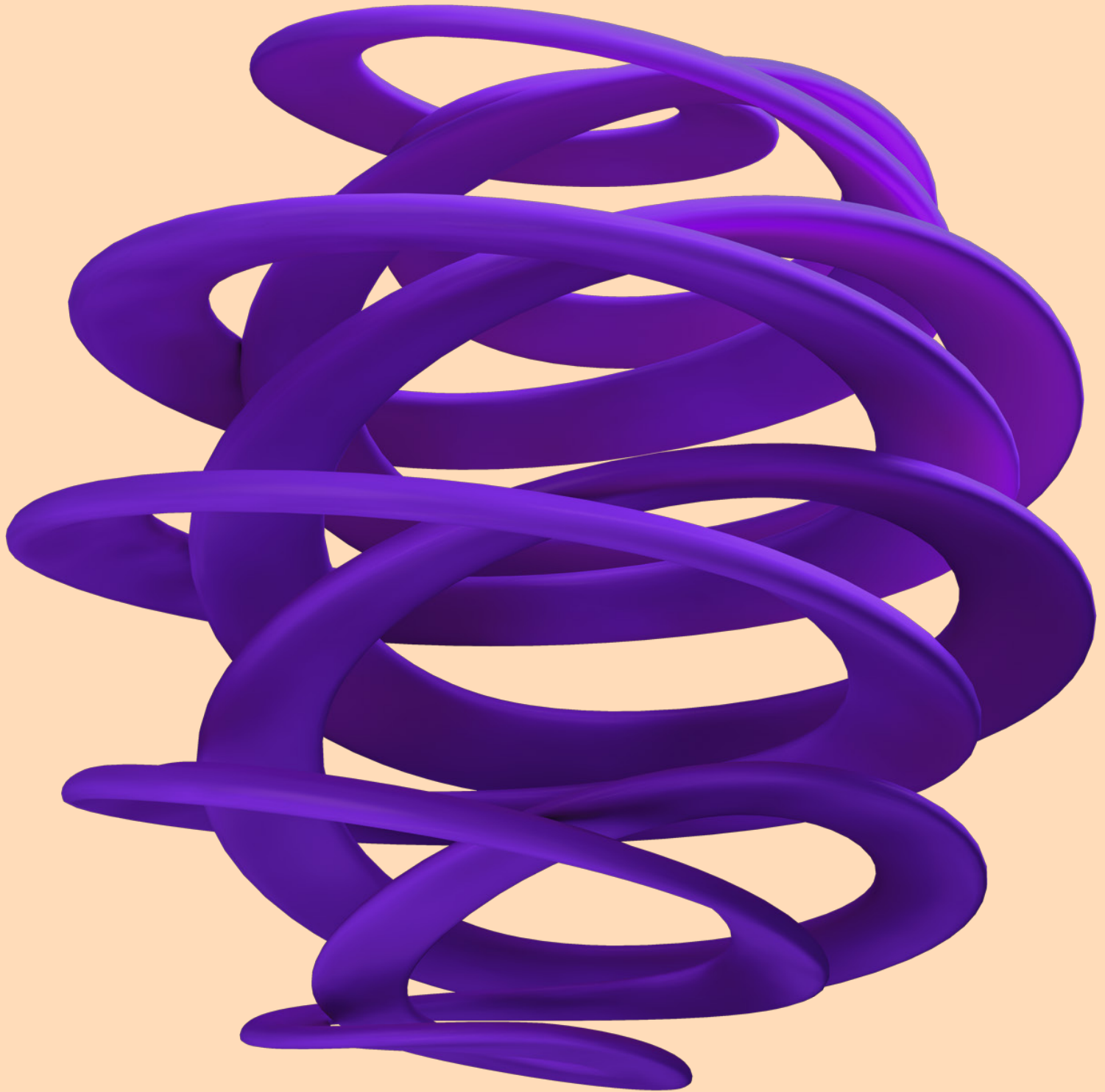


MERCK



QUARTERLY STATEMENT

1ST QUARTER

2020

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This document is a quarterly statement pursuant to section 53 of the Exchange Rules for the Frankfurt Stock Exchange.

This quarterly statement contains certain financial indicators such as operating result (EBIT), EBITDA, EBITDA pre, business free cash flow (BFCF), free cash flow, net financial debt and earnings per share pre, 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 2019 has been optimized for mobile devices and is available on the Web at ar.merckgroup.com/2019/.

Merck – In brief

MERCK GROUP

Key figures

€ million	Q1 2020	Q1 2019	Change
Net sales	4,370	3,746	16.7%
Operating result (EBIT) ¹	716	379	89.0%
Margin (% of net sales) ¹	16.4%	10.1%	
EBITDA ²	1,148	853	34.6%
Margin (% of net sales) ¹	26.3%	22.8%	
EBITDA pre	1,181	929	27.2%
Margin (% of net sales) ¹	27.0%	24.8%	
Profit after tax	458	190	> 100.0%
Earnings per share (€)	1.05	0.43	> 100.0%
Earnings per share pre (€) ¹	1.50	1.13	32.7%
Business free cash flow ¹	661	545	21.4%

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

MERCK GROUP

Net sales by quarter

€ million



MERCK GROUP

EBITDA pre¹ by quarter

€ million



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

Developments within the Group and R&D

Merck

Summary of the first quarter of 2020

We are Merck, a vibrant science and technology company. Science is at the heart of everything we do. It drives the discoveries we make and the technologies we create. Our work makes a positive difference to millions of people's lives every day.

In Healthcare, we discover unique ways to treat the most challenging diseases such as multiple sclerosis and cancer.

Our Life Science experts empower scientists by developing tools and solutions that help deliver breakthroughs more quickly.

And in Performance Materials, we develop science that sits inside technologies and changes the way we access and display information.

Everything we do is fueled by a belief in science and technology as a force for good. A belief that has driven our work since 1668, and will continue to inspire us to find more joyful and sustainable ways to live. We are curious minds dedicated to human progress. We hold the global rights to the Merck name and brand. 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 high-tech materials business.

We had 57,451 employees worldwide on March 31, 2020, compared with 52,140 employees on March 31, 2019.

This section of the present quarterly statement summarizes the highlights of the first quarter of 2020 at Merck including those in research in development. A detailed description of Merck and its business sectors can be found in our Annual Report for 2019. <https://www.merckgroup.com/en/annualreport/2019>.

Healthcare

BIOPHARMA

Oncology and Immuno-Oncology

- On January 6, we and our alliance partner Pfizer Inc. reported that the Phase III JAVELIN Bladder 100 study met its primary endpoint of overall survival (OS) at the planned interim analysis. In this study, patients with previously untreated locally advanced or metastatic urothelial carcinoma whose disease did not progress on induction chemotherapy and who were randomized to receive first-line maintenance therapy with Bavencio® (avelumab) and best supportive care (BSC) lived significantly longer than those who received BSC only. A statistically significant improvement in OS was demonstrated in the avelumab group in each of the co-primary populations: all randomized patients and patients with PD-L1-positive tumors. The safety profile for avelumab in the trial was consistent with that in the JAVELIN monotherapy clinical development program. The results of the study will be submitted for presentation at an upcoming medical

MERCK GROUP

Net sales by business sector – Q1 2020

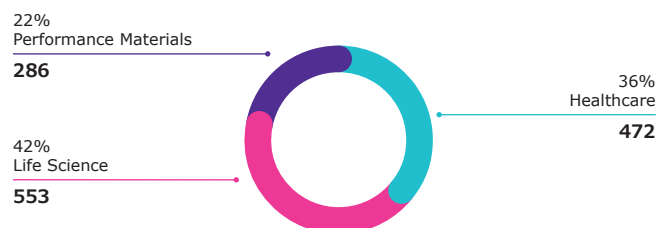
€ million/in % of net sales



MERCK GROUP

EBITDA pre¹ by business sector² – Q1 2020

€ million/in %



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

² Not presented: Decline in Group EBITDA pre by € -129 million due to Corporate and Other.

Congress and shared with the U.S. Food and Drug Administration (FDA) and other health authorities.

- On March 2, Erbitux® (cetuximab) was granted approval by the National Medical Products Administration (NMPA) of China for the first-line treatment of patients with recurrent and/or metastatic squamous cell carcinoma of the head and neck (SCCHN) in combination with platinum-based therapy plus fluorouracil. Evidence from the pivotal Phase III CHANGE II study, on which the approval is based, shows the efficacy and safety of the EXTREME regimen (cetuximab + cisplatin + 5-FU, followed by cetuximab maintenance) versus platinum-based chemotherapy (cisplatin + 5-FU) alone for first-line treatment in Chinese patients with recurrent and/or metastatic SCCHN. The data showed that the addition of cetuximab to platinum-based chemotherapy improved progression-free survival (PFS), OS and overall response rate (ORR), confirming the relevance of the EXTREME regimen specifically in this patient population.
- On March 13, we and our alliance partner Pfizer Inc. provided an update from the Phase III JAVELIN Head and Neck 100 study evaluating Bavencio® in addition to chemoradiotherapy (CRT) versus standard-of-care CRT in patients with untreated locally advanced SCCHN. The alliance accepted the recommendation of the independent Data Monitoring Committee to terminate the JAVELIN Head and Neck 100 trial, as the study was unlikely to show a statistically significant improvement in the primary endpoint of PFS based on a preplanned interim analysis. A detailed analysis of the Phase III JAVELIN Head and Neck 100 study is being conducted and study findings will be shared with the scientific community.
- On March 13, we announced that we and our alliance partner GlaxoSmithKline decided to proactively amend the protocol of the bintrafusp alfa INTR@PID Lung 037 study versus pembrolizumab. The changes include:
 - an adaptive trial design based on pre-specified rules to determine whether to expand to Phase III or stay as Phase II
 - a change to study endpoints from ORR/PFS to PFS/OS, thus confirming the registrational intent and incorporating the guidance from health authorities

These changes were not data-driven as no results were available for the 037 study at the time.

Bintrafusp alfa is being studied in a variety of solid tumors, including non-small cell lung cancer (NSCLC) (INTR@PID LUNG 005, INTR@PID LUNG 024, INTR@PID LUNG 037) and biliary tract cancer (BTC) (INTR@PID BTC 055, INTR@PID BTC 047). In the first quarter of 2020, we initiated a new clinical study for an HPV-associated tumor, cervical cancer (INTR@PID CERVICAL 017). Additional studies are in planning and will be communicated in the coming months. In December 2018, bintrafusp alfa was granted orphan drug designation by both the FDA as well as the European Medicines Agency in BTC.

- On March 25, we announced that the Japanese Ministry of Health, Labour and Welfare (MHLW) approved Tepmetko® (tepotinib) for the treatment of patients with unresectable, advanced or recurrent NSCLC with MET exon 14 (METex14) skipping alterations. Tepmetko® is administered at a dose of 500 mg once daily as two 250 mg tablets. This is the first regulatory approval globally for an oral MET inhibitor indicated for the treatment of advanced NSCLC harboring MET gene alterations. Tepotinib was previously granted SAKI-GAKE "fast-track" designation and orphan drug designation by the MHLW. The approval of Tepmetko® in Japan is supported by data from 99 patients with NSCLC with METex14 skipping alterations enrolled in the ongoing single-arm Phase II VISION study. In September 2019, the FDA granted Breakthrough Therapy designation for tepotinib in patients with metastatic NSCLC harboring METex14 skipping alterations who progressed following platinum-based cancer therapy. We intend to file tepotinib for regulatory review with the FDA in 2020.

Neurology and Immunology

- On February 20, we communicated our decision to change the comparator in our Phase III studies of evobrutinib to Aubagio (EVOLUTION RMS 1 and 2). Evobrutinib is an oral, highly selective Bruton's tyrosine kinase inhibitor being investigated in adult patients with relapsing multiple sclerosis (MS). Evobrutinib was developed in our own laboratories

MERCK GROUP

Business free cash flow¹ by business sector² – Q1 2020

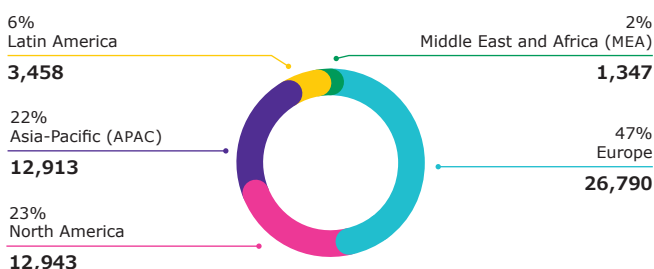
€ million/in %



MERCK GROUP

Employees by region as of March 31, 2020

Number/in %



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

² Not presented: Decline in Group business free cash flow by € -146 million due to Corporate and Other.

and demonstrates our commitment to improving the lives of people with MS and other chronic progressive diseases.

