

Management Report of the Merck Group



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Overall economic situation

Global economy weakens significantly

The financial crisis that was triggered in summer 2007 by the problems in the U.S. housing market resulted in recessionary trends in the global economy in 2008. In many countries, these led to weak demand in industrial production sectors and were reflected in real gross national product (GNP) of the last two quarters of 2008. While 2007 was still marked by global GNP growth of 5%, this value declined to 3.7% in 2008 according to the International Monetary Fund (IMF). The German Council of Economic Experts registered global economic growth of 2.8% in 2008. The Organization for Economic Cooperation and Development (OECD) reported a 1.4% increase in GNP for its 30 members in 2008.

According to the IMF, raw material prices, which fell in the second half of 2008, reflect the global economic downturn, the strengthening of the dollar and the financial crisis.

In addition, during the second half of 2008, consumer confidence fell, leading to declining consumption and postponed investments, and thus lower product volumes.

While the United States saw a 2.0% increase in GNP in 2007, this number decreased to 1.4% in 2008. In the euro zone, GNP grew by 2.6% in 2007 and, according to the IMF and Eurostat, by 1.2% in 2008. Major European economies such as Germany, France, Italy and Spain all registered a decline in GNP growth in 2008. GNP growth in Germany declined from 2.5% in 2007 to 1.3% in 2008 and fell continuously as of the second quarter. According to OECD statistics, France saw a decline in GNP growth from 2.2% in 2007 to 0.8% in 2008 and Italy saw GNP growth decline from +1.5% in 2007 to -0.2% in 2008.

Even high-growth nations such as China, Russia and India could not escape the global trend completely. Initially, however, they were only slightly affected by the turmoil in the financial markets and the global economic weakness. China's double-digit growth of 12% in 2007 declined to 9.7% in 2008, according to IMF data. This was the first time in five years that the Chinese economy had posted single-digit growth.

Russia was not only affected by the global trend toward economic weakness but also suffered from capital outflows due to the conflict in Georgia. According to data from the German Council of Economic Experts, Russian GNP growth declined from 8.1% in 2007 to 7% in 2008. The OECD and the World Bank assume even lower growth rates.

According to the IMF, India recorded a 7.8% increase in GNP in 2008 following an increase of 9.3% in 2007.

The Japanese economy grew by only 0.5% in 2008 following an increase of 2.1% in the previous year, according to IMF data.

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Global pharmaceutical markets see moderate growth

According to data from the market research institute IMS Health, the global pharmaceutical market grew between 4.5% and 5.5% to a volume of US\$ 780 billion in 2008.

According to IMS figures, the United States, the world's largest pharmaceutical market, grew by 1% to US\$ 208 billion. The weaker growth is attributed to lower demand for newly approved products as well as the economic climate, which is possibly impacting the prescribing practices of physicians.

For Japan, the world's second-largest pharmaceutical market, IMS Health reported growth of 4% to US\$ 66 billion, followed by Germany, where market volume increased by 4% to US\$ 36 billion. In France, the world's fourth-largest market, drug sales increased by 1% to US\$ 31 billion in 2008.

Chemical markets suffer from economic downturn

The European chemical industry association CEFIC, which represents around 50% of all global chemical companies, says that production of chemicals including pharmaceutical active ingredients by its member companies increased by 0.2% in 2008. In the United States, chemical production, including drugs, decreased by 1.1%. Excluding the production of pharmaceutical products, CEFIC reported an 0.6% decline in European chemicals production. According to CEFIC data, in the United States, the decline amounted to 2.4% in 2008. Specialty chemical manufacturers cut their output by 1.3% in 2008. Production of chemicals used by consumers fell by 1.4% in 2008.

The German Chemical Industry Association VCI assumes stagnating production and sales growth of 3% to € 179 billion in 2008. According to the VCI, chemical production had already begun to decline in the second half as the financial crisis impacted an increasing number of customer segments within the chemical industry. The VCI primarily named the automotive and the construction industries as sectors that experienced declining demand.

According to the International Council of Chemical Associations (ICCA), more than 7 million people work in the chemical industry. Including industrial sectors that indirectly depend on the chemical industry, more than 20 million people work in the chemical industry. Global sales are around € 2 trillion, with the largest market being Asia followed by Europe.

Economic development of Merck

Merck largely met the guidance it provided at the beginning of the year in an environment that continually worsened.

With the publication of the Annual Report for 2007, we forecast an increase in total Group revenues in a range between 5% and 9%. We met this objective in 2008: Total revenues increased by 7.1% to € 7,558 million.

We predicted that total revenues of the Pharmaceuticals business sector would rise by between 7% and 11%. In 2008, the business sector achieved an 11% increase in total revenues to € 5,428 million.

In February 2008, Merck expected that total revenues in the Chemicals business sector would grow in a range between 5% and 7%. Owing to negative currency effects and the worsening economic situation, we could not achieve this objective: Total revenues declined by 1.3% to € 2,123 million; on a currency-adjusted basis they increased by 4.7%.

The operating result rose by 16%, matching our forecast of double-digit growth. For the Pharmaceuticals business sector, we expected a high double-digit rise in the operating result. Here we achieved an increase of 57%. In February 2008, we assumed that the earnings contribution from the Chemicals business sector would remain stable. Since we supply our specialty chemicals to some extent to sectors that are sensitive to economic cycles, we sustained a decline of 12%.

Comparison of target and actual values

	Forecast for 2008	Actual values in 2008
Growth of total revenues	5% – 9%	7.1%
Pharmaceuticals	7% – 11%	11%
Chemicals	5% – 7%	–1.3%
Growth of operating result	double-digit	16%
Pharmaceuticals	high double-digit	57%
Chemicals	stable	–12%

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Financial position and results of operations

Return on sales of the Merck Group rises to 15.0%

Total revenues of the Merck Group rose by 7.1% to € 7,558 million in 2008. Negative currency effects, especially in the Chemicals business sector, lowered growth by 4.2%. Organically – meaning adjusted for the impact of currency as well as acquisitions and disposals – growth amounted to 11%. Royalty income, which we disclose as part of total revenues, totaled € 356 million, 26% more than in 2007. Gross margin grew in line with total revenues by 7.1%. Marketing and selling expenses rose by 8.5% since the Merck Serono division intensified its marketing activities. This is closely related to new therapeutic areas, for which our drugs have been approved (details can be found starting on page 33). At 28%, the marketing and selling ratio was only one percentage point higher than in 2007.

We maintained administration expenses at the previous year's level of € 446 million. Other operating income and expenses totaled € 170 million and were thus only half as high as in 2007, which included high one-time integration and restructuring expenses following the acquisition of Serono.

Group-wide, we spent € 1,234 million on research and development. This corresponds to an increase of 20% over 2007 and a research ratio of 16% relative to total revenues. At € 573 million, amortization of intangible assets was slightly higher than in 2007 and relates almost exclusively to ongoing amortization resulting from the Serono purchase price allocation.

The operating result of the Merck Group increased by 16% to € 1,131 million in 2008. Return on sales (ROS) rose to 15.0% from 13.8%.

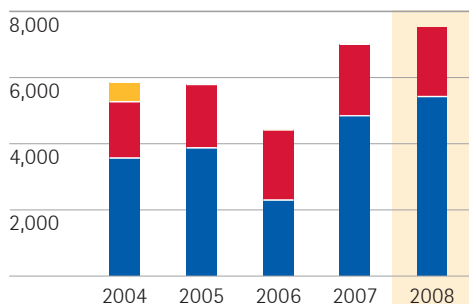
R&D spending increased by 20%.

Exceptional items for pharmaceuticals and restructuring

In 2008, we booked exceptional items of € 400 million. This related primarily to impairments of intangible assets in the Merck Serono division: Due to sharply lower sales expectations for the psoriasis drug Raptiva®, production technology assets were written off in full. This resulted in an expense of € 195 million. Moreover, the licensing rights to Enbrel® for the treatment of rheumatoid arthritis and psoriasis were partially written down due to changes in the estimates of the associated royalty income and the timing thereof. This resulted in an expense of € 43 million. We completely wrote off

Total revenues by business sector*

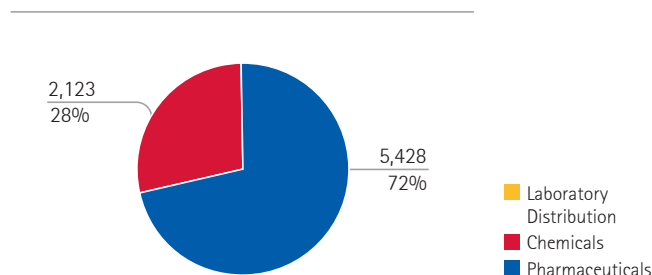
€ million



*excluding Corporate and Other

Total revenues by business sector*

€ million



*excluding Corporate and Other

the goodwill of € 42 million of our former subsidiary Lexigen subsequent to the termination of the relevant research projects. In 2008, we discontinued the development of a high-dose recombinant human growth hormone for HIV-associated adipose redistribution syndrome (HARS) and wrote off in full the intangible assets that had previously been capitalized at € 20 million in this connection.

We booked write-downs of € 29 million for financial assets due to lasting declines in share prices. The Merck Serono division incurred charges totaling € 26 million in connection with the restructuring of its sales force in various European countries.

The Chemicals business sector restructured the Performance & Life Science Chemicals division at its sites in the United States and Brazil. Merck recognized expenses of € 46 million as exceptional items in this connection.

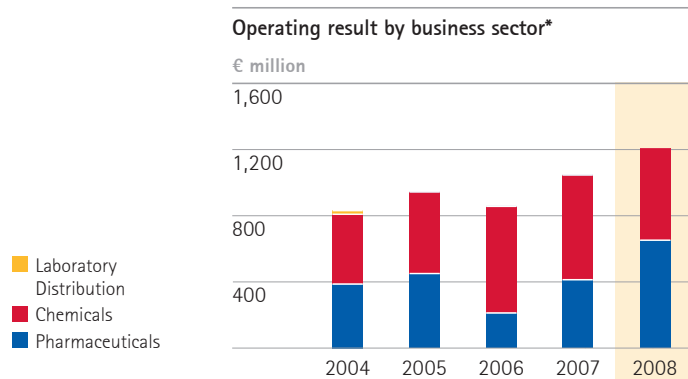
In 2007, exceptional items related mainly to write-downs of inventories, which were remeasured within the scope of the Serono purchase price allocation.

Sharp decline in interest expenses

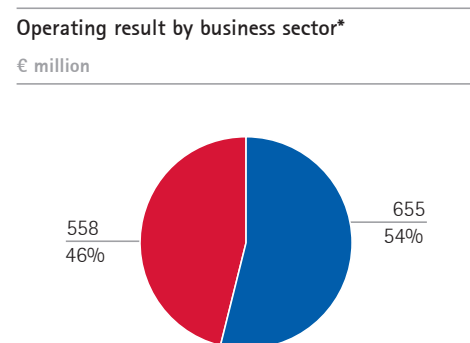
The financial result for 2008 was € –156 million compared to € –311 million in 2007, which was mainly attributable to interest payments for the Serono acquisition. Proceeds from the sale of the Generics business, which were booked in the fourth quarter of 2007, were used to lower financial liabilities. As a result, Merck could considerably reduce its interest expenses in 2008. In 2008, exchange rate differences lowered the financial result by € –18 million, while in 2007, we had booked exchange rate gains of € 9 million.

In 2007, we sold the Generics business to Mylan Inc. and reported it under Discontinued operations in the Group financial statements. As part of the divestment agreement, Mylan received an option to purchase the rest of the business that remained with Merck after the transaction closed. To date, this business has not been transferred to Mylan. It is immaterial for Merck and is reported as part of the Merck Serono division since 2008.

Divestment of Generics helped lower financial liabilities.



*excluding Corporate and Other



*excluding Corporate and Other

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Total revenues by quarter

€ million	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter	2008	2007*
Total	1,858	1,903	1,893	1,904	7,558	7,057
Pharmaceuticals	1,292	1,344	1,352	1,439	5,428	4,877
Chemicals	559	559	541	464	2,123	2,150
Corporate and Other	7	0	0	0	7	29

Components of growth in total revenues by quarter

in %	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter	2008	2007*
Organic growth	14	12	14	6.0	11	11
Pharmaceuticals	14	13	17	15	15	13
Chemicals	13	13	7	-14	4.7	8.7
Currency effects	-5.4	-6.1	-4.8	-0.5	-4.2	-3.6
Acquisitions/disposals	0.0	-0.1	0.0	0.0	-0.1	51
Total	8.3	6.1	8.7	5.4	7.1	58

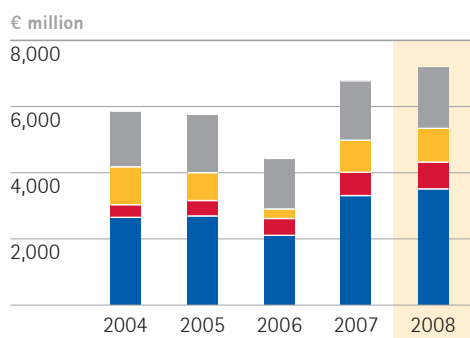
*excluding the Generics division

Above-average sales growth in the new markets of eastern Europe and in China

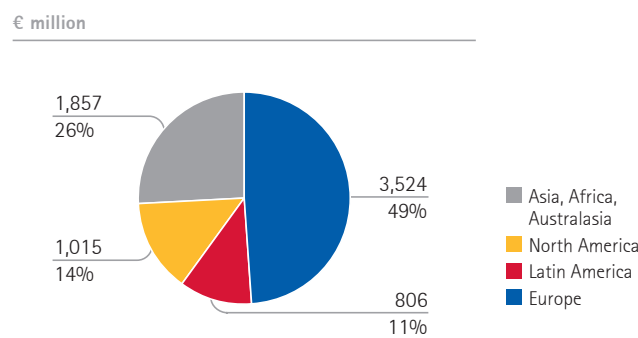
Accounting for nearly half of sales, Europe is Merck's largest market, followed by Asia as well as North America and Latin America. Within Europe, France was once again our top-selling country, where sales increased by 5.6% to € 779 million. Posting slight growth in sales to € 722 million, Germany was our second-largest market, followed by Italy with sales of € 343 million and growth of 7.5%. We increased sales in Poland by 22% to € 86 million and in Russia by 60% to € 72 million. By contrast, sales declined in the United Kingdom due to currency effects.

