MERCK

Quarterly Statement

3RD QUARTER 2017

Table of Contents

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 Merck 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 2016 has been optimized for mobile devices and is available on the Web at **ar2016.merckgroup.com**

MERCK – IN BRIEF

MERCK GROUP

Key figures

€ million	Q3 2017	Q3 2016	Change	Jan.–Sept. 2017	Jan.–Sept 2016	Change
Net sales	3,727	3,724	0.1%	11,479	11,194	2.5%
Operating result (EBIT)[1]	901	676	33.3%	2,283	2,075	10.0%
Margin (% of net sales)[1]	24.2%	18.2%		19.9%	18.5%	
EBITDA[1]	1,320	1,110	18.8%	3,530	3,462	2.0%
Margin (% of net sales)[1]	35.4%	29.8%		30.8%	30.9%	
EBITDA pre exceptionals[1]	1,076	1,174	–8.3%	3,410	3,416	–0.2%
Margin (% of net sales)[1]	28.9%	31.5%		29.7%	30.5%	
Profit after tax	649	460	40.9%	1,595	1,368	16.6%
Earnings per share (€)	1.48	1.05	41.0%	3.65	3.13	16.6%
Earnings per share pre exceptionals (€)[1]	1.51	1.70	–11.2%	4.85	4.79	1.3%
Business free cash flow[1]	910	1,085	–16.1%	2,706	2,646	2.3%

[1] Not defined by International Financial Reporting Standards (IFRS).

MERCK GROUP

Net sales by quarter

€ million

MERCK GROUP

EBITDA pre exceptionals[1] by quarter

€ million

[1] Not defined by International Financial Reporting Standards (IFRS).

OUR SHARES

At a glance

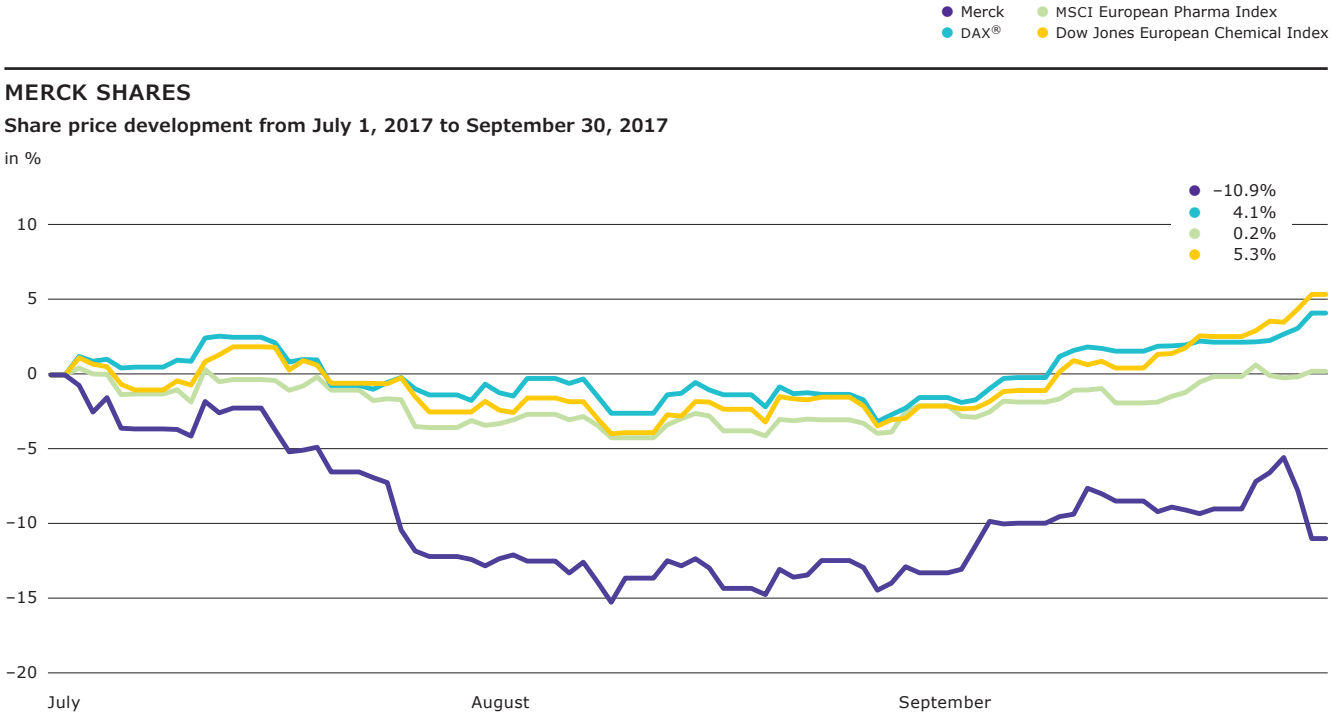
In the third quarter, the performance of Merck shares was considerably weaker than that of the overall market. Closing at € 105.82 on July 1, 2017, the share price then declined to an annual low of € 90.02 on August 10, 2017 and recovered slightly to a level of € 94.40 by the end of the quarter. Overall, our share price decreased by nearly 11% in the third quarter. Merck shares were thus significantly weaker than those of the relevant comparative indices, all of which posted a slight increase during the same period. Our share price performance was nearly 15 percentage points below the comparative DAX® index, which rose by 4% in the third quarter, and it was around 16 percentage points lower than the relevant chemical industry index, which increased by over 5% in the quarter. The pharmaceutical industry index rose only slightly by 0.2%, nevertheless outperforming Merck shares by 11 percentage points in the same period.

The negative development of Merck shares in the third quarter was in stark contrast to the first half of 2017, in which they rose by nearly 7% thanks to a favorable market environment and positive news flow from the company. Yet towards the end of the second quarter, the stock market environment had already started to weaken in the course of rising interest rate expectations in the major capital markets. In addition, European equity markets were increasingly negatively impacted by the continued strength of the euro against the U.S. dollar. The latter also had considerably negative impacts on the Merck share price since the company has a strong net exposure to the euro due to its geographic set-up. This is now affecting the earnings development of our Performance Materials business in particular, and on top of the prolonged adjustment processes in the liquid crystal materials market. In the announcement of its results for the second quarter of 2017, Merck maintained its full-year guidance for EBITDA pre exceptionals despite the intensification of these burdens compared with early summer 2017. Nevertheless, capital market participants again lowered their earnings expectations for the Merck Group, which led to noticeable selling of shares by investors.

Company news that resonated positively in the course of the third quarter, such as the announcement on September 5, 2017 of our intention to review strategic options for the Consumer Health business and further progress being with the R&D pipeline of our Healthcare business could do little to counteract this development and reduce the persistent uncertainty among analysts and investors. Noteworthy examples

MERCK SHARES

Share price development from July 1, 2017 to September 30, 2017



Source: Bloomberg (closing rates)

include the positive opinion of Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) on July 21, 2017 for our immunotherapy Bavencio® (avelumab) in the treatment of metastatic Merkel cell carcinoma (mMCC) followed by marketing authorization on September 21, 2017, the marketing authorization of Cladribine Tablets (trade name Mavenclad®) on August 25, 2017 to treat relapsing multiple sclerosis in patients with high disease activity, and the successful completion of the divestment of our Biosimilars business on September 1, 2017.

In the third quarter, the Merck Executive Board and the Investor Relations team gave in-depth briefings to more than 260 investors at investor conferences as well as during roadshows and conference calls. We again slightly strengthened our presence among financial market participants compared with the previous year. On September 28, 2017, we held our annual Capital Markets Day in Darmstadt, Germany, giving analysts and investors the opportunity for intensive and in-depth discussions with the management of our business sectors. Overall, the event resonated well, yet subsequently led to further adjustments in earnings estimates, particularly in view of the business prospects for 2018.

The average daily trading volume of Merck shares improved noticeably in the third quarter in comparison with the year-earlier quarter. It rose by around 50% to 550,000 shares; in the previous-year period only an average of 364,000 shares were traded per day.

FUNDAMENTAL INFORMATION ABOUT THE GROUP

Merck

We are a global science and technology company headquartered in Darmstadt, Germany. We hold the global rights to the Merck name and brand and operate uniformly as Merck – the only exceptions are Canada and the United States. In these countries, we operate as EMD Serono in the Biopharma business, as MilliporeSigma 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, Merck comprises three business sectors: Healthcare, Life Science and Performance Materials.

Merck had 52,834 employees worldwide on September 30, 2017, which compares with 50,967 on September 30, 2016.

A detailed description of Merck and its business sectors can be found in the Annual Report for 2016 starting on page 47. This section of the present quarterly statement summarizes the key developments of the third quarter of 2017 at Merck.

MERCK GROUP

Sales by business sector – Q3 2017

€ million/% of net sales

MERCK GROUP

EBITDA pre exceptionals[1] by business sector[2] – Q3 2017

€ million/in %

[1] Not defined by International Financial Reporting Standards (IFRS).

[2] Not presented: Decline in Group EBITDA pre exceptionals by € –51 million due to Corporate and Other.

MERCK GROUP

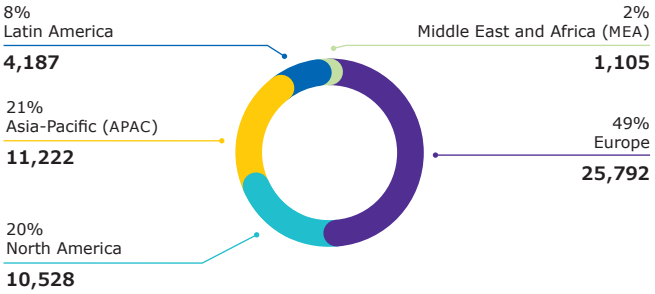
Business free cash flow[1] by business sector[2] – Q3 2017

€ million/in %

MERCK GROUP

Employees by region as of September 30, 2017

Number/in %



[1] Not defined by International Financial Reporting Standards (IFRS).

[2] Not presented: Decline in Group EBITDA pre exceptionals by € –94 million due to Corporate and Other.

Healthcare

The Healthcare business sector comprises the Biopharma, Consumer Health and Allergopharma businesses. The divestment of the Biosimilars business to Fresenius closed on September 1, 2017. The share of Group sales attributable to the Healthcare business sector was 46% in the third quarter of 2017 and the share of EBITDA pre exceptionals (excluding Corporate and Other) was 40%.

On September 10, 2017, we stated our plans to enter a strategic collaboration with Project Data Sphere LLC, an independent, not-for-profit initiative of the CEO Roundtable on Cancer's Life Sciences Consortium, to jointly lead the Global Oncology Big Data Alliance (GOBDA). The GOBDA initiative has been formed to expand the open access of de-identified patient data sets to further enhance analytical capabilities, by building on Project Data Sphere's innovative digital platform. The current platform contains historical clinical trial data from almost 100,000 patients provided by multiple organizations, and access to this information has already led to new and potentially practice-changing findings. GOBDA will expand this platform to include rare tumor trial, experimental arm and real-world patient data. Leveraging these data with big data analytics will help to optimize clinical trials, build a registry of data and help to enable advancement in the understanding of cancer treatment globally, with the mission to address the significant unmet needs in this field. In addition, by unleashing analytical power and big data to study and learn how to better manage rare but serious immune-mediated adverse events, institutes and industry will be able to assist regulators to adapt these new learnings into treatment guidelines.

BIOPHARMA

Oncology and Immuno-Oncology

On August 8, 2017, the National Institute for Health and Care Excellence (NICE) for England issued a positive Final Appraisal Determination (FAD) recommending the routine National Health Service (NHS) use of Erbitux® (cetuximab) in combination with platinum-based chemotherapy as a first-line therapy for patients with recurrent and/or metastatic (R/M) squamous cell carcinoma of the head and neck (SCCHN) in the oral cavity. Erbitux® is already established and reimbursed as an effective therapy for different stages of SCCHN across many countries worldwide.

Neurology and Immunology

On September 5, 2017, we announced the publication of the results of the CLARITY EXTENSION study in the Multiple Sclerosis Journal. The trial, which is an extension of the Phase III CLARITY study, demonstrated that treatment of patients with relapsing remitting multiple sclerosis (MS) with Mavenclad® (Cladribine Tablets) for two years, followed by two years of treatment with placebo, had clinical benefits similar to those seen with four years of treatment with Mavenclad®, with a low risk of severe lymphopenia.

General Medicine and Endocrinology

In July we launched Preneurin™ in the Philippines. It is the first of many products we are planning to launch in our growth markets in Latin America, Southeast Asia, Middle East and Africa, as well as Central and Eastern Europe. Considering our expertise in selected areas such as diabetes or cardiovascular diseases, the focus are products in the space of Cardiometa-

bolic Care as well as – with a focus on Africa – infectious diseases. The launch of those products is an integral element of our General Medicine and Endocrinology strategy.

Collaborations

On August 8, 2017, we entered a strategic alliance with Baylor College of Medicine (Texas, USA) and its vaccine product development partnership (PDP), Texas Children's Hospital Center for Vaccine Development (Texas Children's CVD), to advance vaccine research and development for neglected and emerging infections. The collaboration focuses on bringing vaccines through development to efficiently deliver them to societies in need. Merck experts in process development and formulation are working with Texas Children's CVD scientists at Baylor to optimize the vaccine manufacturing process to increase vaccine stability and yield. Initially, these activities are targeting schistosomiasis, a deadly parasitic disease that affects millions of people every year in tropical and subtropical regions. The collaboration includes training and exchange of technical know-how in process development and formulation, filling knowledge gaps that exist from research and development to manufacturing, with a focus on neglected and emerging diseases.

Other developments

On October 3, 2017, we declared our intention to invest € 35 million in a new production line for the aseptic filling of biotech medicines under isolator at our manufacturing site in Bari, Italy. The announcement was made at an event marking the 25th anniversary of the site and its leading role on the science and technology scene of the Apulia region of southern Italy. The new production line is expected to be fully operational in 2022. It will be equipped with an isolator designed with the latest technologies available and with a high level of automation. The isolator technology represents best practice in aseptic filling, which is a prerequisite to ensure the safety of injectable medicines. The new production line is intended to be used for the aseptic filling of our biotech medicines in the areas of multiple sclerosis, fertility and endocrinology, with a capacity of 14 million units per year.

On July 6, 2017, we made public the winners of our seventh Biopharma Innovation Cup. The winning team received € 20,000 for its innovative idea around the role of natural killer (NK) cells in cancer immunology. The Biopharma Innovation Cup is designed to support the professional development of post-graduate students and to foster innovation from a promising new generation of academic talent. It showcases our deep commitment to leverage innovation, curiosity and collaboration. With more than 1,400 applications from 60 countries, this year's Biopharma Innovation Cup achieved a new record of popularity.

CONSUMER HEALTH

On September 5, 2017, we announced that we are preparing strategic options for our Consumer Health business, including a potential full or partial sale of the business as well as strategic partnerships. This is consistent with the Healthcare business sector's focus on the Biopharma pipeline in order to fully concentrate our resources on high-priority projects in this area.

Consumer Health has a strong, international business with a portfolio of leading over-the-counter pharmaceuticals. In 2016, Consumer Health generated net sales of € 860 million. The business is focused on consumer-oriented products and solutions that address global megatrends.

BIOSIMILARS

On September 1, 2017, we stated that we had completed the divestment of our Biosimilars business to Fresenius after having received regulatory approvals. The decision to divest Biosimilars is aligned with our strategy for our Healthcare business sector to focus on our pipeline of innovative medicines in oncology, immuno-oncology and immunology.

Life Science

Our Life Science business sector is focusing on delivering the integration of Sigma-Aldrich, strengthening core capabilities globally and establishing new pillars of organic growth through an agile and entrepreneurial organizational structure that was put in place in the second quarter of 2017.

In the third quarter of 2017, the share of Group sales attributable to Life Science was 38% and the share of EBITDA pre exceptionals was 38%.

In August, we announced the acquisition of Natrix Separations, a Canadian manufacturer of hydrogel membrane products for single-use chromatography. This acquisition reflects our strategic focus on achieving long-term growth and complements our efforts to drive next-generation bioprocessing, ultimately enabling faster, and more efficient technology for customers. Natrix Separations is known for its unique technology platform capable of delivering high productivity and impurity removal in a single-use format.

