N-Ras mutated tumors and have currently limited effective treatment options.

L-BLP25 misses primary endpoint in the START study; additional analysis ongoing

L-BLP25 (formerly known as Stimuvax) is an investigational MUC1 antigen-specific cancer immunotherapy designed to stimulate the body's immune system to identify and target cells expressing MUC1. MUC1 is expressed in many cancers, such as NSCLC. L-BLP25 was being investigated in the Phase III START trial and is currently being investigated in the Phase III INSPIRE trial, both for the treatment of unresectable stage III NSCLC. In late 2012, the START trial reported a negative outcome missing the primary endpoint of extending overall survival. Notable treatment effects were observed, however, in certain subgroups. Based on further analysis still to be done, Merck Serono will decide on the future of the L-BLP25 development program in 2013. The ongoing clinical program of L-BLP25, including INSPIRE, will continue pending discussion with relevant regulatory agencies.

Phase III results for cilengitide expected in the first half of 2013

Concerning cilengitide, Merck Serono's investigational integrin inhibitor, the outcome of the pivotal, randomized Phase III CENTRIC trial is expected in the first half of 2013. The study follows a biomarker-guided approach focusing on newly diagnosed glioblastoma patients with methylated MGMT (methylguanine-DNA methyltransferase) gene promotor status since it is thought they might be more likely to benefit from combination treatment with temozolomide, radiotherapy and cilengitide. To ensure the availability of a qualified diagnostic, Merck Serono expanded its collaboration with MDxHealth, a diagnostic company, to support the development and regulatory activities for the MGMT test. During 2012, the development of cilengitide in SCCHN was stopped following negative Phase II results. The Phase II study combining cilengitide with Erbitux® and chemotherapy for the treatment of NSCLC continues. Since Erbitux® is not registered for NSCLC, the results of this study can serve only for further hypothesis generation.

In the field of MS, FDA approval of the Rebif® Rebidose injector for patients with relapsing forms of MS was received early 2013. The device was evaluated in a 12-week Phase IIIb multicenter, open-label, single-arm study for the self-administration of Rebif® with respect to ease of use, patient satisfaction and acceptability, and functional reliability.

Decision regarding further development of ONO-4641 to be made during 2013

Turning to ONO-4641, a sphingosine-1-phosphate receptor modulator, a positive outcome from the Phase II DreaMS study in patients with relapsing MS was presented at the American Academy of Neurology meeting in May 2012. Currently, further studies, both non-clinical and clinical, are being performed which will provide more information on efficacy, safety and the potential for differentiation of this agent to allow Merck Serono to make an informed decision about whether to advance this project to Phase III in 2013. An immune tolerizing agent (ATX-MS-1467) is close to delivering Phase I trial results.

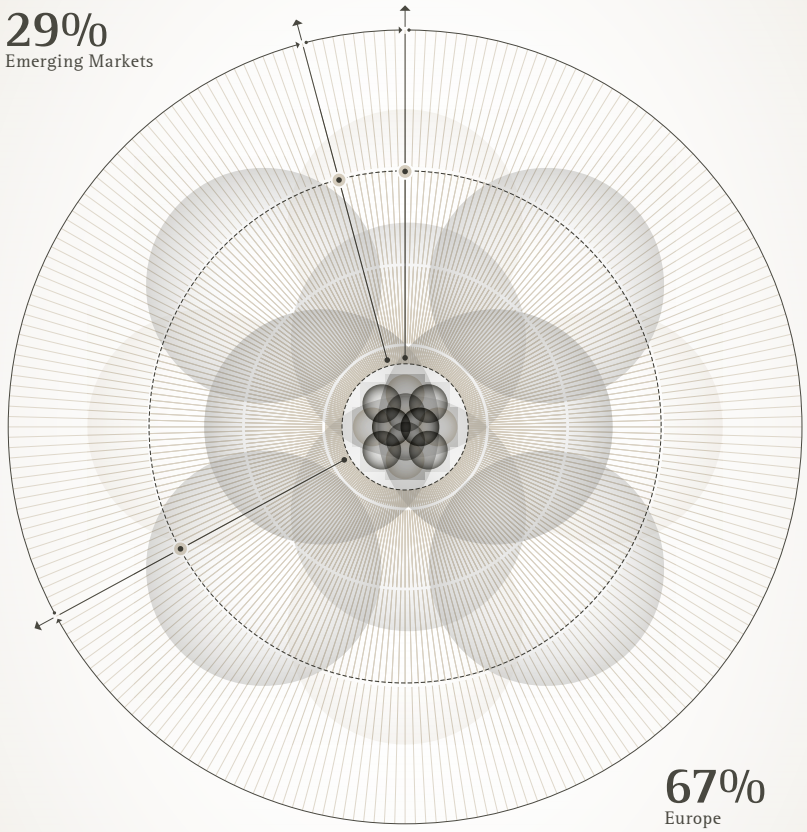
→ *Merck Serono*

After careful evaluation of the available Phase I data, the division decided to end the development of long-acting interferons in the area of MS.

In the area of immunology, Merck Serono is currently analyzing data from the double-blind, placebo-controlled Phase II study (APRIL SLE) assessing the therapeutic value of atacicept in systemic lupus erythematosus (SLE). The trial initially investigated two doses of atacicept in patients who were stable following steroid taper, and measured the effect of the drug on new disease flares. The study recruited more than 450 patients. The complete clinical and biomarker data from this study are expected to be presented at a scientific conference in the first half of 2013.

Development of sprifermin (fibroblast growth factor 18), a recombinant protein, is ongoing in the treatment of knee cartilage injury in the context of a Phase II study. Two Phase I studies were completed in patients with osteoarthritis of the knee joint.

Consumer Health | Our business by region | Page 70



Consumer Health

Sales by region 2012

Consumer Health → 2/4

Rebuilding the division's base

Extensive restructuring initiatives implemented to increase profitability

The Consumer Health division reported sales of € 473 million in 2012, compared to € 494 million in 2011. To fundamentally improve its operational profitability, Consumer Health began the process of restructuring its operations in 2012. This process, which is planned to be completed in 2013, involves refocusing investments on those core brands that hold leading positions in a number of important markets. The division is also in the process of restructuring its operating model towards greater market proximity and trimmed its resources in marketing and selling as well as R&D. The Seven Seas plant in Hull (United Kingdom) will be shut down given the continued low capacity utilization, high investments required to upgrade equipment, and the relatively high cost of operations. Related to this, the division stopped shipment of several products from the Seven Seas plant to remediate the registration dossiers. As a consequence of these interventions, sales declined organically by 6.2%, owing to softer sales of local and non-core brands and in some cases the complete exit from non-profitable markets and brands. Positive exchange rate effects of 1.8% were only partly able to compensate for the decline in organic sales. Despite this and as a result of tighter cost control, particularly in marketing and sales, the division's EBITDA pre margin improved to 13.4% of sales (2011: 11.8%).

Consumer Health | Key figures

€ million	2012	2011	Change in %
Total revenues	475.2	496.2	–4.2
Sales	472.6	494.2	–4.4
Operating result (EBIT)	4.3	46.9	–90.8
Margin (% of sales)	0.9	9.5	–
EBITDA	26.5	58.5	–54.8
Margin (% of sales)	5.6	11.8	–
EBITDA pre one-time items	63.5	58.5	8.4
Margin (% of sales)	13.4	11.8	–

Cost of sales was nearly unchanged at € 158 million (2011: € 157 million). As a result of the lower annual sales level and costs related to brand reorientation and restructuring, gross profit decreased to € 317 million (2011: € 339 million) resulting in a lower gross margin (as % of sales) of 67.0% (2011: 68.6%).

Marketing and selling expenses lowered through prioritization

Total selling, general and administration costs (SG&A, comprising marketing & selling, royalty, license and commission expenses, administration and other operating expenses/income) increased to € 289 million (2011: € 265 million) due to restructuring-related one-time items. Marketing and selling expenses, which are included in this item, decreased substantially, mainly as a result of more focused, lower spending.

Moreover, R&D costs declined to € 19 million (2011: € 23 million) or 4.1% of sales. This was achieved by improved prioritization of projects as well as structural cost savings.

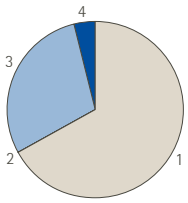
→ *Consumer Health*

EBITDA pre one-time items improved to 13.4% of sales

On a reported basis, EBIT declined to € 4 million (2011: € 47 million). Adjusted for restructuring charges of € 37 million (mainly due to the planned closure of the Seven Seas plant in Hull), and € 11 million in restructuring-related impairments and depreciation and amortization, EBITDA pre one-time items grew to € 63 million (2011: € 59 million). This increase includes structural net savings from the efficiency program. The EBITDA pre margin (as % of sales) climbed to 13.4% (2011: 11.8%).

Consumer Health | Sales by region – 2012

€ million / % of divisional sales



1	Europe	315	67%
2	North America	1	0%
3	Emerging Markets	139	29%
4	Rest of World	17	4%

From a geographic perspective, Emerging Markets was the only region to generate organic growth in 2012, driven by Cebion®, the Consumer Health vitamin C brand. In Europe, top-line sales were negatively affected by the refocus on strategic brands as well as restructuring efforts. In addition, the division faced declining over-the-counter medicines markets and strong competitive pressure in Central Europe. The sales decline in North America reflects the market exit of Consumer Health in Canada.

