Half-Yearly Financial Report 2024

Merck – in brief*

Merck Group

Key figures

€ million	Q2 2024	Q2 2023	Change	Jan.-June 2024	Jan.-June 2023	Change
Net sales	5,352	5,302	0.9%	10,472	10,595	-1.2%
Operating result (EBIT)[1]	792	969	-18.3%	1,724	2,004	-14.0%
Margin (% of net sales)[1]	14.8%	18.3%		16.5%	18.9%	
EBITDA[2]	1,472	1,452	1.4%	2,857	2,942	-2.9%
Margin (% of net sales)[1]	27.5%	27.4%		27.3%	27.8%	
EBITDA pre[1]	1,509	1,553	-2.9%	2,963	3,140	-5.7%
Margin (% of net sales)[1]	28.2%	29.3%		28.3%	29.6%	
Profit after income tax	605	706	-14.3%	1,305	1,506	-13.3%
Earnings per share (€)	1.40	1.62	-13.6%	2.99	3.45	-13.3%
Earnings per share pre (€)[1]	2.20	2.20	–	4.26	4.57	-6.8%
Operating cash flow	861	622	38.4%	1,896	1,475	28.6%
Net financial debt[1, 3]	7,950	7,500	6.0%			
Number of employees[4]	62,176	63,701	-2.4%			

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

[2] 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.

[3] Figures for the reporting period ending on June 30, 2024, prior-year figures as of December 31, 2023.

[4] Figures for the reporting period ending on June 30, 2024, prior-year figures as of June 30, 2023. This figure refers to all employees at sites of fully consolidated entities.

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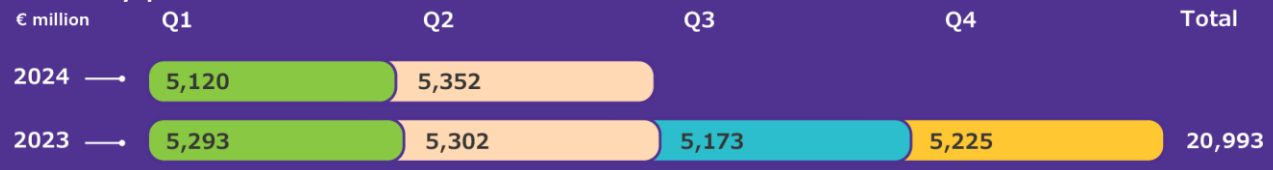
Net sales by quarter



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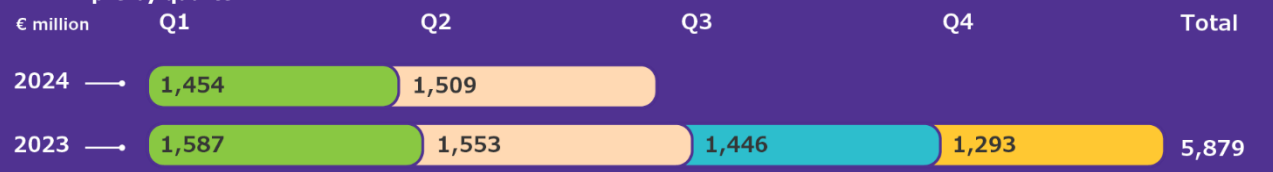
EBITDA pre by quarter



* This half-yearly financial report 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 half-yearly financial report have been rounded. This may lead to individual values not adding up to the totals presented.
It is our aim to ensure that our communication is inclusive and so we strive to use language that is both non-discriminatory and easy to read. This report attempts to use gender-neutral language, which may not yet be consistent in all instances. Even if masculine forms are used, all genders are explicitly meant.
The Annual Report for 2023 has been optimized for mobile devices and is available at **https://www.merckgroup.com/en/annualreport/2023/**.

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Interim Management Report as of June 30, 2024

Developments within the Group and Research & Development

We are Merck, a science and technology company. We are pioneers of human progress, driven by our curiosity. We are working toward a better future in a special organizational setup and are bringing together different disciplines under one roof with the three business sectors Life Science, Healthcare and Electronics.

Ever since we were established in 1668, we have continuously reinvented ourselves and adopted a long-term mindset. This approach is rooted in responsibility, care and respect: for our work, our employees, our customers, patients, society, and our planet. We want to become the global 21st century science and technology pioneer and are committed to working towards a better future: sustainable progress for humankind.

The founding family, now in the 13th generation, is still the majority owner. This is made possible by our company structure: a corporation with general partners (Kommanditgesellschaft auf Aktien – KGaA). In a KGaA, the total capital is divided between general partners and limited partners. The founding family holds a 70.274% interest in the listed Merck Kommanditgesellschaft auf Aktien (Merck KGaA), Darmstadt, as general partner via the Group's ultimate parent company, E. Merck Kommanditgesellschaft, Darmstadt. The remaining 29.726% of the share capital of Merck KGaA is traded on the regulated market of the Frankfurt Stock Exchange and other stock exchanges.

Our company management assesses the business development and the allocation of financial resources for the Life Science, Healthcare and Electronics business sectors as well as the enabling Group functions. In addition to the Chair of the Executive Board and CEO Belén Garijo, the Members of the Executive Board are Matthias Heinzel, CEO Life Science, Peter Guenter, CEO Healthcare, Kai Beckmann, CEO Electronics, and Helene von Roeder, Chief Financial Officer (CFO).