In September, we opened China's first BioReliance® End-to-End Biodevelopment Center in Shanghai. The center will provide a full range of process development capabilities and services, including cell line development, upstream and downstream process development and non-GMP (Good Manufacturing Practice) clinical production.

Demonstrating commitment to the safety of the global food supply, we opened our first global Food Safety Studio in Bellevue, Washington (USA) for manufacturers of all types of food to collaborate with our scientists on developing safety products for rapid detection of foodborne pathogens.

In August, the European Patent Office (EPO) issued a "Notice of Intention to Grant" for Merck's patent application covering the company's CRISPR technology used in a genomic integration method for eukaryotic cells. The patent will provide our CRISPR genomic integration technology with broad protection, further strengthening the patent portfolio. In June, a related patent was approved in Australia. Both patents give scientists the ability to advance treatment options for medical challenges.

Performance Materials

Our 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 third quarter of 2017, the Performance Materials business sector's share of Group sales amounted to 16% and its share of EBITDA pre exceptionals (excluding Corporate and Other) was 22%. The EBITDA margin pre exceptionals amounted to 40.7% of net sales.

In the third quarter of 2017, we defended our position as the global market and technology leader for established liquid crystal technologies – despite increasing competition in this segment. The new liquid crystal technology SA-VA (self-aligned vertical alignment), which makes the production process eco-friendlier and more efficient, was developed further toward market readiness in cooperation with selected customers. The development of new application possibilities for liquid crystals remains an important focus of our LC 2021 strategic initiative.

At the International Motor Show (IAA) in Frankfurt, Germany, we presented our automotive innovations at our own exhibition stand for the first time. Our liquid crystal materials are an integral part of innovative lighting systems. Headlights with liquid crystal shutters allow light distribution as needed in real time. Hella, a lighting and electronic components expert, intends to bring this technology to the market together with us and other partners. In addition, our liquid crystal materials permit free-form displays, which no longer have to be rectangular, thus paving the way for new interior designs. Our liquid crystal mixtures are also used in smart satellite antennas specifically developed for vehicle applications. In contrast to today's usually large mechanical antenna solutions, smart antennas can receive a much greater volume of data nearly everywhere around the world. Corresponding software ensures that contact with the satellite is not dropped, and the antenna is flat enough to be integrated in the roof of a car. The liquid crystal window technology developed by us can also be used in cars. Its use makes it possible to darken sunroofs and windows at the press of a button. The technology celebrated its global debut as a complete component at the IAA. We have been developing this expertise for architectural solutions for quite some time now. To achieve faster market penetration of the new technology, we invested around € 15 million in a production facility for liquid crystal window modules at a site in Veldhoven in the Netherlands. The manufacture of switchable liquid crystal modules is scheduled to begin there at the end of 2017.

Integrated Circuit Materials, the second-largest business unit of Performance Materials and an important partner to leading global electronics manufacturers, achieved further strong growth in the third quarter. In order to support our business expansion in Asia, we opened a new research and application center at our site in Kaohsiung, Taiwan. The center houses two laboratories developing applications for coating materials and semiconductor packaging.

At the International Conference on Atomic Layer Deposition (ALD) in Denver, Colorado (USA), we presented our latest advances in coating technology. At industry events such as the international trade shows for semiconductor technology Semicon West in San Francisco, California (USA) and Semicon Taiwan, we presented our portfolio, which we have expanded in recent years through the acquisitions of SAFC Hitech and Ormet Circuits.

The Pigments & Functional Materials business unit opened a new application laboratory in Shanghai, China, in the summer. It is the first application laboratory for pigments and functional materials in China, through which we offer our customers comprehensive tailored services for our products and at the same time work with them to develop new products. China is one of the fastest-growing markets for our pigments and cosmetics businesses. With the new application laboratory, we are continuing our 20-year commitment in this business in China and Southeast Asia, and are underscoring our leading position in pigments and functional materials.

At the International Symposium on Automotive Lighting (ISAL) in Darmstadt, Germany, we presented our functional pigments for lighting applications. With these pigments from the Iriotec 8000 series, circuit layouts can be integrated into injection-molded components or powder-coated components in laser direct structuring processes. Laser structuring of the components offers tremendous design freedom, especially since these pigments also enable light-colored design in addition to dark modules.

In the third quarter of 2017, the Advanced Technologies business unit invested 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). The OLED materials business is one of our fastest-growing businesses. The application possibilities of OLED materials are diverse and range from displays to lighting. At the IAA, for instance, we exhibited rear lights with OLED materials. As OLEDs are extremely thin and lightweight, the parts require only little space. This allows rear lights in new forms, giving vehicle designers even greater possibilities in the future. OLED materials also permit free-form displays in vehicle interiors, which expands the design possibilities even further. In addition, the technology permits particularly vivid contrasts, brilliant colors, sharp images, and pleasant readability.

We are developing materials for LED lighting for the automotive industry as well. At ISAL 2017, we presented our innovative packaging materials for this. These are materials that can replace silicon in the application of phosphors to LED chips. They offer many advantages compared with solutions to date. They have long-term stability, are easy to incorporate in the industrial process, and have a wide range of applications.

Together with our collaboration partners OLEDWorks, OPVIUS and Kolon, we presented an innovative façade system at the Biennale in Seoul, Korea, which combines OLED technology with organic photovoltaics. By combining various innovative material solutions, energy is generated and light emitted at the same time, opening up new application possibilities in architecture.

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.

We research innovations to serve long-term health and technology trends in both established and growth markets. We spent around € 545 million on research and development in the third quarter of 2017.

We focus on both in-house research and external collaborations. Our R&D activities are set up in line with the structure of Merck with three business sectors. A detailed description of our R&D activities can be found in the Annual Report for 2016 starting on page 72. This section of the present quarterly statement summarizes the key research and development activities during the third quarter of 2017.

Healthcare

BIOPHARMA

Oncology and Immuno-Oncology

On September 21, 2017, the European Commission gave its approval of avelumab injection 20 mg/ml under the tradename Bavencio®, for intravenous use, for the treatment of adults and pediatric patients 12 years and older with metastatic Merkel cell carcinoma (mMCC). This followed approval in the same indication in early September in Switzerland.

On September 27, 2017, the Ministry of Health, Labor and Welfare (MHLW) approved avelumab in Japan. Avelumab is therefore the first and only treatment indicated for curatively unresectable Merkel cell carcinoma (MCC) in Japan. It is also the first anti-PD-L1 antibody to be available in Japan.

On the occasion of the European Society for Medical Oncology congress (ESMO 2017; September 8–12, Madrid, Spain) we presented a total of 23 abstracts, representing five therapeutic agents, which highlighted our company's expanding scientific expertise.

Data presented included data on the role of established medicine Erbitux® (cetuximab), with quality of life (QoL) data in colorectal cancer (CRC) and real-world data in both CRC and squamous cell carcinoma of the head and neck. With respect to avelumab, updated efficacy and safety data were presented in mMCC and urothelial carcinoma (12-month follow-up data in pre-treated patients with locally advanced or metastatic disease). The progress of the broader JAVELIN clinical development program was also highlighted, with updated data in hard-to-treat tumors such as metastatic adrenocortical carcinoma. New data and updates from our rapidly evolving pipeline were also presented, including first stand-alone data in metastatic triple negative breast cancer from potential first-in-class ataxia telangiectasia and Rad3-related protein (ATR) inhibitor M6620. M6620 is currently being investigated in several ongoing Phase I trials across a variety of tumor types.

The addition of our recently in-licensed Vertex DNA damage response (DDR) portfolio to our own in-house DDR platform has positioned us as one of the key players in the DDR field. Our broad DDR portfolio includes inhibitors for enzymes of major DDR pathways, such as ATR, DNA-PK and ATM.

Other pipeline updates included data on the potential first-in-class dual p70S6K/Atk inhibitor M2698; and tepotinib, a highly selective c-Met kinase inhibitor, in patients with advanced hepatocellular carcinoma (HCC).

On September 10, 2017, we announced the recipients of the fourth annual Grant for Oncology Innovation (GOI) awards. The three winners of this prestigious program were awarded € 1 million in total to progress their research. Chosen from a total of 100 applicants worldwide, and judged by a scientific steering committee of internationally renowned oncology experts, the winning proposals were selected based on relevance to patient care, innovative approach, scientific impact, feasibility and relevance for the personalization of treatment.

Growth Disorders

On September 18, 2017, we introduced the recipients of the Grant for Growth Innovation (GGI) for 2017 at an awards presentation meeting organized by Merck during the 10th International Meeting of Pediatric Endocrinology in Washington, United States. Sixty-five applications were received from 28 countries, and reviewed by an independent Scientific Steering Committee consisting of six internationally renowned endocrinologists and researchers. Following a rigorous selection process, two awards were offered to innovative projects that seek to advance understanding in the field of growth and growth disorders. The winning projects originated from the research groups based in France and Denmark.

Neurology and Immunology

On August 25, 2017, the European Commission (EC) granted marketing authorization for Mavenclad® 10 mg (Cladribine Tablets) for the treatment of highly active relapsing multiple sclerosis (RMS) in the 28 countries of the European Union (EU) as well as in Norway, Liechtenstein and Iceland. Mavenclad® is the first oral short-course treatment to provide efficacy across key measures of disease activity in patients with highly active RMS, including disability progression, annualized relapse rate and magnetic resonance imaging (MRI) activity.

The Mavenclad® marketing authorization is based on more than 10,000 patient-years of data with over 2,700 patients included in the clinical trial program, and up to 10 years of observation in some patients. The efficacy and safety results of these studies allowed for a detailed characterization of its benefit-to-risk profile. Mavenclad® is a selective immune reconstitution therapy which simplifies treatment administration, by giving patients just two short annual courses of tablets in four years without the need for frequent monitoring. The most clinically relevant adverse reactions were lymphopenia and herpes zoster.

On September 12, 2017, we made known that a Phase IIb study of evobrutinib, a Bruton's tyrosine kinase inhibitor (BTKi) discovered by Merck, had been initiated in rheumatoid arthritis (RA) following a Phase IIa study which met the pre-defined criteria for progressing to a dose-finding study in this disease. The results of this study will be announced at a forthcoming rheumatology meeting. Evobrutinib is now in Phase IIb studies in three immunological indications: RA, MS, and systemic lupus erythematosus (SLE). Evobrutinib was discovered in our own laboratories and is an example of the innovation of our R&D activities within Healthcare.

Life Science

The three business units of Life Science, i.e. Research Solutions, Process Solutions and Applied Solutions, serve the world's scientific community with an array of offerings to address a diverse set of customer needs. Our research and development teams collaborate with customers to tackle tough life science challenges. In the third quarter, R&D activities continued to progress across the entire Life Science business sector with the launch of over 3,000 new products, including over 2,000 chemicals.

Notably, we launched Millistak®+ HC Pro, a first of its kind, high-capacity, fully synthetic depth filter for non-treated Chinese hamster ovary (CHO) harvest clarification and downstream filtration applications. The product offers customers improved consistency that will help them design a more robust and controlled clarification process. We also introduced Eshmuno® P Anti-A and Anti-B affinity chromatography resins specifically designed to remove anti-A and anti-B isoagglutinin antibodies during the manufacturing of plasma-derived immunoglobulin (Ig) therapies. The technology increases patient safety when using these types of therapies. We have the right to grant non-exclusive sublicenses to certain patents and patent applications owned and controlled by LFB (Laboratoire Français du Fractionnement et des Biotechnologies S.A.), strictly limited to the use of Eshmuno® P Anti-A and/or Eshmuno® P Anti-B resins for research, development and manufacture of plasma products (including toll and contract manufacturing for third parties).

Life Science also launched MC-Media Pads for convenient food and beverage testing. The product offers streamlined, convenient indicator organism testing for robust quality control of food and beverages, helping customers improve their sample testing workflows by increasing efficiency without compromising quality.

Performance Materials

In the third quarter, we continued to further develop our technologies and products in the Performance Materials business sector. We are the market and technology leader in liquid crystals (LCs) and photoresists, which are primarily used in televisions and mobile communication applications. In addition, we are the market leader in pearlescent pigments for the automotive industry and rank among the leading suppliers of OLED materials. Integrated circuit materials are the fourth pillar of the Performance Materials portfolio.

Display Materials

We continued to work with our customers, the display manufacturers, to further develop high-performance liquid crystal technologies. The systematic introduction of new liquid crystal materials and the development of higher-performance liquid crystal mixtures led to numerous newly qualified and commercialized products in all applications, including large-size TVs, public information displays, as well as mobile devices and automotive applications. We developed and successfully commercialized a number of new photoresist formulations for producing the thin-film transistor backplanes used in both LC and OLED display manufacture. Our high-resolution photoresist technology is especially important for the more complex and demanding electronic patterning required in increasingly high-resolution displays.

Our innovative liquid crystal technology UB-FFS (ultra-brightness fringe-field switching) continued to grow significantly in the mobile display sector compared with the year-earlier quarter. UB-FFS is highly attractive for mobile applications. It provides the highest light efficiency as pixel sizes become increasingly smaller due to the demand for higher-resolution smartphones and tablet devices. We are also further developing this energy-saving technology for larger display applications, including TVs and public information displays where high light efficiency is particularly valuable in highest resolution (e.g. 8k) displays.

Our new liquid crystal technology SA-VA (self-aligned vertical alignment) is resonating well with our customers. We have been developing the materials and process in the scope of close technical partnerships. We expect the first commercialization by the end of this year and significant growth in 2018. SA-VA is an eco-friendly and resource-conserving technology that requires less energy and creates less waste products than conventional modes during display manufacture. It also provides a more efficient display manufacturing process and could allow improved design features for display manufacturers. SA-VA has the potential to be used in all types of display applications including mobile IT applications, but most importantly large-size TVs. We expect first products in mid-sized applications, but extending quickly to large-area and premium TV applications.

We also made further progress with the development of new liquid crystal technologies to enable free-form LC displays. Here we are aiming to enable the use of low-cost plastic substrates rather than the thin glass commonly used in LC displays to date. We are working closely with display makers in Asia to optimize the materials and process for our innovative polymer wall LC technology. This could provide robust and bendable plastic displays without the defect patterns that typically occur when an LC display is pressed or bent.

In the field of liquid crystal smart windows, we further strengthened the performance and familiarity of our novel liquid crystals for controlling light incidence for windows in both architectural and automotive applications. For architectural applications, we are developing large-area products for external and internal use. Our technology makes it possible to achieve excellent performance for both solar protection and privacy control effects. We are working closely with our partners to enable large-scale products within the coming year. In addition, our latest LC window technology for automotive sunroofs attracted attention at the International Motor Show (IAA) in Frankfurt, Germany.

Good progress continued to be made in the development of smart antennas, which can also be used in the automotive industry. Thanks to a thin functional layer of liquid crystals, the antenna can be electronically pointed to a satellite without the need to move the device mechanically.

Together with Hella, a light and electronics expert, and other partners, we have developed a smart automotive headlight system based on an LC display. With a total of 30,000 pixels, the smart adaptive lighting can be set to various driving situations in a continuously variable manner and in real time. Hella is to bring the developed technology to series production.

Integrated Circuit Materials

Gas-phase deposition materials represent a technology field that offers high growth rates for our Integrated Circuit Materials business. In order to better support our customers in Asia, we recently opened a new research and development center in Taiwan. There we are developing very thermally conductive, economically sustainable, high-performance sinter pastes for packaging applications, and we are conducting research in atomic layer deposition and gas phase deposition for front-end applications. At our sites in Shizuoka, Japan, and Darmstadt, Germany, we are developing innovative dielectrics that can be used at lower application temperatures and are thus suitable for novel chip types. Our thick-film resist technology found new applications for the production of 3D NAND storage chips that can store a multiple amount of data with the same surface area. These new-generation storage chips are increasingly being used in solid state drives (SSD), successors of the classic hard drive, as well as other applications.