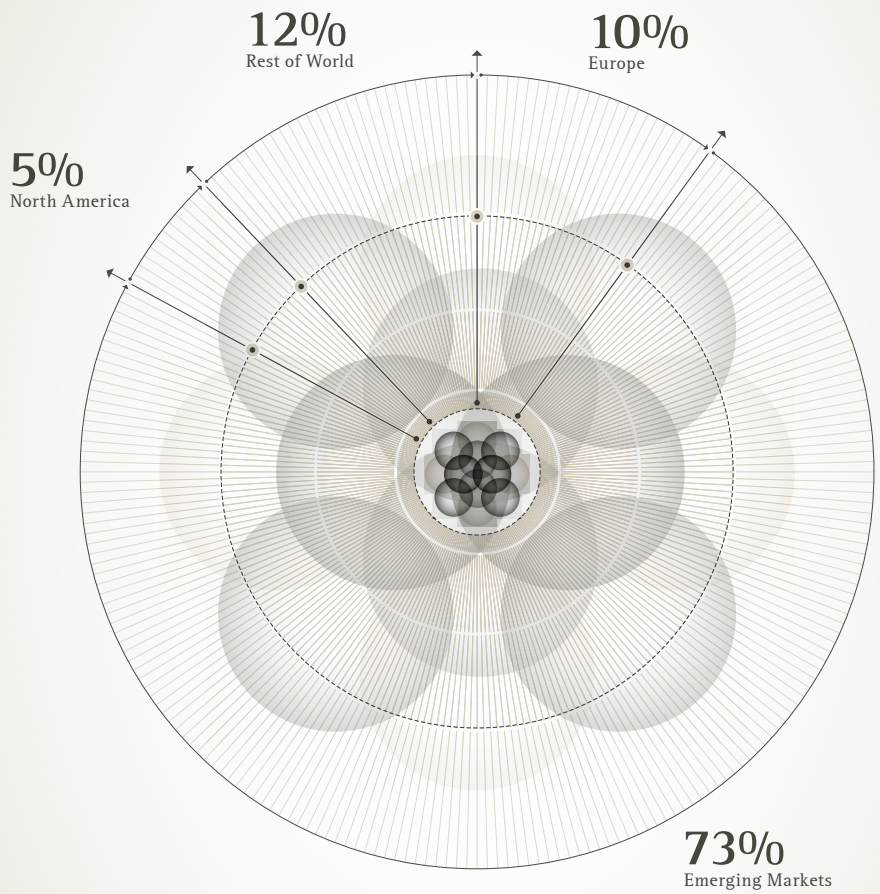
Consumer Health | Sales growth components by region – 2012

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Reported sales growth
Europe	315.1	–8.5	1.0	–	–7.5
North America	1.2	–75.1	1.3	–	–73.7
Emerging Markets	139.4	2.2	4.3	–	6.5
Rest of World	16.9	–4.9	–2.0	–	–6.9
World in total	**472.5**	**–6.2**	**1.8**	**–**	**–4.4**

The exit from unprofitable markets and brands as well as the impact of restructuring led to an organic sales decline ranging between 2% and 10% across all of the division's health themes.

Consumer Health | Core brands

Performance Materials | Our business by region | Page 74



Performance Materials

Sales by region 2012

Performance Materials → 3/4

Exceptionally strong year due to high demand for liquid crystal materials and positive foreign exchange rate effects

Higher volumes of LC materials driven by unabated consumer demand and market share gains

Performance Materials performed strongly in 2012, generating record sales of € 1,674 million (2011: € 1,465 million), an outstanding increase of 14.3%. The division benefited significantly from the stronger U.S. dollar as a dominant portion of its sales are booked in this currency. As a result, changes in foreign exchange rates added 7.0%. Organically, the division grew by 7.4% as robust growth trends in the flat panel display industry stimulated strong demand for liquid crystal materials, which contribute more than 70% to divisional sales. Increasing sales of TV sets and especially growing screen sizes led to high demand for liquid crystals materials with VA (vertical alignment), PS-VA (polymer stabilized vertical alignment) and IPS (in-plane switching) technologies. Sales volumes of IPS liquid crystals additionally benefited from growing sales of mobile devices with touch-screen LCD displays such as tablet PCs and smartphones. Additionally, as a result of incrementally improving the properties and characteristics of our marketed liquid crystals portfolio, we increased our market share to more than 60% in 2012 from around 55% in 2011.

Pigments sales improve over weak prior year, outlook remains cautious

The Pigments & Cosmetics business unit also increased its sales in 2012, albeit in comparison with a moderate previous year. Apart from significant positive foreign exchange rated effects, Pigments & Cosmetics registered organic sales growth with functional materials for plastic and printing applications and especially with the Xirallic® family of effect pigments, which are primarily used in automotive coatings. In 2011, volumes of Xirallic® pigments declined significantly as a result of supply bottlenecks due to the temporary shut-down of the business unit's site in Onahama (Japan) caused by one of the strongest earthquakes Japan had ever seen. To raise it future supply reliability, the business unit commissioned a second production site for Xirallic® pigments in Germany in 2012, which helped to regain market share lost in this segment in 2011. From an overall market perspective, however, the automotive industry became increasingly cautious during the second half of the year with respect to its near-term volume projections.

Divestments had a negligible effect on the performance of the division in 2012. The sale of the battery electrolyte business to BASF, announced in February 2012, lowered sales only by 0.1%.

Performance Materials | Key figures

€ million	2012	2011	Change in %
Total revenues	1,675.6	1,467.4	14.2
Sales	1,674.2	1,464.7	14.3
Operating result (EBIT)	598.5	691.0	–13.4
Margin (% of sales)	35.7	47.2	–
EBITDA	723.4	801.1	–9.7
Margin (% of sales)	43.2	54.7	–
EBITDA pre one-time items	730.7	682.7	7.0
Margin (% of sales)	43.6	46.6	–

→ *Performance Materials*

Inventory optimization and softer pricing weighing on gross margin

In 2012, the division's gross profit grew 9.6% to € 959 million (2011: € 875 million), at a lower rate than sales growth, which reduced gross margin to 57.3% (2011: 59.8%). Several factors were responsible for this development: Higher volumes in addition to underutilization of production capacity as a result of reducing inventory levels led to an increase in production costs of 21.0% to € 716 million (2011: € 592 million). Furthermore, price concessions as a result of higher volumes additionally weighed on the gross margin.

Total selling, general and administration costs (including also license and commission expenses, other operating expenses/income) increased more than fourfold by € 179 million to € 219 million (2011: € 40 million). This development is attributable to the very low levels in the prior year, which included other operating income of € 157 million from the sale of the CropBioscience business to Novozymes. Moreover, other operating expenses of € 26 million related to the efficiency program were booked for the first time in 2012. The division has set itself the goal of optimizing the existing production network in addition to streamlining its organizational structure. Overall, other operating expenses of € 39 million in 2012 compared with other operating income of € 127 million in the previous year. The 7.9% increase in marketing and selling expenses and 6.4% rise in administrative costs, however, remained significantly lower than sales growth.

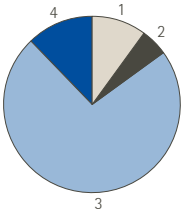
R&D at an unchanged high level, displaying leadership claim for liquid crystal materials

The same applies to R&D investments, which rose 3.5% to € 137 million (2011: € 133 million). This ongoing high level of 8.2% of sales (2011: 9.1%) reflects the sustainable innovation strategy of the division, especially in Liquid Crystals. Merck intends to maintain its leading market position in liquid crystal materials by both continuously improving existing products and developing new ones.

The aforementioned one-time items also had a significant impact on the operating result of the division. EBIT fell by 13.4% to € 599 million (2011: € 691 million) and EBITDA by 9.7% to € 723 million (2011: € 801 million). Adjusted for one-time items, EBITDA pre rose by 7.0% to € 731 million (2011: € 683 million), representing 43.6% of sales (2011: 46.6%).