- On March 19, we announced that as part of the global effort to investigate potential therapeutics for Covid-19 and our support of independent research, we donated a supply of interferon beta-1a (Rebif®) to the French Institut National de la Santé et de la Recherche Médicale (INSERM) following a request for use in a clinical trial (DISCOVERY). The trial is sponsored by INSERM and its launch was announced by the French Health authorities on March 11. To date, our interferon beta-1a has not been approved by any regulatory authority for the treatment of Covid-19 or for use as an antiviral agent.
- During the first quarter, we continued to gain regulatory approvals for our oral MS medicine Mavenclad® (cladribine tablets), including in Morocco, Thailand, Oman, Russia, and Macau. These approvals of Mavenclad® follow its approvals in more than 70 other countries, including the United States in March 2019 and the 28 countries of the European Union including the United Kingdom, as well as in Norway, Liechtenstein and Iceland in August 2017.

General Medicine and Endocrinology

- Glucophage®, containing the active ingredient metformin, is now approved in 56 countries for prediabetes when lifestyle intervention is not enough to control the condition.
- In early 2020, the number of new patients using the Easypod® electromechanical injection device for treatment with Saizen® (somatropin) continued to grow, bringing the total number of patients enrolled on Easypod® Connect to almost 21,000. In addition to that, an innovative mobile app called Easypod® AR was launched in Taiwan and Hong Kong, with global rollout to additional markets planned during 2020 and 2021. Easypod® AR uses augmented reality technology to support patients learning how to operate the Easypod® device, offering an innovative, interactive and engaging learning experience. Saizen® is our main endocrinology product and is indicated for the treatment of growth hormone deficiency in children and adults.

Fertility

- To date, an estimated 3.6 million babies have been born with the help of our Fertility portfolio.
- On January 22, we reported that the European Commission granted marketing authorization for our new Gonal-f (folliotropin alfa) 150 IU pen injection device. This means we now offer an even more comprehensive range of best-in-class pens, supporting patients from the beginning to the end of their fertility stimulation cycle, when lower doses are required.

- The successful global launches of our Pergoveris® Pen continued in early 2020 with Indonesia, Panama and Slovakia, so that patients in 27 countries now have access to this convenient and ready-to-use fertility combination treatment option for women with severe follicle-stimulating hormone and luteinizing hormone deficiency. Additional launches in other countries are planned.

ALLERGOPHARMA

- On February 19, we signed an agreement to sell our allergy business Allergopharma to Dermapharm Holding SE ("Dermapharm"). The transaction closed on March 31. By divesting Allergopharma, we are further sharpening the focus of the Healthcare business sector on the development of innovative medicines for difficult-to-treat diseases. The divestment to Dermapharm will sustainably strengthen the business of Allergopharma, a leader in allergen-specific immunotherapy of type 1 allergies such as hay fever or allergic asthma. Allergopharma products are available in 18 countries worldwide.

Life Science

- In the first quarter of 2020, we continued to focus on meeting customer needs by launching more than 4,000 products across the Research Solutions, Process Solutions and Applied Solutions business units, including those launched through our "faucet program" for antibodies, reference materials, chemicals and nanomaterials.
- In January, we opened a non-profit, high-tech skill development center in collaboration with the Council of Scientific and Industrial Research's Institute of Microbial Technology (CSIR-IMTECH), an organization under the government of India's Ministry of Science and Technology. Located in Chandigarh, India, the center is equipped with genome-editing, single-molecule biomarker detection and other technologies to help local students build life science skills.
- In February, we introduced the BrightLab™ platform, our cloud-based software solution bringing inventory management and instrument connectivity functionalities to research scientists. The tool brings Internet of Things (IoT) integrations to R&D, meeting an increasing demand for data automation and accessible, real-time monitoring of centralized and synched lab data.
- Also in February, we announced that our business was selected by Elypta, a molecular diagnostics firm in Sweden, as the contract manufacturer for their Research Use Only (RUO) clinical diagnostic liquid biopsy kits. Once validated and commercialized, the kits will be intended to improve the

accuracy of cancer diagnoses by analyzing metabolites deregulated in several cancer types. The kits will be manufactured at the Life Science facility in St. Louis, Missouri, USA.

- In addition, we announced a global licensing agreement with ReForm Biologics, a pharmaceutical technology company in Woburn, Massachusetts, USA, for excipient development and commercialization. The collaboration will accelerate R&D activities and GMP manufacturing for ReForm's excipients, making them available to our customers for use in biologic formulations.
- In March, we launched the LANEXO™ system for lab inventory, safety and compliance management. This first-to-market digital lab informatics solution offers radio-frequency identification (RFID) labels, cloud-based integration, mobile and web applications for easily accessible digital data capture and real-time documentation.
- As part of our response to the Covid-19 pandemic, in March, we launched a dedicated Covid-19 webpage on our e-Commerce platform, providing a one-stop-shop of approximately 200 products and corresponding information for academic labs and biopharmaceutical companies working to combat the virus. This consolidated offering of our products, services and necessary raw materials empowers scientists and researchers to detect and characterize viruses and to develop vaccines and therapies.

Performance Materials

- Our Performance Materials business sector comprises the specialty chemicals business of Merck and consists of three business units: Semiconductor Solutions, Display Solutions and Surface Solutions.
- We are well on track in the execution of our five-year Bright Future transformation program announced in 2018, with which we are adapting to new market realities and customer requirements.
- With the completion of the acquisitions of Intermolecular and Versum Materials, we reached two major milestones on our Bright Future journey to transform Performance Materials into a strong solutions provider and leading player in the electronic materials market. We are making good progress with the integration, ensuring a seamless transition and business continuity.

Semiconductor Solutions

- Semiconductor Solutions is the largest business within Performance Materials. It consists of two dedicated units: Delivery Systems & Services as well as Semiconductor Materials. Our Semiconductor Materials unit supplies products for

every major step in the wafer manufacturing process – including doping, lithography, patterning, deposition, planarization, etching, and cleaning. Specialty cleans, photoresists and conductive pastes for semiconductor packaging round off the portfolio.

- Delivery Systems & Services (DS&S) develops and deploys equipment that enables our Semiconductor Materials business to manage safe and reliable delivery of hazardous materials to our customers. This unit also supports the installation of our equipment and the safe handling of our materials through MEGASYS® Gas and Chemical Services, which celebrated 30 years in business last year.
- DS&S launched two new models within our CHEMGUARD family, which are high purity, liquid delivery systems. These newest product offerings enable and align with our thin film molecules. The CHEMGUARD CG600 is developed for primarily handling our product TDMAT (TetrakisDiMethylAmino-Titanium), which is enjoying wider adoption in high volume manufacturing (HVM) with increased volumes. The CG600 integrates our innovative delivery system into bulk applications to ensure low vapor pressure, highly reactive molecule integrity during canister changes, without the use of heat or solvent. The CHEMGUARD CG350 has been adopted in some of the latest advanced chemical vapor deposition (CVD) applications, which utilizes increasingly challenging molecules that DS&S delivers.
- In Semiconductor Materials, our thin film solutions business continues to make progress in all our technology platforms - organosilanes, organometallics and liquid phase silicon formulations for processes with low resistance and improved dielectric characteristics for faster or better processors, servers and data storage density.
- Our planarization business developed new products in dielectric polishing and copper metal polishing for advanced logic and memory. The new products have been a key accelerator to sustain momentum in the market through continued innovation and improving defect reduction.
- In the photoresists business we are continuously developing new products to address the needs of the growing market, e.g. for 3D NAND, sensors and radio frequency filters. Furthermore, customer interest in directed self-assembly technology remains strong.
- In the 5G space, our Transient Liquid Phase Sintering (TLPS) conductive pastes are enabling high-yield production of advanced antenna applications. Our mid- to back-end photolithography resist materials used in electronic packaging applications continue to drive miniaturization and heterogeneous integration for small-form factor devices.
- Intermolecular, our R&D services offering, achieved significant breakthroughs in Ovonic Threshold Switch selectors,

which are crucial for the development of next-generation 3D Phase Change Memories, a key memory technology. We are currently working with our partners to develop the materials and integration processes required for their commercial introduction.

Display Solutions

- Our Display Solutions business unit consists of our Liquid Crystals, Organic Light-Emitting Diodes (OLED), Photoresists, and Liquid Crystal Windows businesses.
- In Liquid Crystals, we are facing a declining market as expected. Our newest materials are helping us maintain our position as the technology leader. With our XtraBright™ products, we were able to win new projects for large area displays as well as high-resolution mobile devices.
- With our OLED materials, the business unit is contributing to the fast-growing market of flexible displays, which includes foldable smartphones and rollable TVs. Our OLED materials have qualified in all upcoming free form display based products that will enter the market this year.
- Our Photoresist materials are also contributing to the flexible displays market. Our low-temperature processable positive tone photoresists are widely used to pattern on-cell touch sensors. These sensors enable a thinner display structure which is crucial for foldable devices.
- For Liquid Crystal Window modules, we successfully completed the installation phase of two architectural lighthouse projects: one with crane manufacturer Kirow in Leipzig, Germany; and another project with consulting, controlling and planning company FC Group in Karlsruhe, Germany.

Surface Solutions

- The core markets for Surface Solutions are automotive coatings, cosmetics, and, to a smaller extent, industrials. We are serving them with functional and decorative solutions. Our focus is on expanding our portfolio through innovation in all areas.
- For the automotive market, we continue to expand our capabilities for silica flake production with the focus on Colorstream® Lava Red, which offers both chromatic effects and high hiding power. Another focus is on promoting the intense sparkle effects that our Xirallic® NXT pigments Amur Black and Tigris Blue can achieve in automotive stylings.
- We have launched several new laser additives under the brand name Iriotec® as well as a new high luster pigment Biflair® 81 which offers unique brilliancy in printing applications.
- In the area of cosmetics, we have completed our Ronastar® Lights series with two further elements to achieve unique sparkle effects. Ronacare® Balmance is a new active ingredient addressing the claims of anti-itching, redness reduction and soothing, which can be, for example, of particular importance for users of face masks.
- In response to the postponement of the industry fair “in-cosmetics,” we launched the “Live Cosmetics Conference” as an online alternative to our physical appearance at the exhibition. The two-day web-based event attracted more than 2,200 participants to interact with our experts and learn about new products and industry trends.

Course of Business and Economic Position

Merck

Overview – Q1 2020

- All business sectors contribute to double-digit increase (16.7%) in Group sales to € 4,370 million
- Group net sales show organic growth of 7.6%, insignificantly supported by positive exchange rate effects (0.6%)
- Group EBITDA pre up by 27.2% to € 1,181 million; EBITDA pre margin improves to 27.0% (Q1 2019: 24.8%)
- Net financial debt amounts to € 12.3 billion on March 31, 2020 (December 31, 2019: € 12.4 billion)

MERCK GROUP

Key figures

€ million	Q1 2020	Q1 2019	Change
Net sales	4,370	3,746	16.7%
Operating result (EBIT) ¹	716	379	89.0%
Margin (% of net sales) ¹	16.4%	10.1%	
EBITDA ²	1,148	853	34.6%
Margin (% of net sales) ¹	26.3%	22.8%	
EBITDA pre	1,181	929	27.2%
Margin (% of net sales) ¹	27.0%	24.8%	
Profit after tax	458	190	> 100.0%
Earnings per share (€)	1.05	0.43	> 100.0%
Earnings per share pre (€) ¹	1.50	1.13	32.7%
Business free cash flow ¹	661	545	21.4%

¹ Not defined by International Financial Reporting Standards (IFRSs).

DEVELOPMENT OF NET SALES AND RESULTS OF OPERATIONS

In the first quarter of 2020, the Merck Group generated net sales of € 4,370 million (Q1 2019: € 3,746 million). This represented a year-on-year increase of around € 624 million or 16.7%. Organic sales growth for the Group amounted to € 286 million or 7.6% in the first quarter of 2020. While the two top-selling business sectors Life Science and Healthcare generated organic sales increases of 5.6% and 15.3%, respectively, Performance Materials saw an organic sales decline of –5.4%. At 0.6%, the impact of foreign exchange on Group sales was insignificant. Portfolio changes increased Group net sales by € 315 million or 8.4%. This primary stemmed from the acquisition of Versum

Materials, Inc., USA, (Versum), which closed on October 7, 2019, as well as the acquisition of Intermolecular, Inc., USA, (Intermolecular), which closed on September 20, 2019. Both businesses are now part of the Semiconductor Solutions business unit of our Performance Materials business sector.