Pigments & Functional Materials

For the cosmetics industry, we have developed the Allure range of innovative matte pigments, which combine brightness with hiding power and good skin feel. New luster effects in cosmetics are achieved using a special architecture of a sapphire substrate, which combines a particularly intensive color impression with a sparkle. In addition, we recently implemented a technology developed in-house to more efficiently assess new cosmetic actives. It is based on two-dimensional and three-dimensional skin models. Particularly in testing the efficacy of natural substances, we are expecting to accelerate the marketability of products. In the area of functional materials for technical applications, we further developed the product class of polysilazanes. Owing to their excellent adhesion and barrier properties, these materials are suitable for use in high-quality coating systems, such as to protect against dirt and scratches.

Advanced Technologies

Organic light-emitting diodes (OLEDs) are a superb example of our R&D activities in the Advanced Technologies business unit. We again forged ahead with their further development in the third quarter of 2017.

COURSE OF BUSINESS AND ECONOMIC POSITION

Merck

Overview – Q3 2017

- Group net sales of € 3.7 billion on a par with the year-earlier period; organic growth (+4.2%) eroded by foreign exchange impact (–3.7%)
- Organic sales growth generated by Healthcare (+5.8 %) and Life Science (+4.8%)
- Group EBITDA pre exceptionals declines by –8.3% to € 1,076 million
- At 28.9%, Group EBITDA margin pre exceptionals lower than in the year-earlier quarter
- Net financial debt decreases by –8.9% to € 10.5 billion (December 31, 2016: € 11.5 billion)

MERCK GROUP

Key figures

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
Net sales	3,727	3,724	0.1%	11,479	11,194	2.5%
Operating result (EBIT)[1]	901	676	33.3%	2,283	2,075	10.0%
Margin (% of net sales)[1]	24.2%	18.2%		19.9%	18.5%	
EBITDA[1]	1,320	1,110	18.8%	3,530	3,462	2.0%
Margin (% of net sales)[1]	35.4%	29.8%		30.8%	30.9%	
EBITDA pre exceptionals[1]	1,076	1,174	–8.3%	3,410	3,416	–0.2%
Margin (% of net sales)[1]	28.9%	31.5%		29.7%	30.5%	
Profit after tax	649	460	40.9%	1,595	1,368	16.6%
Earnings per share (€)	1.48	1.05	41.0%	3.65	3.13	16.6%
Earnings per share pre exceptionals (€)[1]	1.51	1.70	–11.2%	4.85	4.79	1.3%
Business free cash flow[1]	910	1,085	–16.1%	2,706	2,646	2.3%

[1]Not defined by International Financial Reporting Standards (IFRS).

Development of net sales and results of operations

In the third quarter of 2017, net sales of the Merck Group increased by 0.1% to € 3,727 million (Q3 2016: € 3,724 million). Sales grew organically by € 155 million or 4.2%. This increase was attributable to the Healthcare and Life Science business sectors. Because of the strong euro, negative foreign exchange effects amounting to € –136 million or –3.7% were recorded in the third quarter of 2017. In particular, this affected the regions North America due to the exchange rate development of the U.S. dollar, as well as Asia-Pacific as a result of negative exchange rate effects from the Japanese yen, Chinese renminbi and Korean won. Portfolio changes caused Group sales to decrease by –0.4%. The divestment of the subsidiaries in Pakistan at the end of December 2016 had a negative impact on net sales of the Healthcare business sector whereas the first-time consolidation of BioControl Systems, Inc., USA, led to higher sales in Life Science.

Thanks to organic sales growth of 5.8%, the Healthcare business sector achieved an overall increase in sales to € 1,708 million (Q3 2016: € 1,689 million). Accounting for an unchanged 46% share of Group sales, Healthcare was once again the Group's largest business sector in terms of sales. In the third quarter of 2017, Life Science generated an organic growth rate of 4.8%. Including negative foreign exchange

MERCK GROUP

Net sales components by business sector – Q3 2017

€ million/Change in %	Net sales	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change
Healthcare	1,708	5.8%	–3.4%	–1.2%	1.2%
Life Science	1,408	4.8%	–3.9%	0.4%	1.3%
Performance Materials	611	–1.5%	–3.8%	–	–5.3%
Merck Group	**3,727**	**4.2%**	**–3.7%**	**–0.4%**	**0.1%**

[1]Not defined by International Financial Reporting Standard (IFRS).

effects (–3.9%) and acquisition-related sales increases (+0.4%), sales rose to € 1,408 million (Q3 2016: € 1,391 million). Consequently, Life Science accounted for 38% of Group sales in the third quarter of 2017 (Q3 2016: 37%). Owing to slight organic sales declines as well as negative foreign exchange effects, the net sales of Performance Materials amounted to € 611 million in the third quarter of 2017 (Q3 2016: € 645 million). This business sector thus accounted for 16% of Group net sales (Q3 2016: 17%).

In Asia-Pacific, the top-selling region, the Merck Group generated net sales of € 1,221 million in the third quarter of 2017 (Q3 2016: € 1,218 million). The very strong organic growth of 7.2%, which was due to the Healthcare and Life Science business sectors, was eroded by negative foreign exchange effects (–5.2%) and acquisition effects (–1.8%). Asia-Pacific's contribution to Group sales remained stable at 33% (Q3 2016: 33%).

In the third quarter of 2017, sales generated in Europe increased slightly by 0.3% to € 1,135 million (Q3 2016: € 1,131 million). The organic growth achieved by Life Science and Performance Materials and negative foreign exchange effects largely offset each other in this region. Thus, at 30%, Europe's share of Group sales remained at the level of the year-earlier quarter (Q3 2016: 30%).

The decrease in net sales in North America to € 926 million (Q3 2016: € 960 million) was mainly due to the exchange rate development of the U.S. dollar. Consequently, North America's contribution to Group sales declined to 25% (Q3 2016: 26%).

MERCK GROUP

Net sales by region – Q3 2017

€ million/% of net sales

Sales in Latin America grew by 5.7% to € 303 million (Q3 2016: € 287 million). This was primarily attributable to strong organic growth of the Healthcare business sector. Latin America's share of Group sales amounted to 8% in the third quarter of 2017 (Q3 2016: 8%).

The 12.1% sales increase in the Middle East and Africa region to € 142 million (Q3 2016: € 127 million) was mainly due to Healthcare, the region's most important business sector. This region accounted for a 4% share of Group sales in the third quarter of 2017 (Q3 2016: 3%).

MERCK GROUP

Net sales components by region – Q3 2017

€ million/Change in %	Net sales	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change
Europe	1,135	1.2%	–1.0%	0.1%	0.3%
North America	926	0.7%	–4.8%	0.5%	–3.6%
Asia-Pacific (APAC)	1,221	7.2%	–5.2%	–1.8%	0.2%
Latin America	303	9.2%	–3.6%	0.1%	5.7%
Middle East and Africa (MEA)	142	15.5%	–3.7%	0.2%	12.1%
Merck Group	**3,727**	**4.2%**	**–3.7%**	**–0.4%**	**0.1%**

[1]Not defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2017, Group net sales increased by € 285 million or 2.5% to € 11,479 million (January-September 2016: € 11,194 million). This increase was predominantly due to organic sales growth of 3.2%. Acquisitions and divestments caused Group net sales to decline by –0.4% in the first nine months of 2017. Exchange rate effects had only a minor impact of –0.2% on Group sales. The Healthcare and Life Science business sectors contributed +4.2% and +4.1%,

respectively, to the organic increase in Group sales. By contrast, Performance Materials posted an organic sales decline of –1.8%.

Geographically, the Merck Group generated sales increases in all regions apart from Europe. With organic growth of 6.7% in the first nine months of 2017, Asia-Pacific, the top-selling region, increased sales by a total of 4.7% to € 3,709 million (January-September 2016: € 3,544 million). In Europe, net sales decreased by –0.9% to € 3,516 million (January-September 2016: € 3,547 million). This was mainly due to lower sales in Healthcare (–4.0%). In North America, acquisition effects (+0.5%) were primarily responsible for the 0.6% increase in sales to € 2,880 million (January-September 2016: € 2,863 million). Both the Latin America and the Middle East and Africa regions generated double-digit growth, amounting to 10.3% and 12.1%, respectively. The increase in Latin America to € 929 million (January-September 2016: € 843 million) was due to organic growth (+8.2%) on the one hand and to foreign exchange rate effects (+1.9%) on the other. In the first nine months of 2017, the Middle East and Africa region generated net sales of € 444 million (January-September 2016: € 396 million). This increase was mainly attributable to organic growth in Healthcare.

The consolidated income statement of the Merck Group is as follows:

MERCK GROUP

Consolidated Income Statement

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
Net sales	**3,727**	**3,724**	**0.1%**	**11,479**	**11,194**	**2.5%**
Cost of sales	–1,299	–1,251	3.8%	–3,925	–3,873	1.4%
(of which: amortization of intangible assets)[1]	*(–43)*	*(–49)*	*(–12.6%)*	*(–134)*	*(–137)*	*(–2.1%)*
Gross profit	**2,428**	**2,473**	**–1.8%**	**7,553**	**7,321**	**3.2%**
Marketing and selling expenses	–1,135	–1,098	3.3%	–3,520	–3,303	6.6%
(of which: amortization of intangible assets)[1]	*(–251)*	*(–254)*	*(–1.1%)*	*(–768)*	*(–767)*	*(0.2%)*
Administration expenses	–220	–205	7.0%	–719	–620	15.9%
Research and development costs	–545	–443	23.0%	–1,561	–1,429	9.2%
(of which: amortization of intangible assets)[1]	*(–1)*	*(–1)*	*(7.3%)*	*(–4)*	*(–3)*	*(12.9%)*
Other operating expenses and income	372	–51	> 100.0%	529	106	> 100.0%
Operating result (EBIT)[2]	**901**	**676**	**33.3%**	**2,283**	**2,075**	**10.0%**
Financial result	–65	–67	–2.1%	–207	–256	–19.3%
Profit before income tax	**836**	**609**	**37.2%**	**2,076**	**1,819**	**14.2%**
Income tax	–187	–149	25.6%	–482	–451	6.8%
Profit after tax	**649**	**460**	**40.9%**	**1,595**	**1,368**	**16.6%**
Non-controlling interests	–4	–4	11.4%	–7	–8	–6.4%
Net income	**645**	**457**	**41.1%**	**1,587**	**1,360**	**16.7%**

[1] Excluding amortization of internally generated or separately acquired software.
[2] Not defined by International Financial Reporting Standards (IFRS).

In the third quarter of 2017, the Merck Group recorded gross profit of € 2,428 million (Q3 2016: € 2,473 million), thus falling short of the good year-earlier quarter. The resulting gross margin of the Group, i.e. gross profit as a percentage of sales, was 65.1% in the third quarter of 2017 (Q3 2016: 66.4%).

The double-digit increase in Group research and development costs to € 545 million (Q3 2016: € 443 million) was almost exclusively attributable to development activities of the Healthcare business sector, leading to a Group research spending ratio (research and development costs as a percentage of sales) of 14.6% (Q3 2016: 11.9%). Accounting for a 78% (Q3 2016: 73%) share of Group-wide research and development costs, Healthcare remained the most research-intensive business sector of Merck.

Other operating expenses and income (net) showed an income balance of € 372 million in the third quarter of 2017; in the year-earlier quarter this item showed an expense balance of € –51 million. This strong fluctuation was mainly due

to developments in the Healthcare business sector (see explanations in the section entitled "Healthcare"). In particular, the gain on the divestment of the Biosimilars business amounting to € 321 million had an impact in the third quarter of 2017 (see "Significant Events during the Reporting Period" under "Supplemental Financial Information"). This gain was eliminated in the calculation of EBITDA pre exceptionals.

The development of income and expenses in the Group income statement led to a 33.3% increase in the operating result (EBIT), which amounted to € 901 million (Q3 2016: € 676 million).

The financial result improved slightly in the third quarter of 2017 and totaled € – 65 million (Q3 2016: € – 67 million).

Income tax expenses of € 187 million (Q3 2016: € 149 million) led to an effective tax rate of 22.4% (Q3 2016: 24.4%).

Net income, i.e. profit after tax attributable to Merck shareholders, rose by € 188 million to € 645 million in comparison with the year-earlier quarter (Q3 2016: € 457 million), yielding a corresponding 41.0% improvement in earnings per share to € 1.48 (Q3 2016: € 1.05).

MERCK GROUP

Reconciliation of EBIT[1] to EBITDA pre exceptionals[1]

€ million	Q3 2017	Q3 2016	Change	Jan.–Sept. 2017	Jan.–Sept. 2016	Change
Operating result (EBIT)[1]	**901**	**676**	**33.3%**	**2,283**	**2,075**	**10.0%**
Depreciation/amortization/ impairment losses/reversals of impairment losses	419	434	–3.6%	1,247	1,386	–10.1%
(of which: exceptionals)	*(–17)*	*(–)*	*(–)*	*(–74)*	*(71)*	*(> 100.0%)*
EBITDA[1]	**1,320**	**1,110**	**18.8%**	**3,530**	**3,462**	**2.0%**
Restructuring costs	16	4	> 100.0%	28	7	> 100.0%
Integration costs/IT costs	37	48	–22.6%	94	112	–15.6%
Gains/losses on the divestment of businesses	–313	9	> 100.0%	–321	–319	0.6%
Acquisition-related exceptionals	1	1	5.8%	12	148	–92.2%
Other exceptionals	15	2	> 100.0%	66	5	> 100.0%
EBITDA pre exceptionals[1]	**1,076**	**1,174**	**–8.3%**	**3,410**	**3,416**	**–0.2%**

[1]Not defined by International Financial Reporting Standards (IFRS).

Exceptionals (€ –17 million) included under Depreciation/amortization/impairment losses/reversals of impairment losses relate to the impairment loss on the intangible asset for Cladribine Tablets, which was reversed and measured at amortized cost owing to the regulatory approval of Mavenclad®.

After adjusting for depreciation, amortization and exceptionals, EBITDA pre exceptionals, the key financial indicator used to steer operating business, declined by –8.3% to € 1,076 million (Q3 2016: € 1,174 million), leading to an EBITDA margin pre exceptionals relative to sales of 28.9% (Q3 2016: 31.5%). Earnings per share pre exceptionals (earnings per share adjusted by net of tax effect of exceptionals and amortization of purchased intangible assets) fell by –11.2% to € 1.51 (Q3 2016: € 1.70).

In the first nine months of 2017, the Merck Group generated EBITDA pre exceptionals of € 3,410 million, which was at the year-earlier level (January-September 2016: € 3,416 million). The Life Science business sector offset the slightly weaker result of the two other business sectors. At 29.7%, the Group EBITDA margin pre exceptionals was slightly weaker than in the previous year (January-September 2016: 30.5%). Earnings per share pre exceptionals rose slightly to € 4.85 (January-September 2016: € 4.79).

Net assets and financial position

MERCK GROUP

Balance sheet structure

	Sept. 30, 2017		Dec. 31, 2016		Change	
	€ million	**in %**	€ million	in %	€ million	in %
Non-current assets	**28,304**	**79.0%**	**30,582**	**79.9%**	**–2,278**	**–7.4%**
of which:						
Intangible assets	22,383		24,989		–2,605	
Property, plant and equipment	4,242		4,230		12	
Other non-current assets	1,678		1,363		315	
Current assets	**7,527**	**21.0%**	**7,670**	**20.1%**	**–143**	**–1.9%**
of which:						
Inventories	2,696		2,607		89	
Trade accounts receivable	2,910		2,889		21	
Current financial assets	96		145		–49	
Other current assets	973		1,089		–116	
Cash and cash equivalents	852		939		–87	
Total assets	**35,830**	**100.0%**	**38,251**	**100.0%**	**–2,421**	**–6.3%**
Equity	**13,791**	**38.5%**	**14,050**	**36.7%**	**–259**	**–1.8%**
Non-current liabilities	**13,859**	**38.7%**	**15,115**	**39.5%**	**–1,256**	**–8.3%**
of which:						
Provisions for pensions and other post-employment benefits	2,345		2,313		32	
Other non-current provisions	766		834		–68	
Non-current financial liabilities	8,067		8,809		–742	
Other non-current liabilities	2,681		3,159		–478	
Current liabilities	**8,180**	**22.8%**	**9,086**	**23.8%**	**–906**	**–10.0%**
of which:						
Current provisions	389		412		–23	
Current financial liabilities	3,363		3,788		–425	
Trade accounts payable	1,934		2,048		–114	
Other current liabilities	2,493		2,838		–345	
Total liabilities and equity	**35,830**	**100.0%**	**38,251**	**100.0%**	**–2,421**	**–6.3%**

The total assets of the Merck Group amounted to € 35,830 million as of September 30, 2017. This represents a decline of –6.3% compared with December 31, 2016 (€ 38,251 million). A significant reason for this was the development of the euro-U.S. dollar exchange rate. The weaker U.S. dollar led in particular to a decline in intangible assets. Since the beginning of 2017, working capital has risen by 7.7% to € 3,755 million (December 31, 2016: € 3,486 million) owing to higher receivables and inventories amid a simultaneous decline in trade accounts payable.