Performance Materials | Sales by region – 2012

€ million / % of divisional sales



1	Europe	160	10%
2	North America	90	5%
3	Emerging Markets	1,218	73%
4	Rest of World	206	12%

→ *Performance Materials*

China becoming third biggest sales contributor, Japan falling behind

From a geographic perspective, Emerging Markets generated sales of € 1,218 million in 2012 (2011: € 998 million), or 73% of the division's sales, reflecting the high concentration of liquid crystals customers in Asia. Divisional sales in this region showed a strong 13.9% organic increase also as a result of strong demand from the emerging Chinese display industry. As a result, Merck's liquid crystals sales to China more than doubled, elevating China to the number three single market in terms of sales – behind South Korea and Taiwan – overtaking Japan. The sales decline in Japan, which is part of the Rest of World region, was due to the difficult market environment faced by the Japanese display and electronic industry in 2012. As a result, sales of Performance Materials in the Rest of World region declined organically by 15.2% to € 206 million (2011: € 226 million), accounting for 12% of the division's sales

Effect pigments business affected by difficult economic environment in Europe

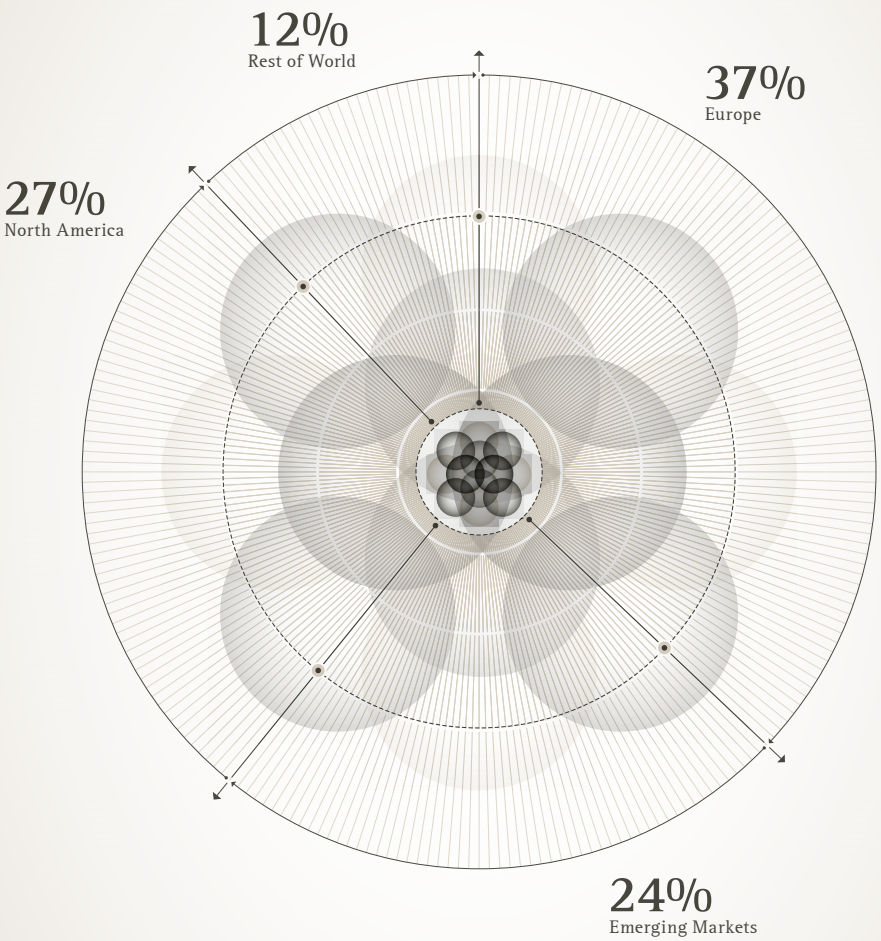
In the regions of Europe and North America, Performance Materials generates sales almost exclusively with products from the Pigments & Cosmetics business unit. Sales in Europe declined 4.2% organically to € 160 million (2011: € 167 million), or 10% of divisional sales due to both slowing automotive production in this region as well as softer sales to customers in the cosmetics industry. In contrast, sales in North America recorded a high growth rate similar that of the Emerging Markets. Sales grew 13.7% organically to € 90 million (2011: € 74 million), driven primarily by sales of Xirallic® pigments for automotive coatings as well as strong demand for the division's active ingredients for cosmetics.

Performance Materials | Sales growth components by region – 2012

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Reported sales growth
Europe	160.3	–4.2	0.3	–	–3.9
North America	89.5	13.7	8.7	–1.5	20.9
Emerging Markets	1,218.3	13.9	8.2	–	22.1
Rest of World	206.1	–15.2	6.3	–	–8.9
World in total	**1,674,2**	**7.4**	**7.0**	**–0.1**	**14.3**

Cooperation established with Epson for the development of cost-efficient manufacturing processes for OLED displays

In October 2012, Merck and Seiko Epson Corporation announced a cooperation and licensing agreement for inkjet inks used in the manufacture of OLED (organic light-emitting diode) displays. OLED is an alternative technology to LCD used to create flat-panel displays. Today, OLED is only used in small displays such as smart phones. According to the agreement, Epson will supply Merck with ink technology able to dissolve Merck's OLED materials, providing the possibility to apply soluble OLED materials on display substrates using specifically designed printing heads. Today, mass production of OLED displays is based on insoluble OLED materials that are applied using complex chemical vapor deposition (CVD) and masking technologies, resulting in highly limited efficiencies of those production processes. Successful development of a printable OLED technology could pave the way for the cost-efficient production of large OLED displays, particularly for televisions.



Merck Millipore

Sales by region 2012

Merck Millipore → 4/4

Solid business performance continues as integration advances

All business units grow organically, brisk demand from pharma customers

2012 was again a successful year for the Merck Millipore division. Sales grew by 9.0% to € 2,598 million (2011: € 2,383 million), stemming from solid organic growth of 3.8% and positive exchange rate effects of 3.9% primarily related to the U.S. dollar and 1.4% from acquisitions in the areas of cell culture media, cell imaging and microbial testing. All three business units grew organically, driven by the division's customers from the pharmaceutical industry, which benefited from higher drug volumes, including new drug launches. Consequently, the Process Solutions business unit, which supplies materials and services for drug production, saw the strongest sales increase. The Lab Solutions business unit performed well, driven by Lab Water and BioMonitoring products. The performance of the Bioscience business unit remained affected by softer spending by government and academic institutions, although this customer group only accounts for about 15% of divisional sales. During 2012, Merck Millipore recorded royalty, license and commission income of € 19 million (2011: € 10 million) primarily related to the Process Solutions business unit.

Merck Millipore | Key figures

€ million	2012	2011	Change in %
Total revenues	2,616.9	2,392.8	9.4
Sales	2,598.2	2,382.6	9.0
Operating result (EBIT)	233.2	235.4	–1.0
Margin (% of sales)	9.0	9.9	–
EBITDA	542.4	522.4	3.8
Margin (% of sales)	20.9	21.9	–
EBITDA pre one-time items	595.9	561.1	6.2
Margin (% of sales)	22.9	23.6	–

Cost of sales increased 8.2% to € 1,086 million in 2012 (2011: € 1,003 million), below reported sales growth. Accordingly, the division's gross profit increased 10.2% to € 1,531 million (2011: € 1,390 million) or 58.9% of sales (2011: 58.3%). Higher idle costs as a result of the division's initiative to reduce inventories were partially offset by stronger pricing.

Higher spending driven by actions to fuel future growth

In 2012, Merck Millipore continued to execute its growth strategy by investing in new product development and commercial operations. As a consequence, total selling, general and administration costs grew 11.9% to € 928 million (2011: € 829 million). Marketing and selling expenses, which are included in this item, increased 11.5% to € 676 million (2011: € 606 million). Part of this increase was also driven by the stronger U.S. dollar since the majority of Merck Millipore's global marketing operations are located in the United States. In addition, the marketing and selling expenses of the recently acquired businesses were included for the first time. Both factors also contributed to the 9.0% increase in administration expenses to € 113 million (2011: € 104 million). Other operating expenses amounted to € 123 million (2011: € 103 million), corresponding to an increase of 19.3% and including € 28 million one-time items related to the Group's efficiency program.

→ *Merck Millipore*

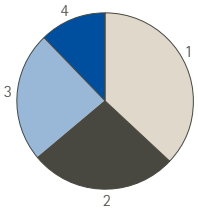
To further drive the development of innovative products, the division also increased its R&D spending by 24.5% to € 166 million (2011: € 133 million), representing 6.4% of divisional sales (2011: 5.6%). A significant portion of the increase was directed to Process Solutions, reflecting the division's expectation that increasing volumes of biopharmaceuticals will remain an attractive growth opportunity. Once again, the strong U.S. dollar contributed to higher costs since the majority of Merck Millipore's R&D activities are also located in the United States.

EBIT slightly down due to restructuring costs, EBITDA pre one-time items increased

The division's EBIT decreased slightly by 1.0% to € 233 million in 2012 (2011: € 235 million) as a consequence of higher strategic investments in the business as well as higher one-time items related to restructuring (including impairments), offsetting the improved gross profit. The decline also reflects a 7.7% increase in depreciation and amortization to € 309 million (2011: € 287 million), driven primarily by higher amortization of purchased intangible assets following recent acquisitions as well as an asset impairment related to the consolidation of the division's production sites. Adding this back, however, EBITDA increased by 3.8% to € 542 million (2011: € 522 million), while EBITDA pre one-time items grew 6.2% to € 596 million (2011: € 561 million).

Merck Millipore | Sales by region – 2012

€ million / % of divisional sales



1	Europe	966	37%
2	North America	703	27%
3	Emerging Markets	617	24%
4	Rest of World	312	12%

As the largest contributor to sales, Europe delivers solid growth, Emerging Markets and Rest of World show strong growth

Compared to 2011, Merck Millipore's geographic sales split remained nearly unchanged, although regional growth trends differed significantly in some cases. Europe remained the division's largest regional market generating sales of € 966 million (2011: € 906 million) or 37% of divisional sales (2011: 38%), growing 3.1% organically. Organic sales growth was primarily driven by healthy demand from biopharmaceutical production customers for Process Solutions products. In North America, Merck Millipore's organic sales were flat at € 703 million (2011: € 648 million), representing an unchanged 27% of the division's sales. However, this development includes the impact of lost sales from an insulin supply contract that was discontinued in the third quarter of 2011 and that primarily affected sales in the United States. Excluding the insulin contract, the division's organic growth in North America was in the low single digits, reflecting the significant presence of drug manufacturing customers in the United States that also posted increasing drug volumes.

