Merck KGaA
Darmstadt, Germany

Quarterly Statement

1st QUARTER 2016

DISCLAIMER

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This document is a quarterly statement pursuant to section 51a of the Exchange Rules for the Frankfurt Stock Exchange.

This quarterly statement contains certain financial indicators such as EBITDA pre exceptionals, business free cash flow (BFCF), net financial debt and earnings per share pre exceptionals, which are not defined by International Financial Reporting Standards (IFRS). These financial indicators should not be taken into account in order to assess the performance of the Group in isolation or used as an alternative to the financial indicators presented in the consolidated financial statements and determined in accordance with IFRS.

The figures presented in this quarterly statement have been rounded. This may lead to individual values not adding up to the totals presented.

The Annual Report for 2015 has been optimized for mobile devices and is available on the Web at **ar2015.emdgroup.com**

IN BRIEF

GROUP
Key figures

€ million	Q1 2016	Q1 2015	Change
Net sales	3,665	3,041	20.5%
Operating result (EBIT)	849	480	76.8%
Margin (% of net sales)	23.2%	15.8%	
EBITDA	1,282	805	59.1%
Margin (% of net sales)	35.0%	26.5%	
EBITDA pre exceptionals	1,084	853	27.0%
Margin (% of net sales)	29.6%	28.0%	
Profit after tax	593	285	>100.0%
Earnings per share (€)	1.36	0.65	>100.0%
Earnings per share pre exceptionals (€)	1.54	1.12	37.5%
Business free cash flow	763	361	>100.0%

GROUP
Net sales by quarter

€ million

GROUP
EBITDA pre exceptionals by quarter

€ million

OUR SHARES

At a glance

In the first quarter of 2016, the stock markets were generally characterized by pronounced weakness, which also affected our shares. Based on a year-end closing price of € 89.57 on December 30, 2015, our share price decreased to € 73.31 on March 31, 2016. This corresponds to a decline of nearly 18% since the beginning of the year. Our shares thus considerably underperformed all the relevant comparative indices. In comparison with the DAX®, their performance was nearly 11 percentage points lower. Our shares underperformed the relevant pharmaceutical industry index by around five percentage points and the relevant chemical industry index by around 12 percentage points.

It should be noted that the pronounced relative weakness of our shares only manifested itself towards the end of the quarter. Until around mid-March 2016, their performance was nearly on a par with that of the generally very weak stock market environment. At the end of 2015, concerns about macroeconomic activity had already resurfaced in the market. These related mainly to economic developments in China and in emerging markets as well as to the perceptible decline in the price of oil.

Since the announcement of our business figures for 2015 on March 8, 2016, our share price has underperformed the relevant indices. The presentation of the figures for fiscal 2015 was received favorably and the reported results slightly exceeded the expectations of analysts and investors. Despite being in line with general market expectations, the first qualitative indicators that we gave in respect of expected sales and earnings performance in 2016 created uncertainty among several market participants as regards future earnings developments. The focus of analysts and investors was on the expected cost increase in "Corporate and Other" as well as the slight inventory reduction in the display industry noted in the first weeks of fiscal 2016. However, the solid figures for the first quarter and more specific guidance for 2016 could help the market to better estimate our business performance in 2016.

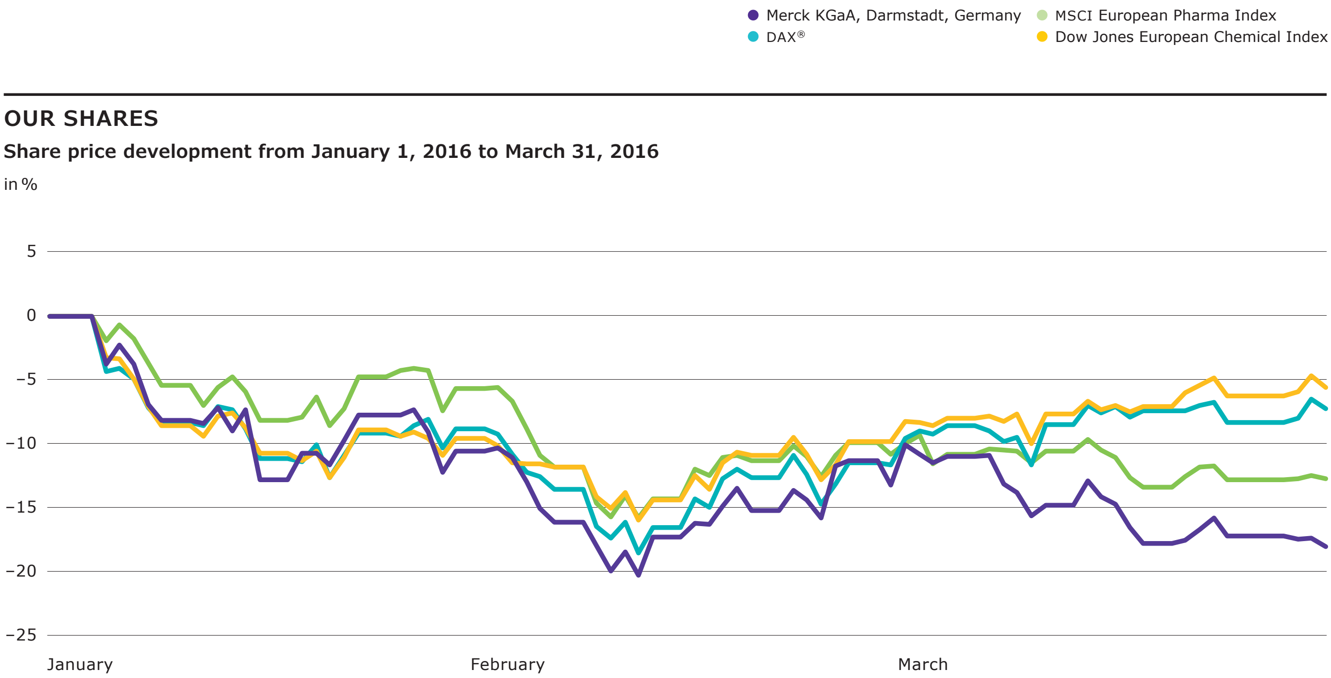
In the first quarter of 2016, our executive management and IR team gave in-depth briefings to more than 150 investors as part of investor conference, roadshows and conference calls.

The average daily trading volume of our shares decreased by around 12% from approximately 583,000 in the previous-year period to over 518,000 in the first quarter of 2016.

OUR SHARES

Share price development from January 1, 2016 to March 31, 2016

in %



Source: Bloomberg (closing rates)

FUNDAMENTAL INFORMATION ABOUT THE GROUP

The Group

We are a global science and technology company headquartered in Darmstadt, Germany. In October 2015, we repositioned our corporate brand. The fundamental redesign of our visual appearance and the introduction of a new logo reflect our transformation into a global science and technology company. At the same time, we simplified the brand architecture. We operate globally unter our corporate brand – the only exceptions are Canada and the United States. In these countries, we operate as EMD Serono in the Biopharma business, as MilliporeSigma – following the completed acquisition of Sigma-Aldrich – in the Life Science business and as EMD Performance Materials in the materials business.

With a history of nearly 350 years, we are the oldest chemical and pharmaceutical company in the world. Our product portfolio ranges from innovative pharmaceuticals and biopharmaceuticals to life science tools, specialty chemicals and high-tech materials.

In line with our strategic direction, our company comprises three business sectors: Healthcare, Life Science, and Performance Materials.

At the Annual General Meeting of the Group on April 29, 2016, Stefan Oschmann took over as new CEO and Chairman of the Executive Board from Karl-Ludwig Kley, who had held this position since 2007. In addition, Udit Batra, Head of our Life Science business sector, and Walter Galinat, Head of our Performance Materials business sector, became new members of the Executive Board. They succeeded Bernd Reckmann, a long-serving member of the Executive Board and until then responsible for Life Science and Performance Materials.

The Group had 50,259 employees worldwide on March 31, 2016, which compares with 39,842 on March 31, 2015 prior to the acquisition of Sigma-Aldrich.

A detailed description of our company and its business sectors can be found in the Annual Report for 2015 starting on page 45. This section of the present quarterly statement summarizes the key developments of the first quarter of 2016 at Merck KGaA, Darmstadt, Germany.

GROUP

Sales by business sector – Q1 2016

€ million / % of net sales

GROUP

EBITDA pre exceptionals by business sector – Q1 2016

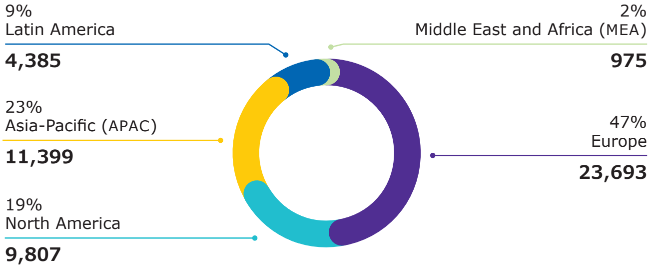
€ million / in %

Not presented: Decline in Group EBITDA pre exceptionals by € –91 million due to Corporate and Other.

GROUP
Business free cash flow by business sector – Q1 2016
€ million / in %

Not presented: Decline in Group business free cash flow by € –104 million due to Corporate and Other.

GROUP
Employees by region as of March 31, 2016
Number / in %



Healthcare

The Healthcare business sector of Merck KGaA, Darmstadt, Germany, comprises the Biopharma, Consumer Health, Biosimilars and Allergopharma businesses. The share of Group sales attributable to our Healthcare business sector was 45% in the first quarter of 2016 and the share of EBITDA pre exceptionals (excluding Corporate and Other) was 43%.

BIOPHARMA

Oncology

In January, we announced a collaboration with Biocartis on a new liquid biopsy technology for RAS biomarker testing and became the first pharmaceutical company to collaborate with multiple diagnostic providers to support RAS biomarker testing.

Immuno-Oncology

During the first quarter of 2016, the Alliance of Merck KGaA, Darmstadt, Germany, and Pfizer entered two collaboration agreements to evaluate avelumab as a potential combination therapy in advanced ovarian cancer. Please see the section on Research and Development for more detailed information.

Neurology/Immunology

We signaled our continuing commitment to this disease area in September 2015, when we announced that we had submitted a letter of intent to the European Medicines Agency (EMA) to file a marketing authorization application for our investigational treatment cladribine tablets for multiple sclerosis. The letter initiates a process to address pre-submission requirements. Submission plans for other parts of the world are being further developed and executed.

Fertility

In March we announced the approval for the improved Gonal-f® prefilled pen from the European Medicines Agency. Originally launched in 2011, this improved version of the pen now includes various advanced features designed to faciliate administration for patients. The improved Gonal-f® prefilled pen is the most recent upgrade to our continuously growing portfolio to support fertility treatment. The prefilled pen provides patients with a simplified self-administrating injection device for our gonadotropins. We will continue to drive innovation to help further improve fertility treatment outcomes.

General Medicine & Endocrinology

At the beginning of 2016, we returned to BioMarin the rights for Kuvan®, a drug used to treat a metabolic disorder known as phenylketonuria (PKU) as well as the option to develop and commercialize Peg-Pal, an investigational drug that is also designed for the treatment of PKU.

CONSUMER HEALTH

On January 1, 2016, we transferred several vitamin brands from our Biopharma business to our Consumer Health business in India. Included in this transfer are Polybion®, a vitamin B complex, Livogen®, a food supplement containing iron and folic acid, and Evion®, a vitamin E supplement. These brands now add to our already existing Consumer Health business in India. The total annual sales volume of the transferred business is around € 45 million.