Traditionally, our sales in Asia are mainly attributable to liquid crystals. Strong currency effects in these markets led to only a moderate 3.7% increase in total Group sales in Asia to € 1,663 million. However, within the Pharmaceuticals business sector, sales increased in Asia by 22% to € 523 million, with China posting an 86% rise to € 116 million. In Japan, our pharmaceutical sales soared by 64% to € 30 million in 2008.

Merck Group | Sales by region



Merck Group | Sales by region



In the North American market, which has grown significantly in importance since 2007 as a result of the acquisition of Serono, Group sales increased by 4.9% to € 1,015 million in 2008, with the United States accounting for € 912 million of the total. Negative currency effects also played a strong role here, resulting in a growth rate in the United States of only 5.6%.

In Brazil, our largest market in Latin America, sales increased by 28% to € 248 million. However, in Mexico, our second-largest market in the region, sales declined by 8.5% to € 166 million due to overstocking by pharmaceutical wholesalers. By contrast, Venezuela and Argentina delivered excellent performances, with growth rates exceeding 25%.

Key figures of the Merck Group

	Operating result € million	Exceptional items € million	EBIT € million	FCF € million	EBITDA € million	ROS %
Pharmaceuticals	655	-354	301	598	1,381	12.1
Chemicals	558	-46	512	474	645	26.3
Corporate and Other	-81	0	-81	-470	-80	-
Total	1,131	-400	731	601	1,947	15.0

EBIT = Earnings before interest and tax

FCF = Free cash flow adjusted for acquisitions and disposals

EBITDA = EBIT before depreciation and amortization

ROS = Operating result/total revenues

Pharmaceuticals increases contribution to operating result

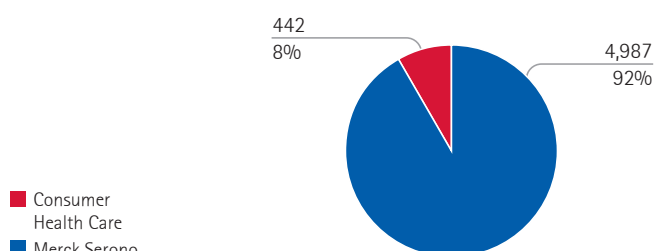
The Pharmaceuticals business sector, comprising the Merck Serono and Consumer Health Care divisions, generated an 11% increase in total revenues to € 5,428 million. The majority of this increase is due to higher sales of the drugs Rebif® and Erbitux®. Royalty income grew by 25% to € 339 million. The operating result increased by 57% to € 655 million. The business sector thus generated 54% of the total operating result*. In 2007, the business sector accounted for 40% of the Group operating result*. Return on sales for the Pharmaceuticals business sector rose to 12.1% compared with 8.5% in 2007.

Total revenues of the Merck Serono division increased by 12% to € 4,987 million and the operating result rose to € 594 million. The 66% increase in the operating result was due to the good development of business and to the absence of high, one-time restructuring and integration expenses for Serono in 2007.

*excluding the segment Corporate and Other

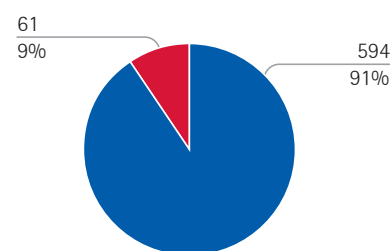
Pharmaceuticals | Total revenues by division

€ million



Pharmaceuticals | Operating result by division

€ million



Pharmaceutical sales higher thanks mainly to Rebif® and Erbitux®

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The division increased its R&D spending by 22%. The research ratio of 22% was two percentage points higher than in 2007. At € 565 million, the high level of expenses due to the amortization of intangible assets was at the previous year's level and was due almost exclusively to the Serono purchase price allocation. Return on sales for the Merck Serono division amounted to 11.9% following 8.0% in 2007.

Total revenues of the Consumer Health Care division rose by 5.2% to € 442 million; the operating result rose by 2.9% to € 61 million compared with 2007. The proceeds of € 11 million on the sale of the biManán® brand in Spain had a positive impact on the operating result. In December, the Belgian company Bio-Fyt was acquired for € 30 million. The division maintained its return on sales of 13.9% at nearly the previous year's level of 14.2%.

Chemicals strongly affected by falling sales and negative currency effects

Total revenues of the Chemicals business sector were € 2,123 million in 2008, corresponding to a decline of 1.3%. Negative currency effects due to the translation of weak currencies such as the U.S. dollar and the Korean won lowered our revenue growth rate of 4.7% by 6.0 percentage points. In the course of the year, and particularly in the fourth quarter, the economic downturn affected sales in our Chemicals business sector, with deliveries to manufacturers of goods used by consumers bearing the brunt.

At € 558 million, the operating result was 12% lower than in 2007. The business sector thus accounted for 46% of the Group operating result* compared with 60% in 2007. Return on sales amounted to 26.3%, compared with 29.3% in 2007. Research and development expenses rose by 4.4% to € 143 million.

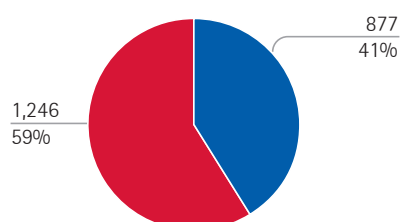
Negative currency effects and the recession strongly impacted total revenues of the Liquid Crystals division. They declined by 4.2% to € 877 million; on a currency-adjusted basis the growth rate was 5.6%. Since Merck produces the basic materials in Darmstadt, but generates sales with customers in Asia and bills in local currencies, the unfavorable currency relationships directly impacted the operating result. Since the fourth quarter, the economic downturn has led to a sharp decline in sales. At € 391 million, the operating result was therefore 20% lower than in 2007. Return on sales declined to 44.6% compared to 53.1% in 2007.

*excluding the segment Corporate and Other

Chemicals business sector contributes 46% to the Group operating result*.

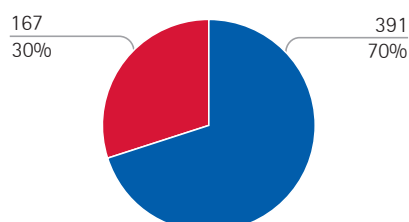
Chemicals | Total revenues by division

€ million



Chemicals | Operating result by division

€ million



■ Performance Et Life Science Chemicals
■ Liquid Crystals

The Performance & Life Science Chemicals division also suffered from negative currency effects as well as from the economic downturn in its effect pigments business. Total revenues were unchanged at € 1,246 million. However, on a currency-adjusted basis, growth amounted to 4.0%. The operating result rose by 15% to € 167 million. This is primarily due to the low level of 2007, which included one-time expenses for write-downs and restructuring measures. At 13.4%, return on sales was markedly higher than 2007, when it amounted to 11.7%.

Sharp increase in profit after tax

Profit after tax from continuing operations was € 379 million. This was considerably better than the negative value of € – 88 million in 2007, which stemmed from high exceptional items due to the Serono acquisition. Adjusted for exceptional items, the tax rate was 25.8%, compared to 28.2% in 2007. In 2007, profit after tax including discontinued operations included the earnings contribution as well as the gain on the disposal of the Generics business.

Dividend proposal

The objective of our dividend policy is to distribute, on a long-term average, a total dividend equivalent to 30 – 40% of the Group profit after tax. We plan to propose to the Annual General Meeting of Merck KGaA on April 3, 2009 a dividend of € 1.50 per share.

Free cash flow affected by higher business volume

In addition to return on sales (ROS), we consider free cash flow an important indicator to assess the financial position of the company. In 2008, free cash flow amounted to € 438 million. In 2007, at € –1,473 million, this indicator reflected the acquisition of Serono and the sale of the Generics business. Free cash flow adjusted for acquisitions and disposals amounted to € 601 million in 2008, compared to € 978 million in 2007. This decline is due mainly to an increase of € 112 million in working capital. Aside from a higher business volume, the increase in receivables is due mainly also to the fact that we terminated a program to sell receivables in Italy and now disclose the financing in

Merck to propose a dividend of € 1.50 per share to the Annual General Meeting.



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our balance sheet. In addition, we increased spending on property, plant and equipment by € 131 million. In 2007, Merck booked around 160 million from one-time gains on the sale of financial assets. Free cash flow before acquisitions and disposals as a percentage of total revenues declined to 8.0% compared to 13.9% in 2007.

Higher equity ratio, lower gearing

Total assets of Merck as of December 31, 2008 were € 15,645 million. This corresponds to an increase of € 722 million, or 4.8%, as compared with December 31, 2007. The higher level of working capital was mainly responsible for this development. The equity ratio increased from 58.2% to 61.1%. This was due to both the improved profit after tax in 2008 as well as currency effects. Net equity increased by a total of € 875 million. In particular, the high level of Serono assets disclosed in the balance sheet after measurement in Swiss francs increased owing to currency effects as the Swiss franc strengthened considerably toward the end of 2008.

On December 31, 2008, net debt, defined as financial liabilities less cash, amounted to € 477 million, as compared with € 355 million on December 31, 2007. At 0.17, gearing (ratio of net debt and pension provisions to net equity) remained at a very low level (2007: 0.18).

Solid balance sheet ratios reflect the financial strategy

Overall, Merck's balance sheet ratios and financial indicators remain a very solid expression of our financial strategy of securing Merck's liquidity at all times. Merck's bank debts are low. In addition, we have issued bonds for refinancing purposes and have secure investment deposits as well as open credit lines. In terms of business development, Merck's performance was satisfactory until October 2008. However, we sustained declines due to negative currency effects, particularly in the Chemicals business sector. In November and December, the economic downturn led to a sharp decline in sales. This affected liquid crystals and, within the Performance & Life Science Chemicals division, particularly effect pigments for automotive coatings.

Merck's bank debts are low.

Capital spending rises markedly

In 2008, Merck invested a total of € 395 million in property, plant and equipment. This was € 131 million or 50% more than in 2007. As a result, the capital spending ratio as a percentage of total revenues increased to 5.2% compared with 3.7% in 2007.

Individual investment projects, each with a value of more than € 0.5 million, accounted for around two-thirds of capital spending. In regional terms, Europe accounted for 84% of the total, with the focus on Germany and Switzerland. In Germany, we invested € 160 million at our two largest production sites, namely Darmstadt and Gernsheim, for new and expanded production capacities and research and development facilities, among other things. In Switzerland, capital spending totaled € 119 million. Capital spending amounted to € 18 million in North America and € 19 million in Latin America. Our companies in Asia accounted for a total capital spending volume of € 24 million. Spending focused mainly on Japan, India and Korea, especially for the Chemicals business sector.

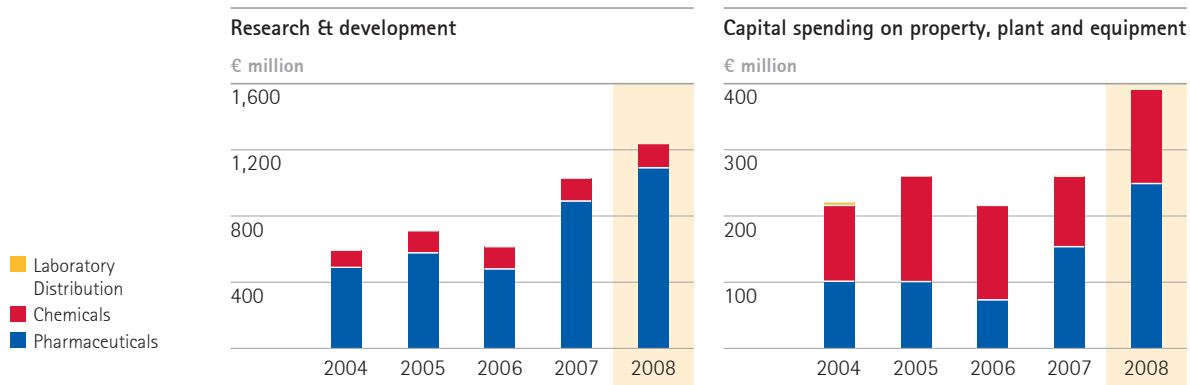
Capital spending by the Pharmaceuticals business sector totaled € 250 million in 2008, with the Merck Serono division accounting for the vast majority of this amount. The main focus of the investments was on the expansion of our biotechnology production capacities in Corsier-sur-Vevey, Switzerland. In November 2008, we placed the cornerstone for the expansion of the Merck Serono Biotech Center, which represents the single largest investment project of the Merck Group in both 2008 and 2009. Around 20% of capital spending for this business sector related to headquarters in Darmstadt, Germany.

Capital spending on property, plant and equipment amounted to € 143 million in the Chemicals business sector, with the Liquid Crystals division accounting for € 65 million and the Performance & Life Science Chemicals division for € 79 million of this total. Both divisions invested primarily at the Darmstadt and Gernsheim sites, our main locations, in order to expand and modernize existing production facilities, to improve infrastructure and to construct new research buildings.

Value added

Value added is a measure of the economic strength of a company and indicates how the corporate result is achieved and for what it is used.

High level of investment in biotech protection facility.



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The corporate result, i.e. the sum of total revenues, other income and financial income, amounted to € 7,713 million in 2008. After deducting the costs of materials as well as other purchased services and expenses, the net value added statement shows that gross value added increased to € 3,975 million in 2008. Following the deduction of write-downs, which were very high in 2007 due to the purchase price allocation for the Serono inventories, net value added amounted to € 2,760 million.

The majority, or 73%, of net value added went towards personnel expenses, i.e. salaries, social security contributions and pension expenses. Financial expenses were significantly lower following an increase in 2007 due to the Serono acquisition. Profit after tax and income tax were higher than in 2007, a year that was strongly impacted by the Serono acquisition.

Net value added statement

€ million	2008	2007*
Total revenues	7,558	7,057
Other income	142	151
Financial income	13	62
Corporate result	7,713	7,270
Cost of materials	-1,089	-1,045
Other purchased services/expenses	-2,649	-2,372
Gross value added	3,975	3,853
Depreciation/write-downs of purchase price allocation	-1,215	-1,658
Net value added	2,760	2,195

Increase in gross value added.