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

MERCK GROUP

Net financial debt[1]

	Sept. 30, 2017	Dec. 31, 2016	Change	
	€ million	€ million	€ million	in %
Bonds and commercial paper	8,331	9,650	–1,319	–13.7%
Bank loans	2,103	1,978	125	6.3%
Liabilities to related parties	813	758	55	7.3%
Loans from third parties and other financial liabilities	73	80	–7	–8.8%
Liabilities from derivatives (financial transactions)	108	128	–21	–16.2%
Finance lease liabilities	3	4	–1	–15.5%
Financial liabilities	**11,430**	**12,597**	**–1,167**	**–9.3%**
less				
Cash and cash equivalents	852	939	–87	–9.3%
Current financial assets	96	145	–49	–33.9%
Net financial debt[1]	**10,483**	**11,513**	**–1,030**	**–8.9%**

[1]Not defined by International Financial Reporting Standards (IFRS).

MERCK GROUP

Reconciliation of net financial debt[1]

€ million	**2017**
January 1	**11,513**
Currency translation difference	–386
Dividend payments to shareholders and to E. Merck[2]	624
Acquisitions[2]	17
Payments from the divestment of assets held for sale and from other divestments[2]	–167
Free cash flow[1]	–1,183
Other	65
September 30	**10,483**

[1]Not defined by International Financial Reporting Standards (IFRS).
[2]As reported in the consolidated cash flow statement.

The slight decrease in equity to € 13,791 million (December 31, 2016: € 14,050 million) was largely due to the development of currency translation differences from the translation of assets held in foreign currencies into euro, the reporting currency, as well as to the payment of the dividend. The increase in equity was mainly attributable to profit after tax (see "Consolidated Statement of Changes in Net Equity"). The equity ratio improved to 38.5% (December 31, 2016: 36.7%).

The composition of free cash flow as well as the development of the relevant items are presented in the following table:

MERCK GROUP

Free cash flow[1]

€ million	Q3 2017	Q3 2016	Change	Jan.–Sept. 2017	Jan.–Sept. 2016	Change
Cash flow from operating activities as reported in the consolidated cash flow statement	758	1,067	–29.0%	2,055	1,731	18.7%
Payments for investments in intangible assets	–38	–37	2.1%	–328	–82	> 100.0%
Payments from the disposal of intangible assets	2	–	–	5	1	> 100.0%
Payments for investments in property, plant and equipment	–197	–171	15.2%	–569	–456	24.9%
Payments from the disposal of property, plant and equipment	2	–	–	19	11	82.2%
Free cash flow[1]	**527**	**859**	**–38.7%**	**1,183**	**1,205**	**–1.8%**

[1]Not defined by International Financial Reporting Standards (IFRS).

In the third quarter of 2017, the business free cash flow of the Merck Group was € 910 million (Q3 2016: € 1,085 million). The decrease of € –175 million was mainly due to lower EBITDA pre exceptionals as well as the development of receivables.

MERCK GROUP

Business free cash flow[1]

€ million	Q3 2017	Q3 2016	Change	Jan.–Sept. 2017	Jan.–Sept. 2016	Change
EBITDA pre exceptionals[1]	1,076	1,174	–8.3%	3,410	3,416	–0.2%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–225	–203	10.9%	–549	–471	16.4%
Changes in inventories as reported in the consolidated balance sheet	4	19	–79.2%	–89	–1	> 100.0%
Changes in trade accounts receivable and receivables from royalties and licenses as reported in the consolidated balance sheet	55	94	–41.9%	–66	–138	–51.8%
Adjustments first-time consolidation of Sigma-Aldrich	–	–	–	–	–159	–
Business free cash flow[1]	**910**	**1,085**	**–16.1%**	**2,706**	**2,646**	**2.3%**

[1]Not defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2017, the Merck Group generated a € 60 million increase in business free cash flow, which amounted to € 2,706 million (January-September 2016: € 2,646 million). The improvement was primarily the result of the development of inventories and receivables. By contrast, higher cash outflows due to increased investment spending lowered business free cash flow in the reporting period.

Healthcare

HEALTHCARE

Key figures

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
Net sales	1,708	1,689	1.2%	5,226	5,089	2.7%
Operating result (EBIT)[1]	581	375	54.9%	1,375	1,314	4.6%
Margin (% of net sales)[1]	34.0%	22.2%		26.3%	25.8%	
EBITDA[1]	752	560	34.4%	1,847	1,947	–5.1%
Margin (% of net sales)[1]	44.1%	33.1%		35.3%	38.3%	
EBITDA pre exceptionals[1]	453	565	–19.9%	1,566	1,631	–4.0%
Margin (% of net sales)[1]	26.5%	33.5%		30.0%	32.0%	
Business free cash flow[1]	366	543	–32.6%	1,189	1,308	–9.1%

[1]Not defined by International Financial Reporting Standards (IFRS).

Development of net sales and results of operations

In the third quarter of 2017, the Healthcare business sector generated organic sales growth of 5.8%. Including a negative exchange rate impact of –3.4% and a negative portfolio effect of –1.2%, net sales amounted to € 1,708 million (Q3 2016: € 1,689 million). In the Biopharma business, the main drivers of organic sales growth were the antidiabetic agent Glucophage® and Euthyrox® for the treatment of thyroid disorders. The Consumer Health business also delivered double-digit organic growth. By contrast, the two top-selling products, the multiple sclerosis treatment Rebif® and the oncology drug Erbitux®, saw organic sales declines. Negative foreign exchange effects resulted from the decrease in the value of the U.S. dollar as well as the Chinese renminbi and the Japanese yen. The divestment of the business in Pakistan at the end of 2016, which primarily affected sales in the General Medicine franchise (including CardioMetabolic Care), led to a portfolio effect of –1.2%. Commission income, which is also included in net sales, dropped by –56.6% to € 20 million (Q3 2016: € 46 million). This was driven in particular by the takeover of the Glucophage® marketing rights in China from Bristol-Myers Squibb at the beginning of 2017. In the past, Healthcare exclusively recorded commission income for Glucophage® sales in China. Since the first quarter of 2017, the business sector no longer reports commission income for this product, but rather the corresponding sales for Glucophage®.

Europe, which accounts for 35% of Healthcare sales (Q3 2016: 36%) and is the business sector's largest region in terms of sales, saw an organic sales decline of –0.4% and generated net sales of € 602 million (Q3 2016: € 612 million). In particular, this was attributable to the difficult competitive situation and further price reductions for Rebif®. Sales of Erbitux® and Gonal-f® also decreased organically. By contrast, the beta-blocker Concor® from the General Medicine franchise (including CardioMetabolic Care) developed positively.

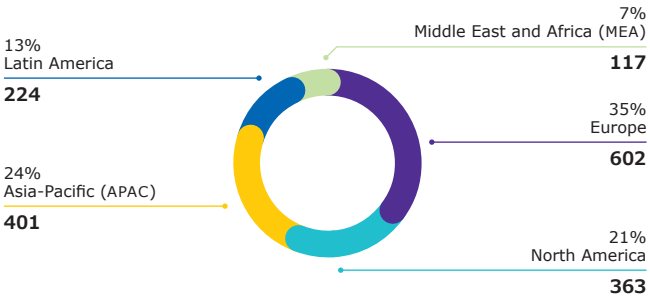
Asia-Pacific, the second-largest region, generated organic growth of 20.8%, contributing 24% to the business sector's net sales (Q3 2016: 22%). This was mainly due to the changed business model for Glucophage® marketing in China as of January 1, 2017. The business with fertility medicines, including Gonal-f®, as well as the Consumer Health business also generated double-digit organic growth rates in the Asia-Pacific region. A portfolio effect of –5.5% was primarily due to the divestment of our business activities in Pakistan. Including currency headwinds of –5.5%, sales amounted to € 401 million (Q3 2016: € 365 million).

In North America, net sales amounted to € 363 million (Q3 2016: € 400 million). The organic decline of –4.5% was predominantly driven by the development of Rebif® due to the difficult competitive situation, as well as by Gonal-f®, which had benefited from a favorable competitive situation in the year-earlier period. Initial sales of Bavencio® had a positive effect. This immuno-oncology medicine was approved in the United States for the treatment of metastatic Merkel cell carcinoma in March 2017 and advanced bladder cancer in May 2017. In addition, Bavencio® was approved to treat Merkel cell carcinoma in Europe and Japan in September 2017. Including negative exchange rate effects of –4.6%, the share of sales accounted for by the region decreased to 21% (Q3 2016: 24%).

HEALTHCARE

Net sales by region – Q3 2017

€ million / % of net sales of the business sector



Negative foreign exchange rate effects of –3.7% and organic sales growth of 11.3% in Latin America led to net sales of € 224 million (Q3 2016: € 209 million). The region's contribution to the business sector's net sales was thus 13% (Q3 2016: 12%). In particular, the Consumer Health business contributed to this development with double-digit organic growth. In the Biopharma business, organic sales growth of Erbitux®, Euthyrox® and Saizen® more than offset the Rebif® decline.

The Middle East and Africa region generated net sales of € 117 million (Q3 2016: € 103 million). Organic growth of 18.1% was mainly driven by the performance of the Consumer Health business as well as by Euthyrox® and fertility medicines.

HEALTHCARE

Net sales components by region – Q3 2017

€ million / Change in %	Net sales	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change
Europe	602	–0.4%	–1.1%	–	–1.5%
North America	363	–4.5%	–4.6%	–	–9.1%
Asia-Pacific (APAC)	401	20.8%	–5.5%	–5.5%	9.7%
Latin America	224	11.3%	–3.7%	–0.1%	7.5%
Middle East and Africa (MEA)	117	18.1%	–4.7%	0.1%	13.4%
Healthcare	**1,708**	**5.8%**	**–3.4%**	**–1.2%**	**1.2%**

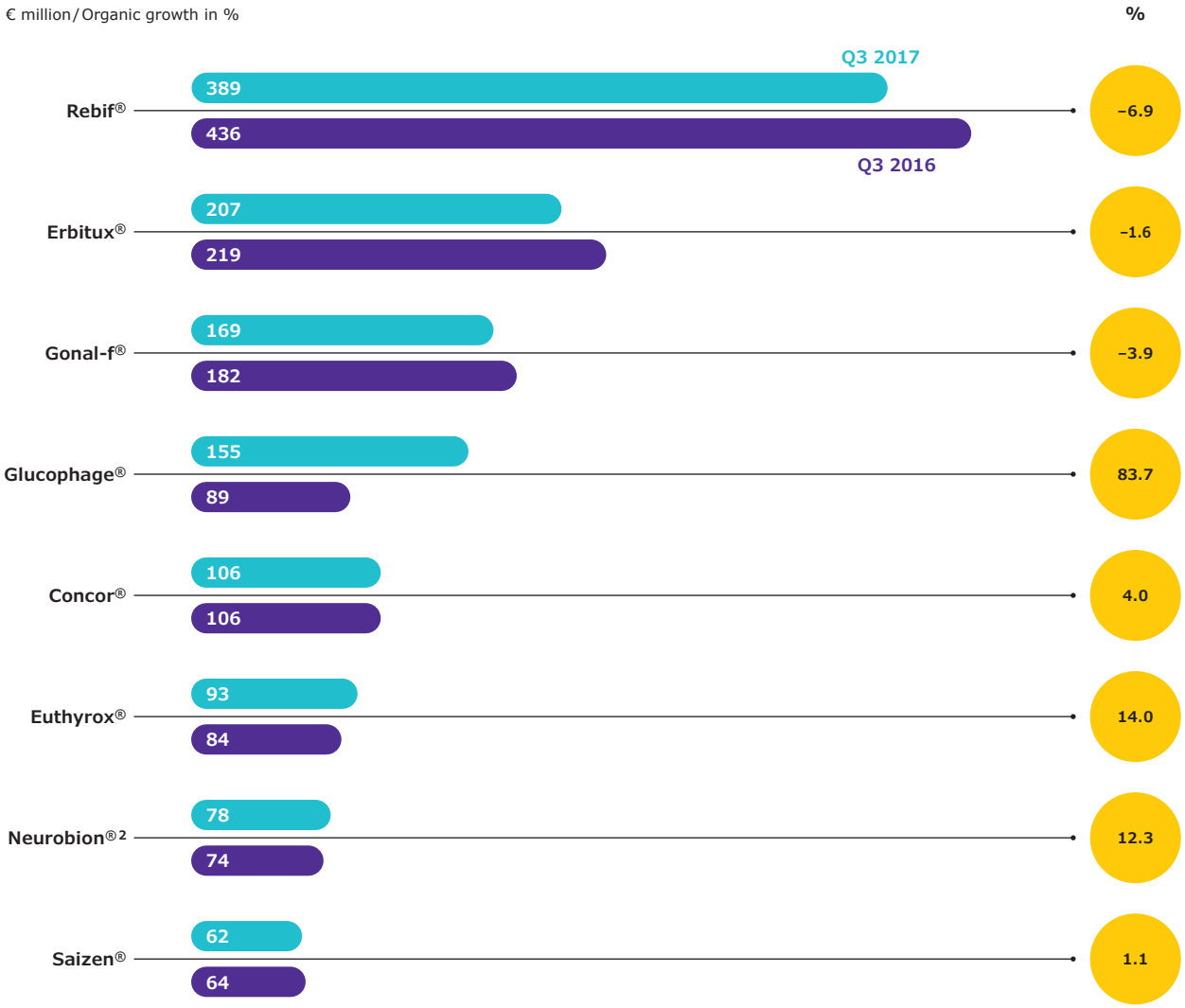
[1]Not defined by International Financial Reporting Standards (IFRS).

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

HEALTHCARE

Product sales and organic growth[1]

€ million / Organic growth in %



[1]Not defined by International Financial Reporting Standard (IFRS).
[2]Including Neurobion®, Dolo-Neurobion®, Dexabion® and Gavindo®.

Sales of the drug Rebif®, which is used to treat relapsing forms of multiple sclerosis, saw an organic sales decline of –6.9% in the third quarter of 2017. Including negative exchange rate effects of –4.1%, sales of € 389 million were recorded (Q3 2016: € 436 million). The organic decline was primarily attributable to performance in Europe and North America. Accounting for 63% of sales (Q3 2016: 62%), North America remained the most important sales market for Rebif® despite an organic sales decline of –5.1%. The price increases in the United States at the beginning of 2017 and in August could not offset declining sales volumes. Including foreign exchange effects of –4.8%, sales of € 245 million (Q3 2016: € 272 million) were generated in the region. In Europe, further price reductions and continued competitive pressure led to an organic sales decline of –12.1%. Sales amounted to € 111 million (Q3 2016: € 128 million), representing a 28% share of sales (Q3 2016: 29%). Together, the other regions, namely Latin America, Middle East and Africa, and Asia-Pacific generated a 9% share of sales (Q3 2016: 9%).

The oncology drug Erbitux® saw a slight organic sales decrease of –1.6%. Including currency headwinds of –3.6%, sales amounted to € 207 million (Q3 2016: € 219 million). Europe, the top-selling region, delivered sales of € 107 million (Q3 2016: € 114 million), contributing 51% (Q3 2016: 52%) to total Erbitux® sales. The organic decline of –5.5% was due especially to further price reductions. The Asia-Pacific region reported slight organic growth of 1.0% as well as negative foreign exchange effects of –6.5%. Consequently, sales decreased to € 68 million (Q3 2016: € 72 million). Latin America was the only region that delivered organic growth (+18.8%), with sales totaling € 21 million (Q3 2016: € 19 million). At € 11 million (Q3 2016: € 13 million), sales in the Middle East and Africa region were lower than in the year-earlier quarter, reflecting an organic sales decline of –12.8%.