This recent product brand transfer in India follows a pattern of successful brand transfers from our Biopharma business to our Consumer Health business, all aimed at additional value creation. The first example was the highly successful global consumerization of the Neurobion®/Dolo-Neurobion® franchise as of January 1, 2014 in Latin America and Asia with an annual sales volume of around € 250 million. A second example is the Vigantol® brand transfer in 2015 with a focus on Germany and eastern Europe.

BIOSIMILARS

On March 2, 2016, we announced the initiation of a global Phase III clinical study of MSB11022, a proposed biosimilar of adalimumab, a recombinant human monoclonal antibody in patients with chronic plaque psoriasis. Please see the section on Research and Development for more detailed information.

Life Science

In the first quarter of 2016, we moved forward with the integration of Sigma-Aldrich. The share of Group sales attributable to our Life Science business sector was 38% in the first quarter and the share of EBITDA pre exceptionals (excluding Corporate and Other) was 34%.

Since the acquisition closing, we have expanded the e-commerce platform of legacy Sigma-Aldrich (sigma-aldrich.com) to include core products from our legacy Life Science business portfolio. Overall, we added 50% of the addressable portfolio to the website in the United States and 30% in Europe. We are making good progress in mature markets and are working on plans to expand into other countries beyond Europe and the United States.

As of April 1, 2016, the first four levels of the organization under the Life Science CEO had been announced, representing the vast majority of the new organization’s structure. Additional placements will continue to be made throughout the organization on a rolling basis.

Within the scope of the integration and our effort to unite Life Science employees, we launched the SPARK initiative on February 29, 2016. This offered employees the opportunity to join together and show their commitment by giving back to the communities in which they live and work. The program inspired employees across the Life Science business to log approximately 15,000 volunteer hours and to share their knowledge with more than 60,000 students around the world.

Country integration is one of the critical next steps in the overall integration process to ensure we successfully implement the new structure and go-to-market strategy of our Life Science business sector. We prepared the groundwork for country integration back in September 2015 by holding regional workshops. In January 2016, we initiated the business integration for nearly 40 countries in which independent legal entities of legacy Life Science business and legacy Sigma-Aldrich exist.

The transfer from the Integration Office to a combined team comprising members of the operational marketing, sales as well as customer and distributor relations organizations has already taken place. This team will now track, monitor, and steer the country integration.

In addition, the Life Science business implemented a new brand strategy to leverage the strong brand equity of our combined portfolio. Brands such as Sigma-Aldrich and Millipore will now take on a new role as portfolio brands representing different parts of our product portfolio. All of these portfolio brands are marketed by our company and we will build a strong relationship between our corporate brand and our portfolio brands.

Performance Materials

Our entire specialty chemicals business is combined in our Performance Materials business sector. The portfolio includes high-tech chemicals for applications in fields such as consumer electronics, lighting, coatings, printing technology, paints, plastics, and cosmetics. Performance Materials comprises four business units: Display Materials, Integrated Circuit Materials, Pigments & Functional Materials, and Advanced Technologies.

In the first quarter of 2016, the business sector's share of Group sales amounted to 17% and its share of EBITDA pre exceptionals (excluding Corporate and Other) was 23%. The EBITDA margin pre exceptionals amounted to 43.9% of sales.

In the first quarter of 2016, we again defended our position as the global market and technology leader for established liquid crystal technologies – in the face of declining demand for liquid crystal displays (LCDs) and the associated lower capacity utilization of display manufacturers. New developments such as UB-FFS technology established themselves further in the market in the first quarter of 2016. After UB-FFS enabled a breakthrough in the energy efficiency of displays for smartphones and tablets, we are now working on developing this technology also for large, non-mobile displays such as in televisions. In the first quarter of 2016, the development of new application possibilities for liquid crystals was again an important focus of our LC 2021 strategic initiative. This primarily includes developing liquid crystal windows (LCWs), which allow continuously variable switching from light to dark in just seconds and have high color neutrality compared with competitive technologies. They are intended for use in buildings, but also for example in sunroofs for automobiles.

Integrated Circuit Materials is the second-largest business unit and supplies products for integrated circuit manufacture. On April 1, 2016, Deposition Materials was established as a new business field within Integrated Circuit Materials. It comprises the former SAFC Hitech business of Sigma-Aldrich, consisting of high-purity materials for silicon semiconductors, compound semiconductors, and other high-tech industry applications. Deposition materials ideally complement our offering and strengthen our position as a global leading supplier to the electronics and semiconductor industries. At the annual SPIE Advanced Lithography conference in February 2016 in San Jose, CA (USA), we presented our newly developed material solutions for next-generation lithography, including directed self-assembly (DSA), a revolutionary technology that is crucial to all advanced semiconductor manufacturers. We hold a leadership position in DSA technology thanks to our extensive expertise in polymer synthesis using anionic polymerization techniques as well as many years of process and formulation experience.

The Pigments & Functional Materials business unit develops and markets a comprehensive product portfolio of decorative effect pigments and functional materials. Particularly noteworthy was the increase in demand for our insect repellent IR3535 in the first quarter of 2016. This was triggered by the Zika virus epidemic, which has spread widely especially in Latin America. IR3535 provides effective protection against mosquito bites. It has the advantage of being a safe biologic product that can also be used by pregnant women who are at particular risk from the Zika virus.

The Advanced Technologies business unit invests particularly in future-oriented research and development in Performance Materials. A very good example of this are our materials for organic light-emitting diodes (OLEDs), which are used in new display technologies and lighting techniques. The OLED materials business is one of our fastest-growing businesses. We presented the future potential of OLED lighting in March 2016 at the world's leading Light + Building trade fair in Frankfurt. Artwork installations at the booth showed how OLED materials can be used to build thin, filigree, lightweight light panels that provide great freedom of design. The construction of the new OLED materials production unit progressed according to plan in the first quarter of 2016 and is scheduled for completion by mid-year. With a volume of more than € 30 million, the project is one of the largest single investments we have made at the Darmstadt site in recent years.

Research and Development

We conduct research and development (R&D) worldwide in order to develop new products and services designed to improve the quality of life of patients and to satisfy the needs of our customers. Further optimizing the relevance and efficiency of our research and development activities – either on our own or in cooperation with third parties – is one of our top priorities.

Around 5,000 employees work for our company researching innovations to serve long-term health and technology trends in both established and growth markets. We spent around € 489 million on research and development in the first quarter of 2016. We focus on both in-house research and external collaborations. Our R&D activities are set up in line with the structure of our company with three business sectors.

A detailed description of our R&D activities can be found in the Annual Report for 2015 starting on page 70. This section of the present quarterly statement summarizes the key Research and Development activities during the first quarter of 2016.

Healthcare

BIOPHARMA

Immuno-Oncology/Oncology

On April 5, 2016, Merck KGaA, Darmstadt, Germany, and Pfizer announced the initiation of a Phase III study of avelumab, an investigational fully human anti-PD-L1 IgG1 monoclonal antibody, in an advanced renal cell carcinoma (RCC) setting. The study, JAVELIN Renal 101 is a multicenter, international, randomized, open-label Phase III trial designed to evaluate the potential superiority, assessed by the progression-free survival (PFS), of first-line avelumab combined with INLYTA® (axitinib) compared with SUTENT (sunitinib malate) monotherapy in patients with unresectable, locally advanced or metastatic RCC with clear cell component. It is the first pivotal trial investigating avelumab in combination with INLYTA® (axitinib), a tyrosine kinase inhibitor (TKI), in patients with previously untreated advanced RCC. Moreover, it is the only Phase III trial currently evaluating an anti-PD-L1 immunotherapy in combination with a vascular endothelial growth factor (VEGF)-receptor TKI in this setting. The study will enroll 583 patients across approximately 170 sites in Asia, Europe, Latin America, and North America.

In March 2016, our company, Pfizer and Verastem announced that they had entered into an agreement to evaluate avelumab in combination with Verastem's VS-6063, an investigational focal adhesion kinase (FAK) inhibitor, in patients with advanced ovarian cancer. This Phase I/Ib clinical trial is expected to begin in the second half of 2016.

In early January, the alliance partners Merck KGaA, Darmstadt, Germany, and Pfizer entered into an exclusive collaboration agreement with Syndax Pharmaceuticals, Inc. to evaluate avelumab in combination with Syndax's entinostat, an investigational oral small molecule that targets immune regulatory cells (myeloid-derived suppressor cells and regulatory T-cells), in patients with heavily pre-treated, recurrent ovarian cancer. Syndax will be responsible for conducting the Phase Ib/II clinical trial.

Fertility

On February 3, 2016 we received European approval for the Gonal-f® prefilled pen 2.0 from the European Medicines Agency. Originally launched in 2011, the new version of the pen provides patients with a simplified self-administrating injection method for gonadotropins. Its enhanced design has made the new Gonal-f® prefilled pen easier to handle with a larger display window that improves the readability of the dosage information.

BIOSIMILARS

On March 2, 2016, we announced the initiation of a global Phase III clinical study of MSB11022, a proposed biosimilar of adalimumab, a recombinant human monoclonal antibody that binds specifically to tumor necrosis factor-alpha (TNF-α), in patients with chronic plaque psoriasis. The AURIEL-Psoriasis (PsO) study is a randomized, double-blind, active-controlled trial evaluating the efficacy, safety and immunogenicity of our adalimumab biosimilar candidate MSB11022 compared with Humira® (adalimumab) in patients with moderate to severe chronic plaque psoriasis. Humira® is marketed globally by AbbVie, Inc. The study is expected to recruit approximately 400 patients across Europe, Asia as well as North and Central America.

Life Science

In the course of integrating the R&D teams within our Life Science business sector, the key focus has been placed on identifying collaborative projects.

In the first quarter of 2016, the Applied Solutions team, through a partnership with the Wellcome Trust Sanger Institute, successfully completed manufacture of the world's first arrayed CRISPR library covering the entire human genome. CRISPR-Cas9 is a DNA editing technology that can be used to remove or replace an existing gene, switch a gene on or off or insert a new gene with unprecedented accuracy.

During the first quarter of 2016, Life Science launched more than ten new products, including the Mobius® 50 and 200-liter single-use bioreactors, as part of a scalable portfolio of bioreactors with configurable software, hardware and single-use assemblies; KitAlysis™ high-throughput screening kits designed to increase productivity in the lab; and Spectroquant® Prove, a new class of spectrophotometers for simplified and secure analysis of waste water, drinking water, beverages and process water.

Performance Materials

We are the undisputed market and technology leader in liquid crystals (LCs) and photoresist materials, which are primarily used in televisions and mobile communication applications. We are also one of the leading suppliers of OLED materials as well as decorative and functional effect pigments. Products for integrated circuit manufacture round off the portfolio.

Display Materials

In the first quarter of 2016, we continued working with display manufacturers on further developing the energy-saving liquid crystal technology UB-FFS (ultra-brightness fringe field switching), which has won multiple awards – also for non-mobile applications. These include televisions, for example, where we want to utilize the trend towards very high resolutions with low power consumption.

In addition, we positioned liquid crystals more strongly as an innovative material for architects. Following the positive reception in 2015 of the liquid crystal window façade of the new modular Innovation Center in Darmstadt, in the first quarter of 2016 we gained cooperation partners, for example from the glass industry, with whom we are driving the development and commercialization of liquid crystal windows forward. The new OLED production building currently being constructed at the Darmstadt site is also to be fitted with liquid crystal windows that already provide improved energy and light management.