Distribution of net value added

€ million	2008	2007*
Personnel expenses	2,015	1,933
Financial expenses	170	373
Taxes on income	196	-23
Profit after tax	379	-88
Net value added	2,760	2,195

*excluding the Generics division

Responsibility

www.merck.de/responsibility

Headcount increases further

As of December 31, 2008, 32,800 people worked for Merck, 1,832 more than a year ago. Merck was represented in 59 countries by 178 companies. We manufacture our products at 54 sites in 25 countries. The increase in the number of employees related to all businesses. In Germany, the size of the workforce increased by 159 employees. However, in August around 130 sales representatives from Merck Pharma GmbH transferred to the German subsidiary of the Japanese pharmaceutical company Daiichi Sankyo. Owing to the changed framework conditions for off-patent ethical drugs, we decided to continue this business without our own sales force activities. The members of the Primary Care sales force in Turkey and Ireland also transferred to Daiichi Sankyo.

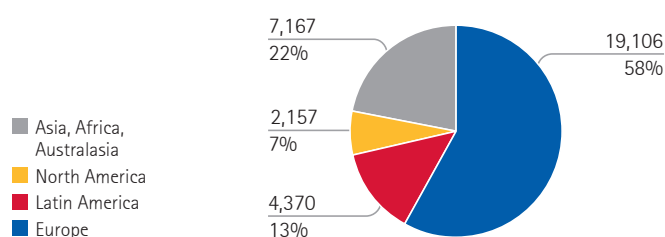
Our workforce in Switzerland grew by 278 employees as a result of the expanded pharmaceutical business. The headcount increased by 316 in Latin America, by 123 in North America and by 1,179 in Asia. Special mention should be made of China, where the workforce grew by 553 employees. The expansion of the Merck Serono business played a significant role here. In several countries, we combined the Merck and Serono companies and eliminated positions. This related above all to the United Kingdom, where the headcount declined by 140. In Spain, we sold biManán®, a local brand of diet products, and also closed one research site. The number of employees declined by 83.

In terms of function, 22% of our employees work in production, 35% in marketing and sales, 14% in research and development, and 6.5% in logistics. The remaining employees work in areas such as Engineering, Environment, IT, Finance and Human Resources.

Access to medicines

In 2007, we joined forces with the World Health Organization (WHO) to combat the tropical disease schistosomiasis – a major threat to children in Africa. In 2008, the project started in eight countries: A total of 14 million tablets of Cesol® 600 containing the active ingredient praziquantel will be distributed in Madagascar, Benin, Nigeria, Cameroon, Senegal, Yemen, the Central African Republic and Angola. In Africa, more than 200 million people are infected. Schistosomiasis is responsible for around 200,000 deaths each year. Over a ten-year period, Merck will provide 200 million tablets to treat around 27 million school children.

Number of employees as of December 31, 2008



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Merck remains the exclusive supporter of the Global Pharma Health Fund (GPHF) in the fight against counterfeit drugs in developing countries. With the GPHF Minilab®, GPHF offers a unique portable compact laboratory that makes it possible to test drugs rapidly and to close gaps in monitoring. The 300th Minilab was delivered for use in 2008.

FTSE4Good-Index: Ethical seal of approval

In 2008, Merck was selected to join the FTSE4Good Index, a share index for global responsible investment. Its members are companies committed to responsible and ethical business practices. Inclusion criteria cover themes such as environmental sustainability, climate change, human and labor rights as well as preventing bribery.

Implementing new chemicals legislation

The EU regulation REACH entered into force in 2007. It stands for “Registration, Evaluation, Authorisation and restriction of Chemicals” and requires all companies manufacturing or importing chemical substances into the European Union to provide evidence of their safety in use. In 2008, we pre-registered all the relevant substances, thereby meeting the preconditions for final registration within the different transition deadlines. In addition, we made all the necessary preparations to implement the Globally Harmonised System of Classification and Labelling of Chemicals (GHS). The EU regulation, which is based on a UN agreement, entered into force on January 20, 2009. The new elements of the GHS hazard communication such as hazard pictograms and signal words will replace the previous hazard symbols and phrases. We expect this to lead to a further improvement in occupational health and safety as well as environment protection aspects when handling our products.

Environmental management system 14001: Under one roof

Based on our responsibility for the environment, we decided to seek certification of all our production sites in accordance with the international environmental management system ISO 14001. According to this standard, environmental performance is permanently recorded and optimized in a continuous improvement process. Merck is building for the first time on a group certificate, which applies to all locations and replaces the former individual certificates. In 2008, the German sites in Darmstadt, Gernsheim, Mainz, Hohenbrunn and Frankfurt, as well as Tres Cantos in Spain were certified. All other production sites are to follow in 2010.

With respect to the measurement of environmental performance, Merck is aiming for a Group certificate for all locations.

Protecting people and the environment

We further improved and refined our environmental, safety and quality management processes in 2008. Spending on environmental protection, health and safety totaled € 131 million. This amount includes investments, operating costs and provisions that have been used. In 2008, direct CO₂ emissions by Merck totaled 164,000 metric tons. This corresponds to a slight increase of 1%. Last year we established the basis to report CO₂ emissions this year in accordance with the Greenhouse Gas Protocol. This often used reporting standard includes not only direct CO₂ emissions from the use of natural gas, oil and other energy sources, but also indirect emissions, such as the proportionate CO₂ quantities from the use of electricity.

Merck shares

Pessimism takes hold in the capital markets

Sentiment in the international capital markets worsened considerably in the course of 2008. Uncertainties regarding potential defaults on sub-prime mortgages, which had begun in 2007 and increased in the course of the year, led to the collapse of some banks in 2008. These banks were either sold or went bankrupt, which triggered a chain reaction in the stock markets, resulting in recessionary trends in different economies. The development of Merck shares was also characterized by this general turmoil in the capital market.

Merck shares outperform the DAX® in 2008.

Merck shares finished 27% lower than in 2007. In terms of our share price performance, we ranked sixth among the DAX® 30 companies. The DAX® index suffered a 40% drop in value in 2008. Merck shares developed virtually consistent with the broad index of European pharmaceutical companies included in the Bloomberg Europe Pharmaceuticals Index (BEUPHRM). This pharmaceutical index recorded a decline of 22% in 2008 compared to 2007.

The relative stability of Merck shares in these turbulent times can be attributed, among other things, to the Merck Group's business model. The Pharmaceuticals and Chemicals business sectors enable us to balance risk, putting Merck on a solid foundation.

Share price supported by good Erbitux® study results

As a result of the strong euro and high oil prices at the beginning of the year, Merck shares suffered with the entire DAX® from fears of only moderate economic growth in Germany. This was followed by a period of uncertainty in which Merck shares remained unchanged in line with the stock markets. At the end of April, the Merck share price recovered and approached its annual high of € 93.79 recorded on January 9, 2008. The capital market's expectations regarding the approval of the oncology drug Erbitux® for early treatment of metastatic colorectal cancer supported the share price development in the second quarter. A committee of the European Medicines Agency issued a positive opinion on May 30. In addition, Merck shares benefited in the second quarter from expectations of positive study results for Erbitux® in the treatment of lung cancer. Merck presented the data at the beginning of June 2008 in Chicago at ASCO, the world's most important oncology congress. We received marketing approval for the early use of Erbitux® in colorectal cancer patients on July 23. This included the potential for broad combination with existing chemotherapies; however, it limits the use of the drug to a certain patient group (see page 34 for details).

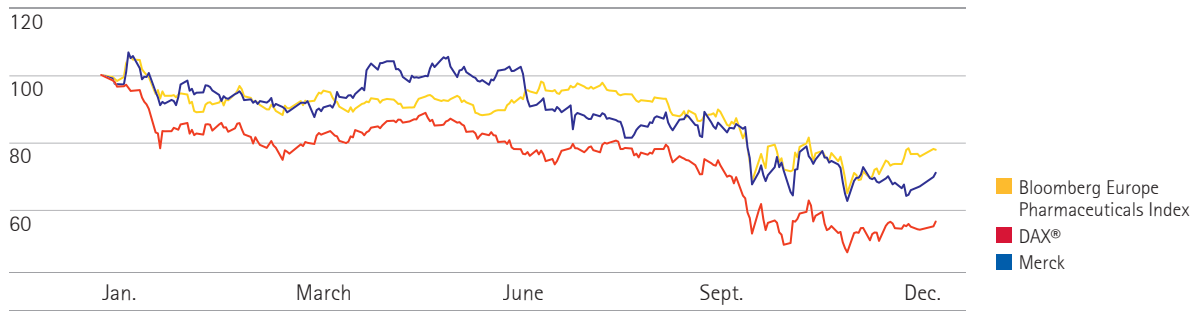
Despite turbulence, our share price recovered slightly at year-end.

In a market environment of continued insecurity, profit-taking in July 2008 exerted downward pressure on Merck shares. In September, the financial crisis reached another peak with the collapse of Lehman Brothers and sent the entire stock market into a tail-spin. Despite our comparatively crisis-resistant business model, the Merck share price declined and reached its annual low of € 57.67 on November 21 but recovered slightly toward year-end.

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The performance of Merck shares vs. the DAX®/Bloomberg Pharmaceuticals Index in 2008

in %



Share data¹

	2008	2007
Earnings per share after tax and minority interest from continuing operations (in €)	1.69	-0.50
Earnings per share after tax and minority interest from continuing and discontinued operations (in €)	1.69	16.21
Dividend in €	1.50	1.20
One-time bonus in €	—	2.00
Share price high in € (January 9, 2008/June 15, 2007)	93.79	106.55
Share price low in € (November 21, 2008/January 2, 2007)	57.67	79.96
Year-end share price in €	64.51	88.30
Actual number of shares in millions (as of year-end)	64.6	64.6
Theoretical total number ² of shares in millions (as of year-end)	217.4	217.4
Market capitalization ³ in € million (as of year-end)	14,024	19,196

¹ Share-price relevant figures relate to the closing price in Xetra® trading on the Frankfurt Stock Exchange.

² The calculation of the theoretical number of shares is based on the fact that the general partner's equity capital is not represented by shares. As the share capital of € 168.0 million was divided into 64.6 million shares, the corresponding calculation for the general partner's capital of € 397.2 million resulted in 152.8 million theoretical shares on December 31, 2008.

³ Based on the theoretical number of shares.

Established in the DAX®

The liquidity of our shares remained at a high level in 2008. On average, 744,506 shares were traded daily. High liquidity makes Merck shares attractive for more investors. At the end of 2008, Merck again ranked 24th in the DAX® with respect to market capitalization, and 30th once again with respect to average share trading volumes.

www.merck.de/investors

Analysts' estimates

As of the end of 2008, Merck shares were covered and assessed by 34 stockbrokers and equity analysts. In comparison, other DAX® companies are followed by an average of 38 brokerages. They serve as multipliers that inform the stakeholders in the capital markets of business developments in a timely manner.

At the end of 2008, a total of 34 investment recommendations had been issued: Merck shares were given buy recommendations by 26 analysts, seven brokerages gave the shares a neutral rating, and one issued a sell recommendation. Analysts adjusted their expectations for the share price as a result of the general pessimism in the capital market. Whereas in 2007 they had estimated an average price of € 102 for Merck shares within one year, their share price estimate was € 79 in 2008. This corresponds to a share price potential of more than 20% compared to the year-end share price of 2008.

Details of the individual analysts and their estimates can be found on our website at www.merck.de/investors.

Analysts see share price potential of 20% over the year-end closing price.

Transparency and proximity to shareholders

We participated in 16 conferences in 2008 in the United States, Europe and Japan as part of our Investor Relations program. Roadshows were conducted in Germany, the United Kingdom, France, Switzerland, Ireland, Italy, Scandinavia and the Benelux countries, as well as on the U.S. west and east coasts, in Canada and Singapore. Altogether, we held more than 500 one-on-one meetings with institutional investors in 2008. We participated in events held by the Deutsche Schutzvereinigung für Wertpapierbesitz e.V. and the Schutzgemeinschaft der Kapitalanleger e.V. to strengthen the private investor base in Germany. We redesigned our website and made it more transparent. We webcasted the Annual General Meeting for the first time in 2008, thereby reaching a broader target group.

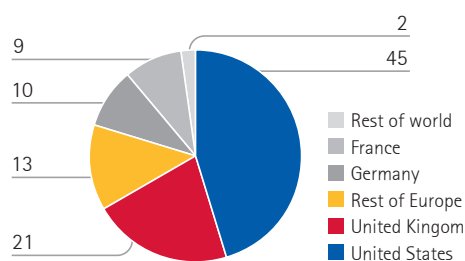
Programs for institutional and private investors intensified.

A more international shareholder structure

The shareholder identification survey conducted in August 2008 identified over 54 million shares and thus more than 80% of the bearer shares in free float. The analysis provides information about the regional distribution of shareholders as well as the classification of investor types. With 45%, U.S. investors continue to hold the majority of Merck shares in free float (2007: 49%), followed by investors residing in the United Kingdom and Germany. The significance of France increased slightly compared to 2007.

Identified investors by region

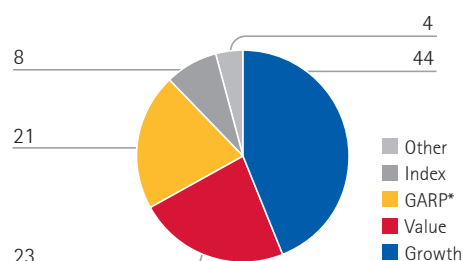
in %



Source: Company data

Identified investors by type

in %



Source: Company data

*Growth at reasonable price

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As of December 31, 2008, the following shareholders reported their holdings in Merck shares to the company in accordance with the German Securities Trading Act:

- Barclays Bank PLC, London (United Kingdom): 5% – 10%
- Capital Group Companies Inc. Los Angeles (United States): 5% – 10%
- Sun Life Financial Inc. Toronto (Canada): 5% – 10%
- Fidelity International Ltd., Hamilton (Bermuda): 3% – 5%
- Templeton Investment Counsel LLC, Fort Lauderdale (United States): 3% – 5%

Merck continues to aim for a more balanced regional distribution of shareholders with a targeted Investor Relations program, concentrating primarily on long-term focused investors.