In the first quarter of 2020, all business sectors increased net sales in comparison with the year-earlier quarter. In the first quarter of 2020, the Healthcare business sector generated a double-digit sales increase of 14.9% to € 1,701 million (Q1 2019: € 1,481 million), which was mainly due to organic sales growth (15.3%). Healthcare's share of Group net sales declined slightly to 39% (Q1 2019: 40%). In the first quarter of 2020, net sales of the Life Science business sector increased by

6.5% to € 1,769 million (Q1 2019: € 1,661 million). Accounting for a 40% (Q1 2019: 44%) share of Group net sales in the first quarter of 2020, Life Science was the Group's largest business sector in terms of sales. Net sales of the Performance Materials business sector increased by 49.0% to € 900 million

(Q1 2019: € 604 million) owing to the successful acquisitions of Versum and Intermolecular. The percentage contribution of the Performance Materials business sector to Group net sales correspondingly rose by five percentage points to 21% (Q1 2019: 16%).

MERCK GROUP

Net sales by business sector

€ million	Q1 2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	Q1 2019	Share
Healthcare	1,701	39%	15.3%	-0.4%	-	14.9%	1,481	40%
Life Science	1,769	40%	5.6%	0.9%	-	6.5%	1,661	44%
Performance Materials	900	21%	-5.4%	2.4%	52.1%	49.0%	604	16%
Merck Group	4,370	100%	7.6%	0.6%	8.4%	16.7%	3,746	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

In the first quarter of 2020, the regional sales development of the Merck Group was as follows:

MERCK GROUP

Net sales by region

€ million	Q1 2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	Q1 2019	Share
Europe	1,310	30%	9.7%	0.3%	1.4%	11.3%	1,177	32%
North America	1,150	26%	12.0%	3.2%	7.9%	23.1%	934	25%
Asia-Pacific (APAC)	1,536	35%	1.2%	1.3%	16.9%	19.4%	1,287	34%
Latin America	252	6%	21.6%	-12.4%	0.2%	9.4%	230	6%
Middle East and Africa (MEA)	121	3%	-4.0%	1.1%	5.9%	3.0%	118	3%
Merck Group	4,370	100%	7.6%	0.6%	8.4%	16.7%	3,746	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

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

MERCK GROUP

Consolidated Income Statement

€ million	Q1 2020	Q1 2019	Change
Net sales	4,370	3,746	16.7%
Cost of sales	-1,654	-1,384	19.5%
Gross profit	2,716	2,362	15.0%
Marketing and selling expenses	-1,059	-1,091	-2.9%
Administration expenses	-289	-283	1.9%
Research and development costs	-579	-527	10.0%
Impairment losses and reversals of impairment losses on financial assets (net)	6	-4	> 100.0%
Other operating expenses and income	-80	-79	0.9%
Operating result (EBIT)¹	716	379	89.0%
Financial result	-98	-113	-12.5%
Profit before income tax	617	266	> 100.0%
Income tax	-159	-67	> 100.0%
Profit after tax from continuing operations	458	199	> 100.0%
Profit after tax from discontinued operation	-	-10	-
Profit after tax	458	190	> 100.0%
Non-controlling interests	-2	-1	99.8%
Net income	456	189	> 100.0%

¹ Not defined by International Financial Reporting Standards (IFRSs).

In the first quarter of 2020, the positive development of Group sales led to an increase of 15.0% in gross profit to € 2,716 million (Q1 2019: € 2,362 million). The resulting gross margin of the Group, i.e. gross profit as a percentage of sales, slipped slightly to 62.2% (Q1 2019: 63.1%).

The 10.0% increase in research and development costs to € 579 million (Q1 2019: € 527 million) was due mainly to the Healthcare business sector. In the first quarter of 2020, the Group research spending ratio (research and development costs as a percentage of net sales) was 13.3% (Q1 2019: 14.1%). Accounting for a 74% (Q1 2019: 74%) share of research and development expenses of all business sectors, Healthcare is the most research-intensive business sector of Merck.

The 89.0% increase in the operating result (EBIT) to € 716 million (Q1 2019: € 379 million) was due mainly to the positive development of gross profit.

Despite higher interest expenses, the financial result improved to € -98 million (Q1 2019: € -113 million) since the year-earlier quarter was burdened by expenses from the revaluation of the existing option to acquire F-star Delta Ltd.

Income tax expenses of € 159 million (Q1 2019: € 67 million) led to an effective tax rate of 25.8% (Q1 2019: 25.2%).

Net income, i.e. profit after tax attributable to Merck KGaA shareholders, rose by € 268 million to € 456 million (Q1 2019: € 189 million), yielding earnings per share of € 1.05 (Q1 2019: € 0.43).

The following table presents the composition of EBITDA pre for the reporting period in comparison with the year-earlier quarter.

The IFRS figures have been modified to reflect the elimination of adjustments included in the respective functional costs.

MERCK GROUP

Reconciliation EBITDA pre¹

€ million	Q1 2020			Q1 2019			Change
	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	4,370	-	4,370	3,746	-	3,746	16.7%
Cost of sales	-1,654	20	-1,633	-1,384	16	-1,368	19.4%
Gross profit	2,716	20	2,736	2,362	16	2,378	15.1%
Marketing and selling expenses	-1,059	2	-1,057	-1,091	3	-1,088	-2.9%
Administration expenses	-289	16	-272	-283	37	-246	10.5%
Research and development costs	-579	-1	-580	-527	16	-511	13.6%
Impairment losses and reversals of impairment losses on financial assets (net)	6	-	6	-4	-	-4	> 100.0
Other operating income and expenses	-80	-2	-82	-79	4	-75	9.2%
Operating result (EBIT)¹	716			379			
Depreciation/amortization/impairment losses/reversals of impairment losses	431	-2	430	474	-	474	-9.4%
EBITDA¹	1,148			853			
Restructuring expenses	15	-15	-	61	-61	-	
Integration expenses / IT expenses	22	-22	-	13	-13	-	
Gains (-) / losses (+) on the divestment of businesses	-30	30	-	2	-2	-	
Acquisition-related adjustments	19	-19	-	-	-	-	
Other adjustments	8	-8	-	-1	1	-	
EBITDA pre¹	1,181	-	1,181	929	-	929	27.2%
thereof: organic growth ¹							14.5%
thereof: exchange rate effects							2.0%
thereof: acquisitions/divestments							10.7%

¹ Not defined by International Financial Reporting Standards (IFRSs).

EBITDA pre, the most important financial indicator used to steer operating business, increased by 27.2% to € 1,181 million (Q1 2019: € 929 million). The organic increase in this key performance indicator amounted to 14.5% and was supported by positive foreign exchange effects (2.0%). The acquisitions of Versum and Intermolecular led to a 10.7% increase

in EBITDA pre in the first quarter of 2020. Relative to net sales, the EBITDA pre margin was 27.0% in the first quarter of 2020 (Q1 2019: 24.8%). Earnings per share pre (earnings per share after net of tax effect of adjustments and amortization of purchased intangible assets) improved by 32.7% to € 1.50 (Q1 2019: € 1.13).

NET ASSETS AND FINANCIAL POSITION

MERCK GROUP

Balance sheet structure

	March 31, 2020		Dec. 31, 2019 ¹		Change	
	€ million	in %	€ million	in %	€ million	in %
Non-current assets	34,730	77.6%	34,808	79.4%	-77	-0.2%
thereof:						
Goodwill	17,376		17,141		235	
Other intangible assets	9,089		9,175		-86	
Property, plant and equipment	6,110		6,213		-103	
Other non-current assets	2,155		2,278		-123	
Current assets	10,013	22.4%	9,003	20.6%	1,009	11.2%
thereof:						
Inventories	3,443		3,342		101	
Trade and other current receivables	3,690		3,488		202	
Other current financial assets	81		57		24	
Other current assets	1,268		1,336		-68	
Cash and cash equivalents	1,530		781		750	
Total assets	44,743	100.0%	43,811	100.0%	932	2.1%
Equity	18,600	41.6%	17,914	40.9%	686	3.8%
Non-current liabilities	15,379	34.4%	14,056	32.1%	1,323	9.4%
thereof:						
Non-current provisions for employee benefits	3,060		3,194		-133	
Other non-current provisions	252		254		-1	
Non-current financial debt	10,137		8,644		1,493	
Other non-current liabilities	1,929		1,965		-36	
Current liabilities	10,764	24.1%	11,842	27.0%	-1,077	-9.1%
thereof:						
Current provisions	904		933		-29	
Current financial debt	3,717		4,550		-834	
Trade and other current payables/Refund liabilities	2,434		2,618		-184	
Other current liabilities	3,710		3,740		-30	
Total equity and liabilities	44,743	100.0%	43,811	100.0%	932	2.1%

¹ Previous year's figures have been adjusted, see "Effects of disclosure changes" under "Supplemental Financial Information".

In the first three months of 2020, total assets of the Merck Group increased by 2.1% to € 44,743 million (December 31, 2019: € 43,811 million). Since the beginning of 2020, working capital has risen by 11.3% to € 4,392 million (December 31,

2019: € 3,944 million), mainly owing to an increase in trade accounts receivable and inventories.

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

MERCK GROUP

Net financial debt¹

	March 31, 2020	Dec. 31, 2019	Change	
	€ million	€ million	€ million	in %
Bonds and commercial paper	9,576	10,059	-483	-4.8%
Bank loans	2,786	1,587	1,199	75.6%
Liabilities to related parties	775	809	-34	-4.2%
Loans from third parties and other financial liabilities	99	97	2	2.2%
Liabilities from derivatives (financial transactions)	83	76	7	9.5%
Lease liabilities	534	567	-33	-5.8%
Financial debt	13,853	13,194	659	5.0%
less:				
Cash and cash equivalents	1,530	781	750	96.0%
Current financial assets ²	38	50	-12	-24.0%
Net financial debt¹	12,285	12,363	-79	-0.6%

¹ Not defined by International Financial Reporting Standards (IFRSs).

² Excluding current derivatives (operational).

MERCK GROUP

Reconciliation of net financial debt¹

€ million	2020
January 1	12,363
Currency translation difference	70
Dividend payments/Profit withdrawals ²	63
Acquisitions ²	1
Payments from other divestments ²	-56
Free cash flow ¹	-167
Other	12
March 31	12,285

¹ Not defined by International Financial Reporting Standards (IFRSs).

² According to the Consolidated Cash Flow Statement.

Equity rose in the first quarter of 2020 by 3.8% to € 18,600 million (December 31, 2019: € 17,914 million). Consequently, the equity ratio rose to 41.6% (December 31, 2019: 40.9%).

More information on the development of equity can be found in the Consolidated Statement of Changes in Net Equity under "Supplemental Financial Information".

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 flow¹

€ million	Q1 2020	Q1 2019	Change
Cash flow from operating activities as reported in the consolidated cash flow statement	516	493	4.9%
Payments for investments in intangible assets	-18	-9	95.0%
Proceeds from the disposal of intangible assets	6	17	-64.9%
Payments for investments in property, plant and equipment	-341	-209	63.3%
Proceeds from the disposal of property, plant and equipment	3	3	20.0%
Free cash flow¹	167	295	-43.2%

¹ Not defined by International Financial Reporting Standards (IFRSs).

Business free cash flow of the Merck Group improved in the first quarter of 2020 to € 661 million (Q1 2019: € 545 million). The increase in EBITDA pre had a positive effect whereas higher

investments and receivables adversely affected business free cash flow.

MERCK GROUP

Business free cash flow¹

€ million	Q1 2020	Q1 2019	Change
EBITDA pre ¹	1,181	929	27.2%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	-175	-126	39.4%
Changes in inventories	-101	-173	-41.4%
Changes in trade accounts receivable and receivables from royalties and licenses	-161	-59	> 100.0%
Lease payments ²	-36	-26	39.8%
Elimination of changes in consolidations	-45	-	-
Business free cash flow¹	661	545	21.4%

¹ Not defined by International Financial Reporting Standards (IFRSs).

² Excluding payments for low-value leases and interest components included in lease payments.

Healthcare

HEALTHCARE

Key figures

€ million	Q1 2020	Q1 2019	Change
Net sales	1,701	1,481	14.9%
Operating result (EBIT) ¹	422	128	> 100.0%
Margin (% of net sales) ¹	24.8%	8.6%	
EBITDA ¹	501	329	52.3%
Margin (% of net sales) ¹	29.5%	22.2%	
EBITDA pre ¹	472	332	42.2%
Margin (% of net sales) ¹	27.8%	22.4%	
Business free cash flow ¹	377	222	69.9%

¹ Not defined by International Financial Reporting Standards (IFRSs).