The development of smart antennas using liquid crystal technology also progressed well. For practical tests, they have now been installed in automobile roofs and enabled good Internet connectivity via satellite throughout the whole journey.

Integrated Circuit Materials

Since April 1, 2016, the former SAFC Hitech business of Sigma-Aldrich has been established as the new Deposition Materials business field within the Integrated Circuit Materials business unit. This has added new materials for deposition technology to the portfolio – including atomic layer deposition (ALD), which is used in modern semiconductor manufacturing processes. These materials, which are deposited from the gas phase, ideally complement our offering of products deposited from the liquid phase. This technology is gaining importance in modern semiconductor manufacturing processes.

High-quality pigments and functional materials

In the first quarter of 2016, we continued to work on technical applications in the Pigments & Functional Materials business unit. Besides classic laser pigments these include additives for 3D laser direct structuring, 3D printing of plastics, and additives for conductive coatings. Laser additives enable computer-controlled fabrication of three-dimensional components and their laser-assisted bonding. For conductive coatings, we are currently developing a new light-colored pigment that can be used as a primer in applications such as the automotive sector.

Advanced Technologies

Organic light-emitting diodes (OLEDs) are an outstanding example of our R&D activities in the Advanced Technologies business unit. We again pushed their continuous further development forward in the first quarter of 2016. LicriEye is an important early-stage research project. The aim is to leverage our expertise in liquid crystals in order to develop an intelligent lens for patients with cataracts. Further information can be found in the magazine section of the Annual Report for 2015 (starting on page 8).

COURSE OF BUSINESS AND ECONOMIC POSITION

Group

Overview – Q1 2016

- Group sales grow organically by 4.7%
- Good organic sales growth in Healthcare
- Life Science delivers very strong organic sales growth of 8.9%
- Performance Materials remains highly profitable with an EBITDA margin pre exceptionals of 44.8% despite destocking in the display industry
- EBITDA pre exceptionals up 27.0% to € 1,084 million
- Net financial debt declines by nearly € 600 million

GROUP

Key figures

€ million	**Q1 2016**	Q1 2015	Change
Net sales	3,665	3,041	20.5%
Operating result (EBIT)	849	480	76.8%
Margin (% of net sales)	23.2%	15.8%	
EBITDA	1,282	805	59.1%
Margin (% of net sales)	35.0%	26.5%	
EBITDA pre exceptionals	1,084	853	27.0%
Margin (% of net sales)	29.6%	28.0%	
Profit after tax	593	285	>100.0%
Earnings per share (€)	1.36	0.65	>100.0%
Earnings per share pre exceptionals (€)	1.54	1.12	37.5%
Business free cash flow	763	361	>100.0%

Development of net sales and results of operations

In the first quarter of 2016, the Group generated net sales of € 3,665 million (Q1 2016: € 3,041 million). This represented an increase of € 624 million or 20.5% compared with the year-earlier quarter. This double-digit sales increase was driven by portfolio changes and moderate organic growth. Organic sales growth in the first quarter of 2016 amounted to € 142 million or 4.7%. Portfolio changes increased net sales by € 603 million or 19.8%. This was mainly attributable to the acquisition of Sigma-Aldrich, which was completed on November 18, 2015. Negative currency effects lowered sales by € 120 million or −4.0%. These were largely due to the development of Latin American currencies.

The double-digit rise in Group sales was primarily attributable to the positive development of our Life Science business sector, which increased its sales overall by 89.3% to € 1,397 million (Q1 2015: € 738 million). This was due on the one hand to the effects of the acquisition of Sigma-Aldrich (+81.6%) and on the other hand to the very strong organic increase in sales (+8.9%). Consequently, the share of Group sales attributable to Life Science in the first quarter of 2016 increased significantly by 14 percentage points to 38%

GROUP

Net sales components by business sector – Q1 2016

€ million / Change in %	Net sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Total change
Healthcare	1,646	5.4%	–6.8%	–1.0%	–2.4%
Life Science	1,397	8.9%	–1.3%	81.6%	89.3%
Performance Materials	622	–2.4%	0.5%	2.7%	0.9%
Group	**3,665**	**4.7%**	**– 4.0%**	**19.8%**	**20.5%**

(Q1 2015: 24%). With a 45% share (Q1 2015: 56%) of Group sales, in the first quarter of 2016 Healthcare remained our strongest business sector in terms of sales. Organically, sales saw strong growth of 5.4%. However, this increase was offset by negative currency effects and the absence of Kuvan® sales (see "Supplemental financial information"). Consequently, net sales decreased slightly to € 1,646 million (Q1 2015: € 1,686 million). At € 622 million, net sales of Performance Materials remained at the previous year's level (Q1 2015: € 617 million). In the first quarter of 2016, this business sector's share of Group sales declined to 17% (Q1 2015: 20%).

At € 1,218 million (Q1 2015: € 1,007 million), sales in Europe again accounted for around one-third of Group sales. In the first quarter of 2016, Europe was thus our strongest region in terms of sales. Driven by double-digit acquisition-related sales increases (+18.6%) and supported by moderate organic growth, sales in Europe rose by € 211 million or 20.9%. This positive sales performance in Europe was mainly due to our Life Science business sector.

Sales in the Asia-Pacific region amounted to € 1,130 million (Q1 2015: € 991 million), which represents a year-on-year increase of € 139 million or 14.0%. The acquisition-related effects of the consolidation of Sigma-Aldrich were largely responsible for this. The contribution to Group sales by the Asia-Pacific region fell by two percentage points to 31% (Q1 2015: 33%).

In North America, net sales increased by € 329 million or 54.6% to € 932 million (Q1 2015: € 603 million). Apart from portfolio-related growth (+44.6%), particularly our Healthcare business sector contributed to the organic increase in Group sales (+7.2%). The contribution to Group sales by North America in the first quarter of 2016 was 26%, representing an increase of six percentage points (Q1 2015: 20%).

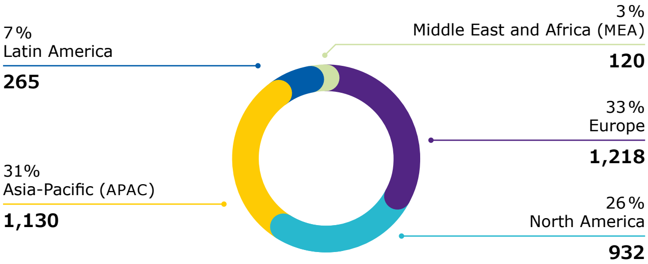
The Latin America region sustained double-digit sales declines owing to currency effects and, at € 265 million (Q1 2015: € 335 million), generated only 7% of Group net sales (Q1 2015: 11%).

Net sales in the Middle East and Africa region rose in the first quarter of 2016 by 13.4%, amounting to € 120 million (Q1 2015: € 106 million). Organic sales growth of 9.3% was mainly attributable to our Healthcare business sector. This region accounted for an unchanged 3% of Group sales.

GROUP

Net sales by region – Q1 2016

€ million / % of net sales



GROUP

Net sales components by region – Q1 2016

€ million / Change in %	Net sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Total change
Europe	1,218	3.2%	–0.9%	18.6%	20.9%
North America	932	7.2%	2.8%	44.6%	54.6%
Asia-Pacific (APAC)	1,130	1.6%	–0.2%	12.6%	14.0%
Latin America	265	11.8%	–36.6%	4.1%	–20.7%
Middle East and Africa (MEA)	120	9.3%	–3.6%	7.7%	13.4%
Group	**3,665**	**4.7%**	**–4.0%**	**19.8%**	**20.5%**

The consolidated income statement of the Group is as follows:

GROUP

Consolidated Income Statement

€ million	Q1 2016	Q1 2015	Change
Net sales	**3,665**	**3,041**	**20.5%**
Cost of sales	–1,307	–973	34.3%
(of which: amortization of intangible assets)[1]	*(–44)*	*(–41)*	*(6.4%)*
Gross profit	**2,358**	**2,068**	**14.0%**
Marketing and selling expenses	–1,090	–940	16.0%
(of which: amortization of intangible assets)[1]	*(–257)*	*(–178)*	*(44.4%)*
Administration expenses	–206	–172	19.8%
Research and development costs	–489	–441	10.8%
(of which: amortization of intangible assets)[1]	*(–1)*	*(–1)*	*(44.5%)*
Other operating expenses and income	276	–35	–
Operating result (EBIT)	**849**	**480**	**76.8%**
Financial result	–68	–101	–32.1%
Profit before income tax	**780**	**379**	**>100.0%**
Income tax	–187	–94	99.2%
Profit after tax	**593**	**285**	**>100.0%**
Non-controlling interests	–2	–4	–45.6%
Net income	**591**	**282**	**>100.0%**

[1] Excluding amortization of internally generated or separately acquired software.

The sharp rise in cost of sales to € 1,307 million (Q1 2015: € 973 million) was mainly related to the consolidation of Sigma-Aldrich. As part of the purchase price allocation, the inventories of Sigma-Aldrich were stepped up to fair values on the date of first-time consolidation. In the first quarter of 2016, part of this step-up was included as an expense in cost of sales. Gross profit resulting from the difference between net sales and cost of sales showed a double-digit increase to € 2,358 million (Q1 2015: € 2,068 million). The gross margin declined in the first quarter of 2016 to 64.3% (Q1 2015: 68.0%).

The increases in marketing and selling expenses as well as administration expenses were largely acquisition-related. In particular, marketing and selling expenses of our Life Science business sector were burdened by higher amortization of intangible assets stemming from the purchase price allocation. Group research and development costs increased by 10.8% to € 489 million. This was due on the one hand to our Healthcare business sector and on the other hand to the consolidation of Sigma-Aldrich. Accounting for 77% of Group R&D spending (Q1 2015: 79%), Healthcare remained our most research-intensive business sector. The Group research spending ratio (research and development costs as a percentage of sales) was 13.3% (Q1 2015: 14.5%).

Other operating income (net) amounted to € 276 million in the first quarter of 2016; in the year-earlier quarter we reported an expense balance of € –35 million. This improvement was mainly due to the gain on the sale of the rights to Kuvan® that was adjusted accordingly for the calculation of EBITDA pre exceptionals.

The Group operating result (EBIT) soared by € 369 million or 76.8% year-on-year to € 849 million.

The negative financial result improved by around € 33 million to € –68 million in the first quarter of 2016 (Q1 2015: € –101 million). This was mainly the result of the development of the time value of Share Units of Merck KGaA, Darmstadt, Germany, within the scope of the Long-Term Incentive Plan of the Group. Whereas expenses were incurred in the year-earlier quarter, income was generated in this connection in the first quarter of 2016.

Income tax expenses of € 187 million (Q1 2015: € 94 million) led to an effective tax rate of 24.0% (Q1 2015: 24.8%).

Net income, i.e. profit after tax attributable to the shareholders of Merck KGaA, Darmstadt, Germany, more than doubled compared with the year-earlier quarter, resulting in earnings per share of € 1.36 (Q1 2015: € 0.65).