HEALTHCARE

Product sales and organic growth[1] of Rebif® and Erbitux® by region – Q3 2017

		Total	Europe	North America	Asia-Pacific (APAC)	Latin America	Middle East and Africa (MEA)
Rebif®	€ million	389	111	245	3	15	15
	Organic growth[1] in %	–6.9%	–12.1%	–5.1%	–0.2%	–11.3%	9.5%
	% of sales	100%	28%	63%	1%	4%	4%
Erbitux®	€ million	207	107	–	68	21	11
	Organic growth[1] in %	–1.6%	–5.5%	–	1.0%	18.8%	–12.8%
	% of sales	100%	51%	–	33%	10%	6%

[1]Not defined by International Financial Reporting Standards (IFRS).

At € 169 million, third-quarter sales of Gonal-f®, the leading recombinant hormone used in the treatment of infertility, were below the year-earlier level (Q3 2016: € 182 million). The organic sales decline of –3.9% was primarily attributable to North America and Europe. The strong year-earlier sales in North America were due to a favorable competitive situation. The good organic development in Asia-Pacific and Latin America could only partly compensate for this effect.

In the Endocrinology franchise, net sales of € 92 million were slightly below the previous year's level (Q3 2016: € 96 million) despite stable organic development. The decrease was due to negative foreign exchange effects of –4.2%. Saizen®, the top-selling product in the franchise, generated slight organic sales growth of 1.1%. Here too, however, this was outweighed by currency headwinds of –3.8% and sales slipped to € 62 million (Q3 2016: € 64 million).

The General Medicine franchise (including CardioMetabolic Care), which commercializes products to treat cardiovascular diseases, thyroid disorders and diabetes, among other things, generated organic growth of 17.1%. Including foreign exchange effects of –3.3% and a portfolio effect of –3.7%, net sales totaled € 462 million (Q3 2016: € 420 million). Double-digit organic growth was due in particular to the performance of Glucophage®, which is used in the treatment of diabetes. The organic growth rate of Glucophage® was 83.7% and included the effect of the takeover of the Glucophage® marketing rights in China from Bristol-Myers Squibb. Including currency headwinds of –6.3% and a portfolio effect of –2.3%, net sales of this diabetes treatment increased to € 155 million (Q3 2016: € 89 million). Euthyrox®, a medicine to treat thyroid disorders, delivered organic growth of 14.0% in the third quarter of 2017. Including negative exchange rate effects (–2.4%), sales amounted to € 93 million (Q3 2016: € 84 million). The portfolio effect in General Medicine (including CardioMetabolic Care) resulted mainly from the divestment of our business in Pakistan at the end of 2016.

In the third quarter of 2017, the Consumer Health business, which commercializes over-the-counter pharmaceuticals, generated double-digit organic sales growth of 11.0%. Including exchange rate effects (–1.5%) and portfolio changes (–1.9%) net sales totaled € 236 million (Q3 2016: € 219 million). In particular, the global core strategic brands Neurobion®, Dolo-Neurobion® and Femibion® contributed to organic growth across all major sales regions.

In the first nine months of 2017, net sales of the Healthcare business sector increased by 2.7% to € 5,226 million (January-September 2016: € 5,089 million). This reflected organic sales growth of 4.2%, negative exchange rate effects of –0.5%, and a portfolio effect of –1.1% resulting from the divestment of the business activities in Pakistan. Organic growth was driven in particular by performance in Asia-Pacific, reflecting the effect of the takeover of the Glucophage® marketing rights in China from Bristol-Myers Squibb. The regions Latin America as well as Middle East and Africa also generated good, and in some cases double-digit, organic growth rates.

Rebif®, the top-selling product, generated sales of € 1,229 million (January-September 2016: € 1,300 million). The organic sales decline of –4.9% was due mainly to the development in Europe caused by the tight competitive situation and price declines. North America, the key sales market, saw only a slight organic sales decline of –1.8% since price increases partly offset the effect of lower sales volumes. Only Latin America delivered positive organic growth, which amounted to 15.7%. Including exchange rate effects of –0.6%, Rebif® sales declined by a total of –5.4%.

Sales of Erbitux® amounted to € 638 million (January-September 2016: € 657 million), declining organically by –2.0%. This was primarily the result of the development in the European market, which was strongly affected by competitive pressure and price decreases in the first nine months. Sales in Europe declined organically by –6.4% to € 335 million (January-September 2016: € 361 million). Double-digit organic growth of 23.7% in Latin America could not fully compensate for this development. Including foreign exchange effects of –0.9%, sales decreased by –2.9% overall.

In comparison with the strong sales in the year-earlier period, which benefited from a favorable competitive situation in North America, sales of Gonal-f® decreased organically in the first nine months of 2017 by –7.0%. The decrease in North America and Europe could only be partly offset by positive, and in some cases double-digit, organic growth rates in the other regions. Overall, sales decreased by –7.8% to € 533 million (January-September 2016: € 578 million).

At 72.2%, the organic sales growth of Glucophage® was predominantly due to the changed business model for Glucophage® marketing in China, leading to sales of € 485 million (January-September 2016: € 286 million). Euthyrox® and Concor® continued to perform well. Organic growth rates of 13.1% and 6.5% led to sales of € 276 million (January-September 2016: € 243 million) for Euthyrox® and € 336 million (January-September 2016: € 320 million) for Concor®.

In the first nine months of 2017, Consumer Health generated sales of € 686 million (January-September 2016: € 646 million). Organic sales growth across all regions totaled 6.8%. Growth was fueled mainly by the core strategic brands Neurobion®, Dolo-Neurobion®, Nasivin®, and Seven Seas®.

The results of operations developed as follows:

HEALTHCARE

Results of operations

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
Net sales	**1,708**	**1,689**	**1.2%**	**5,226**	**5,089**	**2.7%**
Cost of sales	–379	–349	8.6%	–1,152	–1,010	14.2%
(of which: amortization of intangible assets)[1]	*(–1)*	*(–)*	*(–)*	*(–1)*	*(–1)*	*(99.1%)*
Gross profit	**1,329**	**1,339**	**–0.8%**	**4,074**	**4,079**	**–0.1%**
Marketing and selling expenses	–666	–623	7.0%	–2,033	–1,878	8.2%
(of which: amortization of intangible assets)[1]	*(–139)*	*(–140)*	*(–0.3%)*	*(–419)*	*(–426)*	*(–1.5%)*
Administration costs	–71	–65	10.2%	–226	–202	11.7%
Research and development costs	–423	–322	31.5%	–1,188	–1,078	10.2%
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*	*(–1)*	*(–1)*	*(0.3%)*
Other operating expenses and income	413	45	> 100.0%	748	393	90.1%
Operating result (EBIT)[2]	**581**	**375**	**54.9%**	**1,375**	**1,314**	**4.6%**
Depreciation/amortization/impairment losses/reversals of impairment losses	171	185	–7.1%	472	633	–25.4%
(of which: exceptionals)	*(–17)*	*(–)*	*(–)*	*(–84)*	*(71)*	*(> 100.0%)*
EBITDA[2]	**752**	**560**	**34.4%**	**1,847**	**1,947**	**–5.1%**
Restructuring costs	–1	2	> 100.0%	–	3	–
Integration costs/IT costs	5	4	40.7%	17	10	71.2%
Gains/losses on the divestment of businesses	–315	–	–	–325	–330	–1.3%
Acquisition-related exceptionals	–	–	–	–	–	–
Other exceptionals	10	–	–	27	–	–
EBITDA pre exceptionals[2]	**453**	**565**	**–19.9%**	**1,566**	**1,631**	**–4.0%**

[1]Excluding amortization of internally generated or separately acquired software.
[2]Not defined by International Financial Reporting Standards (IFRS).
.

The increase in marketing and selling expenses was primarily attributable to the preparations for the market launches of Mavenclad® and Bavencio®. In addition, this item included license expenses payable to Bristol-Myers Squibb as of the beginning of 2017 owing to the takeover of the marketing rights to Glucophage® in China. In the third quarter of 2017, research and development costs rose to € 423 million (Q3 2016: € 322 million), corresponding to a research spending ratio of 24.8% (Q3 2016: 19.1%). The increase was mainly due to higher investments in the R&D pipeline. Furthermore, the year-earlier quarter included income of around € 40 million resulting from the release of provisions that had originally been set up in connection with the discontinuation of clinical development projects. The positive development of other operating expenses and income was primarily due to the gain on the divestment of the Biosimilars business in August 2017 amounting to € 321 million, which was eliminated in the calculation of EBITDA pre exceptionals. A further exceptional item was the impairment loss reversal of € 17 million for Cladribine Tablets due to the regulatory approval of Mavenclad®. Royalty and license income, which is included in other operating income, included the milestones for the approval of Bavencio® in Europe and Japan in Merkel cell carcinoma. Consequently, EBITDA pre exceptionals amounted to € 453 million (Q3 2016: € 565 million), corresponding to an EBITDA margin pre exceptionals of 26.5% (Q3 2016: 33.5 %).

From January to September 2017, Healthcare generated EBITDA pre exceptionals of € 1,566 million (January-September 2016: € 1,631 million). The increase in marketing and selling expenses reflected, among other things, higher license expenses payable to Bristol-Myers Squibb due to the takeover of the marketing rights to Glucophage® in China as well as the market launch preparations for Mavenclad® and Bavencio®. The four milestone payments for Bavencio® in March, May and September 2017 had a positive impact on other operating income. This item also still included higher royalty income from Avonex® due to the additional patent granted in the United States in June 2016 as well as income from an agreement on a one-time payment for future license payments at the beginning of 2017. This led to an EBITDA margin pre exceptionals of 30.0% (January-September 2016: 32.0%).

Development of business free cash flow

In the third quarter of 2017, business free cash flow amounted to € 366 million (Q3 2016: € 543 million). The drop was primarily attributable to the lower EBITDA pre exceptionals in the third quarter of 2017.

HEALTHCARE

Business free cash flow[1]

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
EBITDA pre exceptionals[1]	453	565	–19.9%	1,566	1,631	–4.0%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–85	–83	1.8%	–216	–184	17.3%
Changes in inventories	–12	5	> 100.0%	–36	–59	–39.5%
Changes in trade accounts receivable as well as receivables from royalties and licenses	10	56	–81.7%	–125	–80	56.4%
Business free cash flow[1]	**366**	**543**	**–32.6%**	**1,189**	**1,308**	**–9.1%**

[1]Not defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2017, business free cash flow decreased to € 1,189 million (January-September 2016: € 1,308 million). Lower EBITDA pre exceptionals, higher capital spending as well as the increase in receivables contributed to this development.

Life Science

LIFE SCIENCE

Key figures

€ million	Q3 2017	Q3 2016	Change	Jan.–Sept. 2017	Jan.–Sept. 2016	Change
Net sales	1,408	1,391	1.3%	4,385	4,217	4.0%
Operating result (EBIT)[1]	220	216	2.1%	677	486	39.3%
Margin (% of net sales)[1]	15.6%	15.5%		15.4%	11.5%	
EBITDA[1]	401	399	0.6%	1,242	1,026	21.1%
Margin (% of net sales)[1]	28.5%	28.7%		28.3%	24.3%	
EBITDA pre exceptionals[1]	426	424	0.5%	1,325	1,233	7.5%
Margin (% of net sales)[1]	30.2%	30.5%		30.2%	29.2%	
Business free cash flow[1]	416	390	6.8%	1,120	935	19.8%

[1]Not defined by International Financial Reporting Standards (IFRS).

Development of sales and results of operations

In the third quarter of 2017, Life Science recorded organic sales growth of 4.8% and portfolio growth of 0.4% due to acquisitions and divestments. Unfavorable foreign exchange effects lowered net sales by –3.9% compared with the year-earlier period. Including all these effects, Life Science sales increased by a total of 1.3% to € 1,408 million (Q3 2016: € 1,391 million). Portfolio growth was attributable to the acquisition of BioControl Systems Inc., which was somewhat offset by the divestment of the Pakistan operations. Favorability across the full Life Science portfolio contributed to organic growth.

From a regional perspective, all regions contributed positively to the organic sales growth of Life Science, reflecting good demand in the market.

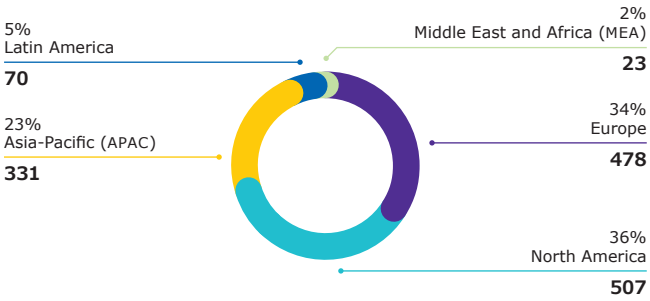
In North America, the business sector's largest market accounting for 36% (Q3 2016: 36%) of sales, organic sales growth amounted to 4.9 %. Process Solutions led the growth with increased demand in the Services and the Upstream & Systems businesses, driven by cell culture media and single-use products. Overall, sales in North America rose to € 507 million (Q3 2016: € 504 million) in the third quarter of 2017 despite negative exchange rate effects (–5.2%).

Europe, the second-largest market for Life Science, accounted for 34% (Q3 2016: 34%) of the business sector's sales in the third quarter of 2017. Sales in Europe increased to € 478 million (Q3 2016: € 469 million), reflecting organic growth of 2.6%, which was driven by Research Solutions and Applied Solutions.

LIFE SCIENCE

Net sales by region – Q3 2017

€ million / % of net sales of the business sector



In Asia-Pacific, Life Science generated strong organic sales growth of 7.2% with all businesses contributing favorably. Growth was fueled by the Process Solutions business unit, which registered high sales growth in the cell culture media business as well as for single-use products. Sales in Asia-Pacific increased to € 331 million (Q3 2016: € 330 million) despite strong currency headwinds (–6.4%). The region thus contributed 23% to the business sector's net sales in the third quarter of 2017 (Q3 2016: 24%).

Sales in Latin America grew organically by 6.9% and were mainly driven by Process Solutions, specifically the Upstream & Systems business. Overall, sales in Latin America increased to € 70 million (Q3 2016: € 67 million).

Sales in the Middle East and Africa region grew organically by 7.7%, led by Process Solutions. Net sales in the region totaled € 23 million in the third quarter of 2017 (Q3 2016: € 21 million).

LIFE SCIENCE

Net sales components by region – Q3 2017

€ million/Change in %	Net sales	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change
Europe	478	2.6%	–1.0%	0.3%	1.9%
North America	507	4.9%	–5.2%	0.9%	0.7%
Asia-Pacific (APAC)	331	7.2%	–6.4%	–0.5%	0.2%
Latin America	70	6.9%	–3.9%	1.0%	3.9%
Middle East and Africa (MEA)	23	7.7%	1.3%	0.8%	9.8%
Life Science	**1,408**	**4.8%**	**–3.9%**	**0.4%**	**1.3%**

[1]Not defined by International Financial Reporting Standards (IFRS).

All Life Science business units contributed to the positive organic sales increase in the third quarter of 2017.

The Process Solutions business unit, which markets products and services for the pharmaceutical production value chain, generated organic sales growth of 5.2%. The share of Life Science net sales accounted for by Process Solutions was 38%. All businesses performed positively with the exception of Filtration & Chromatography, which registered weaker growth within various global strategic accounts but was largely offset by continued favorable demand from regional strategic accounts. Including currency headwinds of –4.0%, sales amounted to € 539 million in the third quarter of 2017 (Q3 2016[2]: € 533 million).

The Research Solutions business unit, which provides products and services to support life science research for pharmaceutical, biotechnology and academic research laboratories, grew organically by 4.0% and accounted for 35% of the business sector's net sales in the third quarter of 2017. Organic growth was driven by higher demand in the Lab and Specialty Chemicals business, specifically in the Lab Essentials portfolio. Including adverse foreign exchange effects of –3.9% and the negative impact of –0.3% from the Pakistan divestment, sales amounted to € 492 million in the third quarter of 2017 (Q3 2016[2]: € 493 million).

