

Quarterly Statement

3rd Quarter

2022

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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, 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 2021 has been optimized for mobile devices and is available on the internet at https://www.merckgroup.com/en/annualreport/2021/.

MERCK - IN BRIEF

Merck Group

Key figures

€ million	Q3 2022	Q3 2021	Change	JanSept. 2022	JanSept. 2021	Change
Net sales	5,806	4,973	16.8%	16,572	14,474	14.5%
Operating result (EBIT) ¹	1,234	1,047	17.8%	3,585	3,140	14.2%
Margin (% of net sales) ¹	21.3%	21.1%		21.6%	21.7%	
EBITDA ²	1,704	1,495	14.0%	5,016	4,433	13.1%
Margin (% of net sales) ¹	29.3%	30.1%		30.3%	30.6%	
EBITDA pre ¹	1,810	1,552	16.7%	5,221	4,639	12.6%
Margin (% of net sales) ¹	31.2%	31.2%		31.5%	32.0%	
Profit after tax	926	764	21.2%	2,680	2,258	18.7%
Earnings per share (€)	2.12	1.75	21.1%	6.14	5.18	18.5%
Earnings per share pre (€) ¹	2.68	2.24	19.6%	7.73	6.66	16.1%
Operating cash flow	1,552	1,467	5.8%	3,244	3,571	-9.2%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

Merck Group





 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

² Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

Developments within the Group and R&D

Merck

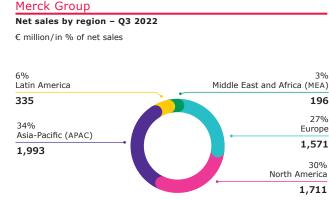
We are Merck, a vibrant science and technology company. Science is at the heart of everything we do. It drives the discoveries we make and the technologies we create. Our work makes a positive difference to millions of people's lives every day. Our Life Science experts impact life and health with science. In Healthcare, we discover unique ways to treat the most challenging diseases such as multiple sclerosis and cancer. And with our Electronics business, we are the company behind the companies, advancing digital living.

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 MilliporeSigma in the Life Science business, as EMD Serono in the Healthcare business, and as EMD Electronics in the Electronics business. We had 63,723 employees worldwide on September 30, 2022, compared with 59,308 employees on September 30, 2021.

This section of the present quarterly statement summarizes the highlights of the third quarter of 2022 at Merck including those in research and development. A detailed description of Merck and its business sectors can be found in our **Annual Report for 2021**.





Life Science

We are a leading global supplier of tools, research-grade chemicals, and equipment for academic labs, biotech, biopharmaceutical manufacturers, and the industrial sector, offering both a broad and deep portfolio of more than 300,000 products. Our purpose is to impact life and health with science by collaborating with the global scientific community to deliver breakthrough innovations. We are committed to delivering products, services and digital platforms to create a sustainable future for generations to come.

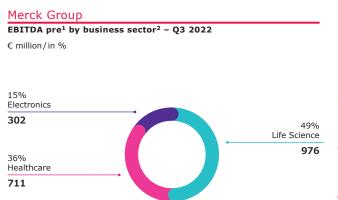
In the third quarter of 2022, we continued to innovate for our customers by launching nearly 6,800 products across the Process Solutions, Life Science Services, and Science & Lab Solutions business units, including those launched through our "faucet program" for antibodies, reference materials, chemicals, and nanomaterials.

Process Solutions

In August, we launched the VirusExpress® 293 Adeno-Associated Virus (AAV) production platform, making us one of the first Contract Development and Manufacturing Organizations (CDMOs) and technology developers to provide a complete viral vector manufacturing offering including AAV, Lentiviral, CDMO, Contract Testing, and process development. This new platform enables biopharmaceutical companies to increase the speed of clinical manufacturing while reducing process development time and costs. It is an extension of our VirusExpress® offering, which can reduce process development time by up to 40%, based on our experience as a CDMO.

Life Science Services

In September, we opened a new viral clearance (VC) laboratory as part of the first phase of our new € 29 million Shanghai-based China Biologics Testing Center. The 5,000 m² center, the first of its kind for our company in China, is designed to meet the double-digit demand for VC testing services in China. Customers will now be able to locally conduct viral clearance studies from pre-clinical development to commercialization, a critical step in drug development required by regulatory agencies to complete clinical trials necessary to move to commercial manufacturing. The second phase of the center's facilities will open in late 2023 and will offer cell line characterization and lot release testing services.





 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

 $^{^2}$ Not presented: Decline in Group EBITDA pre by \odot –178 million due to Corporate and Other.

Science & Lab Solutions

In July, we broke ground at our site in Sheboygan, Wisconsin for our first lateral flow membrane production facility in the United States. Lateral flow membranes are vital in rapid diagnostic test kits for various applications, including Covid-19 testing. The new facility is supported by a \in 121 million contract award from the U.S. Department of Defense on behalf of the U.S. Department of Health and Human Services. The Sheboygan location further supports our competitive advantage by providing improved supply security and reduced lead times for global customers.

Healthcare

Patients are at the center of our work and with every advance, we contribute to creating, improving and prolonging lives. This single ambition drives everything we do. With the continued evolution of our pipeline and a clear commitment to delivering on our performance objectives, we strengthen our position as a global specialty innovator.

Oncology

- At this year's European Society of Medical Oncology Congress, which took place from September 9-13, 2022, we presented a total of 29 abstracts featuring data from company- and investigator-sponsored studies across six approved or investigational medicines in multiple tumor types:
 - Five-year overall survival results from a Phase II study of the IAP (Inhibitor of Apoptosis Protein) inhibitor xevinapant in patients with unresected locally advanced squamous cell carcinoma of the head and neck: In this study, patients treated with xevinapant plus chemoradiotherapy (CRT) were almost twice as likely to be alive at five years than those treated with placebo plus CRT (53% vs 28%).
 - Initial results from the Phase II INSIGHT 2 trial of Tepmetko® (tepotinib) plus osimertinib in the treatment of patients with EGFR-(epidermal growth factor receptor-)-mutant non-small cell lung cancer with MET amplification (METamp) after progression on first-line treatment with osimertinib: The confirmed overall response rate (ORR) was 54.5% (95% CI, 32.2, 75.6) in 22 patients with METamp who received tepotinib plus osimertinib and were followed for at least nine months, with six of 12 responders still on treatment. Among the 48 patients followed for at least three months, ORR was 45.8% (95% CI, 31.4, 60.8).
 - Translational data for Bavencio[®] (avelumab) characterizing genomic biomarkers in peripheral blood from patients enrolled in the Phase III JAVELIN Bladder 100 trial.
- On September 21, 2022, we announced a collaboration agreement with licensing option with Nerviano Medical Sciences S.r.l. (NMS) for the next-generation highly selective and brain-penetrant oral PARP1 (poly (ADP-ribose) polymerase-1) inhibitor NMS-293. NMS-293 has strong potential in combination with a wide variety of DNA-damaging agents, including systemic or targeted chemotherapy (Antibody Drug Conjugates) or with DNA damage response inhibitors, in numerous tumor types. Under the current agreement, we will make early payments (upfront and option exercise fees) of up to US\$ 65 million to NMS. Furthermore, NMS will receive payments for the achievement of certain development, regulatory and commercial milestones and tiered royalties on net sales generated by us. Upon exercising the option, NMS will grant us the exclusive rights to research, develop, manufacture and commercialize NMS-293.

Neurology and Immunology

- Our current multiple sclerosis (MS) portfolio includes two products for the treatment of relapsing MS (RMS): Rebif® (interferon beta-1a) and Mavenclad® (cladribine tablets). Rebif® has been a standard of care in RMS treatment for more than 20 years with data supported by more than 1.8 million patient-years of therapy since approval. Mavenclad® has been approved in 88 countries, including those of the European Union, as well as Australia, Canada and the United States. We are pioneering the therapeutic usage of Bruton's Tyrosine Kinase inhibition for MS through the discovery and development of evobrutinib which targets both inflammatory activity in the central nervous system and immune cells in the periphery to address the underlying causes of ongoing disease progression. Evobrutinib is in Phase III development for RMS.
- In addition to our commitment to MS, we also have a pipeline focusing on discovering new therapies that have potential in other neuroinflammatory and immune-mediated diseases, including systemic lupus erythematosus and cutaneous lupus erythematosus, for example.

Fertility

- According to updated data, more than five million babies have been born with the help of Gonal-f® (follitropin alfa) to date.
- The Pergoveris® pen is the first product comprising both recombinant human follicle-stimulating hormone (FSH) and recombinant human luteinizing hormone (LH) in a ready-to-use liquid version. It thus provides a convenient treatment option for women with severe FSH and LH deficiency. Launches around the globe will continue in order to provide patients with access to this treatment. The Pergoveris® pen is currently available in 51 countries.
- At the 2022 Annual Meeting of the European Society of Human Reproduction and Embryology in July, we
 announced a clinical study for a new smart fertility patient hormone monitoring solution. This is a non-invasive
 device that allows hormone monitoring from the comfort of a patient's home while enabling clinicians to
 monitor hormone levels remotely as well as to support their clinical decisions. Through this device, we hope
 to improve both the patient experience and the efficiency of clinic workflows by increasing convenience and
 flexibility. The first patient enrolled in August.

Cardiovascular, Metabolism and Endocrinology

- In the third quarter, our modified formulation of Euthyrox® (levothyroxine) for the treatment of hypothyroidism received regulatory approval in two additional countries – Morocco and Israel, bringing the total number of countries in which it is approved to 90.
- Glucophage® (metformin), containing the active ingredient metformin, is currently approved in 69 countries for prediabetes when lifestyle intervention is not enough to control the condition. It is also approved in more than 100 countries for type 2 diabetes. Its updated mechanism of action was approved in the third quarter in the European Union and now includes metformin's effects in the gut (including increase in the release of glucagon-like peptide 1 and gut microbiota), its potential to improve the patient's weight and lipids profile, and activation of adenosine monophosphate-protein-kinase. This update will allow healthcare professionals to better understand how Glucophage® addresses the pathophysiological mechanisms underlying type 2 diabetes.
- Saizen® (somatropin) is our main endocrinology product and is indicated for the treatment of growth hormone deficiency in children and adults. As of September 30, 2022, 15,459 patients are using the Easypod® electromechanical injection device for treatment with Saizen® and are enrolled in Easypod® Connect software.

Ensuring the supply of our medicines to patients

- We are striving to ensure the supply of our medicines to patients around the world regardless of circumstances, while always observing the highest standards of health and safety for our people and partners.
- Since the start of the Covid-19 pandemic, we have been continuously making every effort to proactively handle the situation and minimize the impact of the pandemic on the supply of our medicines locally and globally. To this end, we are using three main levers: the thorough implementation of our business continuity plans across our network, the active management of our stocks, and the assessment of alternative transportation routes to reach our customers and patients.
- In the context of the war in Ukraine, we have taken a number of measures to continue to supply to the best
 of our ability patients who rely on our medicines in the countries impacted, while ensuring the strictest
 compliance with international sanctions. These measures include constantly monitoring and updating our
 demand plans, building safety stocks locally, accelerating the shipment of goods from our European sites to
 the countries impacted and defining back-up air shipment routes in addition to truck transportation to ensure
 the highest flexibility at all times.

Building for the future

- As part of our commitment to accelerate the discovery and availability of future medicines for patients in need, we marked the cornerstone laying for our Translational Science Center on July 18, and for our Launch and Technology Center on September 5, at our Darmstadt campus. They are both expected to be fully operational by the end of 2025 and are part of the € 1.5 billion investment package that we announced in March 2022.
- The Translational Science Center, which represents an investment of € 200 million, will be a 30,000 m², fully
 integrated, multi-use building including laboratories, a lecture hall, and office space allowing scientists from
 different disciplines to explore new avenues of research in fields ranging from identifying disease biomarkers
 to developing targeted therapies.
- The Launch and Technology Center, which represents an investment of € 160 million, will offer 13,900 m² of space. It combines a highly technological environment with human-centered design, bridging research and commercial manufacturing, and ensuring that our next generation of pharmaceuticals are available for clinical trials, global launches and commercial supply on time, and in the right quality and quantity.

Flectronics

Our primary focus is on the electronics market with our materials and solutions changing the way we generate, access, store, process, and display information. In addition, our highly specialized, application-driven Surface Solutions business makes life more colorful. Our business sector consists of three business units: Semiconductor Solutions, Display Solutions and Surface Solutions.

In 2021, we introduced our growth program Level Up and announced our plans to invest significantly more than \in 3 billion in innovation and capacities up until the end of 2025. With the transition from the transformation to the growth phase, we aim to achieve a compounded annual organic growth rate (CAGR) of 3% to 6% for the period from 2021 to 2025.

Semiconductor Solutions

- Semiconductor Solutions is at the heart of Electronics, as almost every electronic device uses one of our products. We are advancing virtually every aspect of digital living. Semiconductor Solutions consists of Delivery Systems & Services (DS&S) and Semiconductor Materials.
- The Delivery Systems & Services (DS&S) business develops and deploys reliable delivery equipment to ensure the safe and responsible handling of gases and liquid materials with the highest quality and safety standards for electronic manufacturers. In the third quarter of 2022, our DS&S business continued to make progress in ramping up its manufacturing capacity in Kaohsiung, Taiwan, and Chandler, Arizona, USA. These new factories will expand our ability to support increasing customer demand and boost our overall global manufacturing facility footprint. Kaohsiung will begin operations by the end of 2022 and Chandler in the first half of 2023.
- The Semiconductor Materials business supplies products for every major production step in wafer processing, including doping, patterning, deposition, planarization, etching, and cleaning. Specialty cleans, photoresists, and conductive pastes for semiconductor packaging round off the portfolio. Our business fields are Thin Film Solutions, Specialty Gases, Patterning Solutions, and Planarization.
- Our Thin Film Solutions business is actively developing new organosilanes (OS) and organometallics (OM) for conformal, high-performance atomic layer deposition (ALD) films. Throughout the third quarter of 2022, we continued to develop our low-k dielectric products and metal chemical vapor deposition (CVD) for middle-of-line and back-end-of-line applications using CVD. Many new OS and OM products qualified at several customers, and we are working to develop new materials for leading-edge nodes in 5 nm, 3 nm and beyond. Newly engineered container delivery systems enable these materials for our customers. In the third quarter of 2022, our spin-on-dielectrics platform focused on developing new formulations for gap-fill applications in high aspect ratio insulating features with improved dielectric characteristics, which are needed to enable next-generation V-NAND (vertical flash memory) and DRAM (dynamic random-access memory).
- In August, we signed a definitive agreement to acquire the chemical business of Mecaro Co. Ltd., a publicly listed company based in Korea. The combination of Mecaro's thin films technology competencies and our global footprint will provide our customers with additional value. The acquisition supports our capacity expansion plans and the execution of our Level Up investments in Korea.