→ *Merck Millipore*

In the Emerging Markets region, sales grew 6.8% organically to € 617 million (2011: € 561 million), equivalent to an unchanged 24% of sales. All of the division's business units posted solid growth in this region, delivering mid-single to low double-digit organic growth rates. Posting an 8.5% organic increase in sales to € 312 million (2011: € 268 million), the Rest of World region accounted for 12% of the division's sales (2011: 11%) and showed growth trends similar to those seen in Emerging Markets.

Merck Millipore | Sales growth components by region – 2012

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Reported sales growth
Europe	965.7	3.1	0.8	2.6	6.6
North America	702.8	0.0	7.5	0.9	8.5
Emerging Markets	617.4	6.8	3.1	0.2	10.1
Rest of World	312.3	8.5	7.1	1.1	16.7
World in total	**2,598.2**	**3.8**	**3.9**	**1.4**	**9.0**

Growth in Bioscience driven also by innovations

The Bioscience business unit – which provides products and services to support life science research – continued to grow in line with the market, reporting an organic increase of 2.0% to sales of € 455 million in 2012 (2011: € 421 million). Growth was driven by Asian and Latin American markets offsetting softer conditions in North America and Europe. On a product level, reagents and kits were the main growth contributors, as well as newly launched products, including Muse™, a closed system of instrument and consumables providing quantitative information on cell health, cell death and cell cycle at the individual cell level. Also launched was the Direct Detect™ system that increases the simplicity and reliability of quantitative protein and peptide analysis. To strengthen the cell biology platform, the division acquired CellASIC in October 2012, a company offering a system allowing in-depth studies of living cells. In August 2011, the acquisition of Amnis extended the business units offering of cell imaging solutions.

→ *Merck Millipore*

Acquisitions also contribute to growing sales in Lab Solutions

The Lab Solutions business unit generated € 1,097 million in sales (2011: € 1,006 million). This performance reflects an organic growth of 3.1% as a result of solid demand for laboratory water products and biomonitoring solutions primarily used for sample preparation and analytical purposes, respectively. Geographically, all regions contributed to organic growth with the Emerging Markets being the strongest growth contributor. Lab Solutions' reported sales also saw a 3.1% growth impetus from acquisitions, primarily Heipha and Hycon in March 2011.

Process Solutions strongest growth driver of the division

Sales of the Process Solutions business unit totaled € 1,046 million in 2012 (2011: € 956 million). This represents an organic growth of 5.3% driven by double-digit growth rates in Emerging Markets and Rest of World countries in addition to a solid mid-single digit growth rate in Europe. Organic sales growth in North America was slightly negative; however, adjusted for the above mentioned non-renewal of a supply contract for insulin, organic growth for the total business unit was in the high mid-single digit area. The business mainly benefited from higher volumes of biologically manufactured drugs, seeing strong demand for biosafety solutions, process systems hardware and single-use manufacturing technologies. In November 2012, the business unit's product portfolio in the area of cell culture media was strengthened with the takeover of Biochrom.

Merck Millipore | Sales growth components by business unit – 2012

€ million/change in %	Sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Reported sales growth
Bioscience	454.6	2.0	5.5	0.6	8.0
Lab Solutions	1,097.2	3.1	3.0	3.1	9.1
Process Solutions	1,046.3	5.3	4.1	0.1	9.4

Corporate and Other

Corporate and Other comprises Group administration expenses for Group functions such as Finance and Accounting, Tax, Procurement, Communications, Investor Relations and Human Resources that cannot be directly allocated to the divisions. Corporate costs also include expenses for central, non-allocated IT functions and corporate IT projects related to the expansion and harmonization of IT systems within the Merck Group. As a result, Corporate and Other has no sales to report. Gains or losses on currency hedging also are reported in Corporate and Other.

Corporate and Other | Key figures

€ million	2012	2011	Change
Operating result (EBIT)	–380.7	–183.4	–197.3
EBITDA	–372.7	–178.0	–194.7
Restructuring costs	74.3	–	74.3
Integration / IT related costs	8.7	–	8.7
Costs from discontinued businesses	79.1	30.5	48.6
EBITDA pre one-time items	–210.5	–147.5	–63.0

EBITDA pre one-time items lowered by currency hedging losses

During 2012, administration expenses of Corporate and Other increased 7.1% to € 130 million (2011: € 122 million) primarily due to higher bonus accruals. Other operating expenses totaled € 243 million (2011: € 54 million). This increase was mainly driven by expenses classified as one-time items. They include costs of € 79 million related to discontinued businesses, € 9 million in Integration/IT related costs and € 74 million related to restructuring initiatives. These restructuring costs can relate to Group functions or are linked to mixed legal entities. Accordingly, the increase in other operating expenses lowered EBIT and EBITDA to € –381 million (2011: € –183 million) and € –373 million (2011: € –178 million), respectively. Adjusted for one-time items, EBITDA pre one-time items was € –211 million (2011: € –148 million). This change of € –63 million was almost fully attributable to the net losses from currency hedging. Merck started to book the result of currency hedging under Corporate and Other as of January 1, 2012. Until end of 2011, this result was recorded under the respective divisions.

Risk Report

Risks are inherent to entrepreneurial activity. We have put systems in place to identify risks at an early stage and minimize them by taking appropriate action. Currently no risks can be identified that could jeopardize the continued existence of the Merck Group.

Risk and opportunity management

Merck is part of a complex, global business world and is therefore exposed to a multitude of external and internal influences. Every business decision is therefore based on the associated risks and opportunities. Through our risk management activities, we recognize, assess and manage risks early on and implement appropriate measures to minimize them. Opportunity management is conducted in the operating units on the basis of the corporate strategy. More information can be found in the Report on Expected Developments starting on page 91.

Within the context of the Group-wide risk management process, the division heads, managing directors and CFOs of Merck subsidiaries, and the heads of Group functions are specified as employees with responsibility for risks. Every six months, these executives assess their active risk status and report their entire risk portfolio to Risk Management. Risks are assessed based on their potential impact on EBIT and cash flow, and the likelihood of their occurrence. Significant changes in the assessment of already known risks as well as new, significant risks are reported at all times and communicated to the corporate bodies on an ad hoc basis. For the standard process, a lower limit for risk reporting is set at a value of € 5 million, and for the ad hoc process at a value of € 25 million. Risks below these limits are steered independently in the units. Within the scope of audits, Group Internal Auditing reviews, among other things, the performance of risk management processes within the units and, at the same time, the communication of relevant risks to Group Risk Management. In addition to the aforementioned bottom-up processes, Risk Management addresses potential risks and risk areas top-down. This process is based on independent analyses of both internal and external information. Moreover, assessing the effectiveness of risk-minimizing measures gained further importance in 2012. Key measures are monitored by Risk Management with regard to the planned implementation timeframe and the assumed risk-minimizing effect. Risk Management uses this information to determine the current risk portfolio for the Merck Group, reporting this to the Executive Board, the Supervisory Board and the Finance Committee twice a year.

Group Internal Auditing conducts regular reviews

Internal control system for the consolidated accounting process

The objective of the internal control system for accounting is to implement controls that provide assurance that the financial statements are prepared in compliance with the relevant accounting laws and standards. It covers measures designed to ensure the complete, correct and timely transfer and presentation of information that is relevant for the preparation of the consolidated financial statements and the management report of the Merck Group.

The control system is subject to continuous further development and is an integral component of the accounting and financial reporting processes in all relevant local units and Merck Group functions. With respect to the accounting process, the internal control system measures are intended to minimize the risk of material false statements in the consolidated accounting process of the Merck Group.

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Key tools

The internal control system is geared to ensuring the accuracy of the consolidated accounting process and the preparation of compliant financial statements. The Group function Accounting & Subsidiaries centrally steers the preparation of the consolidated financial statements of Merck KGaA as the parent company of the Merck Group. This Group function defines the reporting requirements that all the Merck subsidiaries must meet as a minimum requirement. At the same time, this function steers and monitors the scheduling and process-related requirements of the consolidated financial statements. The Group-wide accounting guidelines form the basis for the preparation of the statutory financial statements of the parent company as well as of the German and foreign subsidiaries; the guidelines are adapted to reflect changes in the financial regulatory environment and are updated in accordance with internal reporting requirements. One of the requirements of the Group-wide guidelines is to present Group-internal business processes as the basis for proper settlement of intercompany balances. Additional controls have been implemented in the consolidation process.

Accounting & Subsidiaries also ensures the timely central management of changes to the equity holding structure and correspondingly adapts the Merck Group's scope of consolidation. The individual companies have a local internal control system. Where finance processes are handled by a Shared Service Center, the internal control system of the Shared Service Center is additionally applied. They ensure that accounting complies with IFRS (International Financial Reporting Standards) and with the Merck Group accounting guidelines.

Accounting & Subsidiaries provides support to the local contacts and ensures a consistently high quality of reporting throughout the entire reporting process.