GROUP

Reconciliation of EBIT to EBITDA pre exceptionals

€ million	Q1 2016	Q1 2015	Change
Operating result (EBIT)	**849**	**480**	**76.8%**
Depreciation/amortization/impairment losses/reversals of impairment losses	433	325	33.1%
(of which: exceptionals)	*(–)*	*(–)*	(–)
EBITDA	**1,282**	**805**	**59.1%**
Restructuring costs	1	19	–92.7%
Integration costs/IT costs	28	10	>100.0%
Gains/losses on the divestment of businesses	–324	–	–
Acquisition-related exceptionals	94	14	>100.0%
Other exceptionals	2	4	–43.9%
EBITDA pre exceptionals	**1,084**	**853**	**27.0%**

Adjusted for depreciation, amortization and exceptionals, EBITDA pre exceptionals, the key financial indicator used to steer operating business, rose by 27.0% to € 1,084 million (Q1 2015: € 853 million), resulting in an EBITDA margin pre exceptionals of 29.6% relative to sales (Q1 2015: 28.0%). Earnings per share pre exceptionals (earnings per share adjusted by net of tax effect of exceptionals and amortization of purchased intangible assets) rose by 37.5% to € 1.54 in the first quarter of 2016 (Q1 2015: € 1.12).

Net assets and financial position

GROUP

Balance sheet structure

	March 31, 2016		Dec. 31, 2015		Change	
	€ million	**in %**	€ million	in %	€ million	in %
Non-current assets	**29,789**	**80.1%**	**30,657**	**80.7%**	**–868**	**–2.8%**
of which:						
Intangible assets	24,430		25,339		–909	
Property, plant and equipment	3,947		4,009		–63	
Other non-current assets	1,413		1,309		104	
Current assets	**7,385**	**19.9%**	**7,350**	**19.3%**	**35**	**0.5%**
of which:						
Inventories	2,603		2,620		–16	
Trade accounts receivable	2,859		2,738		120	
Current financial assets	107		227		–120	
Other current assets	935		933		2	
Cash and cash equivalents	880		832		48	
Total assets	**37,174**	**100.0%**	**38,007**	**100.0%**	**–834**	**–2.2%**
Equity	**12,565**	**33.8%**	**12,855**	**33.8%**	**–290**	**–2.3%**
Non-current liabilities	**15,574**	**41.9%**	**15,769**	**41.5%**	**–195**	**–1.2%**
of which:						
Provisions for pensions and other post-employment benefits	2,254		1,836		418	
Other non-current provisions	791		855		–64	
Non-current financial liabilities	9,261		9,616		–356	
Other non-current liabilities	3,268		3,462		–194	
Current liabilities	**9,035**	**24.3%**	**9,383**	**24.7%**	**–348**	**–3.7%**
of which:						
Current provisions	568		535		32	
Current financial liabilities	3,800		4,097		–297	
Trade accounts payable	1,751		1,921		–170	
Other current liabilities	2,916		2,830		86	
Total liabilities and equity	**37,174**	**100.0%**	**38,007**	**100.0%**	**–834**	**–2.2%**

The total assets of the Group amounted to € 37,174 million as of March 31, 2016. This represents a slight decline of 2.2% compared with December 31, 2015 (€ 38,007 million). Working capital amounted to € 3,726 million (December 31, 2015: € 3,448 million). This 8.0% increase was mainly due to the expansion of the operating business of the Group.

The composition and the development of net financial debt were as follows:

GROUP

Net financial debt

	March 31, 2016	Dec. 31, 2015	Change	
	€ million	€ million	€ million	in %
Bonds and commercial paper	9,632	9,851	–220	–2.2%
Loans to banks	2,626	3,006	–381	–12.7%
Liabilities to related parties	560	578	–18	–3.1%
Loans from third parties and other financial liabilities	115	89	26	29.1%
Liabilities from derivatives (financial transactions)	124	184	–60	–32.6%
Finance lease liabilities	4	5	–1	–19.7%
Total financial liabilities	**13,060**	**13,713**	**–653**	**–4.8%**
less				
Cash and cash equivalents	880	832	48	5.8%
Current financial assets	107	227	–120	–52.8%
Net financial debt	**12,072**	**12,654**	**–581**	**–4.6%**

GROUP

Reconciliation of net financial debt

€ million	**2016**
January 1	**12,654**
Currency translation	–125
Dividend payments to shareholders and to E. Merck KG, Darmstadt, Germany[1]	55
Acquisitions	–
Payment from the disposal of assets held for sale[1]	–340
Free cash flow	–186
Other	14
March 31	**12,072**

[1] According to the consolidated cash flow statement.

The increase in pension provisions to € 2,254 million (December 31, 2015: € 1,836 million) resulted mainly from the required reduction in the discount rate when calculating the present value of the defined benefit obligations. The resulting actuarial losses were recognized in the Consolidated Statement of Comprehensive Income and, taking into account deferred taxes, lowered the equity of the Group as of March 31, 2016. Moreover, the translation of assets held in foreign currencies into euros, the reporting currency, lowered equity without affecting profit or loss. These effects were largely offset by profit after tax. Consequently, equity declined slightly to € 12,565 million (December 31, 2015: € 12,855) million (see the Consolidated Statement of Comprehensive Income and the Consolidated Statement of Changes in Net Equity). The equity ratio was 33.8% as of March 31, 2016, and was thus unchanged compared with December 31, 2015 (33.8%).

The free cash flow of the Group decreased in the first quarter of 2016 to € 186 million (Q1 2015: € 219 million) owing to higher investments in property, plant and equipment. The composition as well as the development of the relevant items are presented in the following table:

GROUP

Free cash flow

€ million	Q1 2016	Q1 2015	Change
Cash flow from operating activities according to the consolidated cash flow statement	352	279	26.5%
Payments for investments in intangible assets	–12	–4	>100.0%
Payments from the disposal of intangible assets	–	16	–
Payments for investments in property, plant and equipment	–160	–75	>100.0%
Payments from the disposal of property, plant and equipment	6	2	>100.0%
Free cash flow	**186**	**219**	**–14.9%**

Business free cash flow of the Group was € 763 million in the first quarter of 2016 (Q1 2015: € 361 million), representing an increase of around € 400 million. This improvement was attributable to the increase in EBITDA pre exceptionals on the one hand and the development of receivables and inventories on the other hand.

GROUP

Business free cash flow

€ million	Q1 2016	Q1 2015	Change
EBITDA pre exceptionals	1,084	853	27.0%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–118	–78	50.5%
Changes in inventories as reported in the consolidated balance sheet	16	–155	>100.0%
Changes in trade accounts receivable and receivables from royalties and licenses as reported in the consolidated balance sheet	–124	–259	–52.2%
Adjustments first-time consolidation of Sigma-Aldrich	–95	–	–
Business free cash flow	**763**	**361**	**>100.0%**

Healthcare

HEALTHCARE
Key figures

€ million	Q1 2016	Q1 2015	Change
Net sales	1,646	1,686	–2.4%
Operating result (EBIT)	641	268	>100.0%
Margin (% of net sales)	39.0%	15.9%	
EBITDA	829	449	84.5%
Margin (% of net sales)	50.4%	26.7%	
EBITDA pre exceptionals	508	461	10.3%
Margin (% of net sales)	30.9%	27.3%	
Business free cash flow	342	256	33.6%

Development of net sales and results of operations

In the first quarter of 2016, our Healthcare business sector generated organic sales growth of 5.4%. Including a negative currency impact of –6.8%, net sales decreased overall by –2.4% to € 1,646 million (Q1 2015: € 1,686 million). Within the Biopharma business, sales were driven organically in particular by the double-digit growth rates of products to treat infertility (Gonal-f®) and thyroid disorders (Euthyrox®) in the first quarter of 2016. The top-selling drug Rebif® sustained a slight organic decline in sales. The negative foreign exchange impact was primarily due to the development of Latin American currencies. The return of the rights to Kuvan® to BioMarin Pharmaceuticals lowered sales by –1.0% in the first quarter of 2016.

Commission income, which is also included in net sales, rose to € 42 million in the first quarter of 2016 (Q1 2015: € 22 million). Above all, the co-promotion of Xalkori® with Pfizer had a positive effect on commission income.

Europe, our Healthcare business sector's largest region accounting for 40% of net sales (Q1 2015: 41%), registered a slight organic sales decline of −1.0%. Consequently, net sales totaled € 660 million (Q1 2015: € 689 million). This was especially attributable to the difficult competitive environment for the multiple sclerosis treatment Rebif®, whose organic sales decline could not be fully offset by the positive sales performance of the other products.

In North America, the second-largest region in terms of sales, sales increased to € 370 million (Q1 2015: € 329 million), due to an organic increase of 9.9% and positive currency effects of 2.7%. The organic increase was primarily attributable to our products to treat infertility. Net sales of Rebif®, which amounted to € 252 million (Q1 2015: € 241 million), contributed significantly to sales in this region. North America's contribution to the business sector's net sales increased by 2 percentage points to 22%.

In the Asia-Pacific (APAC) region, organic sales growth of 9.8% was recorded in the first quarter of 2016. Including negative exchange rate effects of −1.7%, sales rose to € 325 million (Q1 2015: € 301 million). The key drivers of organic growth were products to treat infertility and thyroid disorders. This region's share of the business sector's net sales increased from 18% in the year-earlier quarter to 20% in the first quarter of 2016.

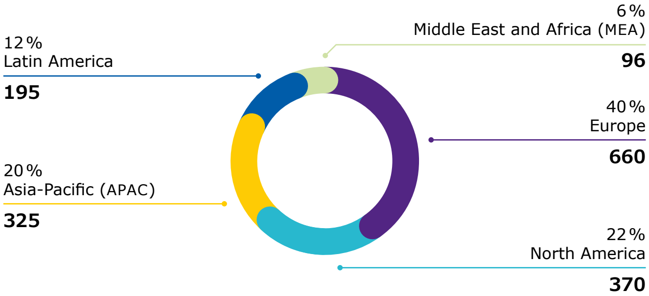
Net sales in the Latin America region amounted to € 195 million in the first quarter of 2016 (Q1 2015: € 276 million). This reflects organic sales increases of 9.6% and negative exchange rate effects of −38.9%. Organic sales growth was mainly attributable to the development of Rebif® and Erbitux® sales, as well as the Consumer Health business.

With sales of € 96 million (Q1 2015: € 90 million), the Middle East and Africa region recorded organic sales growth of 9.6%, which more than offset the negative currency effects of −2.6%. The business with products to treat cardiovascular diseases and diabetes accounted for the largest proportion of net sales in this region.