- In the first nine months of 2022, our etch gas technology program in our Specialty Gases business continued to develop new chemistries to enable more than 100-layer, single-stack etching for advanced memory devices such as V-NAND. We are also seeing good progress in our etch gas development work for new low-GWP (global warming potential) gases for etching applications. In August, we announced that we are joining forces with Micron to develop low-GWP gas solutions used in the production of semiconductors.
- Our Patterning Solutions business continues to see strong demand for products across all semiconductor
 markets. The main driver of our R&D engagements in lithography continues to be manufacturing capability
 and cost of extreme ultraviolet (EUV) exposure layers. We are increasing our efforts in the development of
 EUV lithography materials to directly help our key customers address these challenges. Customer feedback
 clearly indicates that self-aligned and additive approaches to integration are gaining acceptance in highvolume manufacturing. We believe we are well positioned to usher in these new technologies at advanced
 nodes.
- Our Planarization business is driving new product development across advanced oxide and metal segments by
 capitalizing on the proximity of our R&D lab to our leading customers in Asia and the United States. We are
 also leveraging data analytics in product development and quality control to speed up time to market for our
 customers while providing more predictive in-use performance for our customers.

Display Solutions

- Our Display Solutions business unit comprises Liquid Crystal Materials (LC), Organic Light-Emitting Diode
 Materials (OLED), Display Patterning Materials (DPM), Smart Antennas, and Liquid Crystal Glazing. Thanks to
 our rich expertise, broad portfolio and strong global footprint, we continue to work very closely with the
 display industry to push the boundaries of possibility.
- In the third quarter of 2022, we continued to drive R&D activities to develop advanced and differentiated Liquid Crystal mixtures for new display applications. Our energy-efficient UB-FFS (ultra-brightness fringe field switching) technology is inside the world's new best-in-class flagship IT monitor 'IPS Black', now commercially available This new generation of monitors is well-suited for professionals, designers and gamers thanks to its rich color volume, very high contrast ratio (2000:1) and wide viewing angle.
- We continue to work on further improvements of the novel quantum-dot (QD)-OLED technology in terms of scalability and mass production. To meet the increasing demand for high-purity OLED materials in Asia, we completed our OLED manufacturing capacity expansion project in Korea in June 2022. We have invested around € 20 million to install sublimation equipment and OLED vacuum deposition units at our OLED Application Center (OAC) in Poseung, Korea. This investment is also expected to ease the supply chain disruptions caused by Covid-19 and build supply agility and resilience for our customers. By bringing production closer to customers, we are also demonstrating our commitment to a more sustainable future. We aim to reduce our product carbon footprint by choosing the shortest supply routes, expanding capacity for circular material flows and adopting the latest production technologies.
- In September, we inaugurated our Electronics Technology Center China and completed our first OLED materials production site in Shanghai, China. This step allows us to increase the resilience of supply chains for local customers in the semiconductor and display industry by providing comprehensive material solutions.
- Leading real estate investors are choosing eyrise[®] as a key building block to upgrade the sustainability ratings of their buildings. One of the largest real estate investors in Switzerland is currently installing eyrise[®] on all facades of its signature project in the center of Zurich. The dynamic liquid crystal glazing can be switched in an instant between a bright and a dark state to control incoming light and heat while constantly maintaining a view outside.

Surface Solutions

- The core markets for Surface Solutions are automotive coatings, cosmetics, and, to a smaller extent, industrial applications. We are serving these markets with functional and decorative products. We provide our customers with solutions that help them to create innovative surfaces of all kinds. Our materials enable more beautiful, more resistant and more effective product designs.
- Surface Solutions is successfully implementing its strategic transformation. After substantial investments in expanding our production capacities in 2021, we are now further investing in digitalizing and modernizing our effect pigment production plants around the globe. In September, we opened the first fully automated unit for the digital color measurement of our pigment products in Gernsheim, Germany. The investment of nearly € 10 million is just one example of how we are further advancing the digitalization of our production processes. In the past two years, Surface Solutions was adversely impacted by the Covid-19 crisis. Despite the current challenging economic environment, the business is back on a successful organic growth track.

Course of Business and Economic Position

Merck

Overview - Q3 2022

- All business sectors contribute to Group net sales growth of 16.8% to € 5,806 million
- Organic sales growth (7.1%) supported by positive foreign exchange effects (9.0%) and a slight acquisition-related sales increase (0.6%)
- Group EBITDA pre up 16.7% to € 1,810 million (Q3 2021: € 1,552 million)
- EBITDA pre margin constant at 31.2% in comparison with Q3 2021
- Net financial debt amounts to € 9.2 billion as of September 30, 2022 (December 31, 2021: € 8.8 billion)

Merck Group

Key	fic	ur	es

€ million	Q3 2022	Q3 2021	Change	JanSept. 2022	JanSept. 2021	Change
Net sales	5,806	4,973	16.8%	16,572	14,474	14.5%
Operating result (EBIT) ¹	1,234	1,047	17.8%	3,585	3,140	14.2%
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EBITDA pre ¹	1,810	1,552	16.7%	5,221	4,639	12.6%
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Profit after tax	926	764	21.2%	2,680	2,258	18.7%
Earnings per share (€)	2.12	1.75	21.1%	6.14	5.18	18.5%
Earnings per share pre (€) ¹	2.68	2.24	19.6%	7.73	6.66	16.1%
Operating cash flow	1,552	1,467	5.8%	3,244	3,571	-9.2%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

Development of net sales and results of operations

In the third quarter of 2022, the Merck Group generated net sales of € 5,806 million (Q3 2021: € 4,973 million). This was € 833 million or 16.8% more than in the year-earlier quarter. Group-wide organic sales growth was € 355 million, amounting to 7.1%. Positive foreign exchange effects, which were primarily due to the development of the U.S. dollar and the Chinese renminbi, led to a Group net sales increase of € 449 million or 9.0%. The portfolio-related sales increase of € 29 million or 0.6% was due mainly to the acquisition of Exelead Inc., USA, which closed on February 22, 2022.

 $^{^2}$ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

In the third quarter of 2022, net sales of the Life Science business sector rose by € 432 million or 19.2% over the year-earlier quarter to € 2,681 million (Q3 2021: € 2,249 million). This development was attributable to organic growth of 8.7%, boosted by a positive foreign exchange effect of 9.2% as well as a sales increase of 1.3% from the acquisition of Exelead Inc., USA. Accounting for a 46% (Q3 2021: 45%) share of Group net sales, Life Science was the Group's largest business sector in terms of sales. The Healthcare business sector followed, accounting for 36% (Q3 2021: 36%) of Group net sales in the third quarter of 2022 and delivering a 16.9% increase in sales to € 2,089 million (Q3 2021: € 1,788 million). Organic sales growth of 8.7% was supported by a positive foreign exchange effect of 8.2%. The increase in sales in the Electronics business sector by € 99 million or 10.6% to € 1,036 million (Q3 2021: € 936 million) resulted mainly from the positive foreign exchange effect of 10.2%. Organic growth amounted to 0.4%. The percentage share of Group net sales attributable to Electronics amounted to 18% (Q3 2021: 19%).

Merck Group

Net sales by business	sector							
€ million	Q3 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	Q3 2021	Share
Life Science ²	2,681	46%	8.7%	9.2%	1.3%	19.2%	2,249	45%
Healthcare	2,089	36%	8.7%	8.2%	_	16.9%	1,788	36%
Electronics ²	1,036	18%	0.4%	10.2%	_	10.6%	936	19%
Merck Group	5,806	100%	7.1%	9.0%	0.6%	16.8%	4,973	100%

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

In the third quarter of 2022, the regional sales development of the Merck Group was as follows:

Merck Group

Net sales by region								
€ million	Q3 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	Q3 2021	Share
Europe	1,571	27%	9.4%	1.4%	0.1%	10.9%	1,417	29%
North America	1,711	30%	7.0%	18.1%	2.0%	27.1%	1,346	27%
Asia-Pacific (APAC)	1,993	34%	2.4%	7.8%	_	10.2%	1,808	36%
Latin America	335	6%	18.7%	12.8%	0.4%	31.9%	254	5%
Middle East and Africa (MEA)	196	3%	24.8%	8.7%	-	33.5%	147	3%
Merck Group	5,806	100%	7.1%	9.0%	0.6%	16.8%	4,973	100%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards IFRS(IFRS).

In the first nine months of 2022, Group net sales rose by \in 2,098 million or 14.5% to \in 16,572 million (January-September 2021: \in 14,474 million). All business sectors contributed to this increase. With organic sales growth of 9.6%, the Life Science business sector made the largest contribution to overall organic growth of 7.2% in the first nine months of 2022. This was followed by the Healthcare business sector with 5.5% and Electronics with 4.2%. In addition, foreign exchange had a favorable effect of 6.9%. This was mainly attributable to the development of the U.S. dollar, the Chinese renminbi and the Taiwanese dollar.

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

Merck Group

Net sales by business sector

€ million	JanSept. 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	JanSept. 2021	Share
Life Science ²	7,774	47%	9.6%	7.2%	0.9%	17.7%	6,605	46%
Healthcare	5,808	35%	5.5%	5.9%	_	11.4%	5,214	36%
Electronics ²	2,990	18%	4.2%	8.4%		12.6%	2,654	18%
Merck Group	16,572	100%	7.2%	6.9%	0.4%	14.5%	14,474	100%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2022, net sales by region were as follows:

Merck Group

Net sales by region								
€ million	JanSept. 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	JanSept. 2021	Share
Europe	4,624	28%	10.8%	0.5%	0.2%	11.5%	4,147	29%
North America	4,752	29%	4.8%	13.1%	1.2%	19.1%	3,989	27%
Asia-Pacific (APAC)	5,774	35%	4.8%	6.9%	_	11.7%	5,172	36%
Latin America	917	5%	15.1%	10.7%	0.3%	26.1%	727	5%
Middle East and Africa (MEA)	505	3%	8.7%	6.4%	_	15.2%	438	3%

6.9%

0.4%

14.5%

14,474

100%

7.2%

16,572

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

100%

Merck Group

Consolidated Income Statement¹

Merck Group

€ million	Q3 2022	Q3 2021	Change	JanSept. 2022	JanSept. 2021	Change
Net sales	5,806	4,973	16.8%	16,572	14,474	14.5%
Cost of sales	-2,147	-1,859	15.5%	-6,243	-5,392	15.8%
Gross profit	3,658	3,114	17.5%	10,329	9,081	13.7%
Marketing and selling expenses	-1,223	-1,066	14.7%	-3,504	-3,109	12.7%
Administration expenses ¹	-328	-305	7.5%	-946	-877	7.8%
Research and development costs ¹	-642	-667	-3.7%	-1,827	-1,834	-0.4%
Impairment losses and reversals of impairment losses on financial assets (net)	6	1	>100.0%		 -5	39.8%
Other operating expenses and income ¹	-237	-29	>100.0%	-460	-116	>100.0%
Operating result (EBIT) ²	1,234	1,047	17.8%	3,585	3,140	14.2%
Financial result	-47	-54	-13.2%	-136	-208	-34.4%
Profit before income tax	1,187	993	19.5%	3,448	2,932	17.6%
Income tax	-261	-229	13.8%		-673	14.1%
Profit after tax	926	764	21.2%	2,680	2,258	18.7%
Non-controlling interests	-3	-3	-7.4%		-6	55.4%
Net income	923	761	21.3%	2 671	2 253	18.6%

 $^{^{\}rm 1}\,{\rm Adjustment}$ of prior-year figures due to restructuring within Corporate and Other.

 $^{^2}$ Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

 $^{^{\}rm 2}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

In the third quarter of 2022, the positive development of Group net sales led to an increase of 17.5% in gross profit to \in 3,658 million (Q3 2021: \in 3,114 million). The resulting gross margin, i.e. gross profit as a percentage of net sales, was 63.0% (Q3 2021: 62.6%).

The year-on-year decrease in research and development costs to € 642 million (Q3 2021: € 667 million) was mainly attributable to the Healthcare business sector. Consequently, the Group research spending ratio (research and development costs as a percentage of net sales) was 11.1% (Q3 2021: 13.4%). Accounting for a 70% (Q3 2021: 75%) share¹ of research and development costs of all business sectors, Healthcare is the most research-intensive business sector of Merck.

In the third quarter of 2022, other operating expenses and income (net) saw an increase in net operating expenses to € 237 million compared with the year-earlier quarter (Q3 2021: € 29 million). This was due to higher other operating expenses, which were significantly influenced by a negative currency result from cash flow hedging and by higher expenses from profit share agreements in the Healthcare business sector. In addition, other operating income declined, particularly as a result of lower upfront, milestone and license payments in the Healthcare business sector (see explanations under "Healthcare").

The 17.8% increase in the operating result (EBIT) in the third quarter of 2022 to € 1,234 million (Q3 2021: € 1,047 million) was driven primarily by the positive development of gross profit.

In the third quarter of 2022, the operating result reflected the effects of an increase in provisions for obligations from long-term variable compensation programs (Merck Long-Term Incentive Plan). The rise in the intrinsic value of the Merck Share Units influenced the respective functional costs depending on the area of activity of the plan beneficiaries.

The financial result improved by 13.2% to € -47 million in the third quarter of 2022 (Q3 2021: € -54 million). This was due in particular to the positive developments of the interest and currency result in comparison with the year-earlier quarter.

Income tax expenses of € 261 million (Q3 2021: € 229 million) led to an effective tax rate of 22.0% (Q3 2021: 23.1%).

Net income, i.e. profit after tax attributable to Merck KGaA shareholders, increased by 21.3% to € 923 million (Q3 2021: € 761 million), yielding earnings per share of € 2.12 in the third quarter of 2022 (Q3 2021: € 1.75).

 $^{^{1}}$ Not included: Research and development costs of \leqslant 26 million allocated to Corporate and Other.

The following table presents the composition of EBITDA pre in the third quarter of 2022 compared 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

		Q3 2022			Q3 2021		Change
€ million	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	5,806		5,806	4,973		4,973	16.8%
Cost of sales	-2,147	6	-2,141	-1,859	9	-1,850	15.8%
Gross profit	3,658	6	3,664	3,114	9	3,123	17.3%
Marketing and selling expenses	-1,223	6	-1,217	-1,066	4	-1,062	14.6%
Administration expenses ²	-328	31	-297	-305	29	-276	7.6%
Research and development costs ²	-642	22	-620	-667	_	-666	-7.0%
Impairment losses and reversals of impairment losses on financial assets (net)	6		6	1	_	1	>100.0%
Other operating expenses and income ²	-237	52	-186	-29	34	4	>100.0%
Operating result (EBIT) ¹	1,234			1,047			
Depreciation/amortization/impairment losses/reversals of impairment losses	470	-11	459	447	-19	429	7.0%
EBITDA ³	1,704			1,495			
Restructuring expenses	63	-63	_	22	-22	_	
Integration expenses/IT expenses	23	-23	_	24	-24	_	
Gains (-)/losses (+) on the divestment of businesses	-4	4	_	6	-6	_	
Acquisition-related adjustments	7	-7	_			_	
Other adjustments	18	-18	_	5	-5	_	
EBITDA pre ¹	1,810	_	1,810	1,552	_	1,552	16.7%
of which: organic growth ¹							7.5%
of which: exchange rate effects							8.8%
of which: acquisitions/divestments							0.5%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

EBITDA pre, the most important financial indicator used to steer operating business, rose by € 259 million or 16.7% to € 1,810 million in the third quarter of 2022 (Q3 2021: € 1,552 million). Organic earnings growth was 7.5%, complemented by a positive foreign exchange effect of 8.8%. Relative to net sales, the EBITDA pre margin was 31.2% in the third quarter of 2022 (Q3 2021: 31.2%). Earnings per share pre (earnings per share after net of tax effect of adjustments and amortization of purchased intangible assets) improved by 19.6% to € 2.68 (Q3 2021: € 2.24).