Information on capital and shares

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. The holder of the registered share is E. Merck Beteiligungen KG (until and including December 31, 2008 E. Merck Beteiligungen OHG). 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 (until and including December 31, 2008 E. Merck OHG). As of the balance sheet date, there were no holdings in the company's share capital exceeding 10% of the voting rights.

According to the Articles of Association of the company, 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 KG and with the approval of all general partners not holding an equity interest, further persons may be appointed to the Executive Board who are not general partners not holding an equity interest.

The Articles of Association of the company can be amended by a resolution of the Annual Meeting that requires the approval of the general partners. The resolutions of the General Meeting are, notwithstanding any 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 of the company 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 March 31, 2010 by up to a total of € 29,824,787.20 by issuing new shares against cash or contributions in kind. 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.

Pharmaceuticals business sector



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Treating and curing

Merck improves quality of life with products such as Euthyrox® to treat thyroid disorders as well as treatments for hormone disorders using the patient-friendly electronic auto-injection device Easypod®.



Merck Serono



Merck Serono is the largest division of Merck. It focuses on specialist therapeutic areas and markets innovative prescription drugs of chemical and biotechnological origin, including monoclonal antibodies and other therapeutic proteins, in more than 150 countries.

Key therapeutic areas/products

- Oncology: Erbitux® (solid tumors)
- Neurodegenerative Diseases: Rebif® (multiple sclerosis)
- Autoimmune and Inflammatory Diseases: Raptiva® (psoriasis)
- Fertility: Gonal-f®, Pergoveris™, Luveris®, Ovitrelle®, Crinone®, Cetrotide® (infertility)
- Endocrinology: Saizen® (growth hormone disorders), Serostim® (HIV-associated wasting)
- CardioMetabolic Care: Glucophage® family (type 2 diabetes), Concor® family (cardiovascular diseases), Euthyrox® (thyroid disorders)

Key events in 2008

- Return on sales (ROS) rises from 8.0% to 11.9%
- Approvals of Erbitux® in the EU for first-line treatment of head and neck tumors and metastatic colorectal cancer (KRAS wild-type) and in Japan for the treatment of metastatic colorectal cancer after the failure of irinotecan
- Groundbreaking ceremony for the expansion of the production site in Corsier-sur-Vevey (Switzerland) to manufacture biological therapies
- Approval of Kuvan® in the EU for the treatment of hyperphenylalaninemia resulting from phenylketonuria or BH4 deficiency

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Achieving growth with new therapeutic options

In 2008, the Merck Serono division generated total revenues of € 4,987 million, 12% more than in 2007. The continuous growth in sales was primarily the result of the solid increases achieved by our main products, for example the biological drugs Rebif®, Erbitux® and Gonal-f® as well as classic products such as Concor® and Glucophage®. We achieved 58% of sales, equivalent to € 2,677 million, with biological drugs. Rebif® was once again our top-selling product. Global sales of this drug for the treatment of relapsing forms of multiple sclerosis (MS) rose to € 1,331 million in 2008 – an increase of 9.3% over the previous year.

Sales of the targeted cancer therapy Erbitux® continued to grow at a strong double-digit rate, increasing by 20% to € 565 million in 2008. Apart from the approval of Erbitux® in the European Union for first-line treatment of head and neck tumors and metastatic colorectal cancer (KRAS wild-type tumors), we also expanded our presence in the key market of Japan. The approval of Erbitux® in Japan gives physicians and patients a new therapeutic option in the second- and third-line treatment of metastatic colorectal cancer. In addition, we laid the cornerstone for the expansion of our biotech production in Corsier-sur-Vevey (Switzerland) in which we will invest a total of around € 300 million. By expanding this site, we will be able to produce greater quantities of biotherapeutics, for example the oncology drug Erbitux® as well as treatments for autoimmune and inflammatory diseases.

www.merckserono.com

We placed the cornerstone for the expansion of our biotechnology production in Corsier-sur-Vevey.

Operating result rises sharply

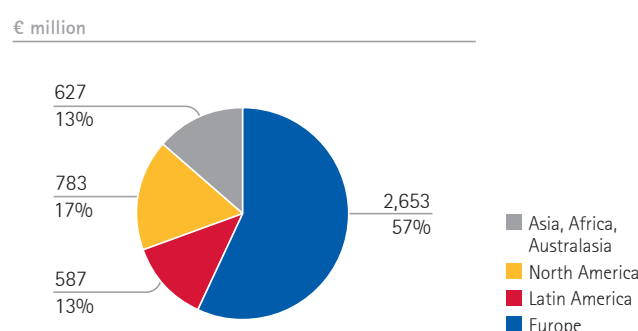
Gross margin increased by 11% to € 4,191 million over the previous year. The operating result rose by 66% to € 594 million. This increase was due, among other things, to the conclusion of restructuring and integration measures following the acquisition of the former Serono. In addition, we increased our royalty income by 25% to € 337 million in 2008.

In Europe, sales by the Merck Serono division grew by 8.7% to € 2,653 million. Our largest market was France, where sales increased by 7.7% to € 625 million. Sales in Germany rose only slightly by 1.7% to € 484 million mainly as a result of restrictive health policies. In both Italy and Spain, sales advanced by 10% and were virtually on a par at € 296 million and € 295 million, respectively. Smaller markets such as Turkey, Russia and the Czech Republic posted strong sales increases of 14%, 48% and 40%, respectively.

Merck Serono | Key figures

€ million	2008	2007	Δ in %
Total revenues	4,987	4,458	12
Gross margin	4,191	3,765	11
R&D	1,074	879	22
Operating result	594	357	66
Exceptional items	-354	-744	-52
Free cash flow (FCF)	554	-6,505	-
FCF before acquisitions and disposals	559	774	-28
ROS in %	11.9	8.0	

Merck Serono | Sales by region



The Merck Serono division has strengthened its position in the North American market.

We expanded our position in North America, where sales rose by 7.2% to € 783 million. In Latin America, we recorded a 19% increase in sales. In Brazil, our largest market, sales grew sharply by 33% to € 196 million. Sales in Venezuela and Colombia surged by 26% and 46%, respectively, whereas in Mexico, sales declined by 8.5% due to overstocking by wholesalers. Sales grew by 20% in the region Asia, Africa, Australasia, primarily thanks to the success in China, where sales jumped by 84% to € 114 million, and Japan, which posted a 64% rise in sales to € 30 million as well as good growth in smaller markets such as Saudi Arabia and Algeria.

Return on sales (ROS) amounted to 11.9% in 2008. Nominal free cash flow was € 554 million, considerably more than in 2007, the year in which we acquired Serono. By contrast, free cash flow adjusted for acquisitions and disposals declined by 28% to € 559 million with the termination of a program to sell receivables in Italy (details can be found on page 99).

Therapeutic areas

	Research	Development	Marketing
Oncology	■	■	■
Neurodegenerative Diseases	■	■	■
Autoimmune and Inflammatory Diseases	■	■	■
Fertility	■	■	■
Endocrinology		■	■
CardioMetabolic Care and other products			■

Oncology

Erbix® offers new prospects in the treatment of head, neck and lung cancer.

With the targeted oncology drug Erbitux® (cetuximab), Merck Serono has not only considerably increased the number of treatment options available in colorectal cancer, but also opened up new medical prospects in the treatment of head and neck cancer as well as lung cancer. In 2008, our Oncology business unit generated sales of € 574 million. The majority share was attributable to Erbitux®, which achieved a 20% increase in sales to € 565 million. Erbitux® currently holds marketing authorizations in 76 countries worldwide.

In July, the European Commission approved the expanded use of Erbitux® in combination with chemotherapy to include not only second- and third-line treatment but also first-line treatment of patients with epidermal growth factor receptor (EGFR)-expressing, KRAS wild-type metastatic colorectal cancer. Patients with KRAS wild-type tumors, which occur in up to 65% of cases, are most likely to respond to Erbitux®, making this drug the first tailored therapy in first-line treatment of metastatic colorectal cancer. As expected, the sales growth rate of Erbitux® slowed from the second to the third quarter of 2008. This was due to the fact that KRAS testing had to be implemented as a standard

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diagnostic procedure. Accordingly, the number of second- and third-line patients initially declined as a result of the focus on patients with KRAS wild-type tumors. In the course of expanded approval, we expect prescriptions for first-line treatment to increase, thereby more than compensating for the lower number of patients in second- and third-line treatment over the medium term. A crucial factor is that reimbursement in different countries is being granted at different points in time.

Further approvals of Erbitux®

In November, Erbitux® was approved in the European Union in combination with platinum-based chemotherapy for treatment of head and neck tumors. This approval is based primarily on the results of the EXTREME study, showing for the first time in 30 years a significant survival advantage in first-line treatment setting. In addition, we received marketing authorization in Japan for the use of Erbitux® in combination with irinotecan in metastatic colorectal cancer – giving pretreated patients access to this new treatment. Merck Serono, Bristol-Myers Squibb and ImClone Systems jointly market Erbitux® in Japan. Our marketing partners receive 50% of profits.

We are working to further expand the range of approved indications for Erbitux®. For example, we submitted an application to the European Medicines Agency (EMA) to approve Erbitux® for first-line treatment of epidermal growth factor receptor (EGFR)-expressing, advanced non-small cell lung cancer (NSCLC).

Neurodegenerative Diseases

Sales by this therapeutic area were almost exclusively attributable to Rebif® (interferon beta-1a). This product is the leading treatment for relapsing forms of multiple sclerosis (MS) outside the United States in terms of sales. Generating sales of € 1,331 million, or 9.3% more than in 2007, Rebif® was once again the top-selling product of the Merck Serono division. Adjusted for currency effects, sales growth amounted to 13%, mainly due to the weak U.S. dollar. We achieved around one-half of Rebif® sales in Europe. The new formulation, which offers improved injection tolerability, has meanwhile been introduced in all countries of the European Union. In 2008, the new formulation of Rebif® was approved in many countries around the world, including Australia, Argentina, Brazil and South Korea. Discussions with the U.S. Food and Drug Administration concerning approval are ongoing. Within the EU, the key markets of Italy and Spain showed exceptionally strong growth. More than one-third of sales were generated in North America, where sales increased by 10% to € 530 million over the previous year. In Latin America, sales remained at the previous year's level overall. However, in Brazil, a young market with considerable potential, we recorded strong double-digit growth. The highest growth rate (+20%) was achieved in Asia, Africa, Australasia, our smallest region.

Rebif® is the top-selling product of the Merck Serono division.

An established core therapy for multiple sclerosis

In 2008, we marked the tenth anniversary of Rebif®. Owing to its proven efficacy and favorable risk-benefit profile, Rebif® has become a core therapy for MS. It is now available in more than 80 countries. According to World Health Organization (WHO) estimates, up to 2.5 million people suffer from MS worldwide. The safety profile of Rebif® is supported by a robust, ongoing clinical development and treatment experience estimated at more than 600,000 patient-years to date.

Autoimmune and Inflammatory Diseases

Sales of our psoriasis treatment Raptiva® (efalizumab) rose by 22% to € 93 million. Raptiva® is approved in more than 60 countries around the world. Owing to sharply lower sales expectations, product technology assets were written off in full, leading to an expense of € 195 million. In the United States, Raptiva® is marketed by Genentech.

Raptiva® is approved for the treatment of adult patients with moderate to severe chronic plaque psoriasis. In some countries, this indication is further restricted to patients who have failed to respond to, or who have a contraindication to, or are intolerant to certain other systemic therapies. Since its approval, approximately 46,000 patients have been treated with Raptiva® worldwide.

However, since October 2008, Merck Serono has been notified of a reported side effect, namely a limited number of confirmed cases of progressive multifocal leukoencephalopathy (PML), a usually fatal viral infection of the central nervous system. The Merck Serono division and the regulatory agencies are reviewing the situation carefully and taking the necessary measures.

Fertility

The Merck Serono division is the global leader in developing and providing drugs to treat infertility. We are the only manufacturer of recombinant versions of all three main gonadotropin hormones. Sales by the Fertility therapeutic area increased 8.9% to € 565 million in 2008. Adjusted for the impact of currency, sales growth amounted to 13%. This was due to North America, where more than 20% of sales are generated. Growth was also above average in Asia, Africa, Australasia, some central European countries and Latin America.

Gonal-f® remains on a growth course

Gonal-f® (follitropin alfa for injection) maintained its position as the world's leading female fertility drug in 2008. This recombinant version of the follicle-stimulating hormone (FSH) is prescribed to supplement or to replace natural FSH. It has been approved in more than 100 countries. Sales rose by 5.9% to € 460 million. Growth slightly exceeded that of the gonadotropin market and was mainly attributable to strong double-digit growth rates in Latin America and Asia, Africa, Australasia, especially Brazil and China. We generated around one-half of Gonal-f® sales in Europe, where sales

Gonal-f® was the leading global female infertility treatment in 2008.

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were maintained at the previous year's level. In particular, sales grew more strongly in Italy and France than the average for the region. In North America, Gonal-f® gained additional market share. However, negative currency effects reduced the double-digit organic growth rate. In Japan, where Gonal-f® is approved to treat male infertility, we filed for regulatory approval in October to expand the indication to include female infertility.

Merck Serono is continually investing in the further development of its products and delivery devices. A new and improved version of the Gonal-f® pen has meanwhile been approved in more than 70 countries. Our efforts to launch the product globally continue.

Two hormones in a single injection

Pergoveris™ is our new drug for the stimulation of follicular development in women with severe luteinizing hormone (LH) and follicle stimulating hormone (FSH) deficiency. It is the first biotech drug based on the combination of both substances in a single subcutaneous injection. Pergoveris™ got off to a successful start, posting sales of € 14 million in the first year since its approval in the member states of the EU as well as Iceland, Liechtenstein and Norway.

Pergoveris™ is our new, additional drug for the stimulation of follicular development.

Ovidrel®/Ovitrelle® (choriogonadotropin alfa), a recombinant version of the natural pregnancy hormone hCG, is used to trigger ovulation in women who are undergoing assisted reproduction techniques. It is the first and only recombinant hCG offered in a ready-to-inject, prefilled syringe that is easy to use. The product generated sales of € 34 million, or 21% more than in 2007. This was due mainly to strong growth in Europe.