Applied Solutions, which accounted for a 27% share of Life Science sales, delivered strong organic sales growth of 5.2% with its broad range of products for researchers and scientific laboratories. This business unit generated growth across all regions and businesses primarily driven by instrumental analytics sales to dealers. Including the negative foreign exchange impact of –3.7% and positive portfolio growth of 1.9% from BioControl Systems, net sales amounted to € 378 million (Q3 2016[2]: € 365 million).

LIFE SCIENCE

Net sales components by business area – Q3 2017

€ million/Change in %	Net sales	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change
Process Solutions	539	5.2%	–4.0%	–0.1%	1.1%
Research Solutions	492	4.0%	–3.9%	–0.3%	–0.1%
Applied Solutions	378	5.2%	–3.7%	1.9%	3.4%

[1]Not defined by International Financial Reporting Standards (IFRS).

[2]Previous year's figures have been adjusted due to an internal realignment.

The Life Science business sector performed well in the first nine months of 2017, reporting net sales of € 4,385 million (January-September 2016: € 4,217 million). Including organic growth of 4.1%, a portfolio effect of 0.4% from the acquisition of BioControl Systems partially offset by the Pakistan divestment, and an adverse foreign exchange impact of –0.5%, net sales of the Life Science business sector rose by a total of 4.0% in the nine-month period. All business units contributed favorably to organic sales growth, led by Process Solutions.

Process Solutions generated organic sales growth of 5.8% in the first nine months of 2017. Including negative foreign exchange effects of –0.7%, sales amounted to € 1,661 million (January-September 2016[3]: € 1,581 million). Process Solutions thus accounted for 38% of Life Science net sales. Overall, the Process Solutions portfolio performed well, driven by Upstream & Systems with higher demand for biopharma ingredients and single-use products, as well as the Services business.

Research Solutions posted organic growth of 2.2% in the first nine months of 2017. Including the adverse foreign exchange impact of –0.4% and the negative effect of the Pakistan divestment of –0.3%, sales amounted to € 1,555 million (January-September 2016[3]: € 1,532 million). Research Solutions accounted for 35% of Life Science net sales. The entire Research Solutions portfolio contributed positively to organic sales growth.

Applied Solutions recorded organic growth of 4.2% in the first nine months of 2017. Including the portfolio impact of 2.0% due to the BioControl Systems acquisition and the negative foreign exchange effect of –0.3%, sales amounted to € 1,168 million (January-September 2016[3]: € 1,104 million). Applied Solutions accounted for 27% of Life Science net sales with all businesses performing well and Biomonitoring leading the growth.

The results of operations developed as follows:

LIFE SCIENCE

Results of operations

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
Net sales	**1,408**	**1,391**	**1.3%**	**4,385**	**4,217**	**4.0%**
Cost of sales	–632	–608	4.0%	–1,902	–2,000	–4.9%
(of which: amortization of intangible assets)[1]	*(–14)*	*(–18)*	*(–19.9%)*	*(–45)*	*(–48)*	*(–6.6%)*
Gross profit	**776**	**783**	**–0.9%**	**2,483**	**2,217**	**12.0%**
Marketing and selling expenses	–412	–414	–0.6%	–1,303	–1,248	4.4%
(of which: amortization of intangible assets)[1]	*(–108)*	*(–109)*	*(–1.3%)*	*(–338)*	*(–327)*	*(3.2%)*
Administration costs	–59	–56	6.7%	–194	–176	10.3%
Research and development costs	–60	–63	–4.4%	–190	–190	0.1%
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*	*(–)*	*(–)*	*(–)*
Other operating expenses and income	–24	–34	–28.8%	–118	–117	1.2%
Operating result (EBIT)[2]	**220**	**216**	**2.1%**	**677**	**486**	**39.3%**
Depreciation/amortization/impairment losses/reversals of impairment losses	181	183	–1.2%	565	540	4.7%
(of which: exceptionals)	*(–)*	*(–)*	*(–)*	*(3)*	*(–)*	*(–)*
EBITDA[2]	**401**	**399**	**0.6%**	**1,242**	**1,026**	**21.1%**
Restructuring costs	1	–	–	3	1	> 100.0%
Integration costs/IT costs	23	23	–3.4%	50	60	–16.2%
Gains/losses on the divestment of businesses	–	–	–	1	–	–
Acquisition-related exceptionals	1	1	5.6%	12	146	–92.0%
Other exceptionals	–	–	–	18	–	–
EBITDA pre exceptionals[2]	**426**	**424**	**0.5%**	**1,325**	**1,233**	**7.5%**

[1]Excluding amortization of internally generated or separately acquired software.
[2]Not defined by International Financial Reporting Standards (IFRS).

[3]Previous year's figures have been adjusted due to an internal realignment.

In the third quarter of 2017, gross profit decreased slightly by –0.9% to € 776 million (Q3 2016: € 783 million), primarily as a consequence of adverse foreign exchange effects. In addition, owing to the weaker growth of various global strategic accounts, this reflects the unfavorable product mix in comparison with the year-earlier quarter.

Marketing and selling expenses were roughly on a par with the year-earlier quarter, whereas R&D costs decreased by –4.4%. Other operating expenses and income (net) improved by 28.8% mainly as a result of higher royalty and license income.

In comparison with the third quarter of 2016, the operating result (EBIT) of Life Science rose by 2.1% to € 220 million (Q3 2016: € 216 million). EBITDA pre exceptionals, the most important performance indicator, rose slightly by 0.5% to € 426 million (Q3 2016: € 424 million).

In the first nine months of 2017, EBITDA pre exceptionals of Life Science rose by 7.5%, to € 1,325 million (Q3 2016: € 1,233 million), reflecting the organic growth of the business sector and the realization of cost synergies from the Sigma-Aldrich acquisition as planned. The EBITDA margin pre exceptionals increased to 30.2% (January – September 2016: 29.2%).

Development of business free cash flow

In the third quarter of 2017, Life Science generated business free cash flow of € 416 million, representing an increase of 6.8% compared with the year-earlier quarter. This increase was driven by favorable inventory development.

LIFE SCIENCE

Business free cash flow[1]

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
EBITDA pre exceptionals[1]	426	424	0.5%	1,325	1,233	7.5%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–73	–68	8.7%	–191	–166	15.0%
Changes in inventories	15	–17	> 100.0%	–37	58	> 100.0%
Changes in trade accounts receivable as well as receivables from royalties and licenses	49	50	–2.4%	22	–34	> 100.0%
Adjustments first-time consolidation of Sigma-Aldrich	–	–	–	–	–156	–
Business free cash flow[1]	**416**	**390**	**6.8%**	**1,120**	**935**	**19.8%**

[1]Not defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2017, business free cash flow rose by 19.8% to € 1,120 million (January-September 2016: € 935 million). This increase was driven by higher EBITDA pre exceptionals along with the favorable development of receivables, which was partially offset by higher capital expenditure.

Performance Materials

PERFORMANCE MATERIALS

Key figures

€ million	Q3 2017	Q3 2016	Change	Jan.–Sept. 2017	Jan.–Sept. 2016	Change
Net sales	611	645	–5.3%	1,867	1,888	–1.1%
Operating result (EBIT)[1]	191	213	–10.6%	553	613	–9.8%
Margin (% of net sales)[1]	31.2%	33.1%		29.6%	32.5%	
EBITDA[1]	246	274	–10.1%	734	808	–9.2%
Margin (% of net sales)[1]	40.3%	42.5%		39.3%	42.8%	
EBITDA pre exceptionals[1]	249	282	–11.7%	752	829	–9.3%
Margin (% of net sales)[1]	40.7%	43.7%		40.2%	43.9%	
Business free cash flow[1]	222	271	–18.3%	694	729	–4.8%

[1]Not defined by International Financial Reporting Standards (IFRS).

Development of net sales and results of operations

In the third quarter of 2017, net sales of the Performance Materials business sector declined by –5.3% to € 611 million (Q3 2016: € 645 million). This resulted mainly from negative foreign exchange effects (–3.8%) due to the stronger euro. In addition, organic sales decreased slightly (–1.5%) as the Display Materials business remained below the year-earlier quarter.

Consisting of the Liquid Crystals business and complementary materials, the Display Materials business unit represented around 50% of the business sector's net sales. Despite the organic decrease in net sales, this business unit continued to defend its market leadership position. The lower level of sales in the third quarter of 2017 stemmed from the performance of established liquid crystal technologies, caused by a normalization of the unusually high market shares as well as the price declines customary in this industry. An exception here was our innovative, energy-saving UB-FFS technology, which generated double-digit growth.

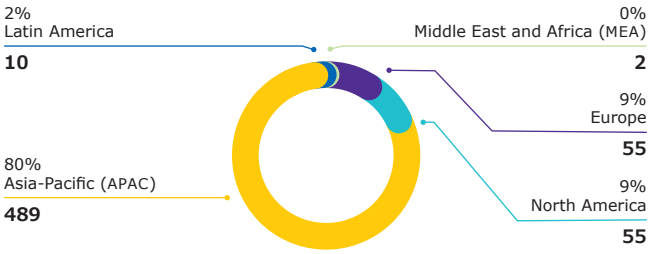
The very strong organic sales growth of the Integrated Circuit Materials business unit was driven in particular by the business with dielectrics and deposition materials for chip production.

The Pigments & Functional Materials business unit achieved healthy organic sales growth in the third quarter of 2017. This resulted from higher demand for decorative materials such as the Xirallic® family of pigments and for effect pigments used in the cosmetics industry.

PERFORMANCE MATERIALS

Net sales by region – Q3 2017

€ million / % of net sales of the business sector



In the Advanced Technologies business unit, higher demand for OLED materials led to double-digit growth rates in net sales.

Accounting for 80% (Q3 2016: 81%), the Asia-Pacific region again generated the vast majority of the business sector's net sales. This is due to the concentration of customers for display and integrated circuit materials in Asia. In this region, sales by the business sector decreased by –6.4% owing to negative foreign exchange effects (–4.2%) and an organic sales decline (–2.2%). The downturn in Display Materials could not be fully offset by strong growth in the other business units.

The moderate sales decline of –3.3% in North America was exclusively due to negative foreign exchange effects (–3.7%).

In Europe, significant organic growth of 7.4% was generated as a result of strong demand for pigments and functional fillers.

Since they account for a low proportion of sales, the two regions Latin America and Middle East and Africa played a subordinate role. Latin America recorded an organic decline in sales since the high level of sales in the year-earlier quarter normalized.

PERFORMANCE MATERIALS

Net sales components by region – Q3 2017

€ million / Change in %	Net sales	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change
Europe	55	7.4%	–0.3%	–	7.1%
North America	55	0.4%	–3.7%	–	–3.3%
Asia-Pacific (APAC)	489	–2.2%	–4.2%	–	–6.4%
Latin America	10	–15.2%	–1.3%	–	–16.5%
Middle East and Africa (MEA)	2	–21.4%	–0.6%	–	–22.0%
Performance Materials	**611**	**–1.5%**	**–3.8%**	**–**	**–5.3%**

[1]Not defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2017, sales of the business sector decreased slightly by –1.1% to € 1,867 million (January-September 2016: € 1,888 million). Positive foreign exchange effects of 0.8% could not offset the –1.8% organic decrease in sales.

The organic sales decline in the first nine months of 2017 stemmed from the performance of established liquid crystal technologies caused by a normalization of the unusually high market shares as well as the price declines customary in this industry. An exception here was our innovative, energy-saving UB-FFS technology, which generated double-digit growth.

During the first nine months of 2017, the Integrated Circuit Materials business unit delivered strong organic growth, with dielectrics and deposition materials for chip production performing well in particular.

The Pigments & Functional Materials business unit generated a healthy organic sales increase in the first nine months of 2017. Growth was driven by the business with decorative pigments and particularly sales of the Xirallic® family of pigments, which delivered significant growth.

In the Advanced Technologies business unit, higher demand for OLED materials led to double-digit growth rates in net sales.

The results of operations developed as follows:

PERFORMANCE MATERIALS

Results of operations

€ million	Q3 2017	Q3 2016	Change	Jan.–Sept. 2017	Jan.–Sept. 2016	Change
Net sales	**611**	**645**	**–5.3%**	**1,867**	**1,888**	**–1.1%**
Cost of sales	–287	–295	–2.5%	–870	–864	0.7%
(of which: amortization of intangible assets)[1]	*(–28)*	*(–31)*	*(–9.7%)*	*(–88)*	*(–89)*	*(–0.3%)*
Gross profit	**323**	**350**	**–7.6%**	**997**	**1,024**	**–2.6%**
Marketing and selling expenses	–56	–59	–5.7%	–181	–175	3.5%
(of which: amortization of intangible assets)[1]	*(–4)*	*(–5)*	*(–17.6%)*	*(–11)*	*(–14)*	*(–21.4%)*
Administration costs	–18	–14	27.5%	–54	–45	21.7%
Research and development costs	–57	–55	2.2%	–173	–157	10.4%
(of which: amortization of intangible assets)[1]	*(–1)*	*(–1)*	*(13.5%)*	*(–2)*	*(–2)*	*(24.9%)*
Other operating expenses and income	–3	–8	–69.6%	–36	–35	3.4%
Operating result (EBIT)[2]	**191**	**213**	**–10.6%**	**553**	**613**	**–9.8%**
Depreciation/amortization/impairment losses/reversals of impairment losses	56	60	–8.0%	181	195	–7.4%
(of which: exceptionals)	*(–)*	*(–)*	*(–)*	*(7)*	*(–)*	*(–)*
EBITDA[2]	**246**	**274**	**–10.1%**	**734**	**808**	**–9.2%**
Restructuring costs	–	–	–	2	1	> 100.0%
Integration costs/IT costs	2	8	–69.7%	11	17	–35.2%
Gains/losses on the divestment of businesses	–	–	–	–	–	–
Acquisition-related exceptionals	–	–	–	–	3	–
Other exceptionals	–	–	–	5	–	–
EBITDA pre exceptionals[2]	**249**	**282**	**–11.7%**	**752**	**829**	**–9.3%**

[1]Excluding amortization of internally generated or separately acquired software.
[2]Not defined by International Financial Reporting Standards (IFRS).

In the third quarter of 2017 and in line with the decline in net sales, the gross profit of the Performance Materials business sector declined compared with the year-earlier period. At 53.0%, gross margin was slightly lower than the year-earlier figure of 54.3%. The operating result (EBIT) decreased by € 22 million to € 191 million in the third quarter of 2017 (Q3 2016: € 213 million). This was mainly driven by the decline in sales of highly profitable liquid crystals due to the normalization of market shares as well as the price declines customary in the industry. Furthermore, research and development costs rose as strategically important initiatives such as liquid crystal windows and OLED materials advanced further. Consequently, at 40.7%, the EBITDA margin pre exceptionals was lower than the previous year's exceptionally high level (Q3 2016: 43.7%).

In the first nine months of 2017, gross profit decreased by –2.6% to € 997 million (January-September 2016: € 1,024 million). At € 553 million, the operating result (EBIT) declined by –9.8% compared with the year-earlier period (January-September 2016: € 613 million). EBITDA pre exceptionals of the business sector decreased by –9.3% to € 752 million (January-September 2016: € 829 million). Therefore, the EBITDA margin pre exceptionals of 40.2% was lower than the previous year's high level of 43.9%.

Development of business free cash flow

In the third quarter of 2017, business free cash flow of the Performance Materials business sector fell to € 222 million (Q3 2016: € 271 million). This was predominantly driven by the decrease in EBITDA pre exceptionals as well as the development of inventories.

PERFORMANCE MATERIALS

Business free cash flow[1]

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
EBITDA pre exceptionals[1]	249	282	-11.7%	752	829	-9.3%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	-27	–28	-1.3%	-69	–71	-3.4%
Changes in inventories	-1	31	-95.4%	-16	–	–
Changes in trade accounts receivable as well as receivables from royalties and licenses	-1	–13	-90.8%	27	–26	> 100.0%
Adjustments first-time consolidation of Sigma-Aldrich	–	–	–	–	–3	–
Business free cash flow[1]	**222**	**271**	**-18.3%**	**694**	**729**	**-4.8%**

[1]Not defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2017, business free cash flow decreased by –4.8% to € 694 million (January-September 2016: € 729 million). Lower EBITDA pre exceptionals was partly offset by the development of receivables and inventories.