 $^{^{\}rm 2}$ Adjustment of prior-year figures due to restructuring within Corporate and Other.

 $^{^3}$ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT)

adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

The following table presents the composition of EBITDA pre for the first nine months of 2022 in comparison with the year-earlier period. The IFRS figures have been modified to reflect the elimination of adjustments included in the respective functional costs.

Merck Group

Reconciliation EBITDA pre1

	J	anSept. 202	22		Change		
€ million	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	16,572	_	16,572	14,474	_	14,474	14.5%
Cost of sales	-6,243	15	-6,228	-5,392	21	-5,372	15.9%
Gross profit	10,329	15	10,344	9,081	21	9,102	13.6%
Marketing and selling expenses	-3,504	21	-3,483	-3,109	13	-3,096	12.5%
Administration expenses ²	-946	81	-865	-877	70	-807	7.2%
Research and development costs ²	-1,827	30	-1,797	-1,834	3	-1,831	-1.8%
Impairment losses and reversals of impairment losses on financial assets (net)	-7	_	-7	-5	_	-5	39.8%
Other operating expenses and income ²	-460	162	-298	-116	129	12	>100.0%
Operating result (EBIT) ¹	3,585			3,140			
Depreciation/amortization/impairment losses/reversals of impairment losses	1,432	-103	1,328	1,294	-30	1,264	5.1%
EBITDA ³	5,016			4,433			
Restructuring expenses	109	-109	_	61	-61	_	
Integration expenses/IT expenses	67	-67	_	62	-62	_	
Gains (-)/losses (+) on the divestment of businesses	-36	36	_	88	-88	_	
Acquisition-related adjustments	17	-17	_	-18	18	_	
Other adjustments	48	-48	_	13	-13	_	
EBITDA pre ¹	5,221	_	5,221	4,639	_	4,639	12.6%
of which: organic growth ¹							4.1%
of which: exchange rate effects							8.3%
of which: acquisitions/divestments							0.2%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2022, EBITDA pre of the Merck Group increased by 12.6% to \leqslant 5,221 million (January–September 2021: \leqslant 4,639 million). Organic growth amounted to 4.1% amid currency tailwinds of 8.3%. In the first nine months of 2022, earnings per share pre increased by 16.1% to \leqslant 7.73 (January–September 2021: \leqslant 6.66).

 $^{^{\}rm 2}\,\mbox{Adjustment}$ of prior-year figures due to restructuring within Corporate and Other.

³ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT)

adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

Net assets and financial position

Merck Group

Balance sheet structure

	Sept. 30, 2	2022	Dec. 31, 2	021	Change	е
	€ million	in %	€ million	in %	€ million	in %
Non-current assets	37,990	74.6%	34,380	75.8%	3,610	10.5%
thereof:						
Goodwill	19,534		17,004		2,530	
Other intangible assets	8,080		7,612		467	
Property, plant and equipment	7,946		7,217		729	
Other non-current assets	2,431		2,546		-116	
Current assets	12,943	25.4%	10,982	24.2%	1,961	17.9%
thereof:						
Inventories	4,860		3,900		959	
Trade and other current receivables	4,346		3,646		700	
Other current financial assets	347		174		173	
Other current assets	1,785		1,362		423	
Cash and cash equivalents	1,604		1,899		-295	
Total assets	50,933	100.0%	45,362	100.0%	5,571	12.3%
Equity	28,337	55.6%	21,416	47.2%	6,921	32.3%
Non-current liabilities	13,184	25.9%	13,515	29.8%	-330	-2.4%
thereof:						
Non-current provisions for employee benefits	1,955		3,402		-1,447	
Other non-current provisions	300		269		31	
Non-current financial debt	9,266		8,270		996	
Other non-current liabilities	1,664		1,574		90	
Current liabilities	9,412	18.5%	10,432	23.0%	-1,020	-9.8%
thereof:						
Current provisions	562		601		-38	
Current financial debt	1,784		2,531		-747	
Trade and other current payables/refund liabilities	3,413		3,219		194	
Other current liabilities	3,652		4,081		-429	
Total equity and liabilities	50,933	100.0%	45,362	100.0%	5,571	12.3%

In the first nine months of 2022, total assets of the Merck Group rose by 12.3% to \leqslant 50,933 million (December 31, 2021: \leqslant 45,362 million). The increase was due not only to the impact of the successful operating business performance, but also mainly to exchange rate changes.

In the reporting period, equity rose by 32.3%, amounting to € 28,337 million as of September 30, 2022 (December 31, 2021: € 21,416 million). Consequently, the equity ratio improved to 55.6% (December 31, 2021: 47.2%). This increase was attributable not only to profit after tax, but especially to a positive currency translation difference as well as adjustments to pension provisions recognized in equity owing to the increase in the discount factors. 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 and the development of net financial debt were as follows:

Merck Group

Net financial debt1

	Sept. 30, 2022	Dec. 31, 2021	Change		
	€ million	€ million	€ million	in %	
Bonds and commercial paper	8,854	9,320	-466	-5.0%	
Bank loans	257	36	221	>100.0%	
Liabilities to related parties	1,363	896	467	52.1%	
Loans from third parties and other financial liabilities	58	56	2	4.1%	
Liabilities from derivatives (financial transactions)	30	35	-4	-12.7%	
Lease liabilities	488	459	29	6.3%	
Financial debt	11,050	10,801	249	2.3%	
less:					
Cash and cash equivalents	1,604	1,899	-295	-15.5%	
Current financial assets ²	231	149	82	55.2%	
Net financial debt ¹	9,215	8,753	462	5.3%	

 $^{^1\,\}rm Not$ defined by International Financial Reporting Standards (IFRS). $^2\,\rm Excluding$ current derivatives (operational).

Merck Group

Reconciliation of net financial debt¹

€ million	2022	2021
January 1	8,753	10,758
Operating cash flow	-3,244	-3,571
Payments for investments in intangible assets ²	209	287
Payments from the disposal of intangible assets ²	-35	-35
Payments for investments in property, plant and equipment ²	1,065	868
Payments from the disposal of property, plant and equipment ²		-8
Acquisitions ²	696	4
Payments from other divestments ²		-1
Dividend payments/profit withdrawals ²	966	756
Currency translation difference	233	137
Other	590	125
September 30	9,215	9,320

 $^{^{\}rm 1}$ Not defined by International Financial Reporting Standards (IFRS). $^{\rm 2}$ According to the Consolidated Cash Flow Statement.

As one of the three key performance indicators alongside net sales and EBITDA pre, operating cash flow developed as follows:

Merck Group

Operating cash flow

€ million	Q3 2022	Q3 2021	Change	JanSept. 2022	JanSept. 2021	Change
EBITDA pre ¹	1,810	1,552	16.7%	5,221	4,639	12.6%
Adjustments ¹	-107	-57	86.7%	-205	-205	-0.2%
Financial result ²	-47	-54	-13.2%	-136	-208	-34.4%
Income tax ²	-261	-229	13.8%	-768	-673	14.1%
Changes in working capital ¹	-181	-82	>100.0%	-828	-338	>100.0%
of which: changes in inventories ³	-249	-160	55.6%	-636	-384	65.4%
of which: changes in trade accounts receivable ³	149	-54	>100.0%	-388	-433	-10.4%
of which: changes in trade accounts payable/refund liabilities ³	-81	131	>100.0%	196	479	-59.2%
Changes in provisions ³	111	191	-41.9%	-41	246	>100.0%
Changes in other assets and liabilities ³	235	128	83.5%	34	72	-51.8%
Neutralization of gains/losses on disposals of fixed assets and other disposals ³	-4	-8	-55.8%	-43	-32	34.7%
Other non-cash income and expenses ³	-5	26	>100.0%	10	71	-86.3%
Operating cash flow	1,552	1,467	5.8%	3,244	3,571	-9.2%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

 $^{^{\}rm 2}\,{\rm According}$ to the Consolidated Income Statement.

 $^{^{\}rm 3}\,{\rm According}$ to the Consolidated Cash Flow Statement.

Life Science

Life Science

Kev figures

€ million	Q3 2022	Q3 2021 ²	Change	JanSept. 2022	JanSept. 2021 ²	Change
Net sales	2,681	2,249	19.2%	7,774	6,605	17.7%
Operating result (EBIT) ¹	719	614	17.1%	2,208	1,851	19.2%
Margin (% of net sales) ¹	26.8%	27.3%		28.4%	28.0%	
EBITDA ³	936	806	16.1%	2,833	2,421	17.0%
Margin (% of net sales) ¹	34.9%	35.8%		36.4%	36.6%	
EBITDA pre ¹	976	824	18.6%	2,909	2,446	18.9%
Margin (% of net sales) ¹	36.4%	36.6%		37.4%	37.0%	

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

Development of net sales and results of operations

In the third quarter of 2022, Life Science generated organic sales growth of 8.7%. Including a favorable foreign exchange effect of 9.2% and a portfolio effect of 1.3%, net sales grew by 19.2% over the year-earlier quarter. All three business units contributed to organic growth, with the largest contribution coming from Process Solutions followed by Science & Lab Solutions and Life Science Services. Overall, Life Science net sales increased to \in 2,681 million (Q3 2021: \in 2,249 million).

Life Science

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€ million	Q3 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	Q3 2021 ²	Share
Science & Lab Solutions	1,246	47%	7.9%	8.8%	_	16.7%	1,067	48%
Process Solutions	1,190	44%	10.7%	9.2%		19.9%	993	44%
Life Science Services	244	9%	3.1%	11.1%	15.3%	29.5%	189	8%
Life Science	2,681	100%	8.7%	9.2%	1.3%	19.2%	2,249	100%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

The Science & Lab Solutions business unit, which provides products and services to support life science research for pharmaceutical, biotechnology and academic research laboratories and researchers as well as scientific and industrial laboratories, delivered organic sales growth of 7.9% in the third quarter of 2022. This was mainly driven by growth in the core business amid a decline in pandemic-related demand. Including a favorable foreign exchange effect of 8.8%, net sales amounted to \in 1,246 million (Q3 2021: \in 1,067 million). Science & Lab Solutions thus accounted for 47% of Life Science net sales (Q3 2021: 48%). Organic sales growth was mainly driven by Asia-Pacific and North America.

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

 $^{^3}$ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

 $^{^2}$ Prior-year figures have been adjusted owing to the reorganization of the Life Science business sector as well as to product reallocations between the Life Science and Electronics business sectors.

The Process Solutions business unit, which markets products and services for the entire pharmaceutical production value chain, generated organic sales growth of 10.7%. While pandemic-related business declined as expected, the performance of the core business was robust. Including a favorable foreign exchange effect of 9.2%, net sales increased to € 1,190 million in the third quarter of 2022 (Q3 2021: € 993 million). The percentage contribution of the Process Solutions business unit to Life Science net sales was 44% (Q3 2021: 44%). In regional terms, mainly North America and Europe contributed to the organic sales growth of Process Solutions.

The Life Science Services business unit, which offers fully integrated Contract Development and Manufacturing Organization (CDMO) and Contract Testing services, accounted for a 9% share of Life Science net sales (Q3 2021: 8%). Life Science Services delivered organic sales growth of 3.1% in the third quarter of 2022, which was mainly driven by pandemic-related sales. Including a favorable foreign exchange effect of 11.1% as well as a positive portfolio effect of 15.3% from the acquisition of Exelead Inc., USA, net sales totaled € 244 million (Q3 2021: € 189 million). Geographically, the organic sales growth of Life Science Services was mainly attributable to the North America and Asia-Pacific regions.

Net sales of the business sector by region developed in the third quarter of 2022 as follows:

Life Science

Q3 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	Q3 2021 ²	Share
848	32%	5.6%	1.4%	0.1%	7.1%	791	35%
1,051	39%	9.6%	18.5%	3.4%	31.5%	799	36%
653	24%	10.1%	6.6%		16.6%	559	25%
97	4%	18.2%	13.6%	1.5%	33.4%	73	3%
33	1%	22.1%	2.4%	_	24.4%	26	1%
2,681	100%	8.7%	9.2%	1.3%	19.2%	2,249	100%
	848 1,051 653 97 33	848 32% 1,051 39% 653 24% 97 4% 33 1%	Q3 2022 Share growth¹ 848 32% 5.6% 1,051 39% 9.6% 653 24% 10.1% 97 4% 18.2% 33 1% 22.1%	Q3 2022 Share growth¹ rate effects 848 32% 5.6% 1.4% 1,051 39% 9.6% 18.5% 653 24% 10.1% 6.6% 97 4% 18.2% 13.6% 33 1% 22.1% 2.4%	Q3 2022 Share growth¹ rate effects divestments 848 32% 5.6% 1.4% 0.1% 1,051 39% 9.6% 18.5% 3.4% 653 24% 10.1% 6.6% - 97 4% 18.2% 13.6% 1.5% 33 1% 22.1% 2.4% -	Q3 2022 Share growth¹ rate effects divestments Total change 848 32% 5.6% 1.4% 0.1% 7.1% 1,051 39% 9.6% 18.5% 3.4% 31.5% 653 24% 10.1% 6.6% - 16.6% 97 4% 18.2% 13.6% 1.5% 33.4% 33 1% 22.1% 2.4% - 24.4%	Q3 2022 Share growth¹ rate effects divestments Total change Q3 2021² 848 32% 5.6% 1.4% 0.1% 7.1% 791 1,051 39% 9.6% 18.5% 3.4% 31.5% 799 653 24% 10.1% 6.6% - 16.6% 559 97 4% 18.2% 13.6% 1.5% 33.4% 73 33 1% 22.1% 2.4% - 24.4% 26

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2022, Life Science recorded organic sales growth of 9.6% with a favorable foreign exchange effect of 7.2% and a portfolio effect of 0.9%, resulting in net sales growth of 17.7% over the year-earlier period. All three business units contributed to organic growth, with the largest contribution coming from Process Solutions followed by Science & Lab Solutions and Life Science Services. Taking these developments into account, Life Science net sales increased overall to ℓ 7,774 million (January-September 2021: ℓ 6,605 million).

Life Science

Net sales by business unit	t							
€ million	JanSept. 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	JanSept. 2021 ²	Share
Science & Lab Solutions	3,678	47%	6.9%	6.8%	_	13.7%	3,235	49%
Process Solutions	3,390	44%	11.3%	7.2%	_	18.5%	2,861	43%
Life Science Services	706	9%	17.3%	9.7%	11.6%	38.6%	509	8%
Life Science	7,774	100%	9.6%	7.2%	0.9%	17.7%	6,605	100%

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

² Prior-year figures have been adjusted due to product reallocations between Life Science and Electronics business sectors.

 $^{^2}$ Prior-year figures have been adjusted owing to the reorganization of the Life Science business sector as well as to product reallocations between the Life Science and Electronics business sectors.