Endocrinology

With the specialized therapies and innovative drug delivery devices offered by its Endocrinology therapeutic area, the Merck Serono division is pursuing a clear aim: to improve the lives of patients affected by endocrine and metabolic disorders. Sales in this therapeutic area increased by 4.8% to € 229 million over the previous year. The top-selling product is Saizen®, a recombinant human growth hormone, which generated sales of € 172 million. Demand for Saizen® remained strong, especially in Europe, where sales grew 9.3%. The drug is marketed in most countries for the treatment of growth hormone deficiency in children and adults, as well as in children born small for gestational age (SGA), with Turner syndrome or chronic renal failure. According to expert estimates, the prevalence of growth hormone deficiency in children is between 1 in 4,000 and 1 in 10,000. Yet adults are also affected. In the United States alone, more than 50,000 people suffer from growth hormone deficiency and every year, 6,000 new cases are reported. In the United States, the Endocrinology therapeutic area also offers Serostim®. It is used to treat patients suffering from HIV-associated wasting, which is estimated to affect up to 8% of HIV-infected individuals.

Easypod® electronic auto-injection device drives sales growth of Saizen®

The good development of Saizen® was favorably impacted by the increasing use of the electronic auto-injection device Easypod®. This first delivery device of its kind has made once-daily administration easier for patients and medical professionals. In particular, it helps to monitor compliance. Since the launches in Europe, Australia, Latin America, North America and selected Asian markets, the uptake of Easypod® has increased among patients with growth hormone deficiency.

Kuvan® approved in Europe for the treatment of hyperphenylalaninemia

In the fourth quarter of 2008, the European Commission granted marketing authorization for Kuvan® for the treatment of hyperphenylalaninemia (HPA) due to phenylketonuria (PKU) or tetrahydrobiopterin (BH4) deficiency. HPA is an abnormally high concentration of phenylalanine in the blood, which can cause serious brain damage in infants and children, and transient to lasting neurocognitive impairment in adult patients if a strict diet is not adhered to at all times. Kuvan® is the first drug approved in Europe to treat this rare disease.

We are developing Kuvan® in partnership with BioMarin Pharmaceutical of the United States. Kuvan® was previously granted orphan drug designation by both the FDA and the EMEA. Consequently, Kuvan® has market exclusivity in this indication for ten years in the European Union and for seven years in the United States.

CardioMetabolic Care and other products

The interrelationships between diabetes, cardiovascular diseases and thyroid disorders are the causes of many complex clinical pictures.

More and more physicians are adopting an integrated approach to treat diabetes, cardiovascular diseases and thyroid disorders as they meanwhile attribute the causes of many complex clinical pictures to the multifaceted interrelationships between these conditions. In order to offer physicians and patients effective therapeutic approaches, the Merck Serono division has combined its portfolio of drugs to treat patients with these diseases in its CardioMetabolic Care therapeutic area. Sales by the CardioMetabolic Care therapeutic area increased by 11% to € 916 million, thanks to the strong growth of the Concor® franchise as well to solid growth of the Glucophage® and thyroid product franchises. Sales of other products, some of which we distribute only in individual markets, totaled € 921 million in 2008.

Bisoprolol – the leading beta-blocker in Europe

The Concor® franchise remains the top-selling group within CardioMetabolic Care. Sales of this beta-blocker containing the active ingredient bisoprolol increased by 14% to € 433 million in 2008. As the active ingredient in products such as Lodoz® and Concor®COR, bisoprolol is the leading beta-blocker in Europe. This region accounted for 73% of global sales. The growth of the Concor® family is due primarily to the excellent development of Concor®COR, sales of which increased 17%.

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Metformin recommended for type 2 diabetes

The active ingredient metformin remains the drug of choice for first-line therapy of type 2 diabetes. More than six million patients worldwide are benefiting from one of our oral diabetes therapies based on metformin. According to the International Diabetes Federation (IDF), around 246 million people have diabetes worldwide. Type 2 accounts for 85 to 90% of these cases, and the number continues to grow. According to a study by the Health Services Research Network, the number of type 2 diabetes cases in the United States alone is expected to increase to 29 million by 2050. The guidelines of the IDF, the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD) therefore recommend that newly diagnosed patients with type 2 diabetes be treated immediately with metformin, for example Glucophage®.

Despite generic competition, sales of the metformin franchise rose 9.0% to € 290 million. Branded products from the Glucophage® family generated a respectable 6.1% increase in sales to € 252 million. Glucophage XR® – a once-daily formulation – performed especially well, with sales surging by more than 33%.

Metformin is the drug of choice in type 2 diabetes.

Thyroid hormone Euthyrox® continues to deliver

Sales of our products to treat thyroid disorders increased by 10% to € 150 million in 2008. Nearly two-thirds of sales were attributable to Europe. Sales of the thyroid hormone Euthyrox® increased by 12% to € 129 million. Currently, around 12 million people in more than 70 countries take Euthyrox® every day.

With drugs to treat hypo- and hyperthyroidism as well as to prevent iodine deficiency diseases, Merck Serono is the second largest supplier worldwide. In Europe, Latin America and China we are number one. Thyroid disorders are one of the world's most prevalent diseases. According to epidemiological data, more than 300 million people suffer from hypothyroidism, i.e. underactivity of the thyroid gland, while not even 20% of them are currently being treated. We are therefore working to educate the public and improve awareness of the need to adequately manage this disease.

Globally, more than 300 million people suffer from hypothyroidism.

Research and development

Research and development spending increased markedly by 22% to € 1,074 million in 2008. This is equivalent to 22% of the division's total revenues. Apart from oncology we are focusing our research activities on innovative specialist therapies to treat neurodegenerative diseases such as multiple sclerosis as well as autoimmune and inflammatory diseases. Here and in the therapeutic areas of Endocrinology and Fertility we are simultaneously working on numerous development projects, for example, therapies to help infertile couples to conceive a child as well as treatments for growth disorders.

Overall, around 2,300 employees are engaged in the discovery and development of new drugs – mainly in Darmstadt, Geneva and Boston. They are working in highly specialized fields at the interface of innovative biotechnology and established pharmaceutical science. We improved our efficiency, starting seven new development projects in 2008. In addition, we submitted three of our innovative compounds for approval. We received four new marketing authorizations. In order to streamline our research and development activities, we terminated ten projects at the pre-clinical or clinical stage in 2008. As a result, our R&D pipeline consisted of 12 Phase I projects, eight Phase II projects and 11 Phase III projects in 2008.

We plan to strengthen our biotech R&D activities in the U.S.

With the announced expansion of our U.S. research site in Billerica, Massachusetts in a planned \$ 50 million investment, we will strengthen our biotech research and development activities in the United States. At the research center, which is scheduled to be completed by 2010, around 200 scientists, as well as 50 employees specializing in process development and protein production, will jointly discover and bring forward new treatments for unmet medical needs. The close proximity of protein production to research is expected to drive the rapid transition from research to manufacturing.

Scientific networks helping to secure the future

Cooperating in networks is of paramount importance to our success. In Germany, we belong to a top biotech cluster in the Rhine-Neckar region that is supported by the German federal government. Our researchers are participating in five subprojects. We are involved in pioneering work on new therapeutic strategies to eliminate tumor stem cells in collaboration with the German Cancer Research Center in Heidelberg.

We are cooperating with universities and have set up a fund for research projects.

Another example of our networks is the research alliance between the Merck Serono division and École Polytechnique Fédérale de Lausanne (EPFL). Our joint efforts are focused on the areas of neuroscience, oncology and drug delivery. The agreement has provided for three Merck Serono-endowed chairs as well as a major research fund. One of the projects is exploring the use of nanotechnology to achieve better drug uptake.

By restructuring our partnership with ZymoGenetics, we now have exclusive worldwide development and commercialization rights for atacicept as well as access to other innovative approaches. Merck Serono is developing the recombinant fusion protein atacicept as a potential therapy for autoimmune diseases such as lupus, rheumatoid arthritis and multiple sclerosis.

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Status of our innovative compounds (Status: December 31, 2008)

Therapeutic area	Compound	Indication	Status
Oncology	Erbitux® (cetuximab) ¹	NSCLC	Filed
		Adjuvant colorectal cancer	Phase III
		Gastric cancer	Phase III
	Stimuvax® ²	NSCLC	Phase III
	Cilengitide	Glioblastoma	Phase III
	Erbitux® (cetuximab) ¹	Breast cancer	Phase II
	Cilengitide	SCCHN	Phase II
	Tucotuzumab celmoleukin (EMD 273066/huKS-IL2)	SCLC	Phase II
	EMD 273063 (hu14.18-IL2)	Pediatric neuroblastoma and melanoma	Phase II
	Adecatumumab (MT201) ³	Solid tumors	Phase I
	Aurorakinase inhibitor (AS703569) ⁴	Solid tumors and hematological malignancies	Phase I
	NHS-IL2-LT (EMD 521873)	Solid tumors	Phase I
	DI17E6 (EMD 525797)	Solid tumors	Phase I
	Eg 5 inhibitor (EMD 534085)	Solid tumors und hematological malignancies	Phase I
	Survivac (cancer vaccine)	Solid tumors	Phase I
	MEK inhibitor (AS703026) ⁵	Solid tumors	Phase I
	IMO-2055 ⁶ (TLR9 immunomodulator)	Solid tumors	Phase I
Neurodegenerative Diseases	New formulation of Rebif®	Relapsing forms of multiple sclerosis (MS) EMEA: approved; FDA: filed	Approved/ filed
		Clinically isolated syndrome	Phase III
	Cladribine tablets	Relapsing forms of MS	Phase III
		Clinically isolated syndrome	Phase III
	Safinamide ⁸	Early-stage Parkinson's disease	Phase III
		Mid- to late-stage Parkinson's disease	Phase III
	Atacicept ⁹	Multiple sclerosis	Phase II
Autoimmune & Inflammatory Diseases	Atacicept ⁹	Systemic lupus erythematosus	Phase III
		Rheumatoid arthritis	Phase II
	Fibroblast growth factor 18 ⁹	Osteoarthritis	Phase I
Fertility	Hyperglycosylated FSH	Infertility (OI/ART)	Phase II
Endocrinology	Tesmarolin ¹⁰	HIV patients with lipodystrophy (only U.S.)	Phase III
	ARX 201 ¹¹	Growth hormone deficiency	Phase I

¹ Developed in cooperation with mit ImClone: Erbitux® is a trademark of ImClone Systems, a wholly owned subsidiary of Eli Lilly & Co.

² Exclusive worldwide licensing rights acquired from Oncocyte Inc.

³ Collaboration with Micromet AG

⁴ Collaboration with Rigel Pharmaceuticals Inc.

⁵ All rights acquired from Santhera Pharmaceuticals AG

⁶ Inlicensed from Idera Pharmaceuticals Inc.

⁷ Collaboration with LPath, Inc. ASONEP is a trademark of LPath, Inc.

⁸ Collaboration with Newron Pharmaceuticals S.p.A.

⁹ Collaboration with ZymoGenetics Inc.

¹⁰ Collaboration with Theratechnologies

¹¹ Collaboration with Ambrx, Inc.

SCCHN: Squamous cell carcinoma of the head and neck

NSCLC: Non-small cell lung cancer

SCLC: Small cell lung cancer

OI/ART: Ovulation induction/Assisted reproductive technology

HARS: HIV-associated adipose redistribution syndrome

Personalized medicine:
A genetic test identifies
patients who will respond
best to treatment.

New therapeutic options for cancer treatment with Erbitux®

The results of numerous studies involving the monoclonal antibody Erbitux® (cetuximab) impressively demonstrate the consistent efficacy and versatility of this targeted cancer therapy. In metastatic colorectal cancer, for example, it is now possible to use the KRAS gene as a biomarker to identify those patients who are most likely to respond to treatment with Erbitux®, namely those with KRAS wild-type tumors.

The results of the Phase III CRYSTAL trial underline the value of Erbitux® as a new standard in first-line treatment of metastatic colorectal cancer. In this large randomized trial, 60% of all patients with KRAS wild-type tumors experienced significant tumor shrinkage when treated with Erbitux® in combination with chemotherapy – clearly exceeding the results achieved with chemotherapy alone. The ability of Erbitux® to shrink the tumor translated into a substantially decreased risk of tumor progression and a trend towards prolonged survival for all patients with KRAS wild-type tumors. Furthermore, effective tumor shrinkage might allow complete surgical resection of liver metastases, thereby enhancing the chance of a potential cure. A further randomized Phase II study (CELIM) investigated the efficacy of Erbitux® in combination with standard chemotherapy in patients with initially inoperable liver metastases. Tumor shrinkage was experienced by 79% of patients with KRAS wild-type tumors, and 43% of these patients underwent surgery. A complete surgical removal of the tumor was achieved in 34% – a chance for these patients to be cured. These data are among the best ever achieved for complete surgical removal of liver metastases in metastatic colorectal cancer.

Erbitux® in lung and gastric cancer

A Phase III clinical trial (FLEX) proved that in first-line treatment in combination with a platinum-based chemotherapy, Erbitux® can significantly prolong median overall survival of patients with non-small-cell lung cancer (NSCLC) across all histological patient subgroups. This effect was more pronounced in FLEX patients treated with Erbitux® who developed early acne-like rash, resulting in median overall survival of 15 months. Lung cancer is one of the leading causes of cancer death worldwide: Among men, it claims more lives – around 975,000 per year – than any other form of cancer. Among women, it is responsible for 376,000 deaths each year, second to breast cancer.

A further Phase III clinical trial (EXPAND) was started in the third quarter of 2008 to investigate the efficacy of Erbitux® in combination with chemotherapy as a new option in first-line treatment of gastric cancer. Every year, nearly 930,000 people are diagnosed with gastric cancer and around 700,000 die from it.

Expanding treatment possibilities in oncology

Cancer vaccine Stimuvax®
designed to induce an immune
response to cancer cells.

Two further compounds, Stimuvax® and cilengitide, are currently in Phase III development. Stimuvax® (BLP25 liposome vaccine) is an investigational therapeutic cancer vaccine designed to induce an immune response to cancer cells that express MUC1, a protein antigen over-expressed in many common cancers including lung, breast and colorectal cancer. Stimuvax® is currently in a Phase III study involving patients with non-small cell lung cancer (NSCLC). It is the first cancer vaccine in unresectable locally advanced NSCLC to enter Phase III clinical trial testing (START). The results of a randomized Phase II study found that after three years, almost twice as many patients with unresectable advanced NSCLC receiving Stimuvax® were still alive compared to patients in the control group.