The accounting process is designed at all levels to ensure a clearly defined segregation of duties and assignment of responsibilities to the units involved in the accounting process at all times within the scope of continuous dual control.

For the assessment of balance sheet items, Accounting & Subsidiaries closely cooperates with Group Risk Management in order to correctly reflect potential balance sheet risks. For special issues, such as the evaluation of intangible assets and pension obligations, external experts are additionally involved where necessary. For the Group accounting process, Merck uses in most countries a standard SAP software tool. Via a detailed authorization concept to limit user rights on a need-to-have basis, the system contains both single entity reporting and the consolidated financial statements.

The effectiveness of Merck's internal control system with regard to accounting and the compliance of financial reporting of the individual companies is confirmed by both the local managing director and the Chief Financial Officer by signing the single entity reporting. All the structures and processes described are subject to constant review by Group Internal Auditing based on an annual audit plan specified by the Executive Board. The results of these audits are dealt with by the Executive Board, the Supervisory Board and the Finance Committee.

The internal control system at Merck makes it possible to lower the risk of materially false accounting statements to a minimum. However, no internal control system – regardless of its design – can prevent a residual risk.

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Business-related risks

Merck integrates its risk management system into the ongoing business planning processes. Potential negative developments, for example changes in customer demand or new political framework conditions, are identified, described and evaluated within the scope of the internal risk management process. We can, therefore, take countermeasures in a timely manner if any events lead to deviations from the business plan. Risks in connection with investment decisions are minimized by the use of detailed guidelines.

Merck minimizes business risks through its diversified product portfolio

Total revenues and the economic success of the Merck Group depend on a large number of pharmaceutical and chemical products for various industries. This diversification lowers risk since the markets differ in their structure and economic cycles. This is also an expression of the Merck strategy to remain an integrated pharmaceutical, chemical and life science company.

Political and regulatory risks

As a global company, Merck faces political and regulatory changes in many countries and markets. In 2012, increasingly restrictive requirements were imposed in the pharmaceutical environment in terms of drug pricing, reimbursement and approval, a trend that can be seen in many countries. These requirements can negatively impact the profitability of our products and jeopardize the success of market launches and new approvals. Close communication with health and regulatory agencies serves as a preventive measure to avert risks. The destabilization of political systems, possible erection of trade barriers and monetary policy changes can lead to declines in sales in certain countries and regions. Diversification in terms of products, industries and regions serves to mitigate potential negative effects.

Research and development risks

For Merck, innovation is a major element of the Group strategy. Research and development projects can experience delays, expected budgets can be exceeded or targets remain unmet. Research and development are of special importance to the pharmaceutical business. Therefore, research and development projects are constantly monitored by a portfolio management system. In the course of portfolio management, we regularly evaluate and, if necessary, refocus research areas and all R&D pipeline projects. Sometimes development projects are discontinued after high levels of investment at a late phase of clinical development. Decisions – such as those relating to the transition to the next clinical phase – are taken with a view to minimizing risk. Furthermore, there is a risk that the regulatory authorities either do not grant or delay approval, which can have an impact on earnings. Additionally, there is the danger that undesirable side effects of a pharmaceutical product could remain undetected until after approval or registration, which could result in a restriction of approval or withdrawal from the market.

Product quality and availability risks

Merck is exposed to product liability risks. These include complying with the highest quality standards in the production of pharmaceuticals (Good Manufacturing Practices) which is monitored by the regulatory authorities. Quality controls along the entire value chain minimize these risks. This starts with the qualification of our suppliers. Quality controls also include comprehensive quality requirements for raw materials, purchased semifinished products and plants, as well as long-term strategic alliances in the case of supply- and price-critical precursor products.

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Financial risks

As a company that operates internationally and due to its presence in the capital market, Merck is exposed to various financial risks. These are primarily liquidity, default, and market-price risks; fluctuations in the valuation of pension obligations; and risks of changing fair values of tangible and intangible assets.

In order to ensure its continued existence, a company must be able to fulfill its commitments from operating and financial activities at all times. Merck therefore has a central Group-wide liquidity management process to reduce potential liquidity risks.

In addition, we have a € 2 billion syndicated multicurrency credit facility, which expires in 2014. This ensures Merck's continuing solvency in case any liquidity bottlenecks occur despite the Group's positive operating cash flow. As our loan agreements do not contain any financial covenants, these agreed lines of credit can be accessed even if Merck's credit rating should deteriorate.
In fiscal 2009, Merck set up a debt issuance program that forms the contractual basis for the issue of bonds. In 2010, the volume of this program was increased from € 5 billion to € 10 billion.

Default risks arise in connection with financial investments, loans and financing commitments as well as receivables in operating business. Due to the impact of the financial crisis in the eurozone, an increased default risk continues to exist. Merck has therefore reviewed all its positions with trading partners in the respective countries and has adjusted its default risks as necessary. Merck minimizes these risks by spreading its financial positions and by the associated active management of its trading partners. Significant financial transactions involving credit risk are only entered into with banks and industrial companies that have a good credit rating. In addition, Merck's large banking syndicate – the existing credit line of € 2 billion was syndicated by 17 banks – reduces possible losses in the event of default. Nevertheless, the default of individual trading partners cannot be fundamentally excluded, even if they have an excellent credit rating.

Companies with international business operations in different currency and interest rate regions are inevitably exposed to currency and interest risks. Merck is also affected by these market price risks owing to its global group structure and the associated financial transactions, receivables and liabilities in operating business, as well as expected future cash flows from sales and costs in foreign currency. Merck therefore uses derivative financial instruments to minimize currency risks and financing costs caused by exchange rate or interest rate fluctuations. The exchange rate for financial transactions and for operating receivables and liabilities recognized in foreign currency is generally hedged. In certain cases, the company also hedges the exchange rate for anticipated sales and future costs recognized in foreign currency for a period of up to three years. (More information can be found starting on page 184 in the Notes to the Consolidated Financial Statements).

The values of individual items in the balance sheet are exposed to the risk of changing market and business circumstances and thus also to changes in fair values. The need for write-downs could significantly impact profit and lead to changes in balance sheet ratios. This applies in particular to the high level of intangible assets including goodwill, which have become significantly more important in the consolidated financial statements due to the acquisitions of Serono in 2007 and Millipore in 2010, as well as the related purchase price allocations. (More information can be found starting on page 160 under Intangible assets).

Merck has commitments in connection with pension obligations. The present value of these obligations can be significantly influenced by changes in the relevant valuation parameters, e.g. the interest rate or death probabilities. Pension obligations are regularly evaluated by preparing annual actuarial valuations. Part of these obligations is covered by the pension provisions disclosed in the balance sheet, while the other obligations are

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externally funded. (More information can be found starting on page 171 in the Notes to the Consolidated Financial Statements). As far as pension obligations are covered by plan assets consisting of interest-bearing securities, shares, real estate, and other financial assets, decreasing or negative returns on these assets can adversely impact the value of the plan assets and thus result in further additions to pension provisions. We reduce the risk of fluctuations in the fair value of plan assets by a diversified investment strategy.

Assessments by independent rating agencies

Credit ratings raised in 2012

The capital market makes use of the assessments published by rating agencies in order to assist lenders in evaluating the risks of a financial instrument. Merck is currently rated by the agencies Standard & Poor's and Moody's, who raised their credit ratings for Merck in 2012. While Standard & Poor's issued Merck an A-long-term credit rating with a stable outlook, Moody's issued it a Baa1 rating with a stable outlook.

Legal risks

Merck is exposed to litigation risks. These include in particular risks in the areas of product liability, competition and antitrust law, pharmaceutical law, patent law, tax law, and environmental protection. As a research-based company, Merck has a valuable portfolio of industrial property rights, such as patents and brand names. These can become the target of attacks and infringements.

We are engaged in legal proceedings and government investigations, the outcome of which is currently not certain. We also continue to bear the risks from certain proceedings against companies of the Generics group that we sold to Mylan in 2007. Therefore, in this connection, Merck continues to be responsible for risks arising from cases concerning drug pricing in the United States. In connection with the divested Generics business, the European Commission opened administrative fine proceedings against Merck. It is alleged that Merck engaged in anticompetitive behavior in connection with the market launch of the product citalopram. In Germany, Merck is involved in antitrust proceedings concerning its exclusive distribution agreement with the laboratory wholesale distributor VWR International. Owing to a decision by the German Federal Antitrust Office, Merck is obliged to supply a number of products from its Laboratory business to other laboratory wholesale distributors in Germany. In the United States and Israel, certain risks exist with respect to patent rights and the related licenses and agreements. These cases could have a considerable impact on the financial and earnings position.

The company has taken all possible measures to protect its own legal position. To the extent we deemed it necessary in individual cases, we have set up provisions for risks in the event of an unfavorable outcome of judicial proceedings and government investigations. Further information on legal proceedings can be found in the notes to the consolidated financial statements. Generally, Merck strives to minimize and manage its legal risks. We have taken the necessary precautions to identify threats and defend our rights where necessary.

A compliance program applies for our employees worldwide, which enjoins them to comply with laws and guidelines, as well as provides them with the relevant training and support. The core of the program is the Merck Code of Conduct, which defines ethical behavior guidelines.