In the first nine months of 2022, net sales by region developed as follows:

Life Science

Net sales by region								
€ million	JanSept. 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	JanSept. 2021 ²	Share
Europe	2,549	33%	9.9%	1.3%	0.4%	11.7%	2,283	34%
North America	2,968	38%	10.5%	13.8%	2.0%	26.3%	2,351	36%
Asia-Pacific (APAC)	1,903	25%	7.1%	5.5%		12.6%	1,691	26%
Latin America	268	3%	15.8%	11.5%	0.9%	28.2%	209	3%
Middle East and Africa (MEA)	86	1%	16.0%	2.8%	_	18.8%	72	1%
Life Science	7,774	100%	9.6%	7.2%	0.9%	17.7%	6,605	100%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

The following table presents the composition of EBITDA pre for the third quarter of 2022 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	pre ¹
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		Q3 2022			Q3 2021 ²		Change
€ million	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	2,681	-	2,681	2,249	_	2,249	19.2%
Cost of sales	-1,071	2	-1,068	-901	3	-898	19.0%
Gross profit	1,610	2	1,613	1,348	3	1,351	19.4%
Marketing and selling expenses	-634	5	-629	-529	2	-527	19.5%
Administration expenses	-112	10	-102	-93	9	-84	21.4%
Research and development costs	-106		-106	-88		-88	19.9%
Impairment losses and reversals of impairment losses on financial assets (net)	2		2			_	>100.0%
Other operating expenses and income	-41	23	-18	-24	3	-21	-13.0%
Operating result (EBIT) ¹	719			614			
Depreciation/amortization/impairment losses/reversals of impairment losses	217		217	192		192	12.9%
EBITDA ³	936			806			
Restructuring expenses	28	-28	_	9		_	
Integration expenses/IT expenses	10	-10	_	8	-8		
Gains (-)/losses (+) on the divestment of businesses			_	_			
Acquisition-related adjustments	2	-2	_	_		_	
Other adjustments			_	_	_	_	
EBITDA pre ¹	976		976	824	_	824	18.6%
of which: organic growth ¹							10.8%
of which: exchange rate effects							6.9%
of which: acquisitions/divestments							0.9%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

² Prior-year figures have been adjusted due to product reallocations between Life Science and Electronics business sectors.

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

³ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

Adjusted gross profit rose by 19.4% to € 1,613 million (Q3 2021: € 1,351 million). This was mainly driven by strong sales growth in the Process Solutions business unit, followed by Science & Lab Solutions and Life Science Services. Marketing and selling expenses increased by 19.5% to € 629 million (Q3 2021: € 527 million) primarily owing to higher logistics costs, personnel expenses as well as e-commerce investments. Administration expenses rose by 21.4% to € 102 million (Q3 2021: € 84 million) owing to additional expenses to support our organic transformation and sustainability strategy. Research and development costs increased by 19.9% to € 106 million (Q3 2021: € 88 million), driven mainly by our core growth areas. In addition to organic developments, unfavorable foreign exchange effects impacted the development of costs in comparison with the year-earlier quarter. After eliminating adjustments, amortization and depreciation, EBITDA pre rose by 18.6% to € 976 million (Q3 2021: € 824 million). Organic growth of 10.8% in the third quarter of 2022 was complemented by positive exchange rate effects of 6.9%.

The following table presents the composition of EBITDA pre for the first nine months of 2022 in comparison with the year-earlier period. The IFRS figures have been modified to reflect the elimination of adjustments included in the respective functional costs.

Life Science

Reconciliation EBITDA pre1

	J	anSept. 202	2	J	anSept. 202	12	Change
€ million	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	7,774		7,774	6,605		6,605	17.7%
Cost of sales	-3,088	6	-3,082	-2,637	4	-2,633	17.1%
Gross profit	4,686	6	4,692	3,968	4	3,972	18.1%
Marketing and selling expenses	-1,795	16	-1,779	-1,535	3	-1,532	16.1%
Administration expenses	-306	26	-280	-267	25	-242	15.5%
Research and development costs	-292	_	-292	-250	_	-250	16.8%
Impairment losses and reversals of impairment losses on financial assets (net)	-8	-	-8	-7	-	-7	15.6%
Other operating expenses and income	-77	29	-48	-58	-6	-64	-25.4%
Operating result (EBIT) ¹	2,208			1,851			
Depreciation/amortization/impairment losses/reversals of impairment losses	625	-1	624	569		569	9.6%
EBITDA ³	2,833			2,421			
Restructuring expenses	38	-38	_	19	-19	_	
Integration expenses/IT expenses	28	-28		24	-24		
Gains (-)/losses (+) on the divestment of businesses	_		_			_	
Acquisition-related adjustments	10	-10	_	-18	18	_	
Other adjustments	_		_			_	
EBITDA pre ¹	2,909	_	2,909	2,446	_	2,446	18.9%
of which: organic growth ¹							12.4%
of which: exchange rate effects							6.2%
of which: acquisitions/divestments							0.4%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

³ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

In the first nine months of 2022, adjusted gross profit increased by 18.1% to € 4,692 million (January-September 2021: € 3,972 million). This was mainly driven by strong sales growth in the Process Solutions business unit, followed by Science & Lab Solutions and Life Science Services. Marketing and selling expenses rose by 16.1% to € 1,779 million (January-September 2021: € 1,532 million), mainly driven by higher logistics costs and personnel expenses. Administration expenses rose by 15.5% to € 280 million (January-September 2021: € 242 million) owing to additional expenses to support our organic transformation and sustainability strategy.

Research and development costs increased by 16.8% to \le 292 million (January-September 2021: \le 250 million), driven mainly by our core growth areas. In addition to organic developments, unfavorable foreign exchange effects impacted the development of costs in comparison with the year-earlier quarter. After eliminating adjustments, EBITDA pre rose by 18.9% to \le 2,909 million (January-September 2021: \le 2,446 million). Organically, EBITDA pre grew by 12.4% in the first nine months of 2022. Organic growth was complemented by positive exchange rate effects of 6.2%.

Healthcare

Healthcare

Key figures

€ million	Q3 2022	Q3 2021	Change	JanSept. 2022	JanSept. 2021	Change
Net sales	2,089	1,788	16.9%	5,808	5,214	11.4%
Operating result (EBIT) ¹	606	453	33.7%	1,499	1,399	7.1%
Margin (% of net sales) ¹	29.0%	25.4%		25.8%	26.8%	
EBITDA ²	683	532	28.4%	1,811	1,627	11.3%
Margin (% of net sales) ¹	32.7%	29.7%		31.2%	31.2%	
EBITDA pre ¹	711	541	31.4%	1,844	1,655	11.4%
Margin (% of net sales) ¹	34.0%	30.3%		31.7%	31.7%	

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

Development of net sales and results of operations

In the third quarter of 2022, the Healthcare business sector generated organic sales growth of 8.7% over the year-earlier quarter. Including positive foreign exchange effects of 8.2%, net sales amounted to \leq 2,089 million (Q3 2021: \leq 1,788 million). Positive foreign exchange effects were driven in particular by the increase in the value of the U.S. dollar and the Chinese renminbi.

Sales of the key product lines and products developed in the third quarter of 2022 as follows:

Healthcare

Development of net sales by key product lines and products

€ million	Q3 2022	Share	Organic growth ¹	Exchange rate effects	Total change	Q3 2021	Share
Oncology	453	22%	24.5%	5.4%	30.0%	349	19%
thereof: Erbitux®	274	13%	13.5%	4.0%	17.5%	233	13%
thereof: Bavencio®	166	8%	51.0%	8.9%	59.9%	104	6%
Neurology & Immunology	484	23%	2.3%	10.0%	12.3%	431	24%
thereof: Rebif®	249	12%	-3.9%	10.8%	6.8%	234	13%
thereof: Mavenclad®	234	11%	9.8%	9.2%	18.9%	197	11%
Fertility	373	18%	2.6%	7.3%	9.9%	339	19%
thereof: Gonal-f®	221	11%	8.2%	7.8%	16.0%	191	11%
Cardiovascular, Metabolism and Endocrinology	730	35%	6.0%	8.9%	14.8%	635	36%
thereof: Glucophage®	237	11%	3.1%	10.1%	13.2%	209	12%
thereof: Concor®	152	7%	4.1%	10.9%	14.9%	133	7%
thereof: Euthyrox®	143	7%	9.9%	6.3%	16.2%	123	7%
thereof: Saizen®	69	3%	12.3%	2.3%	14.6%	61	3%
Other	49	2%				33	2%
Healthcare	2,089	100%	8.7%	8.2%	16.9%	1,788	100%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

The oncology drug Erbitux® generated organic sales growth of 13.5% in comparison with the year-earlier quarter. Including positive foreign exchange effects of 4.0%, net sales rose by a total of 17.5% to € 274 million in the third quarter of 2022 (Q3 2021: € 233 million). In Europe, an important region for Erbitux, sales grew amid an organic increase of 5.3% to € 111 million (Q3 2021: € 104 million). In the Asia-Pacific region, sales grew organically by 9.0% to € 117 million (Q3 2021: € 101 million). The Latin America region saw very significant organic sales growth of 59.4%, driven by inflation-related price adjustments in combination with increased demand in the private and public sectors. Likewise, the Middle East and Africa region recorded high organic growth of 64.2%, which was attributable to the lower sales level of the year-earlier quarter in some countries as well as additional import approvals.

Thanks to strong organic growth of 51.0% and positive foreign exchange effects of 8.9%, sales of the oncology drug Bavencio® rose to € 166 million (Q3 2021: € 104 million). The organic growth of Bavencio® was driven by all regions, in particular as a result of the further gain of market shares in connection with first-line maintenance therapy in patients with locally advanced or metastatic urothelial carcinoma (UC) in Japan, Europe and North America.

Mavenclad®, for the oral short-course treatment of highly active relapsing multiple sclerosis (MS), generated organic sales growth of 9.8% in the third quarter of 2022. Supported by positive foreign exchange effects of 9.2%, net sales rose to a total of € 234 million (Q3 2021: € 197 million). In the third quarter of 2022, growth was driven particularly by higher demand in Europe.

Healthcare

Product sales and organic growth¹ of Erbitux®, Rebif® und Glucophage® by region - Q3 2022

	Total	Europe	North America	Asia-Pacific (APAC)	Latin America	Middle East and Africa (MEA)
€ million	274	111	_	117	26	21
Organic growth ¹	13.5%	5.3%		9.0%	59.4%	64.2%
Share	100%	40%		43%	10%	7%
€ million	249	59	166	2	7	16
Organic growth ¹	-3.9%	-13.5%	-1.7%	-10.1%	11.9%	16.0%
Share	100%	24%	66%	1%	3%	6%
€ million	237	32		131	45	28
Organic growth ¹	3.1%	-1.9%		-0.7%	6.8%	26.6%
Share	100%	14%		55%	19%	12%
	Organic growth ¹ Share C million Organic growth ¹ Share C million Organic growth ¹ Organic growth ¹	C million 274 Organic growth¹ 13.5% Share 100% C million 249 Organic growth¹ -3.9% Share 100% C million 237 Organic growth¹ 3.1%	Emillion 274 111 Organic growth¹ 13.5% 5.3% Share 100% 40% Emillion 249 59 Organic growth¹ -3.9% -13.5% Share 100% 24% Emillion 237 32 Organic growth¹ 3.1% -1.9%	Emillion 274 111 - Organic growth¹ 13.5% 5.3% - Share 100% 40% - Emillion 249 59 166 Organic growth¹ -3.9% -13.5% -1.7% Share 100% 24% 66% Emillion 237 32 - Organic growth¹ 3.1% -1.9% -	Total Europe North America (APAC) E million 274 111 — 117 Organic growth¹ 13.5% 5.3% — 9.0% Share 100% 40% — 43% E million 249 59 166 2 Organic growth¹ —3.9% —13.5% —1.7% —10.1% Share 100% 24% 66% 1% E million 237 32 — 131 Organic growth¹ 3.1% —1.9% — —0.7%	Total Europe North America (APAC) Latin America C million 274 111 - 117 26 Organic growth¹ 13.5% 5.3% - 9.0% 59.4% Share 100% 40% - 43% 10% C million 249 59 166 2 7 Organic growth¹ -3.9% -13.5% -1.7% -10.1% 11.9% Share 100% 24% 66% 1% 3% C million 237 32 - 131 45 Organic growth¹ 3.1% -1.9% - -0.7% 6.8%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

The medicine Rebif[®], which is indicated for the treatment of relapsing forms of multiple sclerosis, saw an organic sales decline of -3.9%. Thanks to positive foreign exchange effects of 10.8%, net sales increased to € 249 million (Q3 2021: € 234 million). Amid an organic sales decline of -1.7% and positive foreign exchange effects of 17.1%, sales in North America, the largest market for Rebif[®], totaled € 166 million (Q3 2021: € 143 million). The organic decrease in Rebif[®] sales in North America reflected the effects of the comparison with a low year-earlier figure as well as one-off channel dynamics. Overall, the decline in sales of Rebif[®] was driven by the erosion of the interferon market as a result of growing competition from high-efficacy therapies and their increasing market share gains. In Europe, sales declined organically by -13.5% to € 59 million (Q3 2021: € 69 million), in line with the aforementioned overriding trend in the interferon market.

The Cardiovascular, Metabolism and Endocrinology franchise, which commercializes products to treat cardiovascular diseases, thyroid disorders, diabetes, and growth disorders, among other things, generated organic growth of 6.0% in the third quarter of 2022. Including positive foreign exchange effects of 8.9%, net sales of the franchise amounted to \in 730 million (Q3 2021: \in 635 million). The main driver of the organic increase in

sales was the medicine Euthyrox® for the treatment of hypothyroidism. Organic sales growth of this product by 9.9% to € 143 million (Q3 2021: € 123 million) was attributable to strong demand. Sales of the betablocker Concor® amounted to € 152 million (Q3 2021: € 133 million), growing organically by 4.1%. Likewise, net sales of the diabetes medicine Glucophage® increased to € 237 million (Q3 2021: € 209 million), reflecting organic sales growth of 3.1% following a decline in sales in the year-earlier quarter due to the volume-based procurement regulation that has been in effect in China since 2020.

The Fertility franchise generated organic growth of 2.6%. Including positive foreign exchange effects of 7.3%, global net sales increased to € 373 million (Q3 2021: € 339 million). Gonal- $f^{\$}$, the leading recombinant hormone used in the treatment of infertility, generated favorable organic growth of 8.2%, driven in particular by the Asia-Pacific and Middle East and Africa regions. Likewise, as a result of positive foreign exchange effects of 7.8%, sales rose to a total of € 221 million (Q3 2021: € 191 million).

Net sales of the business sector by region developed in the third quarter of 2022 as follows:

Healthcare

Net sales by region								
€ million	Q3 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	Q3 2021	Share
Europe	611	29%	8.4%	0.5%	-	8.9%	562	31%
North America	496	24%	3.1%	17.3%	_	20.4%	412	23%
Asia-Pacific (APAC)	606	29%	7.0%	7.6%	_	14.6%	528	30%
Latin America	227	11%	18.2%	12.2%	_	30.4%	174	10%
Middle East and Africa (MEA)	149	7%	24.2%	9.8%		34.0%	111	6%
Healthcare	2,089	100%	8.7%	8.2%	_	16.9%	1,788	100%

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

In the first nine months of 2022, the Healthcare business sector recorded net sales of \leqslant 5,808 million (January-September 2021: \leqslant 5,214 million). This was driven by organic sales growth of 5.5% and positive foreign exchange effects of 5.9%. Specifically, the positive performance was due especially to the organic growth of Bavencio® (66.8%), Mavenclad® (19.5%) and Euthyrox® (14.3%).