DEVELOPMENT OF NET SALES AND RESULTS OF OPERATIONS

In the first quarter of 2020, the Healthcare business sector generated above-average organic sales growth of 15.3%. Amid neutral foreign exchange effects (–0.4%), net sales rose by € 220 million to € 1,701 million in the first quarter of 2020 (Q1 2019: € 1,481 million). Foreign exchange effects reflect

the positive impact of the increase in value of the U.S. dollar and the Russian ruble against the euro, which was lowered by the development of individual Latin American currencies.

Sales of the key product lines and products developed in the third quarter of 2019 as follows:

HEALTHCARE

Net sales by major product lines /products

€ million	Q1 2020	Share	Organic growth ¹	Exchange rate effects	Total change	Q1 2019	Share
Oncology	260	15%	14.3%	–0.9%	13.5%	229	16%
thereof: Erbitux®	211	12%	7.1%	–1.0%	6.1%	199	13%
thereof: Bavencio®	33	2%	49.8%	0.5%	50.3%	22	1%
Neurology & Immunology	418	25%	20.3%	1.7%	22.1%	342	23%
thereof: Rebif®	295	17%	–3.4%	2.0%	–1.4%	299	20%
thereof: Mavenclad®	123	7%	> 100.0%	0.1%	> 100.0%	43	3%
Fertility	278	16%	–3.5%	0.1%	–3.4%	287	19%
thereof: Gonal-F®	167	10%	–1.2%	0.4%	–0.8%	168	11%
General Medicine & Endocrinology	680	40%	20.9%	–1.6%	19.3%	570	38%
thereof: Glucophage®	234	14%	31.7%	–2.0%	29.7%	180	12%
thereof: Concor®	150	9%	29.1%	–0.9%	28.2%	117	8%
thereof: Euthyrox®	114	7%	27.7%	–2.4%	25.4%	91	6%
thereof: Saizen®	65	4%	21.7%	–3.9%	17.8%	55	4%
Other	65	4%				52	4%
Healthcare	1,701	100%	15.3%	–0.4%	14.9%	1,481	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

The oncology drug Erbitux® (cetuximab) generated favorable organic sales growth of 7.1%, thus continuing the positive trend from 2019. Including negative foreign exchange effects, global net sales of Erbitux® increased in the first quarter of 2020 by 6.1% to € 211 million (Q1 2019: € 199 million). The Asia-Pacific region could not maintain the high growth rates of the previous year, which were mainly driven by the inclusion of Erbitux® in the National Reimbursement Drug List (NRDL) in China. Consequently, sales in this region stagnated at € 77 million (Q1 2019: € 75 million). The moderate development in Asia is due in particular to the initial impacts of the Covid-19 pandemic. In the core markets within Europe, the situation

remained difficult owing to the competitive environment. Nevertheless, positive effects from tenders won led to favorable organic growth of 12.3% for the region as a whole. Sales amounted to € 111 million (Q1 2019: € 98 million).

Within Immuno-Oncology, sales of the oncology drug Bavencio® (avelumab) grew organically by 49.8% amid stable foreign exchange rates to € 33 million (Q1 2019: € 22 million). The marketing authorizations in the United States, Europe and Japan in 2019 for the first-line treatment of patients with advanced renal cell carcinoma were key drivers of this sales growth.

HEALTHCARE

Product sales and organic growth¹ of Rebif®, Glucophage® and Erbitux® by region – Q1 2020

		Total	Europe	North America	Asia-Pacific (APAC)	Latin America	Middle East and Africa (MEA)
	€ million	295	105	171	3	6	9
Rebif®	Organic growth ¹ in %	-3.4%	4.7%	-7.0%	-9.8%	3.5%	-18.5%
	% of sales	100%	36%	58%	1%	2%	3%
	€ million	234	35	-	147	35	17
Glucophage®	Organic growth ¹ in %	31.7%	18.3%	-	39.0%	33.2%	5.2%
	% of sales	100%	15%	-	63%	15%	7%
	€ million	211	111	-	77	17	6
Erbitux®	Organic growth ¹ in %	7.1%	12.3%	-	0.6%	42.9%	-42.3%
	% of sales	100%	53%	-	36%	8%	3%

¹ Not defined by International Financial Reporting Standards (IFRSs).

Mavenclad®, a medicine for oral short-course treatment of highly active relapsing multiple sclerosis, contributed substantially to the positive development of the Healthcare business sector, delivering organic growth of € 80 million. Sales of € 123 million were generated (Q1 2019: € 43 million). In particular, this reflects the regulatory approval of Mavenclad® in the United States on March 29, 2019.

The drug Rebif®, which is used to treat relapsing forms of multiple sclerosis, posted an organic decline of -3.4%, thus slowing down the negative trend of previous quarters. Thanks to positive foreign exchange effects of 2.0%, it was possible to maintain net sales of € 295 million at the year-earlier level (Q1 2019: € 299 million). In North America, the largest sales market for Rebif®, the continued difficult competitive situation in the interferon market as well as competition from oral dosage forms were responsible for the organic sales decline of -7.0%. Including currency tailwinds of 2.7%, sales amounted to € 171 million (Q1 2019: € 179 million). In Europe, a tender award in Russia led to organic sales growth of 4.7%. Including positive foreign exchange effects of 2.7%, net sales of Rebif® in this region amounted to € 105 million (Q1 2019: € 98 million).

The decline in the other regions, where Rebif® generated sales of € 19 million (Q1 2019: € 23 million), was mainly attributable to the organic sales decline in the Middle East & Africa region as well as to negative foreign exchange developments stemming from individual Latin American currencies.

Gonal-f®, the leading recombinant hormone used in the treatment of infertility, generated a moderate organic sales decline of -1.2%. This was partly mitigated by slightly positive exchange rate effects of 0.4%. Globally, sales thus stagnated at € 167 million (Q1 2019: € 168 million). The sharp decline in demand from China, driven by the Covid-19 pandemic, was mainly responsible for this development.

The General Medicine & Endocrinology franchise (including CardioMetabolic Care), which commercializes products to treat cardiovascular diseases, thyroid disorders, diabetes and growth disorders, among other things, delivered organic growth of 20.9%. Including a negative exchange rate effect of -1.6%, net sales totaled € 680 million (Q1 2019: € 570 million). The products Concor®, Euthyrox® and Saizen® contributed to this positive development with double-digit organic growth rates.

In terms of sales, the diabetes treatment Glucophage® from the General Medicine franchise, became the second-leading medicine in the product portfolio of the Healthcare business sector. In comparison with the year-earlier quarter, sales increased by € 54 million to € 234 million (Q1 2019: € 180 million). This corresponds to organic growth of 31.7%, which was only slightly lowered by negative foreign exchange effects of -2.0%. In particular, this was mainly driven by positive performance in China and Latin America.

To some extent, the strong demand for medicines from the General Medicine & Endocrinology franchise in the first quarter of 2020 was also due to the Covid-19 pandemic and mainly represented advance effects.

Net sales of the business sector by region developed in the first quarter of 2020 as follows:

HEALTHCARE

Net sales by region

€ million	Q1 2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	Q1 2019	Share
Europe	622	37%	15.5%	0.1%	-	15.6%	538	36%
North America	370	22%	18.0%	3.4%	-	21.3%	305	21%
Asia-Pacific (APAC)	442	26%	13.3%	0.3%	-	13.6%	389	26%
Latin America	177	10%	26.1%	-12.8%	-	13.3%	157	11%
Middle East and Africa (MEA)	89	5%	-5.0%	1.5%	-	-3.5%	92	6%
Healthcare	1,701	100%	15.3%	-0.4%	-	14.9%	1,481	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

The following table presents the composition of EBITDA pre for the reporting period in comparison with the year-earlier quarter.

The IFRS figures have been modified to reflect the elimination of adjustments included in the respective functional costs.

HEALTHCARE

Reconciliation EBITDA pre¹

€ million	Q1 2020			Q1 2019			Change
	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	1,701	-	1,701	1,481	-	1,481	14.9%
Cost of sales	-393	-	-393	-325	-	-325	21.0%
Gross profit	1,307	-	1,307	1,156	-	1,156	13.1%
Marketing and selling expenses	-423	1	-423	-550	-	-550	-23.2%
Administration expenses	-79	1	-78	-88	2	-86	-8.6%
Research and development costs	-417	-	-417	-380	-	-380	9.8%
Impairment losses and reversals of impairment losses on financial assets (net)	5	-	5	-4	-	-4	> 100.0%
Other operating income and expenses	31	-29	2	-6	1	-5	> 100.0%
Operating result (EBIT)¹	422			128			
Depreciation/amortization/impairment losses/reversals of impairment losses	79	-2	77	201	-	201	-61.7%
EBITDA¹	501			329			
Restructuring expenses	2	-2	-	-	-	-	
Integration expenses/IT expenses	1	-1	-	2	-2	-	
Gains (-)/losses (+) on the divestment of businesses	-32	32	-	1	-1	-	
Acquisition-related adjustments	-	-	-	-	-	-	
Other adjustments	-	-	-	-	-	-	
EBITDA pre¹	472	-	472	332	-	332	42.2%
thereof: organic growth ¹							40.9%
thereof: exchange rate effects							1.3%
thereof: acquisitions/divestments							-

¹ Not defined by International Financial Reporting Standards (IFRSs).

In the first quarter of 2020, gross profit of the Healthcare business sector increased to € 1,307 million (Q1 2019: € 1,156 million). The resulting gross margin was 76.9% (Q1 2019: 78.1%). The main drivers of the decline in gross margin were changes to the product mix.

After eliminating adjustments, marketing and selling expenses declined by 23.2% to € 423 million in comparison with the year-earlier quarter (Q1 2019: € 550 million). This resulted primarily from the end of amortization in connection with the purchase price allocation from the acquisition of Serono in 2006.

Research and development costs reflected continued investments in the Biopharma development pipeline and amounted to € 417 million (Q1 2019: € 380 million). This item also includes expenses from the termination of the JAVELIN Head and Neck 100 study.

The change in other operating expenses and income was attributable to several factors. The gain on the divestment of Allergopharma, which was eliminated in the calculation of EBITDA pre, as well as income from the global strategic

alliance entered into last year with GlaxoSmithKline plc., United Kingdom, to co-develop and co-commercialize bintrafusp alfa had a positive effect on other operating expenses and income in the first quarter of 2020. This was offset by the expiration of income streams from the upfront cash payment from Pfizer Inc., USA, dating back to 2014. In the year-earlier quarter, other operating expenses and income were negatively impacted by an impairment loss on an intangible asset in connection with the immuno-oncology collaboration with F-star Delta Ltd.

EBITDA pre grew to € 472 million in the first quarter of 2020 (Q1 2019: € 332 million). Organic growth of 40.9% was supported by slightly positive foreign exchange effects of 1.3%. The EBITDA pre margin rose to 27.8% (Q1 2019: 22.4%).

DEVELOPMENT OF BUSINESS FREE CASH FLOW

In the first quarter of 2020, business free cash flow amounted to € 377 million (Q1 2019: € 222 million). The increase was due mainly to the growth of EBITDA pre and the positive development of inventories in comparison with the year-earlier quarter. Higher investments had an opposing effect.

HEALTHCARE

Business free cash flow¹

€ million	Q1 2020	Q1 2019	Change
EBITDA pre ¹	472	332	42.2%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	-73	-47	56.0%
Changes in inventories	-5	-66	-92.6%
Changes in trade accounts receivable and receivables from royalties and licenses	22	13	61.9%
Lease payments ²	-12	-10	18.3%
Elimination Allergopharma divestment	-26	-	-
Business free cash flow¹	377	222	69.9%

¹ Not defined by International Financial Reporting Standards (IFRSs).

² Excluding payments for low-value leases and interest components included in lease payments.

Life Science

LIFE SCIENCE

Key figures

€ million	Q1 2020	Q1 2019	Change
Net sales	1,769	1,661	6.5%
Operating result (EBIT) ¹	345	313	10.2%
Margin (% of net sales) ¹	19.5%	18.9%	
EBITDA ¹	541	507	6.8%
Margin (% of net sales) ¹	30.6%	30.5%	
EBITDA pre ¹	553	516	7.2%
Margin (% of net sales) ¹	31.2%	31.0%	
Business free cash flow ¹	246	268	-8.2%

¹ Not defined by International Financial Reporting Standards (IFRSs).

DEVELOPMENT OF SALES AND RESULTS OF OPERATIONS

In the first quarter of 2020, the Life Science business sector generated solid organic sales growth of 5.6% accompanied by a favorable foreign exchange effect of 0.9%, resulting in total net sales growth of 6.5% over the year-earlier quarter. The

main contribution to organic growth came from the Process Solutions business unit. Taking these effects into account, Life Science net sales increased overall to € 1,769 million (Q1 2019: € 1,661 million).