Insofar as possible and practical, the company limits liability and damage risks through insurance coverage, the type and scope of which is continually adjusted to current requirements.

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Human resources risks

Merck's future growth is highly dependent on its innovativeness. Therefore, the expertise and engagement of employees in all sectors in which Merck operates are crucial to the success of the company.

The markets relevant to Merck are characterized by intensive competition for qualified specialists and by demographic challenges. Therefore sourcing, recruiting and retaining specialists and talent at Merck is one of the key priorities for the company.

We address these challenges, among other things, by globally implementing integrated processes, such as the talent process, in which we have been investing for a number of years. As part of the global Talent & Succession Management process, Merck analyzes for example current and future capability gaps for the business. Merck's sourcing strategy is aligned with the outcomes of the Talent & Succession Management process. Another example of aligning the HR strategy to the needs of the business is the Total Rewards Policy, through which we ensure that we offer competitive compensation in all relevant markets.

In addition, Merck is investing in a global employer brand, which communicates the Merck Values and the unique employer value proposition that Merck provides to its current and future employees.

Merck regularly measures the engagement of its employees. The results of the employee survey give managers and employees important indications of current challenges for Human Resources. In this way, Merck can develop improvements that will motivate employees and help to retain them.

Information technology risks

Merck uses a diversity of IT systems and processes in order to optimally focus and adequately support its globalization. This involves a number of potential risks.

Risks resulting from the complexity of internal and external requirements

IT risks with an impact on business results occur when information is not available in time, or is erroneous or unintentionally disclosed, or when the mapped processes have been implemented in IT systems in a way that is too inflexible, too complex or even illegal. Security gaps in IT solutions and insufficient contingency planning measures can quickly become incidents that affect the entire company.

Data protection violations owing to incorrect authorizations can create a negative external impression. The growing connectivity of IT landscapes and the increasing dependency on IT make it necessary for companies to invest heavily in maintenance and enhancement. In conjunction with constantly new legal requirements, data processing represents an increasingly time-consuming and costly activity. As the complexity of the IT landscape increases, so do the potential risks.

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Risks resulting from external threats

Worldwide, external threats are becoming increasingly professional in nature, with the trend moving toward targeted industrial espionage and sabotage. In addition, cyberattacks are being used as a means of gaining attention and of protest. This is resulting in risk scenarios for Merck such as the failure of central IT systems, the disclosure of confidential research and business development data, the manipulation of IT systems in chemical process control, an increased burden or adverse impact on IT systems as a result of virus attacks, the temporary hijacking of exposed systems by computer hackers, and the resulting potential revocation of drug registrations due to deficient validation of the relevant IT systems.

Risk minimization strategy

Merck has been generally addressing and minimizing these risks for several years by means of a certified information protection management system based on ISO 27001. This comprises redundant structures of technical components, networks and sites, as well as suitable, tested contingency measures. Thus Merck ensures the necessary availability of business-critical application systems and access to business-relevant data. Globally valid security guidelines are in place for the entire Merck Group. They include appropriate organizational and technical precautions for access control, access rights, virus protection and data protection. The efficacy of these measures is continuously monitored in connection with the information protection management system and reviewed by Group Internal Auditing as well as external auditors. A further process ensures that IT risks are evaluated and appropriate measures taken. Based on the measures taken, we assume that the likelihood of a serious IT risk occurring is low.

Global IT security guidelines

Environmental and safety risks

Merck is a company with global production operations and is exposed to risks of possible damage to people, goods and its image. We minimize the risks to people and the environment by means of auditing, advising and training in matters of environmental protection as well as occupational health and safety. In order to ensure the continuity of plant and equipment, Merck monitors these risks both at our own sites as well as at suppliers and contract manufacturers. By adhering to high technical standards, our rules of conduct, and all legal requirements in environmental protection and occupational health and safety, Merck ensures the preservation of its goods and assets.

Management assessment of the overall risk situation

Currently no risks can be identified that could jeopardize the continued existence of the Merck Group. This is the finding of this Risk Report, which was prepared in accordance with German Accounting Standard 5.

Report on Expected Developments

Slight global economic growth expected

Forecast for overall global economic development

The Organization for Economic Cooperation and Development (OECD) assumes that the GDP for its 34 member countries will grow by 1.4% in 2013 followed by a 2.3% increase the year after. The eurozone is forecast to remain nearly flat at –0.1% in 2013 and to grow by 1.3% in 2014. For the United States, the OECD predicts a 2.0% GDP increase in 2013 and another 2.8% rise in 2014.

For Brazil, the OECD expects GDP to grow 4.0% in 2013 and 4.1% a year later. China is forecast to show GDP growth of 8.5% in 2013 and a further 8.9% in 2014 and for India the experts assume a GDP increase of 5.9% in 2013 and 7.0% the year after.

On the other hand, the OECD cites a significant drop in confidence for its outlook. This lack of confidence largely reflects insufficient or ineffective policy responses to reach consensus on measures to address the global economic crisis. The OECD also states that the eurozone still poses the greatest threats to the world economy. The crisis in the eurozone is being sustained by three negative feedback loops: solvency fears for banks, break-up fears for the monetary union and worries surrounding government debt. Progress towards a fully fledged banking union is essential to complete the architecture of the eurozone, the OECD says. This would involve supervision at eurozone level and effective cross-border crisis resolution procedures.

For the United States, the OECD sees current policies appropriate as the employment outlook is improving and inflation expectations are well anchored.

If serious downside risks were to materialize, further policy support would be essential. These downside risks include the eurozone crisis as the largest one and excessive budgetary tightening in the United States (the "fiscal cliff") as well as geopolitical risks.

The International Monetary Fund (IMF) considers downside risks to be higher than previously. A key question in its forecast is whether the global economy is just hitting another bout of turbulence or whether the current slowdown has a more lasting component. Its forecast is based on European and U.S. policymakers dealing proactively with their major short-term economic challenges. Thus, global activity is projected to re-accelerate. For the medium term the IMF notes that important questions remain about how the global economy will operate in a world of high government debt and whether emerging market economies can maintain their strong expansion while shifting further from external to domestic sources of growth.

General forecast for the pharmaceutical sector

The pharmaceutical market research firm IMS Institute expects worldwide growth of pharmaceuticals to be between US$ 220 billion to US$ 250 billion from 2012 to 2016. Growth will be driven by emerging markets primarily due to increased access to medicines. These markets will nearly double in size and contribute US$ 150 billion to US$ 165 billion to worldwide pharmaceutical growth in spending.

On the contrary mature markets such as the United States, the top five markets in Europe and Japan will not contribute as much to the overall growth. However, as a consequence of the healthcare reforms by the Obama administration, an increase in spending in the healthcare sector is expected in 2013 and 2014. The U.S. market is forecast to grow by 1% to 4% or US$ 35 billion to US$ 45 billion through 2016.

The top five European markets will continue to suffer from austerity measures and only grow by 1% to 2% through 2016. Japan is expected to see growth rates between 1% and 4% until 2016.

According to the IMS Institute, the United States is set to remain the leading market worldwide by 2016, followed by China, which is expected to replace Japan in second place. Brazil is forecast to move up from sixth to fourth place in 2016, followed by Germany, which currently ranks fourth.

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Growth in the pharmaceutical and chemical industry driven by emerging markets

Evaluate Pharma, another pharmaceutical industry market research firm, forecasts worldwide prescription drug sales to grow by nearly 3% CAGR (compound annual growth rate) through 2018 to reach a volume of US$ 885 billion. The experts assume that the worldwide market will grow by 3.3% to US$ 732 billion in 2013 and another 3.7% to US$ 760 billion in 2014.

The IMS Institute expects the number of drugs to be approved for marketing to increase to an average between 32 and 37 each year through 2016.

General forecast for the chemical industry

In a recent publication, the German Chemical Industry Association VCI (Verband der Chemischen Industrie) expects world chemical output to increase by 3.5% in 2013. According to this publication Europe's chemicals industry is forecasted to increase production by 1.0%, whereas the United States is expected to increase its chemicals output by 1.5%, Japan by 1.5%, South Korea by 3.0%, India by 4.5% and China by 9.5%.

The European Chemical Industry Council Cefic (Conseil Européen de l'Industrie Chimique) forecasts a slight expansion of 0.5% in European chemicals output in 2013. This outlook for the overall chemical sector, excluding pharmaceuticals, is based on an optimistic assumption of modest growth in every quarter. Consumer products, excluding pharmaceuticals, will show a growth rate of only 1.0% in 2013.

The VCI assumes that the German chemical production (excluding pharmaceuticals) is set to rise 1.5% in 2013. Output of fine and specialty chemicals is expected to increase in 2013 by 1.5%, the production of pharmaceuticals by German companies is forecast to increase by 2.5%, according to the VCI. Sales in 2013 should increase by 2.0% to € 188 billion (including pharmaceuticals). China, which currently ranks 11th in terms of German chemical industry exports, is expected to increase its importance continuously, the industry body says.

Forecast for sales and operating result of the Merck Group

Moderate sales increase expected for the Merck Group, EBITDA pre to improve thanks to the effects from the efficiency program

Overall our forecast assumes a moderate increase in energy and raw material prices, as well as increasing personnel costs. Since we produce specialty chemicals, the volatility of oil prices does not have a direct impact on our business. As a company that operates globally, Merck is exposed to a variety of foreign exchange risks, arising especially from the U.S. dollar. Targeted hedging measures are taken to offset these risks to a certain degree.