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 Merck Group.

CORPORATE AND OTHER

Key figures

€ million	**Q3 2017**	Q3 2016	Change	**Jan.–Sept. 2017**	Jan.–Sept. 2016	Change
Operating result (EBIT)[1]	–91	–128	–29.0%	–321	–338	–4.9%
EBITDA[1]	–80	–122	–34.1%	–293	–319	–8.3%
EBITDA pre exceptionals[1]	–51	–97	–47.2%	–233	–277	–15.8%
Business free cash flow[1]	–94	–119	–21.4%	–297	–325	–8.5%

[1]Not defined by International Financial Reporting Standard (IFRS).

In the third quarter of 2017, administration expenses reported under Corporate and Other amounted to € 71 million (Q3 2016: € 71 million). Other operating expenses (net) totaled € –14 million (Q3 2016: € –54 million). This was mainly due to the positive development of the foreign exchange result. Consequently, in the third quarter of 2017 the operating result (EBIT) amounted to € –91 million (Q3 2016: € –128 million) and EBITDA was € –80 million (Q3 2016: € –122 million). Adjusted for exceptionals, EBITDA pre exceptionals totaled € –51 million (Q3 2016: € –97 million). The improvement in negative EBITDA pre exceptionals had a positive impact on the development of business free cash flow, which amounted to € –94 million in the third quarter of 2017 (Q3 2016: –119 million).

In the first nine months of 2017, EBITDA pre exceptionals of Corporate and Other totaled € –233 million (January-September 2016: € –277 million). The improvement in this key performance indicator was due especially to lower other operating expenses (net). Business free cash flow amounted to € –297 million in the reporting period (January-September 2016: € –325 million).

OUTLOOK

Organic sales performance in the third quarter met our expectations. For the full year, we continue to forecast slight to moderate organic net sales growth compared with the previous year. Since our report on the second quarter, the euro has continued to appreciate against the U.S. dollar and various emerging market currencies. Therefore, we assume that exchange rate changes will have a slightly negative effect of 1% to 2% in comparison with the previous year. To date, we had anticipated a neutral effect on net sales. In contrast to our previous estimate for the full year, we expect a €/US$ exchange rate in the range of 1.12–1.14 (formerly: 1.09–1.13). Net sales of the Merck Group in 2017 are likely to be at the lower end of our previously targeted range of € 15.3 billion to € 15.7 billion owing to the amended exchange rate expectations. As in the preceding quarters, the sustainability of this development also depends on future political and macroeconomic developments. High exchange rate volatility is thus generally still to be expected in the remaining weeks of 2017. We maintain the corridor for EBITDA pre exceptionals of the Group at € 4.4 billion to € 4.6 billion. However, owing to the generally more difficult exchange rate environment since our report on the second quarter, we assume that EBITDA pre exceptionals for 2017 will also be at the lower end of this range.

For the Healthcare business sector, we continue to expect a slight organic increase in net sales in 2017 in comparison with the previous year. Our expectations have not changed from our most recently published guidance: We assume that the positive development of demand in growth markets will contribute significantly to the expected development of sales and will compensate for the expected decline in sales of Rebif® and the continued price pressure in individual regions. In addition, sales growth will benefit from the full takeover of the marketing rights for the antidiabetic agent Glucophage® in China from Bristol-Myers Squibb Company, USA, at the beginning of 2017.

In the first and second quarters, the U.S. Food and Drug Administration (FDA) had already approved Bavencio® (avelumab) in the treatment of metastatic Merkel cell carcinoma (mMCC, March 23, 2017) and for the treatment of patients with locally advanced or metastatic urothelial carcinoma (mUC, May 9, 2017). In the third quarter, the European Commission (EC) approved Bavencio® for the treatment of mMCC following the positive opinion of the Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) on July 21, 2017. For 2017, we forecast initial sales contributions from Bavencio® of around € 20 million, in line with the previously expected low double-digit million euro range.

On August 25, 2017, the European Commission (EC) approved Mavenclad® after the CHMP had already issued a positive recommendation in July. Mavenclad® is thus now approved in the 28 Member States of the European Union (EU) as well as in Iceland, Liechtenstein and Norway. The first market launch took place in Germany, and will follow in the United Kingdom and the other EU countries. The medicine is used in the treatment of relapsing multiple sclerosis (MS). This year, we expect sales in the high single-digit million range.

The divestment of our business in Pakistan in the fourth quarter of 2016 will lead to a low portfolio-related decline in sales, as previously stated.

For 2017, we continue to forecast EBITDA pre exceptionals of the Healthcare business sector in a range of between € 1.9 billion and € 2.0 billion. The decrease in comparison with the previous year (€ 1,496 million) is due on the one hand to an expected increase in research and development spending on our pipeline. We continue to foresee this in a range of between € 150 million and € 200 million, but exchange rate effects and the Biosimilars divestment should lead to a slight improvement within this range. The transaction to divest our Biosimilars business to Fresenius, which was announced on April 24, 2017, closed on September 1, 2017, which was slightly earlier than we had anticipated. The responsible authorities approved the transaction without imposing any conditions. For 2017, we now expect a cost reduction in the mid double-digit million range. In our most recent guidance, we had expected this to be in the low double-digit million euro range.

Furthermore, we continue to assume for the Healthcare business sector that an increase in marketing and selling expenses due to the market launches of Bavencio® and Mavenclad® will lower EBITDA pre exceptionals. Royalty

income from a patent granted in the United States in 2016 as well as a one-time payment as compensation for future license payments will increase EBITDA pre exceptionals in 2017. Moreover, we include in our forecast the milestone payments from our partner Pfizer for the aforementioned approvals of Bavencio®.

Following the end of the third quarter, for 2017 we continue to expect for our Life Science business sector solid organic sales growth that should be slightly above the expected market growth of approximately 4% per annum. This should also reflect initial sales synergies from the acquisition of Sigma-Aldrich. We believe that the Process Solutions business unit will still contribute the largest share to organic sales growth, even if organic growth in the first three quarters was slightly lower than in previous quarters due to the very high year-earlier base. Research Solutions and Applied Solutions are also expected to contribute positively to organic sales growth. Additionally, owing to the acquisition of BioControl in 2016 we expect a low positive portfolio effect in 2017. The realization of synergies has high priority for us and we will continue to vigorously pursue this aim in 2017 as well. We continue to expect a positive effect of around € 80 million on earnings in addition to the cost synergies already realized. Overall, we continue to forecast EBITDA pre exceptionals in a range of between € 1.78 billion and € 1.85 billion.

In the Performance Materials business sector we already saw signs in the first quarter of a normalization of our market shares in the liquid crystals business – from a high base level. This development became increasingly visible in the second quarter of 2017. Consequently, the price pressure customary in this industry could no longer be compensated for by corresponding volume growth. In the third quarter, the good organic development in our Integrated Circuit Materials and Pigments & Functional Materials business units was also unable to fully offset the decline in the Display Materials business unit. Overall, for 2017 we assume a slight to moderate organic decline in sales compared with the previous year. We continue to expect that the ongoing normalization of market shares in our highly profitable Liquid Crystals business will lead to a negative margin mix. Overall, we continue to forecast EBITDA pre exceptionals of between € 0.95 billion and € 1.05 billion for 2017.

EBITDA pre exceptionals of Corporate and Other in 2017 is expected to amount to between € –300 million and € –350 million; previously we had expected a range of between € –350 million and € –400 million. The changed expectation is mainly attributable to slight currency hedging gains. We continue to invest in our IT infrastructure and various digitalization initiatives, which we believe hold promise for new business opportunities and greater efficiency in the future.

MERCK GROUP

Forecast for FY 2017

€ million	Net sales	EBITDA pre exceptionals	Business free cash flow
Merck Group	~15,300 to 15,700	~4,400 to 4,600	~3,040 to 3,340
Healthcare	• Slight organic growth • Low portfolio effect due to the divestment of our business in Pakistan	~1,900 to 2,000	~1,320 to 1,410
Life Science	• Solid organic sales growth, slightly above the expected market growth of approximately 4% p.a.	~1,780 to 1,850	~1,400 to 1,490
Performance Materials	• Slight to moderate organic decline in net sales	~950 to 1,050	~820 to 890
Corporate and Other		~–300 to –350	~–450 to –500

Earnings per share pre exceptionals: € 6.15 – € 6.50

Full-year FX assumptions for 2017: € 1 = US$ 1.12 – 1.14
€ 1 = JPY 125
€ 1 = CHF 1.09

SUPPLEMENTAL FINANCIAL INFORMATION

Consolidated Income Statement

€ million	**Q3 2017**	Q3 2016	**Jan.–Sept. 2017**	Jan.–Sept. 2016
Net sales	**3,727**	**3,724**	**11,479**	**11,194**
Cost of sales	–1,299	–1,251	–3,925	–3,873
(of which: amortization of intangible assets)[1]	*(–43)*	*(–49)*	*(–134)*	*(–137)*
Gross profit	**2,428**	**2,473**	**7,553**	**7,321**
Marketing and selling expenses	–1,135	–1,098	–3,520	–3,303
(of which: amortization of intangible assets)[1]	*(–251)*	*(–254)*	*(–768)*	*(–767)*
Administration expenses	–220	–205	–719	–620
Research and development costs	–545	–443	–1,561	–1,429
(of which: amortization of intangible assets)[1]	*(–1)*	*(–1)*	*(–4)*	*(–3)*
Other operating income	544	129	1,067	741
Other operating expenses	–172	–180	–538	–634
Operating result (EBIT)[2]	**901**	**676**	**2,283**	**2,075**
Financial result	–65	–67	–207	–256
Profit before income tax	**836**	**609**	**2,076**	**1,819**
Income tax	–187	–149	–482	–451
Profit after tax	**649**	**460**	**1,595**	**1,368**
of which: attributable to Merck KGaA shareholders (net income)	645	457	1,587	1,360
of which: attributable to non-controlling interests	4	4	7	8
Earnings per share (in €)				
basic	1.48	1.05	3.65	3.13
diluted	1.48	1.05	3.65	3.13

[1]Excluding amortization of internally generated or separately acquired software.
[2]Not defined by International Financial Reporting Standard (IFRS).

Consolidated Statement of Comprehensive Income

€ million	Q3 2017	Q3 2016	Jan.–Sept. 2017	Jan.–Sept. 2016
Profit after tax	**649**	**460**	**1,595**	**1,368**
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	–117	–204	39	–824
Tax effect	22	28	8	127
Changes recognized in equity	–95	–176	47	–697
	–95	–176	47	–697
Items of other comprehensive income that may be reclassified to profit or loss in subsequent periods:				
Available-for-sale financial assets				
Fair value adjustments	2	–2	4	22
Reclassification to profit or loss	1	–	–	–31
Tax effect	–	1	–	2
Changes recognized in equity	2	–1	4	–6
Derivative financial instruments				
Fair value adjustments	16	–24	105	–14
Reclassification to profit or loss	–10	12	16	35
Reclassification to assets	–	–	–	–
Tax effect	–3	8	–38	1
Changes recognized in equity	3	–5	83	22
Exchange differences on translating foreign operations				
Changes taken directly to equity	–503	–142	–1,779	–337
Reclassification to profit or loss	–29	–	–51	–74
Changes recognized in equity	–532	–142	–1,830	–411
	–527	–148	–1,742	–395
Other comprehensive income	**–622**	**–324**	**–1,695**	**–1,093**
Comprehensive income	**26**	**136**	**–100**	**275**
of which: attributable to Merck KGaA shareholders	24	132	–103	268
of which: attributable to non-controlling interests	2	4	3	7

Consolidated Balance Sheet

€ million	Sept. 30, 2017	Dec. 31, 2016
Non-current assets		
Intangible assets	22,383	24,989
Property, plant and equipment	4,242	4,230
Non-current financial assets	497	218
Other non-current assets	140	131
Deferred tax assets	1,041	1,013
	28,304	**30,582**
Current assets		
Inventories	2,696	2,607
Trade accounts receivable	2,910	2,889
Current financial assets	96	145
Other current assets	616	674
Income tax receivables	357	403
Cash and cash equivalents	852	939
Assets held for sale	–	12
	7,527	**7,670**
Total assets	**35,830**	**38,251**
Total equity		
Equity capital	565	565
Reserves	11,841	10,362
Gains / losses recognized in equity	1,325	3,062
Equity attributable to Merck KGaA shareholders	**13,731**	**13,989**
Non-controlling interests	60	61
	13,791	**14,050**
Non-current liabilities		
Provisions for pensions and other post-employment benefits	2,345	2,313
Other non-current provisions	766	834
Non-current financial liabilities	8,067	8,809
Other non-current liabilities	296	439
Deferred tax liabilities	2,385	2,720
	13,859	**15,115**
Current liabilities		
Current provisions	389	412
Current financial liabilities	3,363	3,788
Trade accounts payable	1,934	2,048
Income tax liabilities	1,081	883
Other current liabilities	1,412	1,947
Liabilities directly related to assets held for sale	–	8
	8,180	**9,086**
Total equity and liabilities	**35,830**	**38,251**

Consolidated Cash Flow Statement

€ million	Q3 2017	Q3 2016	Jan.–Sept. 2017	Jan.–Sept. 2016
Profit after tax	**649**	**460**	**1,595**	**1,368**
Depreciation/amortization/impairment losses/reversals of impairment losses	419	434	1,247	1,386
Changes in inventories	–48	10	–236	–31
Changes in trade accounts receivable	26	97	–185	–111
Changes in trade accounts payable	–9	25	62	–23
Changes in provisions	–50	4	22	–42
Changes in other assets and liabilities	99	36	–101	–396
Neutralization of gain/loss on disposals of assets	–324	1	–346	–421
Other non-cash income and expenses	–3	–	–3	–
Net cash flows from operating activities	**758**	**1,067**	**2,055**	**1,731**
thereof: from discontinued operations	**–**	**–**	**–**	**–**
Payments for investments in intangible assets	–38	–37	–328	–82
Payments from the disposal of intangible assets	2	–	5	1
Payments for investments in property, plant and equipment	–197	–171	–569	–456
Payments from the disposal of property, plant and equipment	2	–	19	11
Payments for investments in financial assets	–56	–73	–238	–294
Payments for acquisitions less acquired cash and cash equivalents	–10	–	–17	–
Payments from the disposal of other financial assets	51	57	166	405
Payments from other divestments	–	1	11	22
Payments from the divestment of assets held for sale	156	–	156	340
Net cash flows from investing activities	**–90**	**–223**	**–794**	**–53**
thereof: from discontinued operations	**–**	**1**	**–**	**24**
Dividend payments to Merck KGaA shareholders	–	–	–155	–136
Dividend payments to non-controlling interests	–	–1	–3	–3
Dividend payments to E. Merck KG	–	–	–466	–461
Payments from new borrowings of financial liabilities from E. Merck KG	–	80	349	881
Repayments of financial liabilities to E. Merck KG	–179	–141	–288	–639
Repayments of bonds	–700	–	–932	–212
Changes in other financial liabilities	35	–640	177	–1,061
Net cash flows from financing activities	**–844**	**–702**	**–1,318**	**–1,631**
Changes in cash and cash equivalents	**–176**	**142**	**–57**	**46**
Changes in cash and cash equivalents due to currency translation	–14	3	–30	–3
Cash and cash equivalents at the beginning of the reporting period	1,041	723	939	832
Changes in cash and cash equivalents due to changes in the scope of consolidation	–	–	–	–8
Cash and cash equivalents as of September 30	**852**	**867**	**852**	**867**

Consolidated Statement of Changes in Net Equity

	Equity capital			Retained earnings	
€ million	General partner's equity Merck KGaA	Subscribed capital Merck KGaA	Capital reserves (share premium) Merck KGaA	Retained earnings/ Net retained profit	Remeasurement of defined benefit plans
Balance as of January 1, 2016	**397**	**168**	**3,814**	**7,025**	**–1,160**
Profit after tax	–	–	–	1,360	–
Other comprehensive income	–	–	–	–	–697
Comprehensive income	**–**	**–**	**–**	**1,360**	**–697**
Dividend payments	–	–	–	–136	–
Transactions with no change of control	–	–	–	–	–
Changes in scope of consolidation/Other	–	–	–	–	–
Balance as of September 30, 2016	**397**	**168**	**3,814**	**8,249**	**–1,857**
Balance as of January 1, 2017	**397**	**168**	**3,814**	**8,049**	**–1,501**
Profit after tax	–	–	–	1,587	–
Other comprehensive income	–	–	–	–	47
Comprehensive income	**–**	**–**	**–**	**1,587**	**47**
Dividend payments	–	–	–	–155	–
Transactions with no change of control	–	–	–	–	–
Changes in scope of consolidation/Other	–	–	–	–	–
Balance as of September 30, 2017	**397**	**168**	**3,814**	**9,481**	**–1,454**