LIFE SCIENCE

Net sales by business unit

€ million	Q1 2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	Q1 2019 ²	Share
Process Solutions	802	45%	13.2%	1.3%	-	14.5%	700	42%
Research Solutions	546	31%	-	0.8%	-	0.8%	542	33%
Applied Solutions	421	24%	-	0.4%	-	0.4%	419	25%
Life Science	1,769	100%	5.6%	0.9%	-	6.5%	1,661	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

² Previous year's figures have been adjusted owing to an internal realignment.

The Process Solutions business unit, which markets products and services for the entire pharmaceutical production value chain, generated organic sales growth of 13.2%, which was the highest rate within the Life Science business sector. Amid a favorable foreign exchange effect of 1.3%, sales totaled € 802 million in the first quarter of 2020 (Q1 2019: € 700 million). Process Solutions thus accounted for 45% of Life Science net sales. Geographically, all regions delivered double-digit growth within Process Solutions.

The Research Solutions business unit, which provides products and services to support life science research for pharmaceutical, biotechnology and academic research laboratories, did not achieve organic sales growth in Q1 2020. Weaker demand

from academic laboratories in connection with the Covid-19 crisis had a negative impact here. Including a favorable foreign exchange effect of 0.8%, sales totaled € 546 million in Q1 2020 (Q1 2019: € 542 million). Research Solutions thus accounted for 31% of Life Science net sales. In regional terms, North America and Latin America were the strongest growth drivers, however they were offset by weaker performance in Asia-Pacific and Europe.

The Applied Solutions business unit with its broad range of products for researchers as well as scientific and industrial laboratories accounted for a 24% share of Life Science net sales. Organically, net sales of Applied Solutions were at the same level as in the year-earlier quarter. Lab Water

Solutions saw initial negative effects from the Covid-19 pandemic. Assisted by a favorable foreign exchange effect of 0.4%, sales increased to € 421 million in the first quarter of 2020 (Q1 2019: € 419 million). In regional terms, slightly stronger

demand in North America and Europe was canceled out by the net sales decrease in Asia-Pacific.

Net sales of the business sector by region developed as follows:

LIFE SCIENCE

Net sales by region

€ million	Q1 2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	Q1 2019	Share
Europe	614	35%	5.2%	0.5%	–	5.7%	581	35%
North America	644	36%	8.9%	3.2%	–	12.1%	575	35%
Asia-Pacific (APAC)	422	24%	0.4%	0.5%	–	0.9%	418	25%
Latin America	66	4%	14.2%	–12.6%	–	1.6%	65	4%
Middle East and Africa (MEA)	23	1%	2.3%	–0.3%	–	2.0%	22	1%
Life Science	1,769	100%	5.6%	0.9%	–	6.5%	1,661	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

The following table presents the composition of EBITDA pre for the first quarter of 2020 in comparison with the year-earlier quarter. The IFRS figures have been modified to reflect the

elimination of adjustments included in the respective functional costs.

LIFE SCIENCE

Reconciliation EBITDA pre¹

€ million	Q1 2020			Q1 2019			Change
	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	1,769	–	1,769	1,661	–	1,661	6.5%
Cost of sales	–744	–	–744	–719	1	–718	3.6%
Gross profit	1,024	–	1,025	942	1	943	8.7%
Marketing and selling expenses	–498	–	–497	–470	1	–469	6.1%
Administration expenses	–89	9	–80	–88	6	–81	–1.9%
Research and development costs	–75	–	–75	–62	–	–62	22.2%
Impairment losses and reversals of impairment losses on financial assets (net)	–	–	–	–	–	–	–
Other operating income and expenses	–18	2	–16	–10	1	–8	88.8%
Operating result (EBIT)¹	345	–	–	313	–	–	–
Depreciation/amortization / impairment losses / reversals of impairment losses	196	–	196	193	–	193	1.3%
EBITDA¹	541	–	–	507	–	–	–
Restructuring expenses	2	–2	–	1	–1	–	–
Integration expenses/IT expenses	10	–10	–	7	–7	–	–
Gains (–) / losses (+) on the divestment of businesses	–	–	–	1	–1	–	–
Acquisition-related adjustments	–	–	–	–	–	–	–
Other adjustments	–	–	–	–	–	–	–
EBITDA pre¹	553	–	553	516	–	516	7.2%
thereof: organic growth ¹							8.2%
thereof: exchange rate effects							–0.5%
thereof: acquisitions/divestments							–0.5%

¹ Not defined by International Financial Reporting Standards (IFRSs).

Adjusted gross profit increased by 8.7% to € 1,025 million (Q1 2019: € 943 million). This strong increase was driven by the growth in sales as well as higher production capacity utilization. The gross margin of Life Science, i.e. gross profit as percentage of net sales, amounted to 57.9% (Q1 2019: 56.8%). Marketing and selling expenses increased by 6.1% to € 497 million (Q1 2019: € 469 million) while research and development costs increased by 22.2% to € 75 million (Q1 2019: € 62 million). Other operating expenses (net) increased to € 16 million (Q1 2019: € 8 million). After eliminating adjustments, amortization and depreciation,

EBITDA pre rose by 7.2% to € 553 million (Q1 2019: € 516 million). Organic earnings growth was 8.2%. This reflects the strong performance of the Life Science business sector with a continued focus on driving sales and managing costs.

DEVELOPMENT OF BUSINESS FREE CASH FLOW

In the first quarter of 2020, Life Science generated business free cash flow of € 246 million (Q1 2019: € 268 million). This development was driven by an increase in receivables, which could not be offset by higher EBITDA pre.

LIFE SCIENCE

Business free cash flow¹

€ million	Q1 2020	Q1 2019	Change
EBITDA pre ¹	553	516	7.2%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	-58	-59	-0.5%
Changes in inventories	-89	-88	1.4%
Changes in trade accounts receivable and receivables from royalties and licenses	-145	-91	59.8%
Lease payments ²	-15	-11	37.0%
Business free cash flow¹	246	268	-8.2%

¹ Not defined by International Financial Reporting Standards (IFRSs).

² Excluding payments for low-value leases and interest components included in lease payments.

Performance Materials

PERFORMANCE MATERIALS

Key figures

€ million	Q1 2020	Q1 2019	Change
Net sales	900	604	49.0%
Operating result (EBIT) ¹	116	95	22.1%
Margin (% of net sales) ¹	12.9%	15.8%	
EBITDA ¹	251	157	59.7%
Margin (% of net sales) ¹	27.9%	26.0%	
EBITDA pre ¹	286	193	48.3%
Margin (% of net sales) ¹	31.7%	31.9%	
Business free cash flow ¹	184	172	7.0%

¹ Not defined by International Financial Reporting Standards (IFRSs).

DEVELOPMENT OF NET SALES AND RESULTS OF OPERATIONS

In the first quarter of 2020, net sales of the Performance Materials business sector increased by 49.0% to € 900 million (Q1 2019: € 604 million). The key factors behind this growth

were additional net sales from the acquisitions of Versum and Intermolecular (52.1%) as well as positive foreign exchange effects of 2.4%. These two favorable effects more than offset an organic decrease in net sales in the Performance Materials business units before the acquisitions.

PERFORMANCE MATERIALS

Net sales by business unit

€ million	Q1 2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	Q1 2019	Share
Display Solutions	304	34%	-10.5%	2.4%	-	-8.1%	331	55%
Semiconductor Solutions	485	54%	8.7%	3.7%	> 100.0%	> 100.0%	152	25%
Surface Solutions	111	12%	-9.1%	0.7%	-	-8.4%	121	20%
Other	0	0%	-33.4%	2.1%	-	-31.3%	0	0%
Performance Materials	900	100%	-5.4%	2.4%	52.1%	49.0%	604	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

The Display Solutions business unit, consisting mainly of the business with liquid crystals, photoresists for display applications as well as OLED materials, recorded an organic decrease as expected in the first quarter of 2020. This decline of -10.5% was partly offset by positive foreign exchange effects of 2.4%. In the first two quarters of 2019 – primarily in the first quarter

of 2019 – net sales continued to benefit from projects by panel makers in China to build up production capacities. Classified as a pandemic by the World Health Organization (WHO) on March 11, 2020, the Covid-19 situation exerted initial negative effects on the net sales of the Display Solutions business unit, albeit to a comparatively small extent.

Following the acquisitions of Versum and Intermolecular, the Semiconductor Solutions business unit comprises two new businesses, namely Semiconductor Materials and Delivery Systems & Services. Semiconductor Materials will continue to focus on the development and commercialization of material-based solutions for the semiconductor industry. Delivery Systems & Services will focus on developing and operating delivery systems for semiconductor manufacturers. Additionally, the unit will offer services to support the equipment install base and safe handling of the specialty materials that flow through it. As expected against the backdrop of the 2019 decline in the semiconductor market, the pre-acquisition Semiconductor Solutions business unit delivered strong organic growth of 8.7%. This was further boosted by positive exchange rate effects of 3.7%. The Covid-19 pandemic only had a slight

impact on the Semiconductor Solutions business unit in the first quarter of 2020.

Net sales of Semiconductor Solutions increased by approximately more than three-fold owing to the acquisitions of Versum and Intermolecular in the first quarter of 2020. As a result, the share of Performance Materials sales attributable to this business unit increased from 25% to 54%.

In the first quarter of 2020, net sales of the Surface Solutions business unit declined by a total of -8.4%. An organic decline of -9.1% stemmed mainly from weaker demand, particularly from the automotive and cosmetic markets, against the backdrop of uncertainties resulting from the Covid-19 pandemic. Positive foreign exchange effects of 0.7% mitigated this only slightly.

Net sales of the business sector by region developed in the first quarter of 2020 as follows:

PERFORMANCE MATERIALS

Net sales by region

€ million	Q1 2020	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	Q1 2019	Share
Europe	74	8%	0.2%	0.2%	27.3%	27.7%	58	10%
North America	136	15%	11.3%	3.2%	> 100.0%	> 100.0%	54	9%
Asia-Pacific (APAC)	672	75%	-7.9%	2.7%	45.3%	40.1%	480	79%
Latin America	9	1%	-3.8%	-5.7%	6.2%	-3.2%	9	1%
Middle East and Africa (MEA)	9	1%	-21.2%	0.7%	> 100.0%	> 100.0%	3	1%
Performance Materials	900	100%	-5.4%	2.4%	52.1%	49.0%	604	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

The following table presents the composition of EBITDA pre for the reporting period in comparison with the year-earlier quar-

ter. The IFRS figures have been modified to reflect the elimination of adjustments included in the respective functional costs.

PERFORMANCE MATERIALS

Reconciliation EBITDA pre¹

€ million	Q1 2020			Q1 2019			Change
	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	900	-	900	604	-	604	49.0%
Cost of sales	-515	20	-495	-338	15	-323	53.5%
Gross profit	385	20	405	266	15	282	43.9%
Marketing and selling expenses	-136	1	-134	-66	2	-63	> 100.0%
Administration expenses	-38	-	-38	-23	1	-22	71.8%
Research and development costs	-71	-1	-73	-72	16	-56	29.2%
Impairment losses and reversals of impairment losses on financial assets (net)	1	-	1	-	-	-	-
Other operating income and expenses	-24	14	-10	-10	1	-9	8.9%
Operating result (EBIT)¹	116			95			
Depreciation / amortization / impairment losses / reversals of impairment losses	135	-	135	62	-	62	> 100.0%
EBITDA¹	251			157			
Restructuring expenses	7	-7	-	34	-34	-	-
Integration expenses/IT expenses	8	-8	-	1	-1	-	-
Gains (-) / losses (+) on the divestment of businesses	-	-	-	-	-	-	-
Acquisition-related adjustments	19	-19	-	-	-	-	-
Other adjustments	-	-	-	-	-	-	-
EBITDA pre¹	286	-	286	193	-	193	48.3%
thereof: organic growth ¹							-8.8%
thereof: exchange rate effects							5.1%
thereof: acquisitions/divestments							52.1%

¹ Not defined by International Financial Reporting Standards (IFRSs).

Adjusted gross profit for the Performance Materials business sector was € 405 million in the first quarter of 2020 (Q1 2019: € 282 million). A key driver of this 43.9% increase over the year-earlier quarter was the contribution from the acquisition of Versum. At 45.0%, adjusted gross margin was below the year-earlier figure (Q1 2019: 46.6%). Excluding adjustments, the operating result (EBIT) increased by € 21 million to € 116 million in the first quarter of 2020 (Q1 2019: € 95 million). This was mainly driven by the additional EBIT contribution from the acquisition of Versum.