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Merck Serono is currently evaluating the investigational integrin inhibitor cilengitide in glioblastoma – the most aggressive form of brain tumor – and in head and neck cancer. Cilengitide is thought to suppress the new formation of blood vessels (angiogenesis) and cut off the tumor from the blood supply. In addition, it is believed to target tumor cells directly. Following Phase II data, cilengitide is now being studied in a global Phase III trial (CENTRIC) to evaluate its efficacy in patients with newly diagnosed glioblastoma. All patients enrolled in the study are carriers of a specific chemical modification in a certain section of their DNA (methylated MGMT promoter). A further Phase II trial (ADVANTAGE) is evaluating the novel combination of cilengitide and Erbitux® in squamous cell carcinoma of the head and neck. In addition, we entered into a worldwide alliance with Lpath, Inc. of the United States to develop and commercialize sonepcizumab (ASONEP™), a Phase I monoclonal antibody currently being evaluated for the treatment of various cancer types.

Progress with the further development of Rebif®

Our development projects in Neurodegenerative Diseases are focused on innovative therapeutic options for multiple sclerosis (MS) and Parkinson's disease – two areas with high unmet medical needs. The Merck Serono division wants to expand the range of approved indications for the successful MS treatment Rebif® based on the outcome of clinical trials. One of the aims is to enable more patients in the early stages of the disease to benefit from treatment with Rebif®. In September, we completed the enrollment of more than 500 patients for the REFLEX trial, one of the most important studies on the further development of Rebif®. This 24-month Phase III registration study will examine the efficacy of the new formulation of Rebif® in clinically isolated syndrome. In this new indication, the study participants have so far only experienced MS-like attacks, but have not yet been diagnosed with clinically defined MS. The aim of the study is to investigate the therapeutic value of Rebif® prior to the outbreak of MS in these patients.

Initial results of the ongoing Phase IIb IMPROVE study after 16 weeks of treatment show that the primary endpoint has been met, confirming the therapeutic effect of the new formulation of Rebif® in MS patients. The number of active lesions in the brain as measured by magnetic resonance imaging was significantly lower than in patients treated with the new formulation of Rebif® compared with those receiving placebo in the control group.

Oral MS treatment – a new therapeutic option in development

With cladribine tablets, Merck Serono is developing a drug that – once approved – would represent the first therapeutic option for oral treatment of relapsing MS. Patients would only need to take this proprietary oral formulation of a nucleoside analogue a few times a year for a period of four to five days in a single daily dose, making treatment considerably more comfortable and improving the prospects for compliance. The U.S. Food and Drug Administration has given cladribine tablets fast-track designation. The safety and efficacy of cladribine tablets as an MS monotherapy in two dosage strengths were tested in a two-year Phase III registration study called CLARITY. This study, which involved more than 1,300 patients, was completed at the end of 2008. According to the results of the trial, which met the primary endpoint, the relapse rate was significantly reduced. Patients who received a lower total dose experienced a 58% relative reduction in annualized relapse rates versus placebo while patients

Studies are investigating whether Rebif® can be used in early-stage disease.

Cladribine tablets have fast-track designation from the FDA.

who received a higher total dose experienced a 55% reduction. We initiated ORACLE-MS, a further Phase III trial, at the end of September. It will evaluate the efficacy of cladribine in preventing conversion to definite multiple sclerosis in patients at risk of developing multiple sclerosis. The Phase II study ONWARD, which is currently underway, is examining the safety and efficacy of cladribine as an add-on to treatment to interferon beta, for example the new formulation of Rebif®.

Merck Serono is also developing atacicept for the treatment of multiple sclerosis. In April 2008, we initiated a Phase II study to evaluate the efficacy of atacicept in reducing central nervous system inflammation in patients with relapsing MS. In June, an exploratory Phase II trial was started to evaluate the efficacy of atacicept in optic neuritis. Inflammation of the optic nerve is a condition often experienced as an early clinical manifestation by patients with multiple sclerosis.

Safinamide – a potential add-on treatment in Parkinson's disease

Safinamide, an orally administered add-on treatment with a novel mechanism of action, is also in late-stage clinical trials. Together with the Italian pharmaceutical company Newron, we are developing safinamide for Parkinson's disease. A Phase III study to evaluate safinamide as an add-on treatment to levodopa in patients with advanced Parkinson's met its primary endpoint. The motor functioning of patients with advanced Parkinson's disease improved significantly. The "ON" times during which motor function reaches its highest levels were extended by 1.3 hours. In a Phase III study called MOTION, we are evaluating safinamide as an add-on therapy to dopamine agonist in early-stage disease.

Long-acting fertility hormone under development

Our research and development work in the therapeutic area of Fertility is aimed at helping infertile couples to conceive a child, delivering products for every phase of the reproductive cycle from ovulation to early pregnancy. With our innovative treatments and technologies, we want to help couples increase their chances of a successful pregnancy. In addition, it is our aim to continue making our products as patient-friendly as possible.

For example, we are developing a long-acting recombinant follicle-stimulating hormone (hyperglycosylated FSH), which would mean fewer injections for patients. We successfully completed the Phase II program in assisted reproduction (ART) and are ready to advance the compound to Phase III. Phase II studies to evaluate efficacy in inducing ovulation are still underway.

We terminated the development of anastrozole, an aromatase inhibitor for ovulation induction, in July 2008. Although Phase II dose finding studies were successfully completed, the substance did not show a promising profile to be advanced to Phase III when compared to clomiphene citrate, the standard treatment.

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New studies in systemic lupus erythematosus and rheumatoid arthritis

Our research and development activities in the Autoimmune and Inflammatory Diseases therapeutic area focus on proteins that modulate important mechanisms in the development of disease. The Merck Serono division is developing atacicept, a soluble fusion protein, for several indications including rheumatoid arthritis (RA). We completed patient enrollment in our two largest Phase II studies in RA and started another Phase II study in 2008. Data for the first two studies are expected in the second half of 2009.

Focus on proteins that modulate important mechanisms in the development of disease.

Systemic lupus erythematosus (SLE), a chronic inflammatory disease where the immune system attacks the body's own tissues, is an area of high unmet medical need that primarily affects women. A Phase II/III study with atacicept in patients with SLE began in June. We discontinued one study of atacicept in lupus nephritis (LN), a particularly severe form of SLE affecting the kidneys, which was part of the ongoing SLE development program. This Phase II/III study combined atacicept with other medications (mycophenolate mofetil and corticosteroids) and was discontinued because of the occurrence of severe infections. These were thought to be the result of the underlying significant disease activity coupled with the concomitant use of several immunosuppressive medications. We are currently analyzing the data and redesigning the development plan for atacicept in lupus nephritis.

Thanks to its novel mechanism of action, fibroblast growth factor 18 (FGF 18) could be the first treatment for osteoarthritis that stimulates the repair of articular cartilage instead of simply treating the symptoms of this degenerative joint disease. A second Phase I trial in osteoarthritis was initiated at the end of 2008. In July, Merck Serono returned to the Swiss biotech company NovImmune the rights to develop and commercialize the human monoclonal antibody anti-CD 3 (NI-0401).

Development projects on growth disorders and metabolic diseases

Our researchers are working on a number of development projects on selected growth disorders and metabolic diseases in the therapeutic area of Endocrinology. The Merck Serono division can build on its long-standing experience in these therapeutic indications.

Our U.S. subsidiary EMD Serono acquired the commercialization rights to tesamorelin, a growth hormone-releasing factor analogue with therapeutic potential in a variety of anabolic and lipolytic indications. The compound is in the final stages of its second Phase III clinical trial to assess the safety and efficacy when used to reduce excess abdominal fat in HIV patients with lipodystrophy. The development of a high-dose recombinant human growth hormone for the treatment of HIV-associated adipose redistribution syndrome (HARS) was discontinued and an impairment loss was recognized for the intangible assets capitalized to date.

In cooperation with the U.S. biopharmaceutical company Ambrx, we are studying the long-acting growth hormone ARX-201 for the treatment of growth hormone deficiency.

In other projects we are working on the constant further development of our application devices.

Consumer Health Care



The Consumer Health Care division offers consumers high-quality over-the-counter products for preventive health care and self-treatment of minor ailments.

Key products

- Mobility: Products to strengthen the joints, including the brands Seven Seas®, Seven Seas® JointCare and Kytta®
- Everyday Health Protection: Vitamins and minerals sold under brand names such as Cebion® and Diabion®; probiotic multivitamin products Bion®3 and Multibionta®
- Women's and Children's Health: Femibion®, a multivitamin product with folic acid and Metafolin® for pregnant and nursing women; Kidabion® (Haliborange®), a vitamin product for children
- Cough and Cold: Cold remedy Nasivin® (Iliadin®); flu remedy Sedalmerck®

Key events in 2008

- Double-digit organic growth of 12% in total revenues clearly exceeds market growth
- Acquisition of the Belgian company Bio-Fyt
- Divestment of the biManán® brand of diet products in Spain
- Strategic brands further strengthened
- Successful advertising campaign for Kytta® ointment with strong growth in Germany
- Expansion of business in the growth markets of China and India

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Growth with brands that consumers trust

Focusing on four health themes

Our Consumer Health Care division is a specialized supplier of over-the-counter products focused on four health themes: Cough and Cold, Mobility, Everyday Health Protection and Women's and Children's Health. Our main distribution channels are pharmacies, as well as retail chains and mail order in some countries. We are building on the strength of our well-known brands and the trust consumers place in them with respect to their quality and efficacy.

Total revenues of the Consumer Health Care division rose by 5.2% to € 442 million in 2008. Organically, we posted a double-digit sales increase of 12%, more than twice that of the estimated global OTC market. We are continuing to pursue a two-pronged strategy. On the one hand, we are increasingly focusing our business on our strategic brands, while on the other hand we are driving expansion in growth markets such as those of eastern Europe, Asia and Latin America.

In 2008, we continued to invest significantly to further develop our strategic brands. These were financed partly by the proceeds from the sale of the Spanish diet product brand biManán® to the French company Nutrition & Santé for € 11 million. While biManán® was the division's most important brand in Spain, it was only of local significance, did not focus on our health themes and recorded stagnant sales.

Strong currency impact in key markets

In many markets, negative currency effects seriously undermined our strong organic growth. The most significant impact was felt in the United Kingdom, a key market, as well as in the traditionally important markets of Mexico and Venezuela. By contrast, positive currency effects were registered in the growth markets of eastern Europe, for example Poland, the Czech Republic and Slovakia, though these were insufficient to offset the general trend.

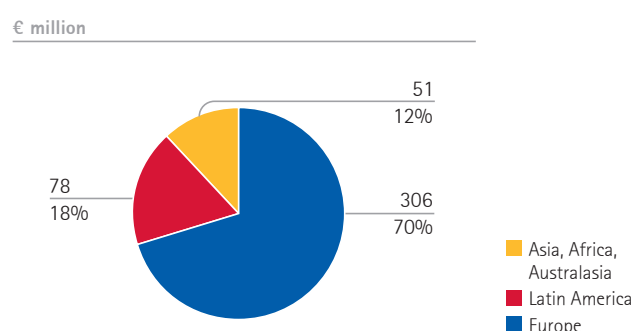
The operating result of the Consumer Health Care division increased to € 61 million, 2.9% more than in 2007. Free cash flow adjusted for acquisitions and disposals decreased by 19% to € 38 million mainly as a result of higher capital spending.

[www.merck.de/
consumerhealthcare](http://www.merck.de/consumerhealthcare)

Consumer Health Care | Key figures

€ million	2008	2007	Δ in %
Total revenues	442	420	5.2
Gross margin	294	284	3.5
R&D	17	12	40
Operating result	61	60	2.9
Exceptional items	–	–	–
Free cash flow (FCF)	5.6	47	–88
FCF before acquisitions and disposals	38	47	–19
ROS in %	13.9	14.2	–

Consumer Health Care | Sales by region



France is the largest market for our Consumer Health Care division.

Good performance in France

Europe remained our most important market. Sales totaled € 306 million. We performed well in the most important core markets, in many cases counteracting weak market developments. In France, where the market for over-the-counter prescription-free medicines declined by 3.2% in 2008, we increased sales by 4.2% to € 94 million in the same period. France was thus once again our largest market. Our subsidiary Merck Médication Familiale saw continued success there with the probiotic multivitamin brand Bion®, achieving a 21% increase in sales to € 23 million. Bion® is now the fifth-leading brand in the French OTC market. The strategic brand Femibion® for pregnant women and nursing mothers also posted a strong 12% increase in sales. Higher sales of strategic brands more than offset the decline in sales of cosmeceuticals from the local dermatology line, which fell to € 26 million. The success of our approach of focusing the business more strongly on strategic brands is apparent here. Merck Médication Familiale now ranks second in both the dietary supplement and OTC markets of France.

Portfolio streamlined in the United Kingdom

Sales in the United Kingdom declined by 16% to € 64 million, primarily as a result of the weakness of the British pound, which had a double-digit currency impact. As a consequence, sales by Seven Seas, our UK subsidiary, decreased by 12%. In local currency, however, sales increased by 2.6%. Seven Seas thus achieved its goal of stabilizing the business despite a 4% decline in the vitamins and supplements market. Compensation payments of around € 4 million from a supplier whose product impurities triggered a recall in 2006 had a positive effect.

At the end of September, we also sold the Petcare business for a low seven-digit figure, thus moving ahead with our plan to streamline the portfolio and divest non-core assets. Sales by Lamberts Healthcare, our mail order business with high-quality vitamins and minerals, stagnated in local currency terms in a weak market.

Kytta® gains market share in Germany

Sales in Germany increased by 16% to € 46 million in a market that declined by 2.5%. The largest contribution to sales came from the plant-based ointment Kytta® for muscle and joint pain. Following a successful advertising campaign, sales increased by 77% to € 14 million in 2008. As a result, Kytta® considerably increased its market share in Germany. Sales of the metafolin product Femibion® also developed favorably, increasing 14% to € 15 million.