Bavencio® benefited from continued growth of market shares in first-line maintenance therapy for patients with locally advanced or metastatic urothelial carcinoma (UC), increasing sales in the first nine months of 2022 to € 440 million (January-September 2021: € 252 million). The oncology drug Erbitux® also recorded favorable organic growth of 3.8%, generating sales of € 774 million (January-September 2021: € 726 million), despite high comparable figures due to the temporary contract manufacturing for Eli Lilly and Company (USA) in the second quarter of 2021. In an environment characterized by increased demand, Mavenclad® gained further market shares, generating sales of € 636 million (January-September 2021: € 501 million). This offset the organic decline in sales of Rebif®, which was attributable to the ongoing difficult competitive situation and the continued weakening of the interferon market. The Cardiovascular, Metabolism and Endocrinology franchise generated organic growth of 3.8% in the first nine months of 2022 and, including positive foreign exchange effects, delivered sales of € 2,073 million (January-September 2021: € 1,878 million). Amid favorable organic growth of 14.3%, sales of Euthyrox® amounted to € 410 million (January-September 2021: € 342 million), which was mainly attributable to higher demand in Asia-Pacific, Latin America and Europe. Glucophage® saw an organic sales decline of -1.4 %, driven primarily by the volume-based procurement regulation rolled out in China. The Fertility franchise generated organic sales growth of 1.3%, despite individual local Covid-19-related lockdowns in China in the first half of 2022.

In the first nine months of 2022, the sales of the major product lines and products developed as follows:

Healthcare

Development of net sales by key product lines and products

€ million	JanSept. 2022	Share	Organic growth ¹	Exchange rate effects	Total change	JanSept. 2021	Share
Oncology	1,248	22%	19.2%	4.0%	23.1%	1,013	20%
thereof: Erbitux®	774	13%	3.8%	2.8%	6.6%	726	14%
thereof: Bavencio®	440	8%	66.8%	7.5%	74.4%	252	5%
Neurology & Immunology	1,304	22%	0.7%	7.1%	7.8%	1,210	23%
thereof: Rebif®	668	12%	-12.6%	7.0%	-5.7%	708	14%
thereof: Mavenclad®	636	11%	19.5%	7.3%	26.8%	501	10%
Fertility	1,066	18%	1.3%	4.9%	6.2%	1,003	19%
thereof: Gonal-f®	620	11%	2.6%	4.8%	7.4%	577	11%
Cardiovascular, Metabolism and Endocrinology	2,073	36%	3.8%	6.6%	10.4%	1,878	36%
thereof: Glucophage®	682	12%	-1.4%	8.1%	6.7%	639	12%
thereof: Concor®	438	8%	6.7%	6.8%	13.5%	386	7%
thereof: Euthyrox®	410	7%	14.3%	5.6%	19.9%	342	7%
thereof: Saizen®	198	3%	6.2%	1.5%	7.7%	184	4%
Other	118	2%				110	2%
Healthcare	5,808	100%	5.5%	5.9%	11.4%	5,214	100%

 $^{^{\}rm 1}\,\mathrm{Not}$ defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2022, net sales by region developed as follows:

Healthcare

	JanSept.		Organic	Exchange	Acquisitions/		JanSept.	
€ million	2022	Share	growth ¹	rate effects	divestments	Total change	2021	Share
Europe	1,804	31%	9.6%	-1.1%	-	8.5%	1,663	32%
North America	1,313	23%	-6.1%	11.8%	_	5.7%	1,242	24%
Asia-Pacific (APAC)	1,690	29%	7.5%	7.1%		14.7%	1,474	28%
Latin America	620	11%	15.0%	10.2%	_	25.2%	495	9%
Middle East and Africa (MEA)	382	6%	5.5%	6.8%	_	12.3%	340	7%
Healthcare	5,808	100%	5.5%	5.9%	_	11.4%	5,214	100%

 $^{^{\}rm 1}\,\mathrm{Not}$ defined by International Financial Reporting Standards (IFRS).

The following table presents the composition of EBITDA pre for the third quarter of 2022 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

		Q3 2022			Q3 2021		Change
€ million		Elimination of adjustments	Pre ¹		Elimination of adjustments	Pre ¹	Pre ¹
Net sales	2,089		2,089	1,788		1,788	16.9%
Cost of sales	-481		-480	-428	-1	-429	12.1%
Gross profit	1,608	1	1,609	1,360	-1	1,359	18.4%
Marketing and selling expenses	-413		-412	-386		-386	6.7%
Administration expenses	-84	4	-79	-79	2	-77	3.0%
Research and development costs	-431	22	-409	-486		-486	-15.8%
Impairment losses and reversals of impairment losses on financial assets (net)	5		5	-		_	>100.0%
Other operating expenses and income	-79	_	-78	44	8	52	>100.0%
Operating result (EBIT) ¹	606			453			
Depreciation/amortization/impairment losses/reversals of impairment losses	77	_	76	78	_	78	-2.8%
EBITDA ²	683			532			
Restructuring expenses	24	-24		_		_	
Integration expenses/IT expenses	4	-4		1	-1	_	
Gains (-)/losses (+) on the divestment of businesses	_			8	-8	_	
Acquisition-related adjustments	_			_	_	_	
Other adjustments				_		_	
EBITDA pre ¹	711	_	711	541		541	31.4%
of which: organic growth ¹							11.0%
of which: exchange rate effects							20.4%
of which: acquisitions/divestments							

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

In the third quarter of 2022, adjusted gross profit increased by 18.4% to € 1,609 million (Q3 2021: € 1,359 million). Compared with the year-earlier quarter, the resulting gross margin rose to 77.0% (Q3 2021: 76.0%).

Adjusted marketing and selling expenses increased in comparison with the year-earlier quarter by 6.7% and amounted to € 412 million (Q3 2021: € 386 million). The decline in research and development costs by -15.8% to € 409 million compared with the year-earlier quarter (Q3 2021: € 486 million) was due not only to cost savings in connection with the discontinuation of the bintrafusp alfa program announced at the end of the third quarter of 2021, but also to the termination of the Phase II study of the drug candidate berzosertib as announced in the second quarter of 2022. The decline in other operating expenses and income to € -78 million (Q3 2021: € 52 million) was mainly due to the final earnings effect of € 74 million in the year-earlier quarter from the receipt of the previously deferred upfront cash payment for the global strategic alliance with GlaxoSmithKline plc, United Kingdom (GSK) to co-develop and co-commercialize bintrafusp alfa. In addition, higher sales of the immuno-oncology medicine Bavencio® led to higher profit transfers from the strategic alliance with Pfizer Inc., United States, to develop and commercialize Bavencio®. Moreover, license income from partners on sales of the medicine Viibryd® declined.

EBITDA pre rose to \in 711 million (Q3 2021: \in 541 million). This favorable increase was driven by organic sales growth of 11.0% and positive foreign exchange effects of 20.4%. The EBITDA pre margin rose to 34.0% (Q3 2021: 30.3%).

Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

The following table presents the composition of EBITDA pre in the first nine months of 2022 in comparison with the year-earlier period. The IFRS figures have been modified to reflect the elimination of adjustments included in the respective functional costs.

Healthcare

Reconciliation EBITDA pre1

Cost of sales		J	anSept. 202	2		anSept. 202	!1	Change
Cost of sales	€ million	IFRS		Pre ¹	IFRS		Pre ¹	Pre ¹
Gross profit 4,383 2 4,385 3,978 -1 3,977 Marketing and selling expenses -1,205 3 -1,202 -1,147 7 -1,140 Administration expenses -236 9 -227 -229 7 -223 Research and development costs -1,229 28 -1,201 -1,317 2 -1,315 Impairment losses and reversals of impairment losses on financial assets (net) - - - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - - 1 - <td< th=""><th>Net sales</th><th>5,808</th><th></th><th>5,808</th><th>5,214</th><th></th><th>5,214</th><th>11.4%</th></td<>	Net sales	5,808		5,808	5,214		5,214	11.4%
Marketing and selling expenses -1,205 3 -1,202 -1,147 7 -1,140 Administration expenses -236 9 -227 -229 7 -223 Research and development costs -1,229 28 -1,201 -1,317 2 -1,315 Impairment losses and reversals of impairment losses on financial assets (net) - - - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - - 1 - 1 - 1 - 1 - 1 - - 1 - 1 - 1 - 1 - 1 - 1 - - - - - - - - 2 - 2 - 2 - 2 - 2 2 - 2 -	Cost of sales	-1,426	2	-1,423	-1,236	-1	-1,237	15.0%
Administration expenses	Gross profit	4,383	2	4,385	3,978	-1	3,977	10.3%
Research and development costs Impairment losses and reversals of impairment losses on financial assets (net) Other operating expenses and income Operating result (EBIT)¹ Depreciation/amortization/impairment losses/reversals of impairment losses/reversals of impairment losses FBITDA² Restructuring expenses 1,811 Integration expenses/IT expenses 8 -8 - 5 -5 - 10 -10 - 11 - 11 - 11 - 11 - 1	Marketing and selling expenses	-1,205	3	-1,202	-1,147	7	-1,140	5.5%
Impairment losses and reversals of impairment losses on financial assets (net)	Administration expenses	-236	9	-227	-229	7	-223	1.9%
On financial assets (net) Confinancial assets (net) Confinancy Confinanc	Research and development costs	-1,229	28	-1,201	-1,317	2	-1,315	-8.7%
Operating result (EBIT)¹ 1,499 1,399 Depreciation/amortization/impairment losses/reversals of impairment losses 312 -91 221 229 -3 226 EBITDA² 1,811 1,627				_	1		1	-75.8%
Separation Sep	Other operating expenses and income	-214	81	-133	113	16	129	>100.0%
of impairment losses EBITDA² 1,811 1,627 Restructuring expenses 35 -35 - 10 -10 - Integration expenses/IT expenses 8 -8 - 5 -5 - Gains (-)/losses (+) on the divestment of businesses -10 10 - 13 -13 - Acquisition-related adjustments -	Operating result (EBIT) ¹	1,499			1,399			
Restructuring expenses 35 -35 - 10 -10 - Integration expenses/IT expenses 8 -8 - 5 -5 - Gains (-)/losses (+) on the divestment of businesses -10 10 - 13 -13 - Acquisition-related adjustments -		312	-91	221	229	-3	226	-2.0%
Integration expenses/IT expenses 8 -8 - 5 -5 - Gains (-)/losses (+) on the divestment of businesses -10 10 - 13 -13 - Acquisition-related adjustments	EBITDA ²	1,811			1,627			
Gains (-)/losses (+) on the divestment of businesses -10 10 - 13 -13 - Acquisition-related adjustments - <td>Restructuring expenses</td> <td>35</td> <td>-35</td> <td>_</td> <td>10</td> <td>-10</td> <td>_</td> <td></td>	Restructuring expenses	35	-35	_	10	-10	_	
Acquisition-related adjustments Other adjustments	Integration expenses/IT expenses	8	-8	_	5	-5	_	
Other adjustments	Gains (-)/losses (+) on the divestment of businesses	-10	10	_	13	-13	_	
EBITDA pre¹ 1,844 - 1,844 1,655 - 1,655 of which: organic growth¹ of which: exchange rate effects	Acquisition-related adjustments	_	_	_		_	_	
of which: organic growth ¹ of which: exchange rate effects	Other adjustments			_			_	
of which: exchange rate effects	EBITDA pre ¹	1,844	_	1,844	1,655	_	1,655	11.4%
	of which: organic growth ¹							-2.1%
of which: acquisitions/divestments	of which: exchange rate effects	=						13.5%
and the state of t	of which: acquisitions/divestments	-						

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

In the first nine months of 2022, adjusted gross profit grew by 10.3% to 0.3% to 0.3% million (January-September 2021: 0.3% and 3,977 million). Compared with the year-earlier period, the resulting gross margin declined to 0.3% (January-September 2021: 0.3%).

Adjusted marketing and selling expenses increased in comparison with the year-earlier quarter by 5.5% and amounted to € 1,202 million (January-September 2021: € 1,140 million). Research and development costs declined by -8.7% to € 1,201 million (January-September 2021: € 1,315 million). This was attributable to cost savings from the discontinuation of the bintrafusp alfa program as well as the termination of the Phase II study of the drug candidate berzosertib announced in the second quarter of 2022. The change in other operating expenses and income to € -133 million (January-September 2021: € 129 million) was primarily due to the fact that no further previously deferred upfront payments were received from the GSK strategic alliance for bintrafusp alfa in the first nine months of 2022. In the year-earlier period, these had a positive effect of € 123 million. Moreover, the year-earlier period included milestone payments of around € 50 million for the approvals of Bavencio® in Europe and Japan as a first-line maintenance treatment of patients with locally advanced or metastatic urothelial carcinoma (UC) as well as the upfront cash payment from the out-licensing agreement with MoonLake Immunotherapeutics AG, Switzerland, which was concluded in May 2021.

EBITDA pre rose to \in 1,844 million (January-September 2021: \in 1,655 million). An organic earnings decline of -2.1% was offset by positive foreign exchange effects of 13.5%. At 31.7%, the EBITDA pre margin was at the level of the year-earlier period.

Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

Electronics

Electronics

Key figures

€ million	Q3 2022	Q3 2021 ²	Change	JanSept. 2022	JanSept. 2021 ²	Change
Net sales	1,036	936	10.6%	2,990	2,654	12.6%
Operating result (EBIT) ¹	144	125	15.1%	438	369	18.7%
Margin (% of net sales) ¹	13.9%	13.4%		14.6%	13.9%	
EBITDA ³	294	277	6.3%	855	788	8.5%
Margin (% of net sales) ¹	28.4%	29.5%		28.6%	29.7%	
EBITDA pre ¹	302	297	1.6%	884	828	6.8%
Margin (% of net sales) ¹	29.1%	31.7%		29.6%	31.2%	

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

Development of net sales and results of operations

In the third quarter of 2022, net sales of the Electronics business sector grew 10.6% to € 1,036 million (Q3 2021: € 936 million). Organically, sales rose by 0.4%, as double-digit growth in Semiconductor Solutions was mostly offset by a decline in Display Solutions. Foreign exchange effects were favorable at 10.2%.

Electronics

Net sales by business unit								
€ million	Q3 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	Q3 2021 ²	Share
Semiconductor Solutions	729	71%	14.8%	12.5%	_	27.3%	573	61%
Display Solutions	200	19%	-32.0%	7.0%		-24.9%	267	29%
Surface Solutions	106	10%	4.2%	5.9%		10.0%	96	10%
Electronics	1,036	100%	0.4%	10.2%	_	10.6%	936	100%

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

Net sales of the Semiconductor Solutions business unit, which comprises two businesses, namely Semiconductor Materials and Delivery Systems & Services, increased by 27.3% in the third quarter of 2022 to € 729 million (Q3 2021: € 573 million), driving its overall share of net sales of the Electronics business sector to 71% (Q3 2021: 61%). Semiconductor Materials focuses on the development and commercialization of material-based solutions for the semiconductor industry, while Delivery Systems & Services focuses on developing, selling and operating delivery systems for semiconductor manufacturers. Semiconductor Solutions grew organically by 14.8% in the third quarter of 2022. Strong demand and price increases to offset inflation drove growth across both businesses. Foreign exchange effects of 12.5% contributed to the increase in sales.