HEALTHCARE

Net sales by region – Q1 2016

€ million / % of net sales of the business sector



HEALTHCARE

Net sales components by region – Q1 2016

€ million / Change in %	Net sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Total change
Europe	660	−1.0%	−1.2%	−2.1%	−4.3%
North America	370	9.9%	2.7%	–	12.6%
Asia-Pacific (APAC)	325	9.8%	−1.7%	−0.4%	7.7%
Latin America	195	9.6%	−38.9%	−0.1%	−29.3%
Middle East and Africa (MEA)	96	9.6%	−2.6%	−0.8%	6.2%
Healthcare	**1,646**	**5.4%**	**−6.8%**	**−1.0%**	**−2.4%**

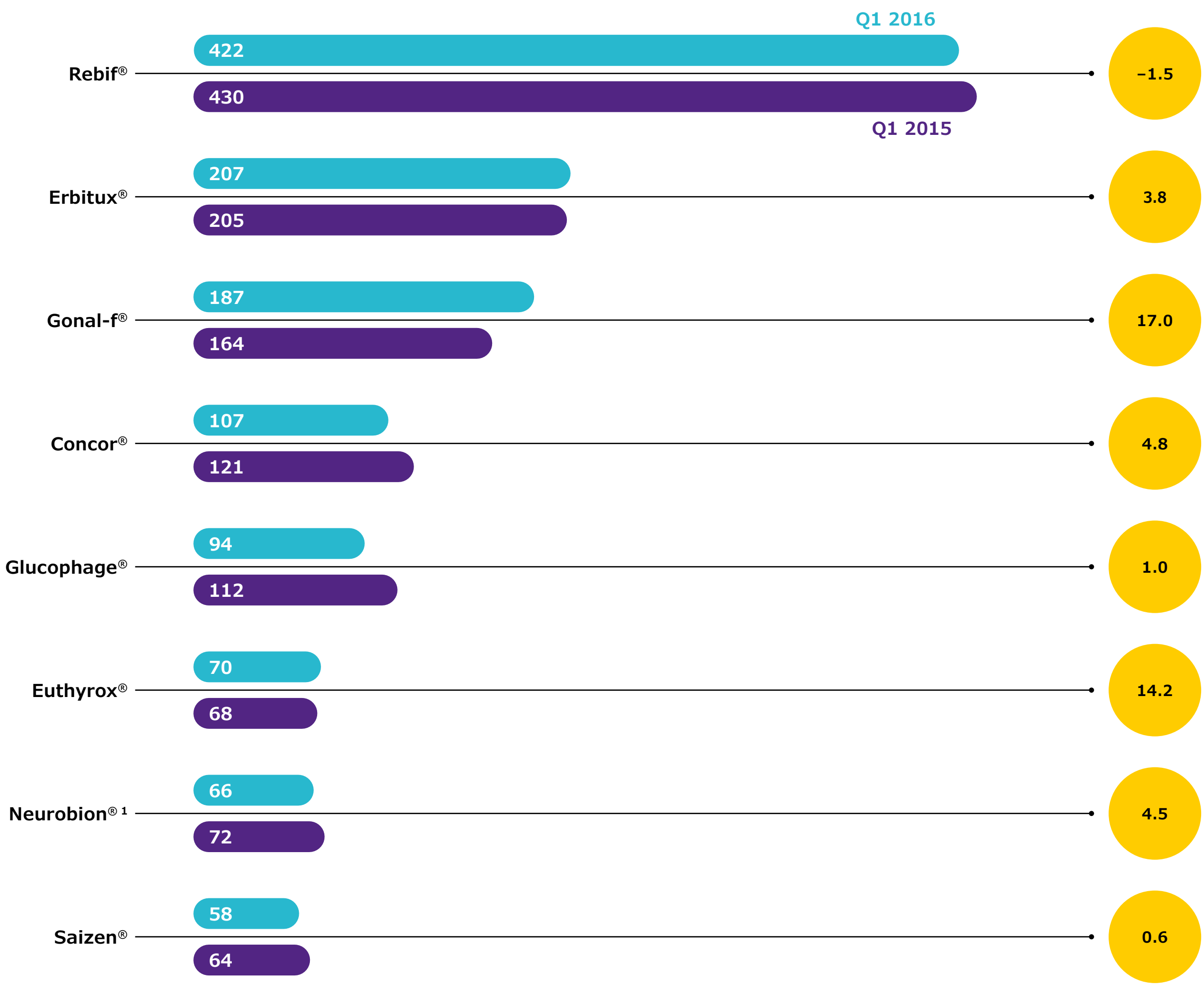
Net sales and the organic growth rates of the key products developed as follows:

HEALTHCARE

Product sales and organic growth

€ million / Organic growth in %

%



[1] Previous year's figure has been adjusted.

Rebif®, which is used to treat relapsing forms of multiple sclerosis, sustained a slight organic sales decline of −1.5% in the first quarter of 2016. Including negative currency effects of −0.2%, Rebif® sales amounted to € 422 million (Q1 2015: € 430 million). North America, which generated 60% of Rebif® sales (Q1 2015: 56%) and is the largest market for this product, saw a double-digit sales increase to € 252 million (Q1 2015: € 241 million) thanks to the strength of the U.S. dollar (currency effect of +2.8%). Sales increased organically by 1.6% compared with the year-earlier quarter. Here, the recently implemented price increases had a positive effect and more than offset the volume declines, which are currently slowing down.

In Europe, which accounts for 32% of sales (Q1 2015: 36%) and is the second-largest region for the product, sales of Rebif® declined organically by −13.1% to € 135 million due to competition (Q1 2015: € 156 million). Together, the remaining regions Latin America, Middle East and Africa, and Asia-Pacific continued to account for an 8% share of sales. Latin America benefited from the new Productive Development Partnership program.

Due to organic sales increases of 3.8% and including negative currency effects of –3.2%, the oncology drug Erbitux® generated sales of € 207 million (Q1 2015: € 205 million).

In Europe, which accounted for 59% (Q1 2015: 58%) of Erbitux® sales and is thus the top-selling region for this product, sales increased organically by 3.2%. Including negative currency effects (–1.2%), sales amounted to € 122 million (Q1 2015: € 120 million).

In the Asia-Pacific region, which contributed a 29% (Q1 2015: 30%) share of net sales, sales declined slightly to € 60 million (Q1 2015: € 62 million).

At 28.2%, Latin America generated the strongest organic growth, delivering sales of € 15 million for the oncology drug (Q1 2015: € 16 million). However, it was unable to fully offset negative foreign exchange effects of –34.8%. This region's contribution to total Erbitux® sales thus decreased slightly to 7% (Q1 2015: 8%).

In the Middle East and Africa region, which contributed 5% to net sales, Erbitux® sales increased to € 9 million (Q1 2015: € 8 million).

HEALTHCARE

Product sales and organic growth of Rebif® and Erbitux® by region – Q1 2016

		Total	Europe	North America	Asia-Pacific (APAC)	Latin America	Middle East and Africa (MEA)
Rebif®	€ million	422	135	252	3	17	15
	Organic growth in %	–1.5%	–13.1%	1.6%	–16.9%	60.9%	11.6%
	% of sales	100%	32%	60%	1%	4%	3%
Erbitux®	€ million	207	122	–	60	15	9
	Organic growth in %	3.8%	3.2%	–	–2.3%	28.2%	11.8%
	% of sales	100%	59%	–	29%	7%	5%

In the first quarter of 2016, our Healthcare business sector generated strong organic sales growth of 17.0% with the fertility treatment Gonal-f®. Including negative exchange rate effects, sales rose to € 187 million (Q1 2015: € 164 million). Sales of this drug showed the strongest growth in the North America region due to a favorable competitive environment.

The Endocrinology franchise within our Biopharma business mainly consists of products to treat metabolic and growth disorders. Amounting to € 90 million, sales were lower compared with the year-earlier quarter (Q1 2015: € 109 million). Despite positive organic growth of 3.0%, this decline in sales was mainly attributable to negative currency effects of –5.0% and the sale of the rights to Kuvan®, a drug used to treat rare metabolic disorders. Sales of the growth hormone Saizen®, the top-selling product of this franchise, saw an organic increase of 0.6% as well as negative exchange rate effects of –9.8%. Consequently, sales of € 58 million were generated (Q1 2015: € 64 million).

The General Medicine franchise (including CardioMetabolic Care), which commercializes products to treat cardiovascular diseases and diabetes, among other things, generated organic sales growth of 3.3%. Taking negative foreign exchange effects of –13.6% into account, sales amounted to € 414 million (Q1 2015: € 461 million).

In particular, organic sales growth of Euthyrox®, a drug used to treat thyroid disorders, developed well, with sales increasing to € 70 million in the first quarter of 2016 (Q1 2015: € 68 million). Organic sales growth amounted to 14.2% and was driven in particular by demand in China. Glucophage®, which is used in the treatment of diabetes, delivered an organic sales increase of 1.0%. Including negative exchange rate effects (–17.2%) following a very strong year-earlier quarter, net sales amounted to € 94 million (Q1 2015: € 112 million). The return of marketing rights to this product in Russia had a positive effect.

In the first quarter of 2016, the Consumer Health business delivered an organic increase of 6.1% in sales of over-the-counter pharmaceuticals. Including a negative foreign exchange effect of –13.1%, net sales amounted to € 215 million (Q1 2015: € 231 million). Organic sales growth was mainly generated in Latin America. Here, the organic growth rate was 10.3%, which was primarily attributable to the strategic brands Neurobion®, Dolo-Neurobion® and local brands. In the course of expanding the strategic product transfer within Healthcare, products in India and Latin America were shifted from Biopharma to the Consumer Health business as of January 1, 2016.

The results of operations developed as follows:

HEALTHCARE

Results of operations

€ million	Q1 2016	Q1 2015	Change
Net sales	**1,646**	**1,686**	**–2.4%**
Cost of sales	–311	–372	–16.4%
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*
Gross profit	**1,335**	**1,314**	**1.6%**
Marketing and selling expenses	–613	–660	–7.2%
(of which: amortization of intangible assets)[1]	*(–143)*	*(–134)*	*(7.0%)*
Administration costs	–71	–66	7.0%
Research and development costs	–378	–348	8.5%
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*
Other operating expenses and income	367	29	>100.0%
Operating result (EBIT)	**641**	**268**	**>100.0%**
Depreciation/amortization/impairment losses/reversals of impairment losses	188	181	3.7%
(of which: exceptionals)	*(–)*	*(–)*	*(–)*
EBITDA	**829**	**449**	**84.5%**
Restructuring costs	1	11	–92.7%
Integration costs/IT costs	2	–	–
Gains/losses on the divestment of businesses	–324	–	–
Acquisition-related exceptionals	–	–	–
Other exceptionals	–	–	–
EBITDA pre exceptionals	**508**	**461**	**10.3%**

[1] Excluding amortization of internally generated or separately acquired software.

The increase in gross profit was due among other things to commission income, which is included in net sales, and positive exchange rate effects. Gross profit amounted to € 1,335 million, resulting in a gross margin of 81.1% (Q1 2015: 78.0%).

Due to slightly lower sales and the termination of the agreement with Pfizer to co-promote Rebif® in the United States, marketing and selling expenses declined in the first quarter of 2016.

The increase in research and development costs mainly stemmed from higher investments in clinical development, especially the studies progressing within the scope of the avelumab program. As a result, the business sector's research spending ratio increased to 23.0% (Q1 2015: 20.7%).

In the first quarter of 2016, the positive development of other operating expenses and income (net) was primarily due to one-time effects, especially the sale of the rights to Kuvan®.

After adjusting for depreciation, amortization and exceptionals, EBITDA pre exceptionals, the key financial indicator used to steer operating business, rose to € 508 million (Q1 2015: € 461 million). The EBITDA margin pre exceptionals increased to 30.9% (Q1 2015: 27.3%).

Development of business free cash flow

Business free cash flow of our Healthcare business sector climbed in the first quarter of 2016 by € 86 million to € 342 million (Q1 2015: € 256 million). In addition to the increase in EBITDA pre exceptionals, the development of receivables also had a positive impact on business free cash flow.

HEALTHCARE

Business free cash flow

€ million	**Q1 2016**	Q1 2015	Change
EBITDA pre exceptionals	508	461	10.3%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–42	–29	41.9%
Changes in inventories	–38	–46	–16.5%
Changes in trade accounts receivable as well as receivables from royalties and licenses	–87	–130	–33.3%
Business free cash flow	**342**	**256**	**33.6%**

Life Science

LIFE SCIENCE

Key figures

€ million	**Q1 2016**	Q1 2015	Change
Net sales	1,397	738	89.3%
Operating result (EBIT)	105	83	26.8%
Margin (% of net sales)	7.5%	11.2%	
EBITDA	284	164	73.0%
Margin (% of net sales)	20.3%	22.2%	
EBITDA pre exceptionals	393	184	>100.0%
Margin (% of net sales)	28.1%	25.0%	
Business free cash flow	269	23	>100.0%

Development of sales and results of operations

In the first quarter of 2016, Life Science posted a very strong organic sales increase of 8.9%, which was mainly driven by the double-digit growth of Process Solutions. In addition, net sales rose significantly by 81.6% or € 602 million in the first quarter of 2016 owing to the acquisition of Sigma-Aldrich in late 2015. At –1.3%, the foreign currency impact was minimal. Taking these effects into account, net sales of our Life Science business sector increased overall by 89.3% to € 1,397 million.