The increase in marketing and selling expenses as well as administration expenses was attributable to the additional costs of the Versum and Intermolecular organizations. After eliminating adjustments, the decrease in research and development costs from the successful implementation of the "Bright Future" transformation program was canceled out by additional expenses from the Versum and Intermolecular organizations. EBITDA pre of the business sector grew by 48.3% to € 286 million (Q1 2019: € 193 million). Additional EBITDA pre from the acquisitions (52.1%) and positive foreign

48.3% to € 286 million (Q1 2019: € 193 million). Additional EBITDA pre from the acquisitions (52.1%) and positive foreign exchange effects (5.1%) significantly more than offset the organic decline in EBITDA pre (-8.8%) that was expected as a result of the high comparable figures for liquid crystals in Q1 2019. At 31.7%, the EBITDA pre margin was slightly below the year-earlier figure (Q1 2019: 31.9%).

DEVELOPMENT OF BUSINESS FREE CASH FLOW

In the first quarter of 2020, business free cash flow of the Performance Materials business sector increased by 7.0% to € 184 million (Q1 2019: € 172 million). Higher EBITDA pre and a lower increase in inventories significantly more than offset higher investments as well as an increase in receivables.

PERFORMANCE MATERIALS

Business free cash flow¹

€ million	Q1 2020	Q1 2019	Change
EBITDA pre ¹	286	193	48.3%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	-35	-14	> 100.0%
Changes in inventories	-9	-19	-54.7%
Changes in trade accounts receivable and receivables from royalties and licenses	-34	15	> 100.0%
Lease payments ²	-5	-2	> 100.0%
Elimination first-time consolidation of Versum/Intermolecular	-19	-	-
Business free cash flow¹	184	172	7.0%

¹ Not defined by International Financial Reporting Standards (IFRSs).

² Excluding payments for low-value leases and interest components included in lease payments.

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 and Other

additionally encompass expenses for central, non-allocated IT functions, including expenses related to the expansion and harmonization of IT systems within the Merck Group as well as research and development costs spanning business sectors.

CORPORATE AND OTHER

Key figures

€ million	Q1 2020	Q1 2019	Change
Operating result (EBIT) ¹	-168	-158	6.6%
EBITDA ¹	-146	-140	4.0%
EBITDA pre ¹	-129	-112	15.5%
Business free cash flow ¹	-146	-118	24.3%

¹ Not defined by International Financial Reporting Standards (IFRSs).

After eliminating adjustments, administration expenses amounted to € 76 million in the first quarter of 2020 (Q1 2019: € 57 million). Research and development costs spanning business sectors, for instance expenses for the Innovation Center were allocated to Corporate and Other in the amount of € 15 million in the first quarter of 2020 (Q1 2019: € 13 million). After eliminating adjustments, other

operating expenses (net) rose to € 58 million in the first quarter of 2020 (Q1 2019: € 52 million). After eliminating depreciation, amortization and adjustments, EBITDA pre totaled € -129 million in the first quarter of 2020 (Q1 2019: € -112 million). The increase in negative business free cash flow to € -146 million (Q1 2019: € -118 million) was largely the outcome of the development of EBITDA pre.

Outlook

With the publication of the results of 2019, we provided a forecast of the development of net sales, EBITDA pre and business free cash flow for the Merck Group and the individual business sectors in 2020.

Following the end of the first quarter, this forecast is now specified in the following report.

The divestment of Allergopharma to Dermapharm Holding SE ("Dermapharm") closed on March 31, 2020. The allergy business of Merck in Europe was transferred to Dermapharm on March 31, 2020. The transaction closing in China is expected in the second half of 2020. The following forecast already reflects this divestment and correspondingly shows a portfolio effect from this transaction on net sales over 2019, which however is not considered to be material at Group level.

Furthermore, in the context of the global outbreak of the Covid-19 pandemic, in deviation from our previous forecast we assume a significant burden on global economic growth,

which will affect all our businesses, particularly however Healthcare and Performance Materials. Due to the high level of uncertainty with respect to the further development of the Covid-19 pandemic, this outlook is being made with a considerably higher degree of uncertainty than normally. Since the dynamics of the pandemic vary regionally, we are presenting our assumptions in this respect as follows: For China, we assume that the Covid-19 pandemic reached its peak at the end of the first quarter and that a significant easing of the situation will set in as of the second quarter of 2020. For Europe and the United States, we do not expect the pandemic to peak until the second quarter, and currently expect that the outbreak will normalize by the end of the third quarter. Moreover, the current forecast does not assume that a second disease wave will occur in the named regions. Based on these assumptions, the forecast for the Merck Group in 2020 is as follows:

Merck Group

FORECAST FOR THE MERCK GROUP

€ million	Actual results 2019	Forecast for 2020	Key assumptions
Net sales	16,152	~16,800 to 17,800 - Slight to moderate organic growth - Positive portfolio effect in the mid single-digit percentage range - Exchange rate effect -2% to +1%	- Organic growth driven by Life Science; Healthcare stable, Performance Materials with a moderate to strong organic decline - Positive portfolio effect in the mid single-digit percentage range, mainly resulting from the acquisition of Versum Materials - Negative foreign exchange effect caused by emerging market currencies softened by the U.S. dollar
EBITDA pre	4,385	~4,350 to 4,850 - Stable organic development - Positive portfolio effect in the mid single-digit percentage range - Slightly negative foreign exchange effect of 0% to -3%	- Strong organic growth in Life Science absorbed by a slight decrease in Healthcare and a decline in Performance Materials in the low to mid-teens-percentage range - Realization of synergies from the integration of Versum Materials in Performance Materials as planned - Negative foreign exchange effect caused by emerging market currencies softened by the U.S. dollar
Business free cash flow	2,732	~2,650 to 3,250 Slight to strong increase	Rise in EBITDA pre and positive effects from working capital compensate for high capital spending

NET SALES

Following a solid first quarter of 2020, we forecast for the full year 2020 a slight to moderate organic net sales increase over the previous year. We continue to assume that Life Science will be a major driver of this organic growth. Against the backdrop of the Covid-19 pandemic, the Healthcare business sector is

expected to show stable organic growth in 2020, whereas our Performance Materials business will see a moderate to strong organic decline. In the first three quarters, the effect of the acquisition of Versum Materials will be reported as a portfolio effect, which we still forecast in the mid single-digit percentage range. With regard to exchange rate developments, we

continue to expect a volatile environment due to political and macroeconomic developments. Overall, we forecast a stable to slightly unfavorable foreign exchange development of -2% to +1% that can be attributed to the currencies of numerous growth markets, especially in Latin America. This effect will be mitigated by a favorable development of the euro-U.S. dollar exchange rate, which we see in a range of 1.08 to 1.12. Overall, we therefore forecast Group net sales of € 16.8 billion to € 17.8 billion for 2020.

EBITDA PRE

According to our expectations, in 2020 Group EBITDA pre will be in a corridor between € 4.35 billion and € 4.85 billion (2019: € 4.38 billion). Owing to strong restrictions of economic

life and declining income in the context of the Covid-19 pandemic with correspondingly adverse effects on our businesses, we forecast a merely stable organic development. The portfolio effect from the acquisition of Versum Materials is still expected to be in the mid single-digit percentage range and will lead to a slight improvement in the margin of the Merck Group. The expected foreign exchange development is forecast to have a slightly negative effect in the percentage range of between -3% and 0% on Group EBITDA pre; it will be seen particularly in the Healthcare and Life Science businesses. The development of the currencies in multiple growth markets will have an adverse impact on earnings and more than offset the positive effects stemming from the U.S. dollar.

Healthcare

FORECAST FOR THE HEALTHCARE BUSINESS SECTOR

€ million	Actual results 2019	Forecast for 2020	Key assumptions
Net sales	6,714	- Organic stable - Adverse portfolio effect in the mid double-digit million euro range - Neutral to moderately adverse foreign exchange effect	- Decline in the core business owing to strong impacts of the Covid-19 pandemic particularly on the Fertility franchise - Substantial growth contribution from our newly approved products, particularly Mavenclad® - Slight adverse portfolio effect from the divestment of Allergopharma - Adverse foreign exchange effect due to exchange rate developments in multiple growth markets, softened by the U.S. dollar
EBITDA pre	1,922	- Organic slightly negative - Slightly to moderately adverse foreign exchange effect	- Continued expected decline in sales of Rebif® as well as significant negative effects of the Covid-19 pandemic, particularly in the Fertility franchise will be softened by the expected significant earnings contributions from our new products, particularly Mavenclad® - Marketing and selling expenses as well as research and development costs decrease in absolute terms and in percent of sales due to rigorous cost management and strict pipeline prioritization - Adverse foreign exchange effect due to the exchange rate developments in multiple growth markets, softened by the U.S. dollar
Business free cash flow	1,252	Moderate decline	- Decline in EBITDA pre, higher investments in property, plant and equipment - Partly offset by improved working capital management

NET SALES

For the Healthcare business sector, we expect a stable organic development of net sales in 2020. Here we foresee significantly negative effects from the Covid-19 pandemic on the core business, particularly in the Fertility franchise. This decrease, in combination with an expected decline in Rebif® sales due to the intensive competitive situation in the market for multiple sclerosis treatments, cannot be offset by the continued positive growth contributions from General Medicine & Endocrinology

products largely attributable to performance in growth markets. We expect our new products to contribute significantly to organic sales. For 2020, we believe that both Mavenclad® and Bavencio® will each generate a further significant increase in sales, albeit not as high as assumed in the Annual Report for 2019 in view of the impact of the Covid-19 pandemic. The aforementioned divestment of Allergopharma will result in a slightly negative portfolio effect in the mid double-digit million range. Unfavorable foreign exchange developments in multiple

growth markets are expected to lead to a neutral to moderately adverse foreign exchange effect.

EBITDA PRE

Based on the stated impacts of the Covid-19 pandemic, we forecast a slight organic decline in EBITDA pre of the Healthcare business sector in 2020 (previously solid organic growth) over the previous year.

The negative earnings effects in the core business owing to the expected decline in sales of Rebif® will now amplify due to the additional sales decline in the Fertility franchise. However, significant earnings contributions from our new products, particularly Mavenclad®, will still have a mitigating effect, albeit to a lower extent owing to the negative impact of the Covid-19 crisis. In addition, we will continue our rigorous cost management and strict pipeline prioritization. We therefore expect marketing and selling expenses as well as research and development costs to decline both in absolute terms and in percent of sales, with

research and development costs remaining heavily dependent on the development of clinical data and further expected study results. As of 2020, the upfront cash payment from the global strategic alliance with Pfizer for Bavencio® and Xalkori® as well as milestone payments will no longer be reflected in profit and loss. However, the upfront cash payment in the context of the global strategic alliance with GlaxoSmithKline plc (GSK) for the joint development and marketing of bintrafusp alfa will have a positive earnings effect in the low triple digit euro millions. The exact amount is dependent on the cost evolution and on reaching development milestones and will be recognized in other operating income. Moreover, the forecast for Healthcare includes effects from active portfolio management. Overall, the earnings contribution attributable to these one-time effects will be significantly below the prior-year figure. Furthermore, we expect foreign exchange effects to have a slightly to moderately adverse impact on EBITDA pre.

Life Science

FORECAST FOR THE LIFE SCIENCE BUSINESS SECTOR

€ million	Actual results 2019	Forecast for 2020	Key assumptions
Net sales	6,864	• Strong organic growth • Neutral to slightly negative foreign exchange effect	• All businesses contribute to the development • Process Solutions remains the main driver of growth, followed by Applied Solutions • Adverse foreign exchange impact due to exchange rate developments in multiple growth markets, almost offset by the U.S. dollar
EBITDA pre	2,129	• Strong organic earnings growth • Neutral to moderately adverse foreign exchange effect	• Organic earnings growth owing to the expected sales growth • Adverse foreign exchange effect owing to exchange rate developments in multiple growth markets
Business free cash flow	1,375	Increase in the low percentage teens range	• Rise in EBITDA pre • Improved management of working capital • Offset by increase in capital spending on strategic projects

NET SALES

For our Life Science business sector, we continue to assume strong organic growth of net sales in 2020 compared with the previous year. Our forecast of all business units making a positive contribution to organic growth remains unchanged. The Process Solutions business unit will remain the strongest driver of organic growth in 2020, followed by Applied Solutions and Research Solutions. As previously stated, we do not expect the acquisitions of FloDesign Sonics Inc. and BSSN Software GmbH to have a material portfolio effect. Negative foreign exchange effects in various growth markets will be almost offset by positive effects from the U.S. dollar. Consequently, we expect stable to slightly negative foreign exchange effects.

EBITDA PRE

For EBITDA pre of the Life Science business sector, we confirm our forecast of strong organic growth in fiscal 2020. The persistently dynamic demand trend will contribute to the organic growth of EBITDA pre. Within the Life Science business sector, in fiscal 2020 we expect stable to moderately adverse foreign exchange effects, driven by the development of various emerging market currencies.