Net sales of the Display Solutions business unit, consisting mainly of the business with liquid crystals, photoresists for display applications as well as OLED materials, decreased by -24.9% to € 200 million in the third quarter of 2022 (Q3 2021: € 267 million). Display Solutions saw an organic decline of -32.0% amid continued lower utilization at key customers owing to weaker end-market demand. Foreign exchange effects were favorable at 7.0%.

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

³ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors and adjustments within the Electronics business sector.

Net sales of the Surface Solutions business unit grew 10.0% to € 106 million in the third quarter of 2022 (Q3 2021: € 96 million). Organically, Surface Solutions increased sales by 4.2% compared with the year-earlier quarter. Continued strong demand in Cosmetics, an improved market environment for Automotive Coatings and pricing activities to offset inflation drove growth. Foreign exchange effects were favorable at 5.9%.

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

Electronics

Net sales by region	Net sales by region									
€ million	Q3 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	Q3 2021 ²	Share		
Europe	112	11%	64.8%	9.0%	_	73.9%	64	7%		
North America	164	16%	4.0%	17.6%		21.6%	135	14%		
Asia-Pacific (APAC)	734	71%	-6.9%	8.8%		1.9%	720	77%		
Latin America		1%	33.4%	19.6%		53.0%	7	1%		
Middle East and Africa (MEA)	14	1%	39.1%	14.0%		53.1%	9	1%		
Electronics	1,036	100%	0.4%	10.2%		10.6%	936	100%		

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

In the first nine months of 2022, net sales of the Electronics business sector rose by 12.6% to €2,990 million (January-September 2021: €2,654 million). Sales grew organically by 4.2% amid favorable foreign exchange effects of 8.4%. Semiconductor Solutions grew organically by 16.9% as strong demand across most product lines coupled with higher pricing to cope with inflation-related cost increases continued to fuel growth. Foreign exchange effects were favorable at 9.8%. The Display Solutions business unit saw an organic sales decline of -19.8%. Weaker demand in end markets at some of our key customers, which worsened in the third quarter, drove the decrease. Favorable foreign exchange effects of 7.2% partly offset the decline. Surface Solutions increased sales organically by 2.3%. Growth in Cosmetics was dampened by weaker demand in the Industrials business field. Foreign exchange effects were positive at 4.6%.

Electronics

Net sales by business unit								
€ million	JanSept. 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	JanSept. 2021 ²	Share
Semiconductor Solutions	1,963	66%	16.9%	9.8%	-	26.7%	1,549	58%
Display Solutions	694	23%	-19.8%	7.2%		-12.6%	794	30%
Surface Solutions	332	11%	2.3%	4.6%		6.9%	310	12%
Electronics	2,990	100%	4.2%	8.4%	_	12.6%	2,654	100%

 $^{^{\}rm 1}\,\mathrm{Not}$ defined by International Financial Reporting Standards (IFRS).

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors and adjustments within the Electronics business sector.

In the first nine months of 2022, net sales by region developed as follows:

Electronics

Net sales by region								
€ million	JanSept. 2022	Share	Organic growth ¹	Exchange rate effects	Acquisitions/ divestments	Total change	JanSept. 2021 ²	Share
Europe	271	9%	30.2%	4.4%	-	34.6%	201	7%
North America	471	16%	5.6%	13.3%	_	18.9%	397	15%
Asia-Pacific (APAC)	2,182	73%	0.9%	7.8%	_	8.7%	2,007	76%
Latin America		1%	12.6%	13.6%	_	26.2%	23	1%
Middle East and Africa (MEA)	37	1%	30.3%	11.9%	_	42.2%	26	1%
Electronics	2,990	100%	4.2%	8.4%	_	12.6%	2,654	100%

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

The following table presents the composition of EBITDA pre for the third quarter of 2022 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.

Electronics

Reconciliation EBITDA pre1

		Q3 2022			Q3 2021 ²		Change
€ million	IFRS	Elimination of adjustments	Pre ¹		Elimination of adjustments	Pre ¹	Pre ¹
Net sales	1,036	-	1,036	936	-	936	10.6%
Cost of sales	-591	3	-588	-530	7	-523	12.4%
Gross profit	445	3	447	406	7	413	8.4%
Marketing and selling expenses	-173		-172	-147		-145	18.4%
Administration expenses	-33		-32	-39		-28	13.7%
Research and development costs	-78		-78	-72		-72	9.5%
Impairment losses and reversals of impairment losses on financial assets (net)							
Other operating expenses and income	-16	14	-3	-23	19	-5	-38.3%
Operating result (EBIT) ¹	144			125			
Depreciation/amortization/impairment losses/reversals of impairment losses	150	-10	140	152	-18	134	4.7%
EBITDA ³	294			277			
Restructuring expenses	3	-3	_	9		_	
Integration expenses/IT expenses	-1	1	_	11	-11	_	
Gains (-)/losses (+) on the divestment of businesses	_		_	_		_	
Acquisition-related adjustments	5	-5	_	_		_	
Other adjustments	_		_	_		_	
EBITDA pre ¹	302		302	297		297	1.6%
of which: organic growth ¹							-14.8%
of which: exchange rate effects							16.5%
of which: acquisitions/divestments							_

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

Adjusted gross profit for the Electronics business sector rose 8.4% to € 447 million in the third quarter of 2022 (Q3 2021: € 413 million). Higher sales and favorable foreign exchange effects drove the increase. These gains were once again partly offset by higher raw material costs due to inflationary pressures. Consequently,

 $^{^2}$ Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

³ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

in the third quarter of 2022, the adjusted gross margin was 43.2% (Q3 2021: 44.1%). The operating result (EBIT) rose by € 19 million to € 144 million in the third quarter of 2022 (Q3 2021: € 125 million). The increase in EBIT was driven by higher gross profit but was partly offset by higher marketing and selling expenses from inflationary effects on logistics costs. Research and development costs also rose as the Electronics business sector continues to invest in the growth of Semiconductor Solutions. EBITDA pre increased by 1.6% to € 302 million in the third quarter of 2022 (Q3 2021: € 297 million). An organic decline of -14.8% was more than offset by favorable foreign exchange effects of 16.5%. At 29.1%, the EBITDA pre margin in the third quarter of 2022 was below the year-earlier quarter (Q3 2021: 31.7%).

The following table presents the composition of EBITDA pre for the first nine months of 2022 in comparison with the year-earlier period. The IFRS figures have been modified to reflect the elimination of adjustments included in the respective functional costs.

Electronics

Reconciliation EBITDA pre1

		JanSept. 2022			JanSept. 2021 ²		
€ million	IFRS	Elimination of adjustments	Pre ¹	IFRS	Elimination of adjustments	Pre ¹	Pre ¹
Net sales	2,990		2,990	2,654		2,654	12.6%
Cost of sales	-1,722	8	-1,714	-1,519	18	-1,501	14.2%
Gross profit	1,268	8	1,275	1,135	18	1,153	10.6%
Marketing and selling expenses	-491	2	-490	-419	3	-417	17.5%
Administration expenses	-94	3	-91	-103	14	-89	1.7%
Research and development costs	-227	1	-226	-205	1	-204	10.5%
Impairment losses and reversals of impairment losses on financial assets (net)	_	-	_			_	_
Other operating expenses and income	-18	26	8	-39	30	-9	>100.0%
Operating result (EBIT) ¹	438		_	369			
Depreciation/amortization/impairment losses/reversals of impairment losses	417	-11	407	420	-25	394	3.2%
EBITDA ³	855			788			
Restructuring expenses	17	-17	_	19	-19	_	
Integration expenses/IT expenses	5	-5	_	21	-21	_	
Gains (-)/losses (+) on the divestment of businesses	_		_			_	
Acquisition-related adjustments	7		_			_	
Other adjustments	_		_			_	
EBITDA pre ¹	884	_	884	828	_	828	6.8%
of which: organic growth ¹							-7.9%
of which: exchange rate effects							14.7%
of which: acquisitions/divestments							

 $^{^{\}rm 1}\,{\rm Not}$ defined by International Financial Reporting Standards (IFRS).

In the first nine months of 2022, adjusted gross profit of the Electronics business sector rose 10.6% to € 1,275 million (January-September 2021: € 1,153 million). Increased sales and favorable foreign exchange effects were the main contributors to growth. At € 438 million, the operating result (EBIT) was € 69 million higher than in the year-earlier period (January-September 2021: € 369 million). The increase was largely attributable to the improved gross profit, which was partly offset by higher logistics costs in marketing and selling expenses as well as higher research and development costs. EBITDA pre of the business sector rose 6.8% to € 884 million (January-September 2021: € 828 million). Positive foreign exchange effects of 14.7% were partly offset by an organic decline of -7.9%. At 29.6%, the EBITDA pre margin was slightly lower than the year-earlier figure of 31.2%.

² Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

³ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

Corporate and Other

Corporate and Other comprises 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 encompasses 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
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€ million	Q3 2022	Q3 2021	Change	JanSept. 2022	JanSept. 2021	Change
Operating result (EBIT) ¹	-235	-145	62.1%	-559	-479	16.8%
EBITDA ²	-209	-119	74.7%	-482	-403	19.8%
EBITDA pre ¹	-178	-109	63.3%	-416	-290	43.1%

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

The operating result (EBIT) amounted to € -235 million in the third quarter of 2022 (Q3 2021: € -145 million). In particular, this reflected a negative currency result from cash flow hedging. After the elimination of adjustments, administration expenses totaled € 83 million in the third quarter of 2022 (Q3 2021: € 86 million) and research and development costs spanning business sectors amounted to € 26 million (Q3 2021: € 21 million). In the third quarter of 2022, EBITDA pre decreased to € -178 million (Q3 2021: € -109 million). In the first nine months of 2022, EBITDA pre amounted to € -416 million (January-September 2021: € -290 million).

 $^{^2}$ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to the operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

Report on Expected Developments

Merck Group

With the publication of the quarterly statement as of September 30, 2022, we provide an update of the forecast for the development of net sales and EBITDA pre for the Merck Group and the individual business sectors Life Science, Healthcare and Electronics as well as an estimate of Group operating cash flow in 2022.

Fundamental assumptions

Against the backdrop of the tense geopolitical situation, energy and raw material prices as well as logistics costs remain in particular at a very high level compared with previous years. The current forecast reflects the continuation of a correspondingly high price level, which will be mitigated by countermeasures as far as possible.

Following renewed outbreaks of Covid-19 in China in the course of the year and the "zero-Covid" strategy pursued there, temporary and locally restricted lockdowns were imposed. Renewed significant and long-term lockdowns are not assumed in this forecast.

Owing to the afore mentioned economic and geopolitical circumstances, this forecast is subject to increased uncertainty and volatility. We are monitoring the developments very closely and quickly responding to them as far as possible.

We confirm that we do not expect the acquisition of Exelead Inc., USA, a biopharmaceutical Contract Development and Manufacturing Organization (CDMO), to have a material portfolio effect at Group level in fiscal 2022.

As regards the development of exchange rates, we confirm our expectation of a continuing volatile environment due to political and macroeconomic developments. For 2022, we forecast a positive foreign exchange effect. In line with our expectations, the value of the euro declined further against the U.S. dollar in the third quarter of 2022 compared with the first half of the year. On average, the euro-U.S. dollar exchange rate for the first nine months of the year was within the corridor of 1.04 to 1.08 we had forecast. Taking into account the current exchange rate development, we assume that the overall more favorable development of foreign exchange effects will continue in the fourth quarter, and we now expect a euro-U.S. dollar exchange rate within the corridor of 1.02 to 1.06 for fiscal 2022.

Net sales

Following an overall robust third quarter for the Merck Group, we specify our forecast and predict for fiscal 2022 organic sales growth of 6% to 8% (previously 6% to 9%), which will be driven by the Life Science business sector in particular. We continue to expect a positive foreign exchange effect in a corridor between 5% and 8%. While the U.S. dollar strengthened in comparison with the previous forecast, several Asian currencies have weakened. Overall, we therefore forecast net sales in the range of \in 22.0 billion to \in 23.0 billion/2021: \in 19.7 billion).

EBITDA pre

For EBITDA pre, we confirm our forecast for organic growth of between 5% and 9%. Life Science will be the key growth driver. We confirm our assumption for positive foreign exchange effects on Group EBITDA pre as stated in the previous forecast. These are expected to be between 6% and 10% and will be seen mainly in the Healthcare and Electronics business sectors. We are specifying the forecast and expect EBITDA pre of between \in 6.8 billion and \in 7.2 billion (previously \in 6.75 billion to \in 7.25 billion/2021: \in 6.1 billion).

Operating cash flow

In general, the forecast for operating cash flow is subject to a higher fluctuation corridor than the forecast for net sales and EBITDA pre. We provide an estimate of the development of operating cash flow only for the Group as a whole. In this context, the development of operating cash flow is forecast to be largely in line with the strong operating performance. This will be dampened by the development of working capital, which will reflect strong business performance and an inventory buildup to secure production capacity in view of supply bottlenecks. Moreover, fiscal 2022 includes expected payments within the scope of the ongoing transformation and growth programs. These programs relate mainly to the Healthcare and Electronics business sectors. We confirm our expectations for operating cash flow of between \in 4.5 billion and \in 5.1 billion (2021: \in 4.6 billion). As regards the composition of operating cash flow, we refer to the consolidated cash flow statement in this report.

Life Science

For the Life Science business sector, we continue to assume organic sales growth of between 7% and 10% for fiscal 2022. Process Solutions will be the strongest growth engine, with growth in this business unit being driven exclusively by the organic growth of the core business. From the fight against the Covid-19 pandemic, we continue to expect sales of up to \in 450 million in Process Solutions and up to \in 250 million in Life Science Services, which, however, are lower than in the year-earlier period. The Science & Lab Solutions business unit will also contribute positively to the overall development of Life Science. The dynamic growth in our Life Science business is currently subject to higher volatility due to the varying developments across product groups and customer segments. Increased research and development activity on the customer side as well as higher production volumes among pharmaceutical companies, especially in the biologics segment, are the key drivers of growth in the core business. The expansion of our production capacities will enable us to meet a higher level of demand. We continue to expect a foreign exchange effect of 5% to 8%. We are specifying our net sales forecast for the full year at \in 10.2 billion to \in 10.7 billion (previously \in 10.15 billion to \in 10.75 billion/2021: \in 9.0 billion).

For the organic growth of EBITDA pre, we are raising our forecast to 8% to 11% (previously 7% to 10%), which is expected to lead to EBITDA pre of between \in 3.7 billion and \in 3.9 billion (2021: \in 3.3 billion). Earnings growth will continue to be driven mainly by the dynamic development of demand. Targeted countermeasures are likely to be able to offset the increase in negative impacts from higher logistics costs as well as raw material and energy prices. We confirm our assumption that based on our estimates, the impact of foreign exchange on earnings will be between 4% and 7% in fiscal 2022.