From a geographic perspective, all regions contributed positively to organic sales growth. Both Europe and North America led the business sector’s growth, each accounting for 36% of net sales.

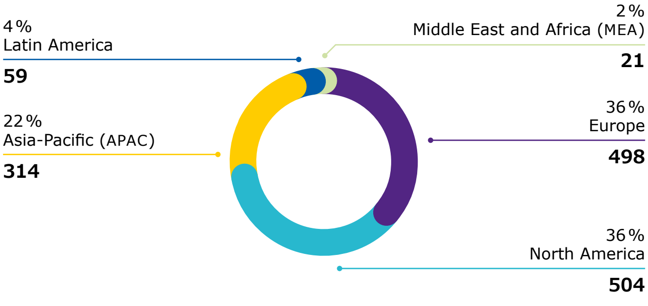
Sales in Europe increased organically by 13.7% and were driven by Process Solutions, particularly sales of filtration and chromatography products. In Europe, sales rose to € 498 million (Q1 2015: € 262 million), which in addition to organic growth includes € 201 million due to the acquisition of Sigma-Aldrich. Europe thus contributed 36% (Q1 2015: 35%) to the business sector’s net sales in the first quarter of 2016.

In North America, Life Science achieved strong organic growth of 5.8% driven by Process Solutions, specifically active pharmaceutical ingredients and materials. Applied Solutions performed relatively well, generating moderate organic growth, while Research Solutions also achieved a slight organic increase in sales. Overall, North America sales increased to € 504 million (Q1 2015: € 224 million) of which € 261 million was due to Sigma-Aldrich. The region thus contributed 36% (Q1 2015: 30%) to the business sector's net sales in the first quarter of 2016.

LIFE SCIENCE

Net sales by region – Q1 2016

€ million / % of net sales of the business sector



In Asia-Pacific, sales grew organically by 3.8%. Double-digit growth rates in China compared with weaker sales in Japan and Singapore. Asia-Pacific sales increased to € 314 million (Q1 2015: € 190 million), of which € 118 million was due to Sigma-Aldrich. Overall, this represented 22% (Q1 2015: 26%) of the business sector's net sales in the first quarter of 2016.

Sales in Latin America saw double-digit organic growth of 18.1%. This was mainly driven by Process Solutions, specifically the Filtration & Chromatography business field. Applied Solutions also contributed double-digit organic growth in this region and Research Solutions generated very strong organic growth. Strong organic growth in the region was offset by currency headwinds of –25.1%, translating into net sales for the region of € 59 million (Q1 2015: € 49 million), of which € 14 million was due to Sigma-Aldrich.

Middle East and Africa (MEA) generated strong organic sales growth of 6.4% primarily driven by Research Solutions. Net sales for the region amounted to € 21 million (Q1 2015: € 13 million) of which € 9 million was due to Sigma-Aldrich.

LIFE SCIENCE

Net sales components by region – Q1 2016

€ million / Change in %	Net sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Total change
Europe	498	13.7%	–0.3%	76.7%	90.1%
North America	504	5.8%	2.9%	116.7%	125.4%
Asia-Pacific (APAC)	314	3.8%	–0.8%	61.8%	64.8%
Latin America	59	18.1%	–25.1%	28.5%	21.5%
Middle East and Africa (MEA)	21	6.4%	–9.8%	66.0%	62.6%
Life Science	**1,397**	**8.9%**	**–1.3%**	**81.6%**	**89.3%**

The Process Solutions business area, which markets products and services for the pharmaceutical production value chain, generated organic sales growth of 15.9%, which was the highest rate within our Life Science business sector. Including the increase in sales of 39.0% due to the Sigma-Aldrich acquisition and a negative foreign exchange effect of –0.3%, sales amounted to € 525 million in the first quarter of 2016 (Q1 2015: € 340 million). Process Solutions thus accounted for 38% (Q1 2015: 46%) of Life Science net sales. The increase was driven by Filtration & Chromatography, which saw higher demand for downstream and purification products especially in Europe, Asia-Pacific and Latin America.

Applied Solutions, which accounted for a 25% (Q1 2015: 32%) share of Life Science sales, delivered moderate organic sales growth of 3.6%. Organic growth was mainly driven by Biomonitoring as well as Water and Food Analytics, which posted growth in all regions. Including negative exchange rate effects of –2.1%, and an increase in sales of 44.9% due to the Sigma-Aldrich acquisition, sales amounted to € 348 million (Q1 2015: € 238 million).

Research Solutions, with its broad range of products for researchers and scientific laboratories, recorded a slight organic sales increase of 2.0%. Including the 226.2% increase in sales due to the Sigma-Aldrich acquisition and a negative foreign currency effect of –2.1%, sales amounted to € 523 million (Q1 2015: € 161 million). This growth was primarily driven by the Biology business field with increased sales of multiplex reagents in the United States. The share of sales accounted for by Research Solutions in the first quarter of 2016 was 37% (Q1 2015: 22%).

The acquisition of Sigma-Aldrich boosted Life Science sales in the first quarter of 2016 by € 602 million, accounting for 43% of the business sector's net sales.

LIFE SCIENCE

Net sales components by business area[1] – Q1 2016

€ million / Change in %	Net sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Total change
Process Solutions	525	15.9%	–0.3%	39.0%	54.6%
Research Solutions	523	2.0%	–2.1%	226.2%	226.0%
Applied Solutions	348	3.6%	–2.1%	44.9%	46.4%

[1] The business areas were restructured in the context of the Sigma-Aldrich acquisition.

The results of operations developed as follows:

LIFE SCIENCE

Results of operations

€ million	**Q1 2016**	Q1 2015	Change
Net sales	**1,397**	**738**	**89.3%**
Cost of sales	–713	–321	>100.0%
(of which: amortization of intangible assets)[1]	*(–15)*	*(–12)*	*(22.6%)*
Gross profit	**683**	**417**	**64.0%**
Marketing and selling expenses	–421	–233	80.2%
(of which: amortization of intangible assets)[1]	*(–110)*	*(–41)*	*(>100.0%)*
Administration costs	–63	–31	>100.0%
Research and development costs	–62	–45	37.1%
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*
Other operating expenses and income	–34	–25	34.3%
Operating result (EBIT)	**105**	**83**	**26.8%**
Depreciation/amortization/impairment losses/reversals of impairment losses	179	81	>100.0%
(of which: exceptionals)	*(–)*	*(–)*	*(–)*
EBITDA	**284**	**164**	**73.0%**
Restructuring costs	–	2	–
Integration costs/IT costs	16	4	>100.0%
Gains/losses on the divestment of businesses	–	–	–
Acquisition-related exceptionals	93	14	>100.0%
Other exceptionals	–	–	–
EBITDA pre exceptionals	**393**	**184**	**>100.0%**

[1] Excluding amortization of internally generated or separately acquired software.

Gross profit soared by 64.0% thanks to the Sigma-Aldrich acquisition and a favorable product mix.

Marketing and selling expenses were driven by the acquisition as well as by investments in the field force, and one-time costs. The increase in R&D expenses was mainly due to the consolidation of Sigma-Aldrich and the ongoing innovation program.

In comparison with the year-earlier quarter, the operating result (EBIT) of Life Science rose by 26.8% to € 105 million. After eliminating depreciation and amortization, and adjusted for exceptionals, EBITDA pre exceptionals, the most important performance indicator, climbed 113.4% to € 393 million.

Development of business free cash flow

Business free cash flow of our Life Science business sector increased from € 23 million in the year-earlier period to € 269 million in the first quarter of 2016. This strong improvement was driven by higher EBITDA pre exceptionals as well as the development of inventories and receivables.

LIFE SCIENCE

Business free cash flow

€ million	**Q1 2016**	Q1 2015	Change
EBITDA pre exceptionals	393	184	>100.0%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–46	–21	>100.0%
Changes in inventories	75	–54	–
Changes in trade accounts receivable as well as receivables from royalties and licenses	–59	–86	–30.6%
Adjustments first-time consolidation of Sigma-Aldrich	–94	–	–
Business free cash flow	**269**	**23**	>100.0%

Performance Materials

PERFORMANCE MATERIALS

Key figures

€ million	**Q1 2016**	Q1 2015	Change
Net sales	622	617	0.9%
Operating result (EBIT)	207	214	–3.4%
Margin (% of net sales)	33.2%	34.7%	
EBITDA	267	273	–2.0%
Margin (% of net sales)	43.0%	44.2%	
EBITDA pre exceptionals	273	277	–1.1%
Margin (% of net sales)	43.9%	44.8%	
Business free cash flow	257	162	58.0%

Development of net sales and results of operations

Net sales of our Performance Materials business sector increased in the first quarter of 2016 by 0.9% to € 622 million, which was at the previous year's level (Q1 2015: € 617 million). The increase was mainly attributable to the positive effect of the SAFC Hitech business of Sigma-Aldrich acquired in November 2015 (+2.7%). Exchange rate effects also contributed positively to sales, although to a lesser extent (+0.5%). Organically, sales declined slightly by –2.4% as the Display Materials business remained below the previous year's level.

The Display Materials business unit, consisting of the liquid crystals business and the complementary materials, represents more than 50% of the overall net sales of Performance Materials. This business unit saw a significant organic decrease in sales, but continued to defend its market leadership position. In the first quarter of 2016, the drop in sales was mainly due to inventory adjustments by customers in the display industry as well as to the continuing decline in volumes of the mature LC technology TN-TFT. Double-digit growth in the energy-saving UB-FFS technology as well as volume growth in PS-VA and IPS could not compensate for these negative effects.

The Integrated Circuit Materials (ICM) business unit includes the business with materials used to manufacture integrated circuits. The business unit achieved solid organic growth, to which all key businesses contributed. Special mention should be made of the double-digit increase in sales of dielectric materials used in chip manufacture.

The Pigments & Functional Materials business unit achieved moderate organic growth in the first quarter of 2016. Cosmetic actives and technical functional materials generated double-digit sales growth, with particularly strong increases in sales of active ingredients for insect repellents in Latin America.

The Advanced Technologies business unit achieved the highest growth rates within our Performance Materials business sector. Special mention should be made of the continuing dynamic development of the OLED materials business.

Accounting for a share of 79%, the Asia-Pacific region again generated the vast majority of the business sector's net sales. This is attributable to the concentration of customers for display and integrated circuit materials in Asia. In this region, Performance Materials saw a slight decline in sales to € 492 million (Q1 2015: € 499 million). Organically, sales decreased by –4.1% as a result of the decline in volumes of the mature LC technology TN-TFT as well as inventory adjustments by customers. The dynamic development of the OLED materials business and higher ICM sales could not compensate for this decrease.

In Europe, Performance Materials generated sales of € 60 million (Q1 2015: € 56 million). The increase in sales was mainly attributable to the positive development of Pigments & Functional Materials.