Performance Materials

FORECAST FOR THE PERFORMANCE MATERIALS BUSINESS SECTOR

€ million	Actual results 2019	Forecast for 2020	Key assumptions
Net sales	2,574	- Moderate to strong organic decline - Portfolio effect in the low to mid-thirties percentage range - Slightly positive foreign exchange effect	- Strong growth momentum in Semiconductor Solutions - Continued price decline in Liquid Crystals business - Significant decrease in Surface Solutions - Portfolio effect due to Versum Materials in the low to mid-thirties percentage range, no material portfolio effect from Intermolecular - Positive foreign exchange effect due to the trend of exchange rates in individual Asian growth markets and of the U.S. dollar
EBITDA pre	803	- Organic decline in the low to mid-teens percentage range - Portfolio effect in the low to mid-thirties percentage range - Moderately positive foreign exchange effect	- Growth in Semiconductor Solutions cannot offset price decline in Liquid Crystals or the significantly adverse impact of the Covid-19 pandemic despite strict cost discipline - Positive earnings contribution from Versum Materials in the low to mid-thirties percentage range leads to slight margin improvement - Planned realization of synergies of € 20 million from the integration of Versum Materials - Positive foreign exchange effect due to the trend of exchange rates in individual Asian growth markets and of the U.S. dollar
Business free cash flow	641	Increase with growth rates in the low twenties percentage range	Rise in EBITDA pre softened by higher capital spending

NET SALES

For our Performance Materials business sector we forecast a moderate to strongly negative organic decline in net sales in 2020. For our Semiconductor Materials business, we continue to expect strong growth dynamics this year as stated in our previous forecast. By contrast, in addition to the continued price erosion owing to price pressure common in the industry, our Liquid Crystals business is suffering from the adverse effects in connection with the Covid-19 pandemic. This slowdown in the dynamics of the global economy will also lead to significantly deteriorating business prospects for our Surface Solutions business in 2020. For Versum Materials, we expect a portfolio effect in the low to mid-thirties range in first three quarters of 2020. Moreover, the acquisition of Intermolecular closed on September 20, 2019. We do not consider the resulting portfolio effect to be material.

Due to the development of the euro against the U.S. dollar as well as the development of several currencies of Asian growth markets, we now project a slightly positive foreign exchange effect (previously slightly negative effect) for 2020.

EBITDA PRE

For our Performance Materials business sector, we expect the economic slowdown within the scope of the Covid-19 pandemic to have a significantly adverse impact on EBITDA pre. Good business performance in our Semiconductor Materials business and high cost discipline will not be able to compensate for this. Consequently, we expect that organic EBITDA pre will decline in the low to mid-teens percentage range in comparison with 2019. We estimate that the portfolio effect of Versum Materials will show total growth in the low to mid-thirties percentage range, which will improve the margin of the business slightly. This forecast includes the planned realization of synergies in the amount of around € 20 million.

Owing to changed foreign exchange assumptions, particularly for the euro-U.S. dollar and several Asian currencies, we assume a moderately positive foreign exchange effect.

Corporate and Other

Due to the high level of uncertainty with respect to the further development of the Covid-19 pandemic, the forecast for Corporate and Other is also being made with a considerably

higher degree of uncertainty than normally. Overall, we forecast a slight increase in corporate costs in 2020 in comparison with the previous year. The forecast figures will be adversely affected mainly by currency hedging.

MERCK GROUP

Forecast for FY 2020

€ million	Net sales	EBITDA pre	Business free cash flow
Merck Group	~16,800 to 17,800 - Slight to moderate organic growth - Portfolio effect in the mid single-digit percentage range - Exchange rate effect -2% to +1%	~4,350 to 4,850 - Stable organic development - Positive portfolio effect in the mid single-digit percentage range - Slightly adverse foreign exchange effect of 0% to -3%	~2,650 to 3,250
Healthcare	- Organic stable - Adverse portfolio effect in the mid double-digit million range - Neutral to moderately adverse foreign exchange effect	- Organic slightly negative - Slightly to moderately adverse foreign exchange effect	Moderate decline
Life Science	- Strong organic growth - Neutral to slightly adverse foreign exchange effect	- Strong organic growth - Neutral to moderately adverse foreign exchange effect	Increase in the low percentage teens range
Performance Materials	- Moderate to strong organic decline - Portfolio effect in the low to mid-thirties percentage range - Slightly positive foreign exchange effect	- Organic decline in the low to mid-teens percentage range - Portfolio effect in the low to mid-thirties percentage range - Moderately positive foreign exchange effect	Increase with growth rates in the low twenties percentage range
Corporate and Other	–	Slightly higher than in 2019	–

EPS pre € 5.50 to € 6.35

Full-year FX assumption for 2020:

€ 1 = US\$ 1.08 to US\$ 1.12



Supplemental Financial Information

Supplemental Financial Information

Consolidated Income Statement

€ million	Q1 2020	Q1 2019
Net sales	4,370	3,746
Cost of sales	-1,654	-1,384
Gross profit	2,716	2,362
Marketing and selling expenses	-1,059	-1,091
Administration expenses	-289	-283
Research and development costs	-579	-527
Impairment losses and reversals of impairment losses on financial assets (net)	6	-4
Other operating income	112	100
Other operating expenses	-191	-179
Operating result (EBIT)¹	716	379
Finance income	14	16
Finance costs	-112	-129
Profit before income tax	617	266
Income tax	-159	-67
Profit after tax from continuing operations	458	199
Profit after tax from discontinued operation	-	-10
Profit after tax	458	190
thereof: attributable to Merck KGaA shareholders (net income)	456	189
thereof: attributable to non-controlling interests	2	1
Earnings per share (in €)		
Basic	1.05	0.43
from continuing operations	1.05	0.45
from discontinued operation	-	-0.02
Diluted	1.05	0.43
from continuing operations	1.05	0.45
from discontinued operation	-	-0.02

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

Statement of Comprehensive Income

€ million	Q1 2020	Q1 2019
Profit after tax	458	190
Items of other comprehensive income that will not be reclassified to profit or loss in subsequent periods		
Net defined benefit liability		
Changes in remeasurement	103	-88
Tax effect	-30	19
Changes recognized in equity	73	-68
Equity instruments		
Fair value adjustments	-57	-18
Tax effect	-	-
Changes recognized in equity	-57	-17
	15	-85
Items of other comprehensive income that may be reclassified to profit or loss in subsequent periods		
Debt instruments		
Fair value adjustments	-	-
Reclassification to profit or loss	-	-
Tax effect	-	-
Changes recognized in equity	-	-
Cash flow hedge reserve		
Fair value adjustments	-47	-38
Reclassification to profit or loss	22	25
Reclassification to assets	-	-
Tax effect	9	4
Changes recognized in equity	-17	-9
Cost of cash flow hedge reserve		
Fair value adjustments	7	2
Reclassification to profit or loss	1	-
Tax effect	-3	-
Changes recognized in equity	6	2
Currency translation difference		
Changes taken directly to equity	231	346
Reclassification to profit or loss	-1	-
Changes recognized in equity	230	346
	219	339
Other comprehensive income	235	254
Comprehensive income	693	444
thereof: attributable to Merck KGaA shareholders	692	441
thereof: attributable to non-controlling interests	1	2
Comprehensive income	693	444
thereof: from continuing operations	693	453
thereof: from discontinued operation	-	-10

Consolidated Balance Sheet¹

€ million	March 31, 2020	Dec. 31, 2019
Non-current assets		
Goodwill	17,376	17,141
Other intangible assets	9,089	9,175
Property, plant and equipment	6,110	6,213
Other non-current financial assets	692	738
Other non-current receivables	21	22
Other non-current non-financial assets	94	97
Deferred tax assets	1,348	1,421
	34,730	34,808
Current assets		
Inventories	3,443	3,342
Trade and other current receivables	3,690	3,488
Contract assets	85	156
Other current financial assets	81	57
Other current non-financial assets	553	591
Income tax receivables	631	589
Cash and cash equivalents	1,530	781
	10,013	9,003
Total assets	44,743	43,811
Total equity		
Equity capital	565	565
Capital reserves	3,814	3,814
Retained earnings	11,978	11,507
Gains / losses recognized in equity	2,200	1,980
Equity attributable to Merck KGaA shareholders	18,556	17,865
Non-controlling interests	44	48
	18,600	17,914
Non-current liabilities		
Non-current provisions for employee benefits	3,060	3,194
Other non-current provisions	252	254
Non-current financial debt	10,137	8,644
Other non-current financial liabilities	44	43
Other non-current non-financial liabilities	90	93
Deferred tax liabilities	1,795	1,828
	15,379	14,056
Current liabilities		
Current provisions for employee benefits	82	110
Other current provisions	822	823
Current financial debt	3,717	4,550
Other current financial liabilities	1,021	1,127
Trade and other current payables	1,807	2,054
Refund liabilities	626	565
Income tax liabilities	1,463	1,402
Other current non-financial liabilities	1,225	1,211
	10,764	11,842
Total equity and liabilities	44,743	43,811

¹Previous year's figures have been adjusted, see "Effects of disclosure changes".

Consolidated Cash Flow Statement

€ million	Q1 2020	Q1 2019
Profit after tax	458	190
Depreciation / amortization / impairment losses / reversals of impairment losses	431	474
Changes in inventories	-129	-146
Changes in trade accounts receivable	-254	-15
Changes in trade accounts payable / refund liabilities	27	-17
Changes in provisions	16	100
Changes in other assets and liabilities	-23	-89
Neutralization of gains / losses on disposals of assets	-35	1
Other non-cash income and expenses	24	-5
Net cash flows from operating activities	516	493
thereof: from discontinued operation	-	-5
Payments for investments in intangible assets	-18	-9
Payments from the disposal of intangible assets	6	17
Payments for investments in property, plant and equipment	-341	-209
Payments from the disposal of property, plant and equipment	3	3
Payments for investments in financial assets	-26	-37
Payments for acquisitions less acquired cash and cash equivalents	-1	-
Payments from the disposal of other financial assets	31	7
Payments for the purchase of non-financial assets	-	-100
Payments from other divestments	56	-
Net cash flows from investing activities	-288	-329
thereof: from discontinued operation	-	-
Dividend payment to Merck KGaA shareholders	-5	-
Dividend payments to E. Merck KG	-58	-61
Payments from new borrowings from E. Merck KG	-	9
Repayments of financial debt to E. Merck KG	-34	-
Payments from the issuance of bonds	1,490	-
Repayments of bonds	-2,041	-
Changes in other current and non-current financial debt	1,189	49
Net cash flows from financing activities	542	-3
thereof: from discontinued operation	-	-
Changes in cash and cash equivalents	770	160
Changes in cash and cash equivalents due to currency translation	-20	9
Cash and cash equivalents at the beginning of the reporting period	781	2,170
Cash and cash equivalents as of March 31 (consolidated balance sheet)	1,530	2,340

Consolidated Statement of Changes in Net Equity

		Comprehensive income			Profit transfer to / from E. Merck KG including changes in reserves	Transactions with no change of control	Change in scope of consolidation / Other	
	Jan. 1, 2020	Profit after tax	Gains / losses recognized in equity	Dividend payments				March 31, 2020
Equity capital	565	-	-	-	-	-	-	565
General partner's equity	397	-	-	-	-	-	-	397
Subscribed capital	168	-	-	-	-	-	-	168
Capital reserves	3,814	-	-	-	-	-	-	3,814
Retained earnings	11,507	456	16	-	-	-1	-	11,978
Retained earnings / net retained profit	13,158	456	-	-	-	-1	-21	13,592
Remeasurement of defined benefit plans	-1,729	-	73	-	-	-	21	-1,636
Fair value reserve for equity instruments	79	-	-57	-	-	-	-	21
Gains / losses recognized in equity	1,980	-	220	-	-	-	-	2,200
Fair value reserve for debt instruments	-1	-	-	-	-	-	-	-1
Cash flow hedge reserve	-118	-	-17	-	-	-	-	-135
Cost of cash flow hedge reserve	-33	-	6	-	-	-	-	-27
Currency translation difference	2,131	-	231	-	-	-	-	2,363
Equity attributable to Merck KGaA shareholders	17,865	456	236	-	-	-1	-	18,556
Non-controlling interests	48	2	-1	-5	-	-	-	44
Total equity	17,914	458	235	-5	-	-1	-	18,600