Healthcare

Following a strong third quarter, we confirm organic net sales growth of between 4% and 7% for fiscal 2022. We expect further significant increases in sales of Mavenclad® and Bavencio® to contribute substantially to this. For our established business, we forecast a roughly stable organic development. Generally, this will be based on organic growth in the Fertility franchise and our products in the Cardiovascular, Metabolism & Endocrinology (CM&E) franchise. Following the adverse impacts on the sales of CM&E in fiscal 2021 caused by the volume-based procurement regulations in place in China since 2020, this franchise will deliver growth in the mid single-digit percentage range in fiscal 2022 as expected. The decline in sales of Rebif® due to continued competitive pressure can thus be offset. We continue to expect a foreign exchange effect of 4% to 7%. As expected, we thus confirm net sales in a range of between € 7.70 billion and € 8.05 billion (2021: € 7.1 billion).

For fiscal 2022, we continue to expect organic growth of EBITDA pre of between 3% and 5%. Significant earnings contributions, especially from Mavenclad®, should largely offset the negative earnings effects due to the expected decline in sales of Rebif®. The expected positive development of EBITDA pre in comparison with the previous year will result from continued strict cost management. Consequently, operating expenses will develop more moderately compared with the increase in sales. In addition, we will further pursue the continuous prioritization of our development pipeline. We therefore expect the share of both marketing and selling expenses as well as research and development costs to decline as a percentage of sales. The development of research and development costs will remain heavily dependent on clinical data as well as further expected study results. The absence of non-recurring effects from fiscal 2021 will negatively impact the development of EBITDA pre. This relates primarily to the milestone payments realized in the previous year within the scope of our strategic alliance with Pfizer Inc., United States, to develop and commercialize Bavencio® as well as the earnings effect from the full receipt of the previously deferred upfront cash payment as a result of the mutual decision to end the global strategic alliance with GlaxoSmithKline plc, United Kingdom, on the co-development and co-commercialization of bintrafusp alfa. The one-time items included in other operating income in the previous year in this context totaled € 173 million. In fiscal 2022, we expect income from active portfolio management in a mid double-digit million euro range. For the Healthcare business sector, we confirm positive foreign exchange effects of between 12% and 15%. Overall, we maintain our forecast for EBITDA pre in a range of between € 2.45 billion and € 2.55 billion (2021: € 2.2 billion).

Electronics

For the Electronics business sector, we lower our forecast for fiscal 2022 and now expect organic sales growth of 2% to 5% (previously 5% to 8%). The Semiconductor Solutions business unit remains the key growth driver of the development compared with the previous year. Here, we continue to expect a strong growth dynamic that will exceed market growth in the medium term. However, various economic and geopolitical developments in the second half of the year could lead to a weakening of growth in comparison with the previous forecast. The project business within our Delivery Systems & Services business unit is subject to strong fluctuations owing to its dependency on individual major contracts, for which delays could be encountered owing to the geopolitical situation and the market environment. We also expect our Surface Solutions business unit to see a positive organic development in fiscal 2022. Our Display Solutions business will see a stronger organic decline in comparison with our previous forecast. Apart from the price pressure common in this industry, demand will fall in the market as a whole. We still expect a foreign exchange effect of 6% to 9%. Consequently, we now forecast net sales of \in 4.0 billion to \in 4.15 billion (previously \in 4.05 billion to \in 4.25 billion/2021: \in 3.6 billion).

As regards the organic development of EBTIDA pre, we are lowering our forecast significantly, and now expect a decline of -7% to -10% compared with the previous year (previously 0% to 3%). As a result of the expected weaker growth and despite active price management, the Semiconductor Solutions business unit will no longer be able to fully compensate for the stronger than expected decline in demand and price erosion in liquid crystals. In comparison with the previous forecast, we continue to expect even greater adverse effects from higher raw material and energy prices. These effects will only be offset partly by countermeasures without negatively impacting future growth in the medium to long term. We now forecast foreign exchange effects of between 13% and 16% (previously 12% to 15%) and therefore expect EBITDA pre of € 1.19 billion to € 1.24 billion (previously € 1.25 billion to € 1.3 billion/2021: € 1.1 billion).

Corporate and Other

We are revising our forecast for Corporate and Other and now expect EBITDA pre for fiscal 2022 in a corridor of \in -570 million to \in -600 million (previously \in -560 million to \in -610 million/2021: \in -465 million). This increase is attributable to the adapted assumptions for exchange rate developments, especially as regards the euro-U.S. dollar exchange rate, and the associated expected negative effects of currency hedging transactions, which will partly offset positive foreign exchange effects in the business sectors.

In summary, the forecast for fiscal 2022 is as follows:

Forecast for the Merck Group

€ million Net sales		EBITDA pre	Operating cash flow		
Merck Group	~22,000 to 22,900 • Organic increase of +6% to +8% • Foreign exchange effect +5% to +8%	nic increase of +6% to +8% • Organic increase of +5% to +9%			
Life Science	 ~10,200 to 10,700 Organic increase of +7% to +10% Foreign exchange effect +5% to +8% 	 ~3,700 to 3,900 Organic increase of +8% to +11% Foreign exchange effect +4% to +7% 	n/a		
Healthcare	 ~7,700 to 8,050 Organic increase of +4% to +7% Foreign exchange effect +4% to +7% 	 ~2,450 to 2,550 Organic increase of +3% to +5% Foreign exchange effect +12% to +15% 	n/a		
Electronics			n/a		
Corporate and Other	-	~-570 to -600	n/a		

EPS pre € 9.90 to € 10.70, based on an effective tax rate of 23%.

Full-year FX assumption for 2022: € 1 = US\$ 1.02 to US\$ 1.06.

Supplemental Financial Information

Supplemental Financial Information

Consolidated Income Statement

2 111				
€ million	Q3 2022	Q3 2021	JanSept. 2022	JanSept. 2021
Net sales	5,806	4,973	16,572	14,474
Cost of sales	-2,147	-1,859	-6,243	-5,392
Gross profit	3,658	3,114	10,329	9,081
Marketing and selling expenses	-1,223	-1,066	-3,504	-3,109
Administration expenses ¹	-328	-305	-946	-877
Research and development costs ¹	-642	-667	-1,827	-1,834
Impairment losses and reversals of impairment losses on financial assets (net)	6	1	-7	-5
Other operating income	59	146	281	432
Other operating expenses ¹	-296	-175	-741	-548
Operating result (EBIT) ²	1,234	1,047	3,585	3,140
Finance income	31	23	83	40
Finance costs	-78	-77	-219	-248
Profit before income tax	1,187	993	3,448	2,932
Income tax	-261	-229	-768	-673
Profit after tax	926	764	2,680	2,258
thereof: attributable to Merck KGaA shareholders (net income)	923	761	2,671	2,253
thereof: attributable to non-controlling interests	3	3	9	6
Earnings per share (in €)				
Basic	2.12	1.75	6.14	5.18
Diluted	2.12	1.75	6.14	5.18

 $^{^{\}rm 1}\,{\rm Adjustment}$ of prior-year figures due to restructuring within Corporate and Other.

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

Statement of Comprehensive Income

€ million	Q3 2022	Q3 2021	JanSept. 2022	JanSept. 2021
Profit after tax	926	764	2,680	2,258
Items of other comprehensive income that will not be reclassified to profit or loss in subsequent periods				
Net defined benefit liability				
Changes in remeasurement	-190	62	1,601	684
Tax effect	34	-4	-336	-112
Changes recognized in equity	-157	58	1,265	572
Equity instruments				
Fair value adjustments	48	_	-8	-77
Tax effect	-4	2	2	11
Changes recognized in equity	44	3	-6	-65
	-113 60 1,259	506		
Items of other comprehensive income that may be reclassified to profit or loss in subsequent periods				
Cash flow hedge reserve				
Fair value adjustments	-100	-14	-215	-79
Reclassification to profit or loss	88	16	146	14
Reclassification to assets	_	-		_
Tax effect	-6	-4	-5	18
Changes recognized in equity	-19	-3	-74	-47
Cost of cash flow hedge reserve				
Fair value adjustments	-11	-9	-14	-22
Reclassification to profit or loss	5	10	10	27
Tax effect	6	-1	10	-2
Changes recognized in equity	_	_	5	3
Currency translation difference				
Changes taken directly to equity	1,519	497	3,308	1,131
Reclassification to profit or loss	-5	_	-7	_
Changes recognized in equity	1,514	497	3,301	1,131
	1,495	494	3,233	1,087
Other comprehensive income	1,382	554	4,492	1,593
Comprehensive income	2,308	1,318	7,172	3,851
thereof: attributable to Merck KGaA shareholders	2,305	1,314	7,162	3,843
thereof: attributable to non-controlling interests	3	4	10	9

Consolidated Balance Sheet

€ million	Sept. 30, 2022	Dec. 31, 2021
Non-current assets		
Goodwill	19,534	17,004
Other intangible assets	8,080	7,612
Property, plant and equipment	7,946	7,217
Investments accounted for using the equity method	3	3
Non-current receivables	28	25
Other non-current financial assets	962	911
Other non-current non-financial assets	104	95
Non-current income tax receivables	9	10
Deferred tax assets	1,324	1,502
	37,990	34,380
Current assets		
Inventories	4,860	3,900
Trade and other current receivables	4,346	3,646
Contract assets	137	207
Other current financial assets	347	174
Other current non-financial assets	1,335	663
Current income tax receivables	313	492
Cash and cash equivalents	1,604	1,899
	12,943	10,982
Total assets	50,933	45,362
Total agritu		
Total equity		565
Equity capital		
Capital reserves	3,814	3,814
Retained earnings	18,825	15,134
Gains/losses recognized in equity	5,056	1,824
Equity attributable to Merck KGaA shareholders		21,338
Non-controlling interests		78
Non-current liabilities	28,337	21,416
		2.402
Non-current provisions for employee benefits		3,402
Other non-current provisions	300	269
Non-current financial debt	9,266	8,270
Other non-current financial liabilities		106
Other non-current non-financial liabilities		15
Non-current income tax liabilities		42
Deferred tax liabilities		1,411
Current liabilities		13,515
Current provisions for employee benefits	207	224
		
Other current provisions	355	377
Current financial debt		2,531
Other current financial liabilities		1,192
Trade and other current payables	2,445	2,380
Refund liabilities	968	839
Current income tax liabilities		1,421
Other current non-financial liabilities	1,505	1,468
Total equity and liabilities	9,412	10,432
Total equity and liabilities	50,933	45,362

Consolidated Cash Flow Statement

			JanSept.	JanSept.
€ million	Q3 2022	Q3 2021	2022	2021
Profit after tax	926	764	2,680	2,258
Depreciation/amortization/impairment losses/reversals of impairment losses ¹	470	447	1,432	1,294
Changes in inventories	-249	-160	-636	-384
Changes in trade accounts receivable	149	-54	-388	-433
Changes in trade accounts payable/refund liabilities	-81	131	196	479
Changes in provisions	111	191	-41	246
Changes in other assets and liabilities	235	128	34	72
Neutralization of gains/losses on disposals of assets	-4	-8	-43	-32
Other non-cash income and expenses ¹	-5	26	10	71
Operating cash flow	1,552	1,467	3,244	3,571
Payments for investments in intangible assets		-219	-209	-287
Payments from the disposal of intangible assets	10	5	35	35
Payments for investments in property, plant and equipment	-388	-299	-1,065	-868
Payments from the disposal of property, plant and equipment	4	4	14	8
Payments for investments in financial assets	-169	-146	-216	-171
Payments for acquisitions less acquired cash and cash equivalents	-1	-4	-696	-4
Payments from the disposal of other financial assets	11	21	136	59
Payments for the acquisition of non-financial assets			-600	-
Proceeds from the disposal of non-financial assets			100	-
Payments from other divestments			4	1
Cash flow from investing activities	-622	-638	-2,497	-1,226
Dividend payment to Merck KGaA shareholders			-239	-181
Dividend payments to non-controlling interests			-11	-8
Dividend payments to E. Merck KG			-716	-567
Payments from new borrowings from E. Merck KG			977	471
Repayments of financial debt to E. Merck KG	-105	-175	-510	-200
Payments from the issuance of bonds	_	_	995	_
Repayments of bonds	-228	_	-1,661	-317
Changes in other current and non-current financial debt	-576	-955	109	-1,382
Cash flow from financing activities	-909	-1,131	-1,057	-2,184
Changes in cash and cash equivalents		-302	-310	161
Changes in cash and cash equivalents due to currency translation			15	7
Cash and cash equivalents at the beginning of the reporting period		1,825	1,899	1,355
Cash and cash equivalents as of Sept. 30 (consolidated balance sheet)	1,604	1,523	1,604	1,523

¹ Previously, impairment losses/reversals of impairment losses on financial assets were disclosed under "Depreciation/amortization/impairment losses/reversals of impairment losses". As of fiscal 2022, they are disclosed under "Other non-cash income and expenses".

Consolidated Statement of Changes in Net Equity

€ million	Equity capital	Capital reserves	Retained earnings	Gains/losses recognized in equity	Equity at- tributable to Merck KGaA shareholders	Non- controlling interests	Equity
Jan. 1, 2022	565	3,814	15,134	1,824	21,338	78	21,416
Profit after tax			2,671		2,671	9	2,680
Gains/losses recognized in equity			1,259	3,232	4,491		4,492
Comprehensive income			3,930	3,232	7,162	10	7,172
Dividend payments			-239		-239	-11	-250
Profit transfer to/from E. Merck KG including changes in reserves			-				_
Transactions with no change of control	_		-			-	_
Change in scope of consolidation/ other changes			-				_
Sept. 30, 2022	565	3,814	18,825	5,056	28,260	77	28,337

€ million	Equity capital	Capital reserves	Retained earnings	Gains/losses recognized in equity	Equity at- tributable to Merck KGaA shareholders	Non- controlling interests	Equity
Jan. 1, 2021	565	3,814	12,378	189	16,946	71	17,017
Profit after tax			2,253		2,253	6	2,258
Gains/losses recognized in equity			506	1,084	1,590	3	1,593
Comprehensive income	_	_	2,759	1,084	3,843	9	3,851
Dividend payments			-181		-181	-8	-189
Profit transfer to/from E. Merck KG including changes in reserves			-	_	_		_
Transactions with no change of control	_	_	-	_	_	_	-
Change in scope of consolidation/ other changes	_	_	-	_	_		_
Sept. 30, 2021	565	3,814	14,955	1,273	20,607	72	20,679

Significant events during the reporting period

Acquisition of Exelead Inc., USA

On December 30, 2021, Merck signed a definitive agreement to acquire Exelead Inc., USA, (Exelead), a biopharmaceutical contract development and manufacturing organization (CDMO). The transaction closed on February 22, 2022 after regulatory clearances and the satisfaction of other customary closing conditions. The purchase price amounted to US\$ 793 million (\in 702 million) in cash. In the consolidated cash flow statement, \in 694 million has been disclosed as net cash outflows from acquisitions less acquired cash and cash equivalents.

Exelead specializes in complex injectable formulations, including the lipid nanoparticles that are key components of mRNA (messenger ribonucleic acid) therapeutics for treating Covid-19 and many other diseases. The aim of the acquisition is to use Exelead's capacities and expertise to expand the service range for mRNA contract development and manufacturing and to provide a fully integrated offering across the entire mRNA manufacturing process. The business is being integrated into the new Life Science Services business unit, which is part of the Life Science business sector.

Acquisition of Chord Therapeutics SA, Switzerland

On January 31, 2022, Merck completed the acquisition of Chord Therapeutics SA, Switzerland, a biotech company specializing in rare neuroinflammatory diseases. The purchase price was agreed as an upfront cash payment amounting to a mid double-digit million euro figure plus payments for the achievement of future development and sales milestones.