Against the background of expected and the aforementioned overall economic developments, the Executive Board assumes that sales of the Merck Group will show moderate organic growth in 2013 and 2014. We do expect, however, that as in the last two years, all our businesses operating in the European Union will be exposed to pricing pressure as a result of structural problems such as pressure on public funding deficits, governmental indebtedness and increased competition. In Performance Materials, some erosion of the high market share in the Liquid Crystals (LC) business cannot be excluded. All of this could have a negative impact on our sales. With regard to our main performance indicator, EBITDA pre, the Executive Board expects that the Merck Group will again be able to post an increase in 2013 and 2014 resulting from net savings achieved via the "Fit for 2018" efficiency program. Reported EBITDA will increase markedly in 2013 since the vast majority of one-time costs of the efficiency program were already incurred in 2012. We continue to expect a tax ratio of around 25% in both 2013 and 2014.

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We expect that free cash flow will again be high in 2013 and 2014. The majority of the cash payments for the efficiency program will be due in 2013, which will lead to around € 300 million in additional cash payments in comparison to 2012. The financial liabilities of the Merck Group should further decrease in the coming years, also as a result of our high free cash flow generation. Capital spending on property, plant and equipment is expected to increase to around € 450 million in 2013 and among others includes capital investments in our efficiency prgram. In 2014, the investments should remain at the same level. We expect the equity ratio to increase slightly and to remain at a high level in both 2013 and 2014.

Apart from Europe, Merck considers Brazil, China, India, Japan, Mexico, South Korea, and the United States to be strategically important. Details on the respective business forecasts and expected developments for these countries can be found in the forecasts for the divisions.

Forecast for the Merck Serono division

Cancer and multiple sclerosis are of particular importance to the Merck Serono division as they are diseases for which we offer patients therapeutic options. In the diabetes field, our product Glucophage® is the drug of choice for first-line treatment of type II diabetes. The IMS Institute states that biologics will continue to gain in importance. It is forecast that seven of the top ten medicines will be of biologic origin by 2016. The Merck Serono products in the fields of oncology and multiple sclerosis are biologics and account for large proportion of the division's sales. Evaluate Pharma expects biologic drugs to attain a market share of 21% in the coming year and 22% in 2014. The research firm also estimates that oncology drugs will remain by far the number-one therapeutic area in its forecast for 2018. The market researchers state a 7.1% CAGR (compound annual growth rate) to a volume of US$ 104.1 billion from US$ 64.6 billion in 2011 for oncology. The second biggest therapeutic area is forecast to remain anti-diabetes drugs with 7.8% CAGR and a total volume of US$ 58.2 billion by 2018.

Therapies to treat multiple sclerosis are said to rank twelfth with a volume of US$ 15.1 billion and a growth rate of 2.6% (CAGR).

The IMS Institute reinforces the aforementioned forecasts. They predict oncology drugs to reach a volume of US$ 83 billion to US$ 88 billion by 2016 and by this be the leading therapeutic area followed by antidiabetics. This market is expected to reach a volume of US$ 48 billion to US$ 53 billion by 2016. Drugs for patients suffering from multiple sclerosis are expected to rank thirteenth and reach a market volume of US$ 14 billion to US$ 16 billion by 2016.

For the Merck Serono division, we expect a slight, organic sales increase in 2013 and 2014, however, slower than in 2012. We currently assume no major new product launch in our forecast.

The efficiency program should lead to further cost savings and thus enable further EBITDA pre improvement in both years. In 2013 and 2014 we still expect one-time costs related to our efficiency program which will be lower compared to 2012. Around € 150 million are expected to be incurred in 2013, decreasing to around € 50 million in 2014. Free cash flow will be negatively affected by the cash payments in relation to the efficiency program, although in 2013 it may not reach the levels of 2012. As the cash payments for the efficiency program are expected to decrease in 2014, cash flow should improve again in 2014.

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Divisional EBIT includes the amortization of intangible assets with definite useful lives that were measured at fair value within the scope of the Serono acquisition. Amortization is expected to amount to around € 600 million in 2013 and to decline to around € 570 million in 2014 owing to the expiration of the useful lives of several assets. Marketing and selling expenses, administration expenses and R&D costs should slightly decrease in 2013 and 2014 as a result of the efficiency program. Total annual net savings of € 300 million should be achieved by the end of 2014. R&D spending is contingent upon the investment that will be made in the Biosimilars area.

Merck Serono assumes that sales of Rebif®, its top-selling product, will stagnate in 2013 and start to decline in 2014 as a result of increased competitive pressure. Sales of the oncology drug Erbitux® will only slightly improve or even stagnate in 2013 and 2014, also due to increased competition. For the other franchises such as Fertility, Endocrinology and CardioMetabolic Care, we also expect to see slight growth in both 2013 and 2014. The markets of Asia and Latin America will remain our geographic growth drivers in the coming years. Opportunities in Europe and the United States, Merck Serono's main sales markets today, will result from life cycle management as well as the development of new dosage forms. Royalty income will decline to around € 180 million to € 200 million by 2014.

Ongoing high levels of national debt in some countries and the associated potential reductions in health care spending could lead to declines in sales of some products. Moreover, litigation has been widespread in the pharmaceutical industry for years and this has also adversely impacted Merck Serono in the past. We cannot rule out the possibility of this also being the case in the coming years.

Forecast for the Consumer Health division

Our Consumer Health division is committed to enhancing the quality of people's lives around the world with innovative over-the-counter health care solutions. According to the market research firm Nicholas Hall, the global volume of the over-the-counter drugs market is expected to rise by 4.6% to a volume of nearly US$ 92 billion worldwide in 2013. For the year thereafter, further growth of 5.1% is expected to yield a market volume of approximately US$ 97 billion.

Asia-Pacific (excluding Japan) is forecast to be the biggest growth contributor with a growth rate of 7.7% in 2013 and 7.5% in 2014. Good growth is also expected in Latin America with an increase of 6.4% in 2013 and about 6.8% in 2014. The market researchers forecast a growth rate for Europe of 3.6% in 2013 and 4.1% in 2014. The market for over-the-counter drugs in North America is projected to increase by 2.6% in 2013 and by a further 4.1% the following year.

Consumer Health focusing on profitable products to improve its EBITDA pre

Merck assumes that the sales of its Consumer Health division will be stable in 2013 and return to growth in 2014. The sales development reflects Merck's decision to deprioritize brands, stock keeping units (SKUs) and markets with low or negative profitability and the announced closure of its UK manufacturing site, as well as the discontinuation of a portion of its UK-sourced portfolio of products. This lowers the sales base of the business especially in Europe – which over time will be rebuilt with growth of strategic brands in top markets. In both 2013 and 2014, the focus will continue to be on raising profitability of the division. Therefore, EBITDA pre is expected to slightly increase in 2013 and 2014 and the business expects an improved EBITDA pre margin (as % of sales) of 15% – 17%. This will be achieved by strict cost control in all operating areas as well as by focusing on the growth of profitable elements of the portfolio of brands and markets. Most of the related one-time costs were already taken in 2012, approximately € 10 million to € 15 million should still be incurred in 2013. In parallel to the increase in EBITDA pre, free cash flow is expected to develop positively in 2013 and 2014.

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In 2013 and 2014, the opportunities and risks of the Consumer Health division will be closely linked to the successful marketing of the existing product portfolio and a strengthening of faster growing geographies. The focus here will be placed equally on the strategic brands that have a global and regional presence, as well as some strong local brands. Increasing the profitability of existing products and the overall portfolio remains one of the main priorities. Geographically, Consumer Health remains committed to Europe – its core market – while allocating more resources towards strengthening its presence in growth markets in Asia, Latin America and eastern Europe. In doing this, the Consumer Health division faces risks especially from changes in health care policy framework for food supplements, risks associated with key emerging markets like Venezuela, Mexico and Brazil and consumer purchasing behavior, factors that could negatively impact the business.

Forecast for the Performance Materials division

Liquid Crystals to maintain its leading market position

Merck is the world's leading manufacturer of liquid crystals for liquid crystal displays. Display Search, a market research firm for the display sector, forecasts that the size of liquid crystal displays continues to increase by 7% in 2013 and 8% in 2014. The main growth will be driven by an increase in average TV display size and the tablet computer market.

One major market of our effect pigments business within the Performance Materials division is automotive coatings. The German automobile industry association VDA (Verband der Automobilindustrie) expects the world market for automobiles to grow by 3% to 70 million units in 2013. Growth is expected in the United States and China. For the United States, the VDA expects a 5% increase, while China is seen to increase demand by 6% On the other hand, the automotive marked in western Europe and Japan are predicted to decline by 3% each.

After a very strong 2012 in the Performance Materials division, we expect a slight organic sales decline in 2013. For 2014 we expect a moderate organic increase again.

In 2013, EBITDA pre will still remain high, but at best is expected to be slightly below the very strong level of 2012. Due to the more volatile nature of the business, it is difficult to provide guidance on the longer term momentum. Should we be able to launch new technologies in the following years, the division strives to develop EBITDA pre accordingly. Should this not materialize, 2014 might not reach a higher EBITDA pre level compared to 2013 and our mid-term guidance remains unchanged.