€ million	Jan. 1, 2019	Comprehensive income		Dividend payments	Profit transfer to / from E. Merck KG including changes in reserves	Transactions with no change of control	Change in scope of consolidation / Other	March 31, 2019
		Profit after tax	Gains / losses recognized in equity					
Equity capital	565	–	–	–	–	–	–	565
General partner's equity	397	–	–	–	–	–	–	397
Subscribed capital	168	–	–	–	–	–	–	168
Capital reserves	3,814	–	–	–	–	–	–	3,814
Retained earnings	11,192	189	–85	–	–	–	–	11,295
Retained earnings / net retained profit	12,525	189	–	–	–	–	1	12,714
Remeasurement of defined benefit plans	–1,340	–	–68	–	–	–	–	–1,408
Fair value reserve for equity instruments	7	–	–17	–	–	–	–1	–12
Gains / losses recognized in equity	1,629	–	338	–	–	–	–	1,967
Fair value reserve for debt instruments	–1	–	–	–	–	–	–	–
Cash flow hedge reserve	–128	–	–9	–	–	–	–	–137
Cost of cash flow hedge reserve	–33	–	2	–	–	–	–	–31
Currency translation difference	1,790	–	345	–	–	–	–	2,135
Equity attributable to Merck KGaA shareholders	17,200	189	253	–	–	–	–	17,640
Non-controlling interests	33	1	1	–	–	–	–	35
Total equity	17,233	190	254	–	–	–	–	17,676

Informationen by Business Sector

	Healthcare		Life Science		Performance Materials		Konzernkosten und Sonstiges		Konzern	
€ million	Q1 2020	Q1 2019	Q1 2020	Q1 2019	Q1 2020	Q1 2019	Q1 2020	Q1 2019	Q1 2020	Q1 2019
Net sales¹	1,701	1,481	1,769	1,661	900	604	-	-	4,370	3,746
Intersegment sales	-	-	5	4	-	-	-5	-4	-	-
Operating result (EBIT)²	422	128	345	313	116	95	-168	-158	716	379
Depreciation and amortization	79	174	196	193	134	62	22	17	430	447
Impairment losses	1	27	-	-	-	-	-	-	1	27
Reversals of impairment losses	-	-	-	-	-	-	-	-	-	-
EBITDA²	501	329	541	507	251	157	-146	-140	1,148	853
Adjustments ²	-29	3	11	9	35	35	17	28	34	76
EBITDA pre (Segment result)²	472	332	553	516	286	193	-129	-112	1,181	929
EBITDA pre margin (in % of net sales) ²	27.8	22.4	31.2	31.0	31.7	31.9	-	-	27.0	24.8
Assets by business sector ³	7,316	7,560	21,835	21,600	10,917	10,784	4,675	3,867	44,743	43,811
Liabilities by business sector ³	-2,905	-3,055	-1,424	-1,519	-675	-716	-21,138	-20,608	-26,143	-25,897
Investments in property, plant and equipment ⁴	155	98	107	76	61	14	17	22	341	209
Investments in intangible assets ⁴	8	6	8	1	1	1	1	1	18	9

¹ Excluding intersegment sales.

² Not defined by International Financial Reporting Standards (IFRS).

³ Figures for the reporting period ending on March 31, 2020; previous-year figures as of December 31, 2019.

⁴ As reported in the consolidated cash flow statement.

€ million	Q1 2020	Q1 2019
EBITDA pre of the operating businesses¹	1,310	1,042
Corporate and Other	-129	-112
EBITDA pre of the Merck Group¹	1,181	929
Depreciation / amortization / impairment losses / reversals of impairment losses	-431	-474
Adjustments ¹	-34	-76
Operating result (EBIT)¹	716	379
Financial result	-98	-113
Profit before income tax	617	266

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

€ million	Q1 2020	Q1 2019
Restructuring expenses	-15	-61
Integration expenses / IT expenses	-22	-13
Gains (+) / losses (-) on the divestment of businesses	30	-2
Acquisition-related adjustments	-19	-
Other adjustments	-8	1
Adjustments before impairment losses / reversals of impairment losses¹	-34	-76
Impairment losses	-2	-
Reversals of impairment losses	-	-
Adjustments (total)¹	-36	-76

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

In comparison with the year-earlier quarter, restructuring expenses declined from € 61 million to € 15 million. Lower expenses were incurred for both the “Bright Future” transformation program in the Performance Materials business sector (€ 0 million; January-March 2019: € 34 million) and for the transfer of various activities to the Shared Service organization (€ 3 million; January-March 2019: € 25 million).

The gain on the divestment of the allergy business (€ 37 million) has been recorded under “Gains on the divestment of businesses”. The 2019 takeover of Versum Materials, Inc., USA, led to acquisition-related adjustments amounting to € 21 million (January-March 2019: € 0 million).

The following tables present a more detailed breakdown of net sales from contracts with customers.

€ Million / in %		Q1 2020							
Net sales by nature of the products		Healthcare		Life Science		Performance Materials		Group	
Goods		1,666	98%	1,583	90%	813	90%	4,062	93%
Equipment / hardware		2	-	71	4%	64	7%	136	3%
Services		14	1%	112	6%	23	3%	149	4%
License income		-	-	3	-	-	-	4	-
Commission income		3	-	-	-	-	-	3	-
Income from co-commercialization agreements		16	1%	-	-	-	-	16	-
Total		1,701	100%	1,769	100%	900	100%	4,370	100%
Net sales by region (customer location)									
Europe		622	37%	614	35%	74	8%	1,310	30%
North America		370	22%	644	36%	136	15%	1,150	26%
Asia-Pacific (APAC)		442	26%	422	24%	672	75%	1,536	35%
Latin America		177	10%	66	4%	9	1%	252	6%
Middle East and Africa (MEA)		89	5%	23	1%	9	1%	121	3%
Total		1,701	100%	1,769	100%	900	100%	4,370	100%

€ Million / in %		Q1 2019							
Net sales by nature of the products		Healthcare		Life Science		Performance Materials		Group	
Goods		1,455	98%	1,450	88%	604	100%	3,509	94%
Equipment / hardware		3	-	105	6%	-	-	107	3%
Services		11	1%	102	6%	1	-	113	3%
License income		-	-	3	-	-	-	3	-
Commission income		4	-	1	-	-	-	5	-
Income from co-commercialization agreements		8	1%	-	-	-	-	8	-
Total		1,481	100%	1,661	100%	604	100%	3,746	100%
Net sales by region (customer location)									
Europe		538	36%	581	35%	58	10%	1,177	32%
North America		305	21%	575	35%	54	9%	934	25%
Asia-Pacific (APAC)		389	26%	418	25%	480	79%	1,287	34%
Latin America		157	11%	65	4%	9	1%	230	6%
Middle East and Africa (MEA)		92	6%	22	1%	3	1%	118	3%
Total		1,481	100%	1,661	100%	604	100%	3,746	100%

HEALTHCARE

€ million / in %	Q1 2020		Q1 2019	
Oncology	260	15%	229	16%
thereof: Erbitux®	211	12%	199	13%
thereof: Bavencio®	33	2%	22	1%
Neurology & Immunology	418	25%	342	23%
thereof: Rebif®	295	17%	299	20%
thereof: Mavenclad®	123	7%	43	3%
Fertility	278	16%	287	19%
thereof: Gonal-f®	167	10%	168	11%
General Medicine & Endocrinology	680	40%	570	38%
thereof: Glucophage®	234	14%	180	12%
thereof: Concor®	150	9%	117	8%
thereof: Euthyrox®	114	7%	91	6%
thereof: Saizen®	65	4%	55	4%
Other	65	4%	52	4%
Total	1,701	100%	1,481	100%

LIFE SCIENCE

€ million / in %	Q1 2020		Q1 2019	
Process Solutions	802	45%	700	42%
Research Solutions	546	31%	542	33%
Applied Solutions	421	24%	419	25%
Total	1,769	100%	1,661	100%

PERFORMANCE MATERIALS

€ million / in %	Q1 2020		Q1 2019	
Display Solutions	304	34%	331	55%
Semiconductor Solutions	485	54%	152	25%
Surface Solutions	111	12%	121	20%
Other	–	–	–	–
Total	900	100%	604	100%

Significant events during the reporting period

IMPACT OF THE COVID-19 PANDEMIC ON THE FINANCIAL STATEMENTS

Merck is continuously reviewing the potential impact of the Covid-19 pandemic on the financial statements of the Group. To date, reductions in orders received due to Covid-19 have mainly been recorded in the Fertility franchise within the Healthcare business sector as well as in the Surface Solutions and Display Solutions business units within the Performance Materials business sector. Additionally, the Research Solutions business unit of the Life Science business sector saw a negative impact from weaker demand from academic laboratories in connection with Covid-19. Apart from the resulting sales declines, further impacts in the reporting period were immaterial; primarily owing to higher logistic expenses and a slight increase in loss allowances for trade accounts receivable. Moreover, contractually agreed payment terms were extended in individual cases.

Further information can be found under "Course of business and economic position". An analysis of the extent to which material impairments of non-financial assets such as goodwill, other intangible assets as well as property, plant and equipment or inventories could be necessary as a result of the Covid-19 pandemic is underway. More information on the expected impact of the Covid-19 pandemic on fiscal 2020 can be found under "Outlook".

AGREEMENT TO DIVEST THE ALLERGOPHARMA ALLERGY BUSINESS

On February 19, 2020, Merck signed an agreement to divest its Allergopharma allergy business to Dermapharm Holding SE, Grünwald, Germany. Following regulatory approval and the satisfaction of other customary closing conditions, the transaction closed on March 31, 2020. Only the transfer of the minor business in China is expected for the second half of 2020.

Allergopharma is a leader in allergen-specific immunotherapy of type 1 allergies. Allergopharma products are currently available in 18 markets worldwide. The transaction encompasses the Allergopharma business in Europe and Asia, with the broad portfolio of therapeutic and diagnostic products

as well as the production site in Reinbek near Hamburg (Germany). An existing adrenaline autoinjector development project for the treatment of anaphylactic reactions is not part of the transaction and will remain with Merck. As of March 31, 2020, after the deduction of cash and cash equivalents Merck received € 56 million, which was disclosed in the reporting period under cash flows from investing activities in the cash flow statement. Because the purchase price adjustments have not been completed, it has not yet been possible to determine the final purchase price.

In the opinion of the Executive Board, the preconditions for classification as a disposal group pursuant to IFRS 5 were only met once the agreement to divest the Allergopharma business had been signed.

ACQUISITION OF VERSUM MATERIALS, INC., USA, IN 2019

On October 7, 2019, Merck announced the successful closing of the acquisition of Versum Materials, Inc., USA, ("Versum"). The purchase price in accordance with IFRS 3 was around € 5.2 billion.

Versum is one of the world's leading suppliers of innovation-driven, high-purity process chemicals, gases and equipment for semiconductor manufacturing. The company reported annual sales of approximately € 1.2 billion in fiscal 2018, has approximately 2,300 employees, and operates 14 manufacturing and seven research and development facilities throughout Asia and North America. The legacy Versum business is being integrated into the Semiconductor Solutions business unit within the Performance Materials business sector. The merger is expected to transform Merck into a leading provider of electronic materials for the semiconductor and display industries.

Intangible assets represented the vast majority of the fair values of the acquired net assets. The finalization of the purchase price allocation is still underway.

More information on this company acquisition can be found under "Acquisition and divestments" in the Notes to the Consolidated Financial Statements of the Annual Report for 2019.

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.

Effects of disclosure changes

CHANGE IN BALANCE SHEET DISCLOSURE OF PROVISIONS FOR EMPLOYEE BENEFITS

To increase the comparability and the further harmonization with the requirements of the IFRS taxonomy, with effect from January 1, 2020 Merck adapted the disclosure of provisions and liabilities for employee benefits.

Provisions for employee benefits of € 237 million previously included in other non-current provisions were reclassified to

provisions for pensions and other post-employment benefits and this item was renamed “non-current provisions for employee benefits”.

Current liabilities were expanded to include “Current provisions for employee benefits”. In connection with this reclassification, other current provisions correspondingly decreased by € 110 million as of January 1, 2020.

Darmstadt, May 13, 2020



Stefan Oschmann



Udit Batra



Kai Beckmann

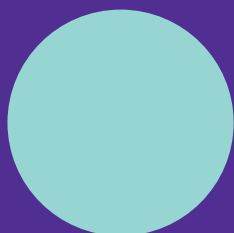


Belén Garijo



Marcus Kuhnert

FINANCIAL CALENDAR
for 2020 / 2021



May
5/28/2020

Annual General Meeting



March
3/4/2021

Annual Press Conference



August
8/6/2020

Half-yearly Financial Report



April
4/23/2021

Annual General Meeting



November
11/12/2020

Quarterly Statement Q3



May
5/12/2021

Quarterly Statement Q1

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TYPESETTING + LAYOUT

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