For this transaction, Merck applied the optional concentration test set out in IFRS 3. Since the vast majority of the purchase price was attributable to the intellectual property acquired in conjunction with the company, the concentration test was satisfied. Consequently, the transaction was not treated in the balance sheet as the acquisition of a business pursuant to IFRS 3 but rather as the acquisition of individual assets.

Acquisition of the MAST® platform from the Lonza Group AG, Switzerland

On March 31, 2022, Merck entered into an agreement with a subsidiary of the Lonza Group AG, Switzerland, to acquire the MAST® platform, a leading automated sampling system for bioreactors, along with the associated assets. A mid double-digit million euro amount was agreed as the purchase price. The acquired business is being integrated into Process Solutions. The acquisition closed on July 1, 2022.

Acquisition of the chemical business of Mecaro Co. Ltd., Korea

On August 17, Merck entered into a definitive agreement to acquire the chemical business of Mecaro Co. Ltd. (Mecaro), a Korea-based and publicly listed manufacturer of heater blocks and chemical precursors for semi-conductors. The acquisition is part of the Level Up growth program of the Electronics business sector of Merck.

The chemical business of Mecaro comprises approximately 100 employees and primarily develops and produces precursors used in Thin Film deposition. The purchase price comprises an upfront payment of \in 75 million plus contingent milestone payments of up to \in 35 million. The transaction is expected to be closed in the fourth quarter of 2022 and is subject to regulatory clearance as well as the satisfaction of other customary closing conditions.

Impacts of the war in Ukraine

As of the preparation date of the quarterly statement, the war in Ukraine has not had any material effects on the net assets, financial position or results of operations of Merck owing to the limited business volume in Russia, Ukraine, Belarus, and the Republic of Moldova. In the reporting period, the total share of Group net sales generated in the named countries amounted to less than 1.5%. These sales were attributable almost exclusively to the Healthcare and Life Science business sectors in connection with patient care. With the exception of Russia, Merck does not have any of its own subsidiaries in this region.

Trade receivables from customers in Russia, Ukraine, Belarus, and the Republic of Moldova are partly covered by credit insurance. The payment behavior of customers in the affected region is being monitored very closely. After reversals recognized for trade accounts receivable in the third quarter amounting to a mid single-digit million euro amount, there were no further notable loss allowances as of September 30, 2022. To date, local payments to customers and employees in Russia as well as international payments with Russia have been ensured without restriction.

Moreover, the war has had an indirect impact on the net assets, financial position and results of operations of the Group as a result of higher logistic and energy expenses as well as an increase in the procurement costs of raw materials.

Termination of a study for the drug candidate berzosertib

Following an interim analysis of a global Phase II study of the ATR inhibitor berzosertib in combination with topotecan in patients with a certain form of lung cancer (relapsed, platinum-resistant small cell lung cancer), it was decided to discontinue the study owing to the low probability of achieving the predefined objective of this trial. Based on these results, in the second quarter of 2022, an impairment loss in a high double-digit million euro amount was recognized on the intangible asset attributable to the rights to the drug candidate.

Issuances and repayments of financial debt

On June 8, 2022, Merck issued a euro bond amounting to \in 1 billion. The issuance comprised two fixed-interest tranches: a bond with a term of four years amounting to \in 500 million paying a coupon of 1.875%, as well as a bond amounting to \in 500 million with a term of eight years paying a coupon of 2.375%.

Moreover, in the first half of 2022, a tranche of a U.S. dollar bond with a nominal volume of US\$ 1 billion was repaid as was a euro bond with a nominal volume of \le 550 million.

On September 9, 2022 a partial buyback of a hybrid bond with a nominal volume of € 250 million issued by Merck in 2019 took place.

Information by business sector

Information by business sector

		Life So	cience			Healt	hcare			Electr	onics	
€ million	Q3 2022	Q3 2021 ¹	JanSept. 2022	JanSept. 2021 ¹	Q3 2022	Q3 2021	JanSept. 2022	JanSept. 2021	Q3 2022	Q3 2021 ¹	JanSept. 2022	JanSept. 2021 ¹
Net sales ²	2,681	2,249	7,774	6,605	2,089	1,788	5,808	5,214	1,036	936	2,990	2,654
Intersegment sales	14	13	44	44		_				_		
Operating result (EBIT) ³	719	614	2,208	1,851	606	453	1,499	1,399	144	125	438	369
Depreciation and amortization	217	192	624	569	76	78	221	234	140	133	407	394
Impairment losses ⁴			1		_	_	91	5	10	21	11	28
Reversals of impairment losses					_	_		-11		-3		-3
EBITDA ⁵	936	806	2,833	2,421	683	532	1,811	1,627	294	277	855	788
Adjustments ³	41	18	76	26	28	9	33	28	8	20	29	40
EBITDA pre (Segment result) ³	976	824	2,909	2,446	711	541	1,844	1,655	302	297	884	828
EBITDA pre margin (in % of net sales) ³	36.4%	36.6%	37.4%	37.0%	34.0%	30.3%	31.7%	31.7%	29.1%	31.7%	29.6%	31.2%
Assets by business sector ⁶	25,899	21,917	25,899	21,917	8,248	7,809	8,248	7,809	11,255	10,306	11,255	10,306
Liabilities by business sector ⁶	-2,213	-2,094	-2,213	-2,094	-3,094	-2,807	-3,094	-2,807	-662	-720	-662	-720
Payments for investments in property, plant and equipment ⁷	189	133	486	370	77	96	262	292	120	61	252	170
Payments for investments in intangible assets ⁷	56	5	68	21	24	209	123	252	3	3	7	9
Non-cash changes in provisions (according to consolidated cash flow statement) ⁸	44	50	55	90	46	102	100	160	8	16	11	6

		Corporate and Other					Group			
€ million	Q3 2022	Q3 2021	JanSept. 2022	JanSept. 2021	Q3 2022	Q3 2021	JanSept. 2022	JanSept 202:		
Net sales ²			_		5,806	4,973	16,572	14,474		
Intersegment sales	-14	-13	-44	-44		_		-		
Operating result (EBIT) ³	-235	-145	-559	-479	1,234	1,047	3,585	3,140		
Depreciation and amortization	26	25	77	75	459	429	1,328	1,272		
Impairment losses ⁴				1	11	22	103	35		
Reversals of impairment losses		_				-3	_	-14		
EBITDA ⁵		-119	-482	-403	1,704	1,495	5,016	4,433		
Adjustments ³	30	10	67	112	107	57	205	205		
EBITDA pre (Segment result) ³	-178	-109	-416	-290	1,810	1,552	5,221	4,639		
EBITDA pre margin (in % of net sales) ³					31.2%	31.2%	31.5%	32.0%		
Assets by business sector ⁶	5,531	5,329	5,531	5,329	50,933	45,362	50,933	45,362		
Liabilities by business sector ⁶	-16,627	-18,326	-16,627	-18,326	-22,596	-23,947	-22,596	-23,947		
Payments for investments in property, plant and equipment ⁷	2	10	65	35	388	299	1,065	868		
Payments for investments in intangible assets ⁷	5	2		6	89	219	209	287		
Non-cash changes in provisions (according to consolidated cash flow statement) ⁸	9	15	-7	151	108	184	160	407		

 $^{^1}$ Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

² Excluding intersegment sales.

 $^{^{\}rm 3}$ Not defined by International Financial Reporting Standards (IFRS).

 $^{^{\}rm 4}\,{\rm Not}$ including impairment losses on financial assets.

⁵ Not defined by International Financial Reporting Standards (IFRS); EBITDA corresponds to operating result (EBIT) adjusted by depreciation, amortization, impairment losses, and reversals of impairment losses.

⁶ Figures for the reporting period ending on Sept. 30, 2022, previous-year figures as of December 31, 2021.

 $^{^{\}rm 7}\,{\rm As}$ reported in the consolidated cash flow statement.

 $^{^{\}rm 8}$ Excluding provisions for pensions and other post-employment benefits.

Segmentation was performed in accordance with the internal organization and reporting structure of the Merck Group valid as of fiscal 2022.

The fields of activity of the individual segments are described under "Fundamental Information about the Group" in the combined management report for 2021.

"Corporate and Other" in Segment Reporting includes income and expenses, assets and liabilities as well as cash flows that cannot be directly allocated to the reportable segments presented. This relates mainly to Group functions. Moreover, the column served the reconciliation to the Group numbers. The expenses and income from the financial result and from income taxes as well as cash flows were also disclosed under "Corporate and Other".

Apart from net sales, the success of a segment is mainly determined by EBITDA pre (segment result). EBITDA pre is a key performance indicator that is not defined by International Financial Reporting Standards. However, it represents an important variable used to steer the Merck Group. To permit a better understanding of operational performance, EBITDA pre excludes depreciation and amortization, impairment losses and reversals of impairment losses in addition to specific adjustments presented in the following.

Transfer prices for intragroup sales were determined on an arm's-length basis.

The following table presents the reconciliation of segment results of all operating businesses to the profit before income tax of the Merck Group:

€ million	Q3 2022	Q3 2021	JanSept. 2022	JanSept. 2021
EBITDA pre of the operating businesses ¹	1,989	1,661	5,637	4,929
Corporate and Other	-178	-109	-416	-290
EBITDA pre of the Merck Group ¹	1,810	1,552	5,221	4,639
Depreciation/amortization/impairment losses/ reversals of impairment losses ²	-470	-447	-1,432	-1,294
Adjustments ¹	107	57	205	205
Operating result (EBIT) ¹	1,234	1,047	3,585	3,140
Financial result	-47	-54	-136	-208
Profit before income tax	1,187	993	3,448	2,932

 $^{^{\}rm 1}$ Not defined by International Financial Reporting Standards (IFRS). $^{\rm 2}$ Not including impairment losses on financial assets.

Adjustments comprised the following:

€ million	Q3 2022	Q3 2021	JanSept. 2022	JanSept. 2021
Restructuring expenses	-63	-22	-109	-61
Integration expenses/IT expenses	-23	-24	-67	-62
Gains (+)/losses (-) on the divestment of businesses	4	-6	36	-88
Acquisition-related adjustments			-17	18
Other adjustments	-18	-5	-48	-13
Adjustments before impairment losses/ reversals of impairment losses ¹	-107	-57	-205	-205
Impairment losses ²	-11	-22	-103	-33
Reversals of impairment losses		3		3
Adjustments (total) ¹	-118	-76	-309	-235

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

 $^{^{\}rm 2}\,{\rm Not}$ including impairment losses on financial assets.

At the end of the third quarter of 2022, adjustments amounted to € 309 million and were thus higher than in the previous year (January-September 2021: € 235 million). Restructuring expenses increased to € 109 million (January-September 2021: € 61 million) due in particular to measures taken in the Life Science and Healthcare business sectors. Gains and losses from divested businesses rose to € 36 million. These mainly included interest rate effects from the measurement of environmental provisions. A small portion arose from the subsequent measurement of contingent consideration from divested businesses. In the previous year, this item mainly reflected the provision for litigation owing to the claims for damages by Heraeus Medical GmbH, Wehrheim, Germany. Impairment losses were mainly attributable to intangible assets in the Healthcare business sector (see explanations under "Significant events during the reporting period").

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

€ million	JanSept. 2022								
Net sales by nature of the products	Life Science		Healthcare		Electronics		Group		
Goods	6,843	88%	5,785	100%	2,613	87%	15,240	92%	
Equipment/hardware	333	4%	1		294	10%	628	4%	
Services	584	8%	10		80	3%	673	4%	
License income	14		_		3	_	17	_	
Commission income			13		_		13	_	
Income from co-commercialization agreements		_	1				1	_	
Total	7,774	100%	5,808	100%	2,990	100%	16,572	100%	
Net sales by region (customer location)									
Europe	2,549	33%	1,804	31%	271	9%	4,624	28%	
North America	2,968	38%	1,313	23%	471	16%	4,752	29%	
Asia-Pacific (APAC)	1,903	25%	1,690	29%	2,182	73%	5,774	35%	
Latin America	268	3%	620	11%	29	1%	917	5%	
Middle East and Africa (MEA)	86	1%	382	6%	37	1%	505	3%	
Total	7,774	100%	5,808	100%	2,990	100%	16,572	100%	

€ million	JanSept. 2021								
Net sales by nature of the products	Life Science ¹		Healthcare		Electronics ¹		Group		
Goods	5,816	88%	5,154	99%	2,359	89%	13,329	92%	
Equipment/hardware	344	5%	2		231	9%	577	4%	
Services	437	7%	21		63	2%	521	4%	
License income	8		_	_	1		9	_	
Commission income		_	14	_	_		14	_	
Income from co-commercialization agreements		-	23	1%		_	23	_	
Total	6,605	100%	5,214	100%	2,654	100%	14,474	100%	
Net sales by region (customer location)									
Europe	2,283	34%	1,663	32%	201	7%	4,147	29%	
North America	2,351	36%	1,242	24%	397	15%	3,989	27%	
Asia-Pacific (APAC)	1,691	26%	1,474	28%	2,007	76%	5,172	36%	
Latin America	209	3%	495	9%	23	1%	727	5%	
Middle East and Africa (MEA)	72	1%	340	7%	26	1%	438	3%	
Total	6,605	100%	5,214	100%	2,654	100%	14,474	100%	

 $^{^1}$ Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors.

Life Science¹

€ million	JanSept. 2022	Share	JanSept. 2021	Share
Science & Lab Solutions	3,678	47%	3,235	49%
Process Solutions	3,390	44%	2,861	43%
Life Science Services	706	9%	509	8%
Total	7,774	100%	6,605	100%

 $^{^1\,\}mathrm{Prior}$ -year figures have been adjusted owing to the reorganization of the Life Science business sector as well as to product reallocations between the Life Science and Electronics business sectors.

Healthcare

€ million	JanSept. 2022	Share	JanSept. 2021	Share
Oncology	1,248	22%	1,013	20%
thereof: Erbitux®	774	13%	726	14%
thereof: Bavencio®	440	8%	252	5%
Neurology & Immunology	1,304	22%	1,210	23%
thereof: Rebif®	668	12%	708	14%
thereof: Mavenclad®	636	11%	501	10%
Fertility	1,066	18%	1,003	19%
thereof: Gonal-f [®]	620	11%	577	11%
Cardiovascular, Metabolism and Endocrinology	2,073	36%	1,878	36%
thereof: Glucophage®	682	12%	639	12%
thereof: Concor®	438	8%	386	7%
thereof: Euthyrox®	410	7%	342	7%
thereof: Saizen®	198	3%	184	4%
Other	118	2%	110	2%
Total	5,808	100%	5,214	100%

Electronics¹

€ million	JanSept. 2022	Share	JanSept. 2021	Share
Semiconductor Solutions	1,963	66%	1,549	58%
Display Solutions	694	23%	794	30%
Surface Solutions	332	11%	310	12%
Total	2,990	100%	2,654	100%

 $^{^1}$ Prior-year figures have been adjusted due to product reallocations between the Life Science and Electronics business sectors and adjustments within the Electronics business sector.

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.

Darmstadt, November 9, 2022

Belén Garijo

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. Marcus Kuhnert

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TYPESETTING & LAYOUT

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