Acquisition in Belgium

We increased sales in Belgium by 18% to € 18 million. In particular, we achieved strong sales gains with the strategic brands sold in Belgium under the Omnibionta® umbrella: Sales of Femibion® and Bion®3 increased by 43% and 24% respectively. Sales of the cold remedy Nasivin® grew by 6.7%. In December, we acquired the company Bio-Fyt for € 30 million in order to strengthen our market position and to expand the product portfolio. Bio-Fyt develops, markets and sells mobility, women's health and everyday health-protection products. The acquisition of Bio-Fyt is therefore in line with our strategy of focusing on specific health themes and achieving leading positions within these defined segments.

The acquisition of the Belgian company Bio-Fyt will expand the portfolio.

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Expanding business in eastern Europe

Business in the growth markets of eastern Europe developed dynamically. In Poland, sales totaled € 26 million. Kidabion®, which was launched in Poland 2007, continued to show dynamic growth. Sales of the multivitamin product for children increased by 27%, confirming its position as the market leader. Sales of Femibion® climbed 61% to € 3.8 million and those of Nasivin® rose 23% to € 5.8 million in Poland. We also grew strongly in other eastern European countries, including the Czech Republic (by 31% to € 4.0 million), Hungary (by 32% to € 4.9 million) and Slovakia (by 6.3% to € 2.4 million).

Global expansion

In Venezuela, we solidified our strong position. Apart from the success of Cebion®, sales of which grew by 27% to € 7.9 million, sales of the fish oil product Maxepa® for cardiovascular care surged again, rising 51% to € 5.7 million. Both products expanded their market leadership positions. Total sales in Venezuela grew by 27% to € 19 million, despite strong negative currency effects.

In India, sales grew by 47% to € 6.6 million despite currency effects. Nasivin® accounted for more than one-half of sales. This successful performance was driven by a dedicated sales force, which we established in 2008.

Sales in India soar by 47% despite substantial currency effects.

The Consumer Health Care division has been present in China since 2007 with the multivitamin syrup Kidabion®. We have meanwhile expanded distribution to five provinces and 12 major cities. In order to further expand the business in this key growth market, we established a legal entity based in Shanghai on January 1, 2009.

Strong brands delivering value

In difficult markets and economically uncertain times, strong brands that consumers trust are more valuable than ever before. Our strategy is succeeding: Sales of Nasivin® grew by 39% to € 46 million in 2008. Sales of Kytta® soared by 75% to € 15 million. Bion®3 also posted strong growth of 24% to € 44 million, as did Femibion®, which grew 32% to € 26 million. Only our Seven Seas® brand saw a year-on-year decline in sales of 6.1% to € 42 million due to unfavorable exchange rate movements.

The future strategy builds on the success of our strategic brands, with which we already achieve more than 50% of our global sales.

Chemicals business sector



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Seeing and being seen

Specialty chemicals from Merck provide for extremely high clarity and visibility. Whether as liquid crystals in high-resolution camera displays or as shiny effect pigments for cosmetics.



Liquid Crystals



Liquid crystals from Merck are used all over the world – for example, in most LCD (liquid crystal display) televisions, computer monitors, notebooks, digital cameras and mobile phones, as well as in many other high-quality displays. Merck is the global market leader in this field and, thanks to continuous investments in research and production, also the technology leader. New lighting and display technologies such as OLEDs (organic light-emitting diodes) are another focus of our work. In addition to the core business with materials for displays, in view of climate change and high energy prices we are also active in growth markets. These include the use of solar energy and the development of innovative light sources for energy-saving LEDs.

Key product

- licristal® – Liquid crystals and mixtures for displays

Other product groups

- livilux® – Materials for OLEDs for displays and innovative lighting
- isishape® – Efficient and environmentally friendly materials for producing solar cells and touch-sensitive screens

Key events in 2008

- Market and technology leadership in liquid crystals maintained
- Economic crisis and overcapacities in the market impacted our operating result
- Total revenues were diminished by negative currency effects, yet increased by 5.6% on a currency-adjusted basis

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Leading position maintained

Total revenues of the Liquid Crystals division decreased by 4.2% to € 877 million in 2008. Apart from market correction due to overcapacities, the economic downturn and negative currency effects played a major role. Sales are generated in U.S. dollars or in local currency such as the Japanese yen. As most manufacturing costs are booked in euros but sales are booked in currencies that are presently weak, there is no natural currency hedge for the division's business. On a currency-adjusted basis, growth was 5.6%.

At € 541 million, the division's gross margin fell 12% compared with the previous year. The operating result decreased by 20% to € 391 million as currency effects directly impacted the division's profit. At 44.6%, return on sales was below the previous year's level. Free cash flow declined by only 5.3% to € 402 million.

[www.merck-chemicals.com/
lcd-emerging-technologies](http://www.merck-chemicals.com/lcd-emerging-technologies)

Markets affected to varying degrees

Merck continues to do most of its business with major display manufacturers in Asia. Merck's customers – like other consumer goods manufacturers – are affected by the global economic crisis as well as market overcapacities. However, the impact in the individual regions varies: The first signs of declining demand became noticeable in October, mainly with manufacturers in Taiwan. We saw a more positive picture in Japan and South Korea: Despite the crisis, which was also distinctly felt in these countries during the fourth quarter, full-year sales increased slightly. The reason for this are the differences in the structure of manufacturers: In Taiwan, suppliers mainly serve the electronics industry (original equipment manufacturers), which in turn cover the increased demand of the major electronics companies at peak times. By contrast, in Japan and South Korea the major brand manufacturers predominate. They also produce their own displays and mainly cover the higher-value price segment.

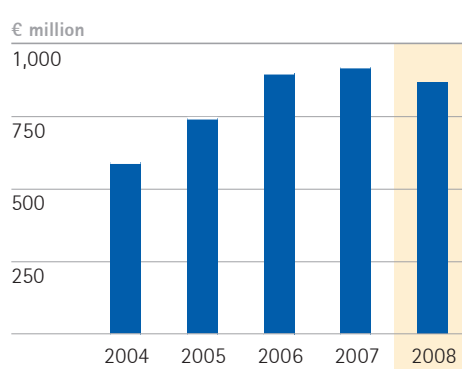
Medium-size screens dominate the market

Televisions and notebooks continue to be the most important growth drivers of the LCD industry. After the trend of the past years toward ever-larger format screens, growth of this segment is slowing and the market is increasingly settling in the medium-price segment with screen diagonals of 32 to 40 inches. For 2009, the market research firm DisplaySearch assumes an increase in total display surface area produced globally.

Liquid Crystals | Key figures

€ million	2008	2007	Δ in %
Total revenues	877	916	-4.2
Gross margin	541	611	-12
R&D	85	79	8
Operating result	391	487	-20
Exceptional items	-	-	-
Free cash flow (FCF)	402	425	-5.3
FCF before acquisitions and disposals	407	425	-4.3
ROS in %	44.6	53.1	-

Liquid Crystals | Total revenues



Investments in research and production

In order to maintain our leadership position in display materials, we continue to invest in research and development as well as in production plants. At € 85 million, the division's R&D spending exceeded the previous year's level. At the Darmstadt site we further expanded our production facilities and broke ground for a new chemical research center, which will also accommodate liquid crystal and organic light-emitting diode (OLED) research. We are expanding our site in South Korea in order to strengthen our research and development and further intensify our cooperation with customers.

LC core business: Merck is technology leader

Based on more than 100 years of experience in liquid crystal manufacturing, we are the global technology leader in the LC industry and the leading development partner to the global display industry, especially for highly complex, specific LC mixtures for technically sophisticated applications. Combining our expertise with our customers' allows us to continuously develop interesting products for consumers and introduce them to the market. We are already working together on technologies for the coming decade to further significantly improve picture quality.

New technologies for displays

PS-VA (polymer stabilized vertical alignment) is the next generation in display technology. It offers better contrast, even faster switching times and, above all, better energy efficiency as backlighting can be significantly reduced. By means of an additional polymer layer, the VA molecules in the display are pre-aligned in a certain direction to achieve the above-mentioned advantages. Innovative materials from Merck have helped pioneer this technology. Some devices with PS-VA displays are already on the market, for example the new PlayStation Portable (PSP). Another innovation was presented in August at the International Consumer Electronics Trade Fair (IFA) in Berlin: the first LCD television with 200/240-hertz technology, produced with our liquid crystal mixtures. It enables even higher definition of fast moving pictures, for example sports programs.

Touch panels

The division is not only a manufacturer of liquid crystal mixtures, but also an important partner to the display industry in other areas. Our patented etching pastes for the isishape® product range are an important component in the manufacture of touch panels. The very thin films used in touch panels must be selectively processed. The layers are often only a few nanometers thick, or about one-thousandth the thickness of a human hair. Touch panels are increasingly used, for example, in high-tech mobile phones, automatic ticket and other vending machines, as well as navigation devices.

Merck is an important development partner to the global display industry.

The new generation of displays offer higher definition and energy efficiency.

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OLED materials

Aside from liquid crystal technology, our researchers are working on materials for innovative displays. Here the special focus of development is on OLED materials (organic light-emitting diodes). They are used in mobile phones, MP3 players and digital picture frames, and have been introduced in televisions. First TV prototypes with 30-inch screens have been announced. Here too, our researchers maintain a close exchange with manufacturers. Merck materials are already inside many OLED displays on the market. Merck also intends to position itself as a leading material supplier in this new display technology.

Growth market of photovoltaics

In addition to display materials, the division is active in the growth market of photovoltaics and is developing new energy-saving lighting materials. In photovoltaics, we are focusing on the development of materials for printing technologies and for the production of organic solar cells. With the isishape® range, we offer solar cell manufacturers printable etching pastes for low-cost structuring of the materials required within the production process. A new production plant was commissioned for this at the Darmstadt site in 2008. New technologies for producing organic and thin-film solar cells are gaining an increasing share of the market as a result of cost advantages.

We supply materials for the production of solar cells.

Alternative to conventional light bulbs

Under “solid-state lighting” we combine research activities focused on developing lighting materials for white LEDs (light-emitting diodes). These LEDs can be an alternative to conventional light bulbs and energy-saving lamps that consume relatively large amounts of energy and have low efficiency rates. If attempts to increase the efficiency of lighting materials succeed, experts estimate that this could eliminate the need for up to 200 coal-fired power plants worldwide. To support these developments, in July 2008 Merck acquired LITEC-LLL GmbH of Greifswald, Germany, a company specializing in the development, production and marketing of ortho-silicate lighting materials.

Our OLED materials are used not only for spot lighting but also for innovative area lighting, making it possible to illuminate large areas while saving energy. Here, prototypes have already been developed in cooperation with leading lighting manufacturers.

Active in the top research cluster

Networks between science and industry play an essential role in developing cutting-edge technologies. Merck is actively participating in several research and cooperation projects, for example the “Organic Electronics” cluster of the Rhine-Neckar metropolitan region, which was one of the winners of the top-cluster competition launched by the German Federal Ministry of Education and Research. Areas of focus include developing organic light-emitting diodes and smart labels based on printed electronic circuits.

Performance & Life Science Chemicals



Specialty chemicals from Merck are important components of the process chain from drug development to industrial production. They ensure reliable analysis in research and dependable production processes. Expertise in chemistry and customer-centric innovations have made us a successful supplier to the pharmaceutical, cosmetics, food, plastics, coatings and printing industries. We find answers to challenges in environmental protection, production safety and product protection. Our goal is to further expand our expertise in regulated markets and in markets with high barriers to entry. The division operates in three business areas:

The success of the Laboratory Business is based on a long tradition. We offer a broad portfolio of laboratory chemicals in a range of product grades including the relevant certificates of analysis, thus ensuring consistent and comparable results.

Life Science Solutions focuses on customer needs in a variety of sectors such as the pharmaceutical industry. We offer products and solutions using the latest technological expertise in chemical and biotechnological processes.

The Pigments business develops and manufactures innovative effect pigments for use in coatings, packaging and product design. Not only decorative, but also security-relevant aspects, for example brand and anti-counterfeit protection, are important here.

Key events in 2008

- High sales level maintained, organic growth of 4.0%
- Operating result increases by 15%, return on sales of 13.4%
- Double-digit growth in several important Asian markets

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Efficient structures in place

Rise in operating result

Total revenues of the Performance & Life Science Chemicals division increased by 0.9% to € 1,246 million in 2008. Currency effects, particularly in the United States and Asia, impacted the division's growth, which amounted to 4.0% on a currency-adjusted basis. Gross margin increased by 2.3% to € 629 million. In comparison with the previous year, which saw restructuring costs, the operating result rose by 15% to € 167 million.

At 13.4%, return on sales was better than in the previous year. Free cash flow decreased by 56% to € 58 million, which was mainly the result of investments in property, plant and equipment, as well as changes in working capital. In 2008, the Performance & Life Science Chemicals division spent around € 58 million on research and development. We consolidated our global chemical production organization in 2008 in order to serve our markets more efficiently.

www.merck-chemicals.com

Growth in the most important markets of Asia

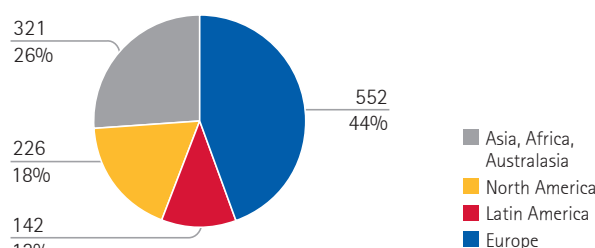
The division performed well in the most important markets of Asia, such as China and India, which recorded growth of 15% and 10%, respectively. Robust growth of 8.7% was also achieved in Latin America. In North America, sales dropped due to the economic downturn that already began in the third quarter. Laboratory Products recorded a slight nominal decline in sales compared with the previous year. The Pigments business, which accounted for around one-fifth of the division's total revenues, was the first to feel the effects of the economic crisis. The automotive coatings business was particularly impacted by declining production in the automotive industry. By contrast, the Life Science Solutions businesses, which are less dependent on economic cycles and accounted for around one-third of the division's total revenues, achieved an increase in sales.