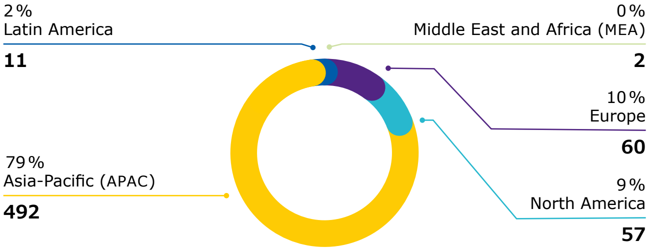
In North America, the sharp increase in sales to € 57 million was fueled by the SAFC Hitech business of Sigma-Aldrich (Q1 2015: € 50 million). Organically, sales declined moderately (–3.6%).

Since they account for a low proportion of sales, the two regions Latin America and Middle East and Africa (MEA) played a subordinate role. Both regions recorded double-digit organic sales growth, which was primarily attributable to the Pigments & Functional Materials business, albeit at a low overall level.

PERFORMANCE MATERIALS

Net sales by region – Q1 2016

€ million / % of net sales of the business sector



PERFORMANCE MATERIALS

Net sales components by region – Q1 2016

€ million / Change in %	Net sales	Organic growth	Exchange rate effects	Acquisitions/ divestments	Total change
Europe	60	5.9%	–0.1%	1.6%	7.4%
North America	57	–3.6%	2.9%	15.1%	14.4%
Asia-Pacific (APAC)	492	– 4.1%	1.0%	1.6%	–1.5%
Latin America	11	42.3%	–29.7%	–	12.6%
Middle East and Africa (MEA)	2	13.7%	–6.0%	9.9%	17.6%
Performance Materials	**622**	**–2.4%**	**0.5%**	**2.7%**	**0.9%**

The results of operations developed as follows:

PERFORMANCE MATERIALS

Results of operations

€ million	**Q1 2016**	Q1 2015	Change
Net sales	**622**	**617**	**0.9%**
Cost of sales	–282	–280	0.7%
(of which: amortization of intangible assets)[1]	*(–28)*	*(–29)*	*(–0.3%)*
Gross profit	**340**	**337**	**1.0%**
Marketing and selling expenses	–58	–46	25.1%
(of which: amortization of intangible assets)[1]	*(–5)*	*(–4)*	*(26.6%)*
Administration costs	–16	–18	–9.1%
Research and development costs	–48	–47	3.0%
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*
Other operating expenses and income	–12	–12	–5.8%
Operating result (EBIT)	**207**	**214**	**–3.4%**
Depreciation/amortization/impairment losses/reversals of impairment losses	61	59	3.1%
(of which: exceptionals)	*(–)*	*(–)*	*(–)*
EBITDA	**267**	**273**	**–2.0%**
Restructuring costs	–	1	–
Integration costs/IT costs	4	2	66.4%
Gains/losses on the divestment of businesses	–	–	–
Acquisition-related exceptionals	2	–	–
Other exceptionals	–	–	–
EBITDA pre exceptionals	**273**	**277**	**–1.1%**

[1] Excluding amortization of internally generated or separately acquired software.

Based on stable net sales, gross margin amounted to 54.6% in the first quarter of 2016, and was thus on a par with the year-earlier quarter (Q1 2015: 54.6%). The operating result (EBIT) decreased slightly by € 7 million to € 207 million in the first quarter of 2016 (Q1 2015: € 214 million). This was especially due to higher marketing and selling expenses as a result of the consolidation of the SAFC Hitech business of Sigma-Aldrich, among other things. The largely stable development of the operating result led to EBITDA pre exceptionals of € 273 million, which was at the previous year's level (Q1 2015: € 277 million). At 43.9%, the EBITDA margin pre exceptionals was just slightly lower than the strong year-earlier quarter (Q1 2015: 44.8%).

Development of business free cash flow

In the first quarter of 2016, our Performance Materials business sector generated business free cash flow of € 257 million, which represents a significant increase of nearly € 100 million over the year-earlier quarter (Q1 2015: € 162 million). This was mainly attributable to the decrease in receivables in the first quarter of 2016 as well as the development of inventories.

PERFORMANCE MATERIALS

Business free cash flow

€ million	**Q1 2016**	Q1 2015	Change
EBITDA pre exceptionals	273	277	–1.1%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–19	–17	11.8%
Changes in inventories	–20	–55	–63.6%
Changes in trade accounts receivable as well as receivables from royalties and licenses	24	–42	–
Adjustments first-time consolidation of Sigma-Aldrich	–2	–	–
Business free cash flow	**257**	**162**	**58.0%**

Corporate and Other

Corporate and Other comprises Group administration expenses for Group functions that cannot be directly allocated to the business sectors, such as Finance, Procurement, Legal, Communications, and Human Resources. Corporate costs additionally encompass expenses for central, non-allocated IT functions, including expenses related to the expansion and harmonization of IT systems within the Group.

CORPORATE AND OTHER

Key figures

€ million	**Q1 2016**	Q1 2015	Change
Operating result (EBIT)	–104	–85	22.4
EBITDA	–98	–81	21.5
EBITDA pre exceptionals	–91	–69	32.6
Business free cash flow	–104	–80	29.2

In the first quarter of 2016, administration expenses reported under Corporate and Other amounted to € 56 million (Q1 2015: € 57 million). Other operating expenses (net) rose to € –46 million (Q1 2015: € –26 million). This was due primarily to an increased foreign currency loss from operating activities. Taking these effects into account, in the first quarter of 2016 EBIT amounted to € –104 million (Q1 2015: € –85 million) and EBITDA was € –98 million (Q1 2015: € –81 million). Adjusted for one-time effects, EBITDA pre exceptionals totaled € –91 million (Q1 2015: € –69 million). This increase in negative EBITDA pre exceptionals also had an impact on the development of business free cash flow, which amounted to € –104 million in the first quarter of 2016 (Q1 2015: € –80 million).

OUTLOOK

With the publication of the results of 2015, we had provided an initial qualitative forecast of the expected development of net sales, EBITDA pre exceptionals and business free cash flow for the Group and the individual business sectors in 2016.

Due to the good business performance in the first quarter, we assume that Group net sales will increase to between € 14.8 billion and € 15.0 billion in 2016. We still expect to see slight organic sales growth for the Group. Owing to the acquisition of Sigma-Aldrich, we expect a portfolio-related increase in net sales in the low double-digit percentage range. This will be countered by negative foreign exchange effects, especially due to the continued devaluations of Latin American currencies. In total, these exchange rate effects are predicted to range between –3% and –5%. In 2016, EBITDA pre exceptionals at Group level is forecast to amount to between € 4.1 billion and € 4.3 billion. We expect business free cash flow of the Group to be between € 3.1 billion and € 3.3 billion in 2016.

For our Healthcare business sector, the forecast for a slight organic increase in net sales in 2016 compared with the previous year remains unchanged. We assume that growth markets will continue to show strong dynamics. Furthermore, the contribution resulting from our co-promotion of Xalkori® with Pfizer should have a visible impact on this development. These positive effects should compensate for the unchanged expected decline in sales of Rebif®. Due to the return of the rights to Kuvan® to BioMarin Pharmaceuticals Inc., we expect a slightly negative portfolio impact on net sales in 2016. For EBITDA pre exceptionals of the Healthcare business sector, we are aiming for a target corridor of € 1.8 billion to € 1.9 billion. Despite the expected overall solid business performance, a decline over the previous year will thus result as a consequence of various influential factors. On the one hand, we have budgeted higher research and development expenses in 2016 for our pharmaceutical pipeline, especially in Immuno-Oncology. Additionally, a less profitable product mix and expected market launch costs for avelumab and cladribine will lower EBITDA pre exceptionals. The divestment of the rights to Kuvan® will lead to a negative portfolio effect on EBITDA pre exceptionals in the mid double-digit million range. We expect that the anticipated negative currency effects, particularly from the Latin America region, will also reduce EBITDA pre exceptionals.

Due to the strong business performance of our Life Science business sector in the first quarter, we are raising our forecast for organic sales growth. We now anticipate organic sales growth in the mid-single-digit percentage range in comparison with the previous year. Process Solutions will continue to benefit from the positive growth dynamics of the market for biopharmaceuticals and is thus likely to contribute substantially to the forecast development. Apart from good organic sales performance, we continue to expect an additional sales-related portfolio effect in the high double-digit percentage range. This will lead to projected EBITDA pre exceptionals for the Life Science business sector of € 1.62 billion to € 1.67 billion.

For our Performance Materials business sector, we expect that organically, sales in 2016 will be roughly stable in comparison with 2015. Overall, we continue to expect volume growth across all businesses and the price declines that are typical for these markets. For the Liquid Crystals business, this takes into account moderate destocking in the liquid crystals display industry, which already began towards the end of the first quarter and is likely to continue in the second quarter. However, we expect the situation to normalize in the second half of 2016. Owing to the strong market position of the Performance Materials business sector, its innovative strength and cost efficiency, we predict EBITDA pre exceptionals of € 1.10 billion to € 1.15 billion in 2016.

EBITDA pre exceptionals of Corporate and Other is forecast to amount to between € –370 million and € –400 million. As in 2015, we are continuing to drive strategic Group initiatives forward. Among other things, this includes the further expansion of our new branding, as well as Group-wide projects to optimize internal processes and to efficiently align the organization for the future. Additional examples of these initiatives include the ONE Global Headquarters project or Group digitalization projects.

GROUP

Forecast for FY 2016

€ million	Net sales	EBITDA pre exceptionals	Business free cash flow
Group	~14,800 to 15,000	~4,100 to 4,300	~3,100 to 3,300
Healthcare	Slight organic growth, slightly negative portfolio effect due to the divestment of Kuvan®	~1,800 to 1,900	~1,400 to 1,500
Life Science	Organic growth in the mid-single-digit percentage range, high double-digit portfolio effect due to the acquisition of Sigma-Aldrich	~1,620 to 1,670	~1,220 to 1,270
Performance Materials	Organic stable	1,100 to 1,150	~950 to 1,000
Corporate and Other	–	~ –370 to –400	~ –460 to –490

Earnings per share pre exceptionals: € 5.65 – € 6.00

Full-year FX assumptions for 2016:
€ 1 = US$ 1.07 to 1.12
€ 1 = JPY 135
€ 1 = CHF 1.05

SUPPLEMENTAL FINANCIAL INFORMATION

Consolidated Income Statement

€ million	Q1 2016	Q1 2015
Net sales	**3,665**	**3,041**
Cost of sales	–1,307	–973
(of which: amortization of intangible assets)[1]	*(–44)*	*(–41)*
Gross profit	**2,358**	**2,068**
Marketing and selling expenses	–1,090	–940
(of which: amortization of intangible assets)[1]	*(–257)*	*(–178)*
Administration expenses	–206	–172
Research and development costs	–489	–441
(of which: amortization of intangible assets)[1]	*(–1)*	*(–1)*
Other operating income	480	138
Other operating expenses	–204	–173
Operating result (EBIT)	**849**	**480**
Financial result	–68	–101
Profit before income tax	**780**	**379**
Income tax	–187	–94
Profit after tax	**593**	**285**
of which: attributable to shareholders of Merck KGaA, Darmstadt, Germany (net income)	591	282
of which: attributable to non-controlling interests	2	4
Earnings per share (€)		
basic	1.36	0.65
diluted	1.36	0.65

[1] Excluding amortization of internally generated or separately acquired software.