The division assumes that the Liquid Crystals business unit will maintain its market leadership position in LC mixtures in the coming years, but might face increasing competitive pressure compared to the extraordinary position it held in 2012.

Price pressure on LC mixtures is however expected to continue, driven by competition. Further growth should come from new LC mixtures for innovative LCD technologies, but we assume no major new technologies to be introduced in either 2013 or 2014. To maintain our leadership in innovative LC technologies, R&D activities will continue at a high level. This also applies to promising future businesses with reactive mesogens, OLEDs and LED materials, which will account for an above-average share of the growth achieved by the Performance Materials division. We are prepared for the dynamic growth of the Chinese display market and have invested locally to participate in it.

In addition, the Performance Materials division expects that the Pigments & Cosmetics business unit will grow only slightly, but will be able to increase its profitability due to the continued focus on cost management.

Free cash flow in 2013 and 2014 will remain at the elevated levels of the previous years. This will be ensured by carefully managing capital spending and working capital.

→ *Report on Expected Developments*

Forecast for the Merck Millipore division

Merck Millipore is a leading supplier to the life science industry. Its products and services are used for customers in the research, development and production of biotech and pharmaceutical drugs as well as general laboratory applications.

Evaluate Pharma forecasts that the research and development spending in the pharmaceutical industry, which encompasses the main customer base of Merck Millipore, will grow by an average of 1.5% per year from 2011 to 2018. The firm predicts R&D costs will total US$ 136 billion in 2013 and US$ 138 billion in the year after.

In addition to the overall growth of the pharmaceutical industry, Evaluate Pharma also states that biotechnology products will lead the growth with an expected CAGR of 6.2% to 2018. The aforementioned area is a field where Merck Millipore markets products and services to accompany its customers across the entire product development process from drug discovery to production and thus will benefit from the above market growth rates. Small molecule drugs, an area where Merck Millipore offers products to enable research and development, still account for the largest proportion of pharmaceutical drugs and are set to grow 1.0% CAGR until 2018.

Besides the development of the spending in the pharmaceutical industry, the future development of Merck Millipore is dependent on the demand for laboratory chemicals. Market researchers from Frost & Sullivan expect the market volume of laboratory products to grow by 3.5% in 2013.

Moderate growth in sales and EBITDA pre expected for Merck Millipore

The Merck Executive Board expects that the Merck Millipore division will achieve moderate organic sales growth in 2013 and 2014. EBITDA pre will continue to grow in line with sales in both years. The division's EBIT includes amortization of intangible assets that were measured at fair value in connection with the Millipore acquisition. These are expected to amount to around € 190 million in 2013 and 2014. Innovations and new product launches will be an area of focus for the division's future growth. For this reason, R&D costs are expected to rise further in 2013 and 2014. We will incur one-time costs related to efficiency measures in both 2013 and 2014, primarily affecting production and logistics. Despite higher capital spending on property, plant and equipment in 2013 and 2014 to support growth, free cash flow will grow in the coming years driven by close monitoring of inventories.

The Bioscience business unit of Merck Millipore develops products that help scientists to better understand complex biological systems and to discover and develop new therapies. The extensive product portfolio of this business unit is well positioned to grow in the dynamic market, where the innovation and launch of new products is a key component of the development of sales. Parts of the Bioscience business will continue to face challenges due to the slowdown in global economic growth in conjunction with cuts in government research budgets which is currently causing the life science market to soften. We see potential risks associated with the ongoing consolidation and restructuring of the pharmaceutical industry.

The Lab Solutions business unit supplies a broad portfolio of innovative, reliable, high-quality products for general laboratory applications, including water systems, and is expected to grow modestly.

The opportunities for the Process Solutions business unit, which supplies consumables and services for major pharmaceutical and biotech manufacturing companies, lie in a comprehensive product and service portfolio and a geographic presence in future growth markets. A potential volume increase could stem from demand for new products and new service offerings.

→ *Report on Expected Developments*

Apart from the established markets of Europe and North America, the geographic growth drivers of the Merck Millipore division will be China and India, as well as markets in Latin America.

Risks for the division could also arise from the cost pressure which dominates the life science, biotech and pharmaceutical industry. Overall, we aim to achieve further earnings growth in an uncertain market environment by offering a broad product portfolio, aligning our business globally, continuing to bring innovative products and solutions in the market and leveraging our regional strengths.

Summary

In view of the aforementioned expected economic developments, overall the Executive Board predicts a more stable economic environment and a slightly positive outlook on the world economy.

Sales of the Merck Group are expected to grow organically at a moderate pace in both 2013 and 2014. Merck assumes neither any major technology shifts in its chemical businesses nor any major new product launches in the pharmaceutical business in either year. On a reported basis, a stronger euro may lead to negative currency effects in comparison to 2012.

At Group level, EBITDA pre one-time items (EBITDA pre) will increase faster than sales as a result of net savings realized from the Group-wide efficiency program.

Significant increase of net income for the Merck Group expected

At net income level, the comparably higher EBITDA pre and lower one-time costs should lead to a significant increase in 2013 and 2014.

For fiscal 2012, we intend to maintain our existing, long-term dividend policy and will propose to the Annual General Meeting the increased payment of a dividend of € 1.70 per share.

Merck has an extensive risk and opportunity management system, which is described in the Risk Report (page 84 et seq.). Relative to the forecast period of two years published here, we mainly see business-related opportunities and risks. Owing to Merck's diversification and broad product portfolio, a very different spectrum of important opportunities and risks results for each individual division. The relevant explanations are given for the respective divisions in the Management Report.

Our forecasts for Merck take into account the company's weighing up of risks and opportunities in accordance with our operational plans and medium-term assumptions. However, possible acquisitions, divestments and other exceptional items are not included.

Report in accordance with Section 315 (4) of the German Commercial Code (HGB)

The following information is provided in accordance with Section 315 (4) of the German Commercial Code and the explanatory report pursuant to Section 176 (1) sentence 1 of the German Stock Corporation Act (AktG).

As of the balance sheet date, the company's subscribed capital is divided into 64,621,125 no-par value bearer shares plus one registered share. Each share therefore corresponds to € 2.60 of the share capital. The holder of the registered share is E. Merck Beteiligungen KG. It is entitled and obliged to appoint one-third of the members of the Supervisory Board representing the limited liability shareholders. If the holder of the registered share is a general partner, he or she has no such right of appointment. The transfer of the registered share requires the company's approval. The approval is granted at the sole discretion of the personally liable general partner with an equity interest, namely E. Merck KG.

On December 31, 2012, the following shareholders owned direct or indirect investments exceeding more than 10% of the voting rights: BlackRock HoldCo 2, Inc., Wilmington, DE, USA and BlackRock Financial Management, Inc., New York, NY USA.

According to the Articles of Association of Merck, the general partners not holding an equity interest who form the Executive Board are admitted by E. Merck KG with the consent of a simply majority of the other general partners. A person may only be a general partner not holding an equity interest if he or she is also a general partner of E. Merck KG. In addition, at the proposal of E. Merck and with the approval of all general partners not holding an equity interest, further persons who are not general partners not holding an equity interest may be appointed to the Executive Board. The Articles of Association can be amended by a resolution of the General Meeting that requires the approval of the general partners. The resolutions of the General Meeting are, notwithstanding any mandatory statutory provisions to the contrary, adopted by a simple majority of the votes cast. Where the law requires a capital majority in addition to the voting majority, resolutions are adopted by a simple majority of the share capital represented in the vote.
The Articles of Association specify the authorized share capital. The Executive Board is authorized, with the approval of the Supervisory Board and of E. Merck KG, to increase the share capital on one or several occasions until April 3, 2014 by up to a total of € 56,521,124.19 by issuing new shares against cash or contributions in kind. The Executive Board is authorized, where the authorized capital is utilized with the approval of the Supervisory Board, to exclude the limited liability shareholders' subscription rights in the case of a capital increase of up to 10% of the share capital by way of the issue of new shares against cash contributions if the issue price of the new shares is not materially lower than the stock market price. In addition, with the approval of the Supervisory Board, the subscription right of the shareholders can be excluded in order to enable E. Merck KG to exercise its right pursuant to Article 32 (3) of the Articles of Association to participate in a capital increase by issuing shares or freely transferable share subscription rights. Lastly, with the approval of the Supervisory Board, the subscription can also be excluded in order to enable E. Merck KG to exercise its right pursuant to Article 33 of the Articles of Association to convert its equity interest into share capital. The Articles of Association also encompass contingent capital. Accordingly, the share capital is contingently increased by up to € 66,406,298.40 divided into 25,540,884 shares. The contingent capital increase serves to grant exchange rights to E. Merck KG in accordance with Article 33 of the Articles of Association to enable the conversion of its equity interest. The company is not authorized to acquire its own shares.

The company has not entered into any material agreements subject to a change of control pursuant to a takeover offer nor has it concluded any compensation agreements with the members of the Executive Board or employees in the event of a takeover offer.

Subsequent Events

Subsequent to the balance sheet date, no further events of special importance occurred that could have a material impact on the financial position and results of operations of the Merck Group.