Performance & Life Science Chemicals | Key figures

€ million	2008	2007	Δ in %
Total revenues	1,246	1,235	0.9
Gross margin	629	615	2.3
R&D	58	58	0.0
Operating result	167	144	15
Exceptional items	-46	-	-
Free cash flow (FCF)	58	132	-56
FCF before acquisitions and disposals	67	132	-49
ROS in %	13.4	11.7	-

Performance & Life Science Chemicals

Sales by region | € million



Laboratory Business

[www.merck-chemicals.com/
food-analytics](http://www.merck-chemicals.com/food-analytics)

Growth in Asia and Latin America

In 2008, total revenues of Laboratory Business decreased slightly by 1.6%. On a currency-adjusted basis, total revenues increased by 2.5%. We are represented by our own local companies in 42 countries worldwide with a broad range of laboratory chemicals. We were satisfied with growth in Asia, which reached 6.5% despite strong negative currency effects, and in Latin America, where sales rose by 7.4%. Sales in the European market remained stable, while a decline was recorded in the comparatively smaller market of North America.

Rapid food tests are easy
to use.

Innovative rapid food tests

Our microbiology business achieved sustainable growth in 2008. Rapid microbiology tests have become a special highlight of our portfolio. They are used to detect harmful and pathogenic microorganisms in foods, such as salmonella and coli bacteria. The business for food and environmental tests with the newly launched Spectroquant® Pharo spectrophotometers got off to a good start. They are used to perform tests of the Spectroquant® range rapidly, precisely and efficiently. With our U.S.-based cooperation partner Rules-Based Medicine Inc., we further expanded the bioscience business with bead-based assays for biomarker detection in pharmaceutical research.

New products for chromatography

By acquiring the Swedish company SeQuant we rounded off the chromatography portfolio. SeQuant specializes in the development of products for chromatography, namely the separation of polar chemical compounds. The focus is on innovative ZIC-HILIC® technology. This product line ideally complements our existing portfolio in HPLC (high-performance liquid chromatography). In 2008, ZIC-HILIC® products were also used to test for melamine contamination in formula, as recommended by the U.S. Food and Drug Administration (FDA).

Life Science Solutions

[www.merck-chemicals.com/
life-science-research](http://www.merck-chemicals.com/life-science-research)

Emprove® premium brand portfolio expanded

Life Science Solutions achieved growth of 7.9%. On a currency-adjusted basis, the increase amounted to 10%. Sales rose by 16% in the important market of North America and by 19% in Latin America. The business with pharmaceutical raw materials generated particularly strong growth. Emprove®, Merck's premium brand of pharmaceutical raw materials, generated double-digit growth and was expanded. This brand stands for comprehensive service and excellent quality. The portfolio now comprises three application areas: "Emprove® exp" for use as a pharmaceutical excipient, "Emprove® bio" for use in biopharmaceutical production and "Emprove® api" for use as an active pharmaceutical ingredient.

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The aim is to enable customers to work even faster and more cost-efficiently with Emprove®. The new generation of Fractogel™ for protein purification and separation in pharmaceutical production is scheduled for market launch in 2009. Innovations also include new, customized solutions for cleaning biopharmaceutical production facilities.

[www.merck-chemicals.com/
pharmaceutical-ingredients](http://www.merck-chemicals.com/pharmaceutical-ingredients)

Targeted investments in innovative cosmetic actives

Business with cosmetic active ingredients sustained a decline in sales owing to weaker demand, e.g. for the self-tanning agent DHA. Here we will concentrate more strongly on innovative, patent-protected products and expand the product range by making targeted investments. The new production plant for OxyneX® ST Liquid started up in India at the end of 2008. This is a stabilizer for light-sensitive raw materials used in cosmetic products and perfumes. We are completing a new plant at the Darmstadt site for producing active ingredients used in sunscreen formulations. Eusolex® UV-Pearls are tiny glass beads in which an innovative UV filter is encapsulated.

[www.merck-chemicals.com/
cosmetic-ingredients](http://www.merck-chemicals.com/cosmetic-ingredients)

Cutting-edge technologies strengthened

In 2008, the technology platform for ionic liquids was further expanded, laying the cornerstone for future growth. Certain ionic liquids can be used as electrolytes for producing a special type of solar cells (dye-sensitized solar cells). Another cutting-edge product are evaporation chemicals (Patinal) of the Solarpur™ range, which are used to coat the surfaces of solar cells to increase their efficiency.

Pigments

Business impacted by the economy

Following good growth in the first half of 2008, the strong dependence of the Pigments business on economic trends became noticeable as of August. This was mainly reflected by weak demand from the automotive sector, to which we are an important supplier with pigments for automotive coatings. As of the fourth quarter, the economic weakening also hit the European business. Total revenues in Pigments declined overall by 9.7%.

Asia still offers potential, for example China with a growth rate of 7.5%. However, negative currency effects are impacting business there. Weak demand for consumer goods and current consumer uncertainty also affected the business with pigments for plastics, print products and cosmetics.

[www.merck-chemicals.com/
pigments](http://www.merck-chemicals.com/pigments)

Product lines rounded off

In the current economic situation, we continue to focus on high-value, profitable pigments. In 2008, we added new color tones to our portfolio of the high-growth product lines Miraval® and Ronastar®, and we implemented the widespread launch of the new Pyrisma™ product line. These pigments, which were developed in close cooperation with our customers, offer very intense effects and cover a wide color range.

Functional pigments

Functional pigments performed very well, including pigments for laser marking and antistatic applications (Minatec® range). These are used, for example, to prevent the static charging of plastic floor coverings and for coating plastic parts. Sales of Candurin® pigments, which are used for color coatings of foods and pharmaceuticals, were also strong. While the focus is on decorative effects in the foods sector, pharmaceutical coatings are used to help patients to better identify their medications and to make drugs more counterfeit-proof. Approval has been granted in the United States and some other core countries. We are now focusing on countries where approval has not yet been obtained.

Pigments make it difficult to counterfeit drugs.

Corporate and Other

The segment Corporate and Other comprises Group administrative costs with respect to holding companies, taxes as well as certain exceptional items not assigned to the individual divisions. The operating result of the segment Corporate and Other totaled € –81 million in 2008 as compared with € –72 million in 2007. The financial result was € –156 million, which was much better than in 2007. Since 2007, the financial result has been reported in full in the segment Corporate and Other. Free cash flow declined to € –581 million; free cash flow adjusted for acquisitions and disposals was € –470 million as compared with € –406 million in 2007, mainly owing to high tax payments.

Corporate and Other | Key figures

€ million	2008	2007	Δ in %
Total revenues	6.6	29	–77
Gross margin	–2.7	2.5	–
R&D	0	0	–
Operating result	–81	–72	–
Exceptional items	–	–32	–
Free cash flow (FCF)	–578	–406	–
FCF before acquisitions and disposals	–470	–406	–

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Risk report

Risk and opportunity management

Every conscious business decision is based on weighing the associated risks and opportunities. Therefore, a targeted approach to handling opportunities and potentially negative developments is an integral component of a value-oriented company management.

Risk management in the Merck Group is supported by a uniform, corporate-wide system. Risk management activities are aimed at identifying risks at an early stage and evaluating, controlling and managing them. In order to fulfill this task, corresponding roles and responsibilities have been defined and outlined throughout the Group by means of binding guidelines.

Within the scope of a standardized risk process, the current risk situation is reported to the Executive Board in six-month intervals or, in special cases, on an ad-hoc basis. The risk management system and compliance with the corresponding guidelines are reviewed regularly by the Internal Auditing department.

Opportunities are identified, analyzed and managed in the respective divisions by means of suitable processes. Information on the opportunities in the individual division, and particularly with respect to R&D, are described in more detail starting on page 39 as well as on pages 54 and 58. In agreement with the Executive Board, it is ensured that opportunities are seized actively and in line with the corporate strategy.

Corporate-wide system helps to steer risk.

Business-related risks

Merck has integrated 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 described and evaluated in the risk reports, so that we can take countermeasures in good time if any events should lead to deviations from the business plan. Risks in connection with investment decisions are lowered by the use of detailed guidelines.

As of December 31, 2008, the Merck Group operated 54 production sites in 25 different countries. We have taken appropriate measures to minimize the risk of a supply bottleneck for important products. Total revenues and the operating result of the Merck Group depend on a large number of pharmaceutical and chemical products for various industries. This diversification itself minimizes 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 and chemical company.

We try to prepare for the potential risks of a changing market environment, for example the current recession, further health care cost containment measures or new products from competitors, by continually observing market developments and acting with appropriate foresight.

With respect to the Liquid Crystals and Performance & Life Science Chemicals divisions, Merck is addressing the momentary decline in demand due to the economic situation by temporarily adjusting production capacities.

Merck's diversification contributes to risk minimization..

The special risks of pharmaceutical development are constantly monitored by a portfolio and project management system introduced in the Merck Group. In the course of portfolio management, research areas and all R&D pipeline projects are regularly evaluated and, if necessary, refocused. As a research-based pharmaceutical company, there is the risk for Merck of development projects having to be discontinued – in some cases only after substantial investment – at a late phase of clinical development. Decisions – such as those relating to the transition to the next clinical phase – are taken responsibly in order to minimize risk. Nevertheless, the danger still exists that undesirable side effects of a pharmaceutical product is not discovered until after approval or registration, which could result in restrictions or a product recall.

Financial risks

Merck uses derivative financial instruments to minimize currency risks and financing costs caused by exchange rate or interest rate fluctuations. Financing transactions in foreign currencies are generally hedged. In certain cases, the company also hedges anticipated sales and future costs for a period of up to three years. (More details are available starting on page 126).

Merck's long-term liquidity is ensured.

Material financial transactions involving credit risk are only entered into with banks that have a good credit rating and a minimum rating of A- from Standard & Poor's. The rating of the commercial banks is constantly observed in order to quickly respond to deterioration. From 2007, we have access to a € 2 billion syndicated multicurrency credit facility with 19 banks, which have good credit ratings. Our long-term liquidity is ensured by our positive operating cash flow, the centralized liquidity management within the Group and an available credit facility with a remaining term of six years. We do not see any threat to Merck of a credit bottleneck, even in connection with the current financial crisis. Due to its broad customer base, Merck is likewise only exposed to a low credit risk in its sales markets.

The carrying 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. This can adversely impact profit and affect balance sheet ratios. This applies in particular to the adjustment of book values of acquired companies to the respective fair values. In particular, the share of goodwill and other intangible assets in the consolidated financial statements increased significantly as a result of the Serono acquisition in 2007. (More details are available starting on page 102).

Merck has obligations in connection with pension commitments. The bulk of these obligations is covered by the provisions disclosed in the balance sheet, while the smaller remainder is externally funded. The obligations are regularly evaluated by preparing annual actuarial valuations. Changes in the valuation parameters, for example in the interest rate, salary increase rate or death probabilities, can negatively influence the value of pension obligations and necessitate additional expenditure for pension plans. 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.

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Assessment by independent rating agencies

The capital market makes use of the assessments published by independent rating agencies in order to assist debt providers in estimating the risks attaching to a financial instrument. Merck is currently rated by the agencies Standard & Poor's and Moody's. Since June 30, 2008, Standard & Poor's has given Merck a long-term rating of A-, with a stable outlook. The short-term rating by this agency is A-2. Since December 16, 2008, Moody's has given Merck an improved long-term rating of A3, with a positive outlook. Moody's short-term rating for Merck is P-2. Moody's decision to upgrade our long-term rating was founded on the rapid retirement of debt following the Serono acquisition and the solid cash flow that Merck generates. Thus, both agencies confirm a stable investment grade rating for us.

Moody's upgrades Merck's long-term rating.

Legal risks

Merck is engaged in legal proceedings and government investigations, the outcome of which cannot currently be predicted. We also continue to bear the risks from certain proceedings against companies of the Generics group that we sold to Mylan in 2007. Thus Merck continues to be responsible for example for risks arising from cases concerning drug pricing in the United States. In addition, the Merck Serono division is involved in a licensing dispute in Israel as well as a dispute with a former sales partner in Italy. The company has taken all possible measures to protect its own legal position. (More details can be found starting on page 115).

Should individual products of the Merck Group prove to be defective and/or display undesirable side effects, this could lead to possible compensation claims and legal proceedings owing to product liability.

As a research-based company, Merck has a valuable portfolio of industrial property rights, such as patents and brand names. This can become the target of attacks and infringements. We have taken the necessary precautions to identify threats and defend our rights where necessary. Generally, Merck endeavors to prevent legal risks from arising.

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

Compliance program is binding on all Merck employees.

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

Human resource risks

Merck's success is significantly influenced by the competence and dedication of its employees. The search for qualified specialists, particularly for fields of activity specific to the pharmaceutical sector, is subject to increasingly intensive competition with other companies. We are countering this development by continuously advancing our international personnel marketing measures.

Merck minimizes the consequences of personnel turnover among qualified specialists and executives by means of a Talent & Succession Management Process established throughout the Group. This helps to identify both key positions and talents, thus enabling appropriate vacancies to be quickly filled with suitable employees as a result of targeted selection. Short-term vacancies are managed by means of clearly defined, appropriate deputizing arrangements.

Information technology risks

Business-critical application systems and access to business-relevant data are set up in such a way that, even in the event of individual failures, they are continually available thanks to redundant technical components, networks and sites.

Security guidelines are in place for the entire Merck Group that include appropriate organizational, technical and software-related precautions for access control, access rights, virus protection and data protection. The adherence to and efficacy of these measures are continuously monitored. A dedicated IT risk management process ensures that IT risks are evaluated and appropriate measures taken. This has been confirmed by successful ISO 20000 and ISO 27001 certifications.

Environmental and safety risks

Global adherence to high technical and corporate governance standards prevents potential damage, minimizes the potential effects of such damage, and thus ensures the continuity of plant and equipment. Merck updates these preventive measures regularly; we systematically carry out internal health and environmental safety audits, and through checks and advice, we minimize the risks to people and the environment.

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

At the present time, overall economic environment cannot be assessed. Within just a short period of time, the U.S. subprime mortgage and banking crisis developed into a global financial and economic crisis. The dynamics of this development, coupled with the complexity and interdependencies of the global financial and real markets, is without precedent. The resulting uncertainties reflect the transitory nature of all the economic forecasts made during the past year and the grotesque miscalculations.

These special circumstances make it impossible for us to give any quantitative forecasts. Likewise, qualitative statements concerning trends are – in view of the strong dynamics and limited soundness of such estimates – at the present time not compatible with the planning horizon provided for in this management report.

Subsequent events

There were no material events at Merck after the balance sheet date.