Consolidated Statement of Comprehensive Income

€ million	Q1 2016	Q1 2015
Profit after tax	**593**	**285**
Items of other comprehensive income that will not be reclassified to profit or loss in subsequent periods:		
Remeasurement of the net defined benefit liability		
Changes in remeasurement	–409	–289
Tax effect	64	55
Changes recognized in equity	–345	–233
	–345	–233
Items of other comprehensive income that may be reclassified to profit or loss in subsequent periods:		
Available-for-sale financial assets		
Fair value adjustments	–1	7
Reclassification to profit or loss	–	–
Tax effect	–	–2
Changes recognized in equity	–1	5
Derivative financial instruments		
Fair value adjustments	60	890
Reclassification to profit or loss	13	12
Reclassification to assets	–	–
Tax effect	–20	29
Changes recognized in equity	53	931
Exchange differences on translating foreign operations		
Changes taken directly to equity	–512	1,033
Reclassification to profit or loss	–76	–
Changes recognized in equity	–588	1,033
	–536	1,970
Other comprehensive income	**–881**	**1,736**
Comprehensive income	**–288**	**2,022**
of which: attributable to shareholders of Merck KGaA, Darmstadt, Germany	–288	2,011
of which: attributable to non-controlling interests	–	11

Consolidated Balance Sheet

€ million	March 31, 2016	Dec. 31, 2015
Non-current assets		
Intangible assets	24,430	25,339
Property, plant and equipment	3,947	4,009
Non-current financial assets	166	131
Other non-current assets	136	128
Deferred tax assets	1,111	1,050
	29,789	**30,657**
Current assets		
Inventories	2,603	2,620
Trade accounts receivable	2,859	2,738
Current financial assets	107	227
Other current assets	601	496
Income tax receivables	334	391
Cash and cash equivalents	880	832
Assets held for sale	–	46
	7,385	**7,350**
Total assets	**37,174**	**38,007**
Total equity		
Equity capital	565	565
Reserves	9,925	9,679
Gains / losses recognized in equity	2,009	2,543
Equity attributable to shareholders of Merck KGaA, Darmstadt, Germany	**12,499**	**12,787**
Non-controlling interests	66	68
	12,565	**12,855**
Non-current liabilities		
Provisions for pensions and other post-employment benefits	2,254	1,836
Other non-current provisions	791	855
Non-current financial liabilities	9,261	9,616
Other non-current liabilities	554	609
Deferred tax liabilities	2,714	2,853
	15,574	**15,769**
Current liabilities		
Current provisions	568	535
Current financial liabilities	3,800	4,097
Trade accounts payable	1,751	1,921
Income tax liabilities	1,069	1,011
Other current liabilities	1,847	1,819
Liabilities directly related to assets held for sale	–	–
	9,035	**9,383**
Total equity and liabilities	**37,174**	**38,007**

Consolidated Cash Flow Statement

€ million	Q1 2016	Q1 2015
Profit after tax	**593**	**285**
Depreciation/amortization/impairment losses/reversals of impairment losses	433	325
Changes in inventories	–19	–43
Changes in trade accounts receivable	–158	–104
Changes in trade accounts payable	–89	–24
Changes in provisions	21	90
Changes in other assets and liabilities	–34	–231
Neutralization of gain/loss on disposals of assets	–388	–15
Other non-cash income and expenses	–6	–5
Net cash flows from operating activities	**352**	**279**
Payments for investments in intangible assets	–12	–4
Payments from the disposal of intangible assets	–	16
Payments for investments in property, plant and equipment	–160	–75
Payments from the disposal of property, plant and equipment	6	2
Payments for investments in financial assets	–159	–1,041
Payments from the disposal of other financial assets	269	1,494
Payments from the divestment of assets held for sale	340	–
Net cash flows from investing activities	**284**	**392**
Dividend payments to non-controlling interests	–2	–
Dividend payments to E. Merck KG, Darmstadt, Germany	–53	–55
Repayments of financial liabilities to E. Merck KG, Darmstadt, Germany	–18	–61
Payments from the issuance of bonds	–	3,713
Repayments of bonds	–	–1,350
Changes in other current and non-current financial liabilities	–500	41
Net cash flows from financing activities	**–572**	**2,288**
Changes in cash and cash equivalents	**64**	**2,959**
Changes in cash and cash equivalents due to currency translation	–8	106
Changes in cash and cash equivalents due to changes in the scope of consolidation	–8	–
Cash and cash equivalents at the beginning of the reporting period	832	2,879
Cash and cash equivalents as of March 31	**880**	**5,943**

Consolidated Statement of Changes in Net Equity

	Equity capital			Retained earnings	
€ million	General partner's equity Merck KGaA, Darmstadt, Germany	Subscribed capital Merck KGaA, Darmstadt, Germany	Capital reserves (share premium) Merck KGaA, Darmstadt, Germany	Retained earnings/ Net retained profit	Remeasurement of defined benefit plans
Balance as of January 1, 2015	**397**	**168**	**3,814**	**6,500**	**–1,275**
Profit after tax	–	–	–	282	–
Other comprehensive income	–	–	–	–	–233
Comprehensive income	**–**	**–**	**–**	**282**	**–233**
Dividend payments	–	–	–	–	–
Transactions with no change of control	–	–	–	–	–
Changes in scope of consolidation/Other	–	–	–	2	–
Balance as of March 31, 2015	**397**	**168**	**3,814**	**6,784**	**–1,508**
Balance as of January 1, 2016	**397**	**168**	**3,814**	**7,025**	**–1,160**
Profit after tax	–	–	–	591	–
Other comprehensive income	–	–	–	–	–345
Comprehensive income	**–**	**–**	**–**	**591**	**–345**
Dividend payments	–	–	–	–	–
Transactions with no change of control	–	–	–	–	–
Changes in scope of consolidation/Other	–	–	–	–	–
Balance as of March 31, 2016	**397**	**168**	**3,814**	**7,616**	**–1,505**

Gains/losses recognized in equity					
Available-for-sale financial assets	Derivative financial instruments	Currency translation difference	Equity attributable to Merck KGaA, Darmstadt, Germany, shareholders	Non-controlling interests	Total equity
–	**393**	**1,745**	**11,742**	**59**	**11,801**
–	–	–	282	4	285
5	931	1,026	1,729	7	1,736
5	**931**	**1,026**	**2,011**	**11**	**2,022**
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	2	–	2
5	**1,324**	**2,771**	**13,754**	**70**	**13,824**
5	**–176**	**2,714**	**12,787**	**68**	**12,855**
–	–	–	591	2	593
–1	53	–586	–879	–2	–881
–1	**53**	**–586**	**–288**	**–**	**–288**
–	–	–	–	–2	–2
–	–	–	–	–	–
–	–	–	–	–	–
4	**–123**	**2,128**	**12,499**	**66**	**12,565**

Information by Business Sector

€ million	Healthcare		Life Science		Performance Materials		Corporate and Other		Group	
	Q1 2016	Q1 2015	**Q1 2016**	Q1 2015	**Q1 2016**	Q1 2015	**Q1 2016**	Q1 2015	**Q1 2016**	Q1 2015
Net sales	**1,646**	**1,686**	**1,397**	**738**	**622**	**617**	**–**	**–**	**3,665**	**3,041**
Operating result (EBIT)	**641**	**268**	**105**	**83**	**207**	**214**	**–104**	**–85**	**849**	**480**
Depreciation/amortization	187	180	180	81	60	59	6	4	434	325
Impairment losses	–	–	–	–	–	–	–	–	1	1
Reversals of impairment losses	–	–	–1	–	–	–	–	–	–1	–
EBITDA	**829**	**449**	**284**	**164**	**267**	**273**	**–98**	**–81**	**1,282**	**805**
Exceptionals	–321	12	109	20	6	4	7	12	–198	48
EBITDA pre exceptionals (Segment result)	**508**	**461**	**393**	**184**	**273**	**277**	**–91**	**–69**	**1,084**	**853**
EBITDA margin pre exceptionals (% of net sales)	30.9%	27.3%	28.1%	25.0%	43.9%	44.8%	–	–	29.6%	28.0%
Net operating assets[1]	5,925	5,813	20,702	21,441	4,207	4,279	137	112	30,972	31,645
Segment liabilities[1]	–2,389	–2,479	–922	–910	–289	–290	–54	–61	–3,654	–3,739
Investments in property, plant and equipment[2]	75	28	58	21	18	16	9	9	160	75
Investments in intangible assets[2]	6	1	2	–	1	–	3	2	12	4
Net cash flows from operating activities	258	360	276	130	236	247	–418	–458	352	279
Business free cash flow	342	256	269	23	257	162	–104	–80	763	361

[1]Figures for the reporting period ending on March 31, 2016; previous-year figures as of December 31, 2015.
[2]According to the consolidated cash flow statement.

€ million	**Q1 2016**	Q1 2015
Total EBITDA pre exceptionals of the operating businesses	**1,175**	**922**
Corporate and Other	–91	–69
EBITDA pre exceptionals of the Group	**1,084**	**853**
Depreciation/amortization/impairment losses/reversals of impairment losses	–433	–325
Exceptionals	198	–48
Operating result (EBIT)	**849**	**480**
Financial result	–68	–101
Profit before income tax	**780**	**379**

€ million	**Q1 2016**	Q1 2015
Restructuring costs	–1	–19
Integration costs/IT costs	–28	–10
Gains/losses on the divestment of businesses	324	–
Acquisition-related exceptionals	–94	–14
Other exceptionals	–2	–4
Exceptionals before impairment losses/reversals of impairment losses	**198**	**–48**
Impairment losses	–	–
Reversals of impairment losses	–	–
Exceptionals (total)	**198**	**–48**

Significant Events during the Reporting Period

(1) Agreements with BioMarin Pharmaceutical Inc., USA, to return the rights to Kuvan® and Peg-Pal

In January 2016, an agreement entered into with BioMarin Pharmaceutical Inc., USA (BioMarin) on October 1, 2015 to return the rights to Kuvan® (sapropterin dihydrochloride), became effective. Kuvan® is a drug used to treat phenylketonuria (PKU), a rare metabolic disorder. The Group received an upfront payment of € 340 million for the sale of this business and is entitled to further payments of up to € 60 million for the achievement of certain commercialization milestones. The upfront payment and the fair value of the contingent purchase price payments were taken into consideration in the calculation of the disposal gain.

Moreover, an agreement also became effective in January 2016 under which the Group will return its option to develop and commercialize Peg-Pal to BioMarin. Peg-Pal is an investigational drug that is also designed for the treatment of PKU. The Group will receive further payments of up to € 125 million for return of the development and marketing rights when certain development milestones are achieved.

The relevant assets were classified as assets available for sale until both transactions were completed in January 2016.

(2) Deconsolidation of the Venezuelan subsidiaries

Due to the nearly complete absence of dividend payments and payments for Group-internal supplies of goods, the Executive Board of Merck KGaA, Darmstadt, Germany, came to the conclusion that the possibility of receiving and influencing variable returns from the participation in the Venezuelan subsidiaries can no longer be deemed given. Owing to the lack of a possibility of control, the Venezuelan subsidiaries were therefore deconsolidated effective February 29, 2016.

Darmstadt, May 13, 2016

Stefan Oschmann

Udit Batra

Kai Beckmann

Walter Galinat

Belén Garijo Lopez

Karl-Ludwig Kley

Marcus Kuhnert

Financial Calendar 2016/2017

August

Thursday, August 4, 2016
Half-year report

November

Tuesday, November 15, 2016
Report on the third quarter

March

Thursday, March 9, 2017
Annual Report 2016

April

Friday, April 28, 2017
Annual General Meeting

May

Thursday, May 18, 2017
Report on the first quarter

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