Gains/losses recognized in equity					
Available-for-sale financial assets	Derivative financial instruments	Currency translation difference	Equity attributable to Merck KGaA shareholders	Non-controlling interests	Total equity
5	**–176**	**2,714**	**12,787**	**68**	**12,855**
–	–	–	1,360	8	1,368
–6	22	–410	–1,092	–1	–1,093
–6	**22**	**–410**	**268**	**7**	**275**
–	–	–	–136	–3	–139
–	–	–	–	–	–
–	–	–	–	–	–
–1	**–154**	**2,304**	**12,920**	**72**	**12,992**
24	**–191**	**3,229**	**13,989**	**61**	**14,050**
–	–	–	1,587	7	1,595
4	83	–1,825	–1,691	–4	–1,695
4	**83**	**–1,825**	**–103**	**3**	**–100**
–	–	–	–155	–3	–158
–	–	–	–	–	–
–	–	–	–	–	–
29	**–107**	**1,404**	**13,731**	**60**	**13,791**

Information by Business Sector

€ million	Healthcare				Life Science			
	Q3 2017	Q3 2016	**Jan.–Sept. 2017**	Jan.–Sept. 2016	**Q3 2017**	Q3 2016	**Jan.–Sept. 2017**	Jan.–Sept. 2016
Net sales[1]	**1,708**	**1,689**	**5,226**	**5,089**	**1,408**	**1,391**	**4,385**	**4,217**
Operating result (EBIT)[2]	**581**	**375**	**1,375**	**1,314**	**220**	**216**	**677**	**486**
Depreciation and amortization	185	184	553	560	181	183	562	541
Impairment losses	4	1	6	73	–	–	3	–
Reversals of impairment losses	–17	–	–87	–	–	–	–	–1
EBITDA[2]	**752**	**560**	**1,847**	**1,947**	**401**	**399**	**1,242**	**1,026**
Exceptionals[2]	–300	5	–281	–316	24	25	83	207
EBITDA pre exceptionals (Segment result)[2]	**453**	**565**	**1,566**	**1,631**	**426**	**424**	**1,325**	**1,233**
EBITDA margin pre exceptionals (% of net sales)[2]	26.5 %	33.5 %	30.0 %	32.0 %	30.2 %	30.5 %	30.2 %	29.2 %
Net operating assets[3]			5,953	5,600			19,762	21,853
Segment liabilities[3]			–2,285	–2,427			–873	–953
Investments in property, plant and equipment[4]	75	77	232	206	61	50	187	145
Investments in intangible assets[4]	18	9	276	24	13	20	36	37
Net cash flows from operating activities	458	567	1,166	1,248	454	487	1,022	956
Business free cash flow[2]	366	543	1,189	1,308	416	390	1,120	935

[1] Excluding intersegment sales.
[2] Not defined by International Financial Reporting Standard (IFRS).
[3] Figures for the reporting period ending on September 30, 2017; previous-year figures as of December 31, 2016.
[4] As reported in the consolidated cash flow statement.

Performance Materials				Corporate and Other				Merck Group			
Q3 2017	Q3 2016	**Jan.–Sept. 2017**	Jan.–Sept. 2016	**Q3 2017**	Q3 2016	**Jan.–Sept. 2017**	Jan.–Sept. 2016	**Q3 2017**	Q3 2016	**Jan.–Sept. 2017**	Jan.–Sept. 2016
611	**645**	**1,867**	**1,888**	**–**	**–**	**–**	**–**	**3,727**	**3,724**	**11,479**	**11,194**
191	**213**	**553**	**613**	**–91**	**–128**	**–321**	**–338**	**901**	**676**	**2,283**	**2,075**
56	60	174	181	10	6	28	18	432	433	1,317	1,300
–	–	7	14	–	–	–	–	4	1	17	88
–	–	–	–	–	–	–	–	–17	–	–87	–1
246	**274**	**734**	**808**	**–80**	**–122**	**–293**	**–319**	**1,320**	**1,110**	**3,530**	**3,462**
2	8	18	21	29	25	60	42	–244	63	–120	–46
249	**282**	**752**	**829**	**–51**	**–97**	**–233**	**–277**	**1,076**	**1,174**	**3,410**	**3,416**
40.7 %	43.7 %	40.2 %	43.9 %	–	–	–	–	28.9 %	31.5 %	29.7 %	30.5 %
		3,686	4,146			433	200			29,833	31,798
		–312	–290			–81	–106			–3,551	–3,777
25	26	72	68	35	17	78	36	197	171	569	456
3	2	8	7	5	7	8	14	38	37	328	82
231	327	782	773	–385	–314	–916	–1,246	758	1,067	2,055	1,731
222	271	694	729	–94	–119	–297	–325	910	1,085	2,706	2,646

€ million	**Q3 2017**	Q3 2016	**Jan.–Sept. 2017**	Jan.–Sept. 2016
EBITDA pre exceptionals of the operating businesses[1]	**1,127**	**1,272**	**3,643**	**3,693**
Corporate and Other	–51	–97	–233	–277
EBITDA pre exceptionals of the Merck Group[1]	**1,076**	**1,174**	**3,410**	**3,416**
Depreciation/amortization/impairment losses/reversals of impairment losses	–419	–434	–1,247	–1,386
Exceptionals[1]	244	–63	120	46
Operating result (EBIT)[1]	**901**	**676**	**2,283**	**2,075**
Financial result	–65	–67	–207	–256
Profit before income tax	**836**	**609**	**2,076**	**1,819**

[1] Not defined by International Financial Reporting Standard (IFRS).

€ million	**Q3 2017**	Q3 2016	**Jan.–Sept. 2017**	Jan.–Sept. 2016
Restructuring costs	–16	–4	–28	–7
Integration costs/IT costs	–37	–48	–94	–112
Gains (+)/losses (–) on the divestment of businesses	313	–9	321	319
Acquisition-related exceptionals	–1	–1	–12	–148
Other exceptionals	–15	–2	–66	–5
Exceptionals before impairment losses/reversals of impairment losses[1]	**244**	**–63**	**120**	**46**
Impairment losses	–	–	–13	–71
Reversals of impairment losses	17	–	87	–
Exceptionals (total)[1]	**261**	**–63**	**195**	**–25**

[1] Not defined by International Financial Reporting Standard (IFRS).

Significant Events during the Reporting Period

Acquisition of BioControl Systems, Inc., USA, in 2016

Effective December 21, 2016, Merck acquired a 100% interest in BioControl Systems, Inc., Bellevue, USA, (BioControl), a company that develops, manufactures and commercializes materials and systems to check food safety. The purchase price amounted to US$ 169 million (€ 161 million). BioControl is being integrated into the Life Science business sector. In comparison with June 30, 2017, no material changes to the purchase price allocation occurred. More information can be found under "Acquisition of BioControl Systems, Inc., USA, in 2016" in the Notes to the Consolidated Half-Year Financial Statements as of June 30, 2017.

Licensing agreement with Vertex Pharmaceuticals Inc., USA, for the development and commercialization of research and development programs

On January 11, 2017, Merck announced a licensing agreement with Vertex Pharmaceuticals Inc., Boston, USA, (Vertex). As part of the agreement, Merck has acquired two clinical-stage programs and additional novel preclinical oncology and immuno-oncology programs. The two clinical-stage programs are pursuing approaches to inhibit the DNA repair pathways that are fundamental to the survival and proliferation of certain cancers. The preclinical programs include one immuno-oncology program against a target with first-in-class potential and a program against a completely novel target. Merck has full responsibility for the development and commercialization of all programs.

In return, Vertex received an upfront payment of US$ 230 million (€ 218 million) in March 2017 and entitlement to royalty fees on future product sales. The upfront payment was allocated to the acquired programs in the first quarter of 2017 and the allocated amounts were capitalized accordingly as intangible assets.

Agreement on compensation for future license payments

On February 6, 2017, Merck entered into an agreement under which Merck is entitled to a one-time payment in exchange for future license payments. In the first quarter of 2017, Merck received a payment from this agreement amounting to € 116 million, which was allocated nearly in full to the Healthcare business sector.

Development agreement with Avillion LLP, United Kingdom, to develop Merck's anti-IL-17 A/F Nanobody®

On March 30, 2017, Merck announced an agreement with a subsidiary of Avillion LLP, London, United Kingdom (Avillion), to co-develop the anti-IL-17 A/F Nanobody® M1095. Merck acquired full, exclusive rights to anti-IL-17 A/F Nanobody® through a global development and commercialization license from Ablynx nv, Ghent, Belgium, in 2013. This Nanobody® is an investigational therapy which has completed Phase I development.

As part of the cooperation, Avillion will be responsible for developing anti-IL-17 A/F Nanobody® from Phase II through Phase III in plaque psoriasis. Avillion will also finance the clinical program through to regulatory submission. During the development stages, Merck will recognize a financial liability for potential repayment obligations to Avillion.

Immuno-oncology collaboration with the F-star Group, Cambridge, United Kingdom

On June 4, 2017, Merck announced a strategic collaboration with F-star Delta Ltd, Cambridge, United Kingdom (F-star), for the development and commercialization of bispecific immuno-oncology antibodies. Merck has the option, upon delivery of pre-defined data packages by F-star, to fully acquire the company that owns five bispecific programs, including the preclinical lead asset FS118. In return, Merck made upfront payments to F-star and its shareholders totaling € 60 million, which were largely capitalized in the second quarter of 2017. Moreover, payments to finance R&D and for the achievement of certain milestones in an amount totaling up to € 55 million will be made during the first two years. The milestone payments will be capitalized when they are incurred. R&D financing will be recorded under research and development expenses. If the option is exercised and defined milestones are reached, Merck will incur further payment obligations.

Promise of a one-time payment on the occasion of the 350th anniversary of the company in 2018

At an employee assembly meeting on June 27, 2017, the Executive Board of Merck promised employees a one-time payment on the occasion of the company's 350th anniversary in 2018. In the second quarter of 2017, a personnel-related provision amounting to € 46 million was set up owing to this commitment. The personnel expense was allocated to the business sectors in accordance with the employees benefiting from it.

Reversal of an impairment loss on a biopharmaceutical production facility in Corsier-sur-Vevey, Switzerland

In the second quarter of 2017, an impairment loss was reversed in the amount of € 69 million on the residual book value of a biopharmaceutical production facility in Corsier-sur-Vevey, Switzerland. The impairment loss reversal was recorded under other operating income and allocated to the Healthcare business sector.

The decision to reverse the impairment loss was due to improved expectations for the capacity utilization of the production facility, particularly owing to the recent approvals of the immuno-oncology medicine Bavencio®, which is to be produced in this facility. An impairment loss of € 165 million was originally recognized for the facility in 2011 owing to the overcapacities that were expected at that time.

Statement of Objections from the European Commission regarding the antitrust review procedure for the Sigma-Aldrich acquisition

On July 6, 2017, Merck received notice from the European Commission (EU Commission), in which the EU Commission informed Merck of its preliminary conclusion that Merck and Sigma-Aldrich allegedly transmitted incorrect and/or misleading information within the scope of the acquisition of Sigma-Aldrich. The EU Commission received registration of the merger on April 21, 2015 and granted clearance on June 15, 2015 subject to the condition that Merck and Sigma-Aldrich divest parts of the European solvents and inorganic chemicals businesses of Sigma-Aldrich in order to resolve antitrust concerns. According to the preliminary viewpoint of the EU Commission communicated in the letter dated July 6, 2017, Merck and Sigma-Aldrich withheld in this connection important information about an innovation project allegedly relevant for certain laboratory chemicals of significance to the analysis by the EU Commission. According to the EU Commission, the innovation project should have been included in the remedies package. Should the EU Commission conclusively decide that Merck and Sigma-Aldrich provided false or misleading information intentionally or through gross negligence, Merck could face a monetary fine of up to 1% of its global annual Group sales. Merck is reviewing the information provided by the EU Commission and will submit a written response to the EU Commission in a timely manner.

Based on the estimations by the Executive Board, a provision amounting to a single-digit euro million amount was set up in the second quarter of 2017. The expense was recorded under other operating expenses and allocated to the Life Science business sector. The ongoing investigations are limited to the examination of violations of EU merger control procedures and do not affect the validity of the EU Commission's decision to approve the merger.

Restructuring of the production site network within the Life Science business sector

On July 12, 2017, Merck announced that the Life Science business sector plans to further refine its current production site network. In this connection, operations at various sites will be relocated and sequentially closed in the course of 2019 to 2022. Overall, by the end of 2022 around 200 positions will be eliminated at the affected sites. The preconditions for the recognition of restructuring provisions and impairment losses on assets had not yet been met on September 30, 2017, the balance sheet date.

Divestment of the Biosimilars business

On August 31, 2017, Merck completed the divestment of the Biosimilars business to subsidiaries of Fresenius SE & Co. KGaA. In addition to the divestment of the business activities, the contract parties entered into supply and services agreements, which include drug development support and manufacturing services. Since fiscal 2016, the Biosimilars business, which is part of the Healthcare business sector, had been reported as a disposal group and consists of allocable goodwill, inventories, property, plant and equipment, pension obligations, and intangible assets.

As compensation for the sale of the business activities, Merck received an upfront payment of € 156 million. According to the agreed terms of the transaction, Merck is entitled to future milestone payments of up to € 497 million upon achievement of defined milestones, which will partly be due for services to be performed, as well as tiered royalties on potential product sales. Additionally, Merck received an advance payment of € 45 million for services to be performed at short

notice. As of 2018, Merck will receive further payments for services performed, partly from future milestone payments.

The fair value of the disposal price for the business being sold is currently being determined by an external expert in accordance with IFRS 13. The preliminary fair values determined for the contingent consideration components of the business activities being divested were classified as available-for-sale financial assets. The preliminary determined disposal gain amounted to € 321 million and was recorded under other operating income. Income from the provision of services is recorded as part of net sales and other operating income.

Preparation of strategic options for the Consumer Health business

On September 5, 2017, Merck announced that it is preparing strategic options for the Consumer Health business, including a potential full or partial sale of the business as well as strategic partnerships.

The preconditions for the classification of the Consumer Health business as a discontinued operation or disposal group pursuant to IFRS 5 were not met on the balance sheet date of September 30, 2017 because the review of the wide variety of strategic options had not yet been completed.

Acquisition of Natrix Separations Inc., Canada

On September 15, 2017, Merck acquired a 100% interest in Natrix Separations Inc. (Natrix). The company, which is headquartered in Burlington, Canada, supplies hydrogel membrane products for single-use chromatography. Natrix is being integrated into the Life Science business sector. The preliminary purchase price comprises fixed compensation of around US$ 15 million (€ 13 million) as well as milestone payments of up to US$ 8 million (€ 7 million). The purchase price allocation had not yet been completed on September 30, 2017.

Subsequent Events

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

Darmstadt, November 8, 2017

Stefan Oschmann

Udit Batra

Kai Beckmann

Walter Galinat

Belén Garijo Lopez

Marcus Kuhnert

Financial Calendar
2018

March
3/8/2018
Annual Report 2017

April
4/27/2018
Annual General Meeting

May
5/15/2018
Report on the first quarter

August
8/9/2018
Report on the second quarter

November
11/14/2018
Report on the third quarter

Published on November 9, 2017
by Merck KGaA, Group Communications
Frankfurter Str. 250, 64293 Darmstadt, Germany
Telephone: +49 6151 72–0
Fax: +49 6151 72–5577
E-Mail: comms@merckgroup.com
Website: www.merckgroup.com

Typesetting + Layout
typowerkstatt Dickerhof & Schwarz, Darmstadt