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. Apart from our three business sectors, our financial reporting presents five regions: Europe, North America, Asia-Pacific, Latin America, and the Middle East and Africa.

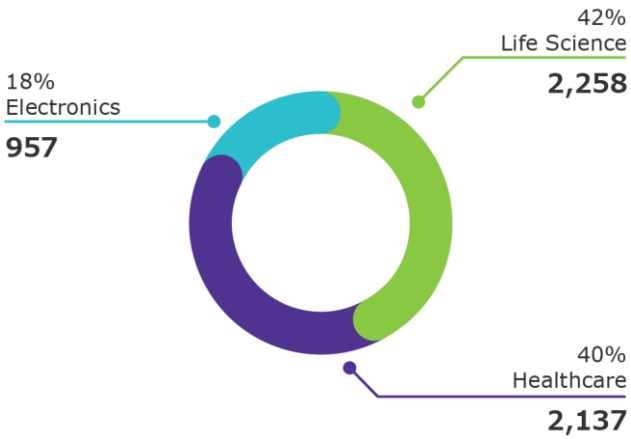
The following chapters of this half-yearly financial report summarize the main developments in the first half of 2024 at Merck and its subsidiaries, including those in research in development. A detailed description of our company as well as our business sectors and sustainability goals can be found in the **Annual Report for 2023** and in the **Sustainability Report for 2023**. As of June 30, 2024, we had 62,176 employees[1] worldwide. The figure as of June 30, 2023 was 63,701 employees[1].

[1] Merck also employs people at sites of subsidiaries that are not fully consolidated. This number refers to people employed in fully consolidated subsidiaries.

Merck Group

Net sales by business sector – Q2 2024

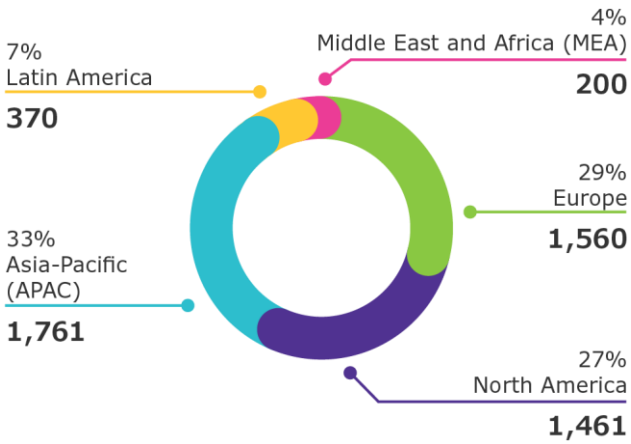
€ millions/in % of net sales



Merck Group

Net sales by regions – Q2 2024

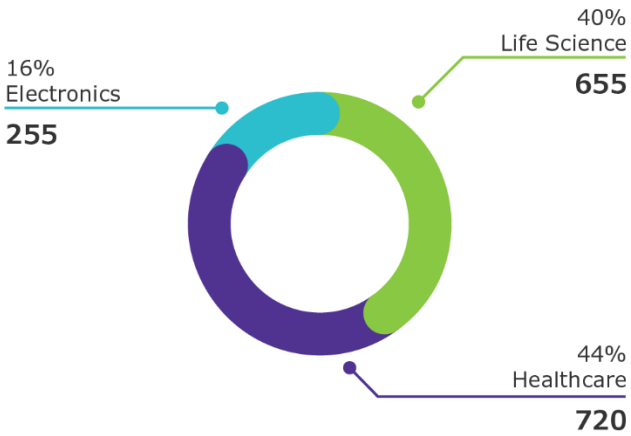
€ millions/in % of net sales



Merck Group

EBITDA pre[1] by business sector[2] – Q2 2024

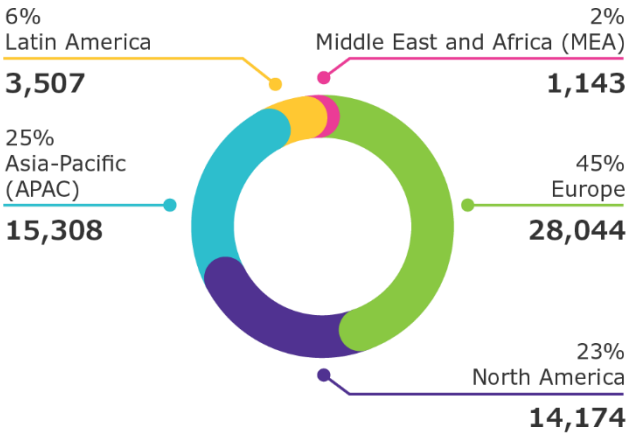
€ millions/in % of net sales



[1] Not defined by International Financial Reporting Standards (IFRS).
[2] Not presented: Decline in Group EBITDA pre by € -121 million due to Corporate and Other.

Merck Group

Employees[1] by region on June 30, 2024



[1] Merck also employs people at sites of subsidiaries that are not fully consolidated. These numbers refer to people employed in fully consolidated subsidiaries.

Life Science

We are a leading global provider of products and services for a wide range of customers, including research labs, biotech and pharmaceutical companies, diagnostic labs, and the industrial sector.

Across our Life Science business sector, we collaborate with the global scientific community to deliver innovations and to this end we offer a broad and deep product portfolio as well as global services as a contract testing development and manufacturing organization (CTDMO) ranging from process development to commercialization. In the first half of 2024, we continued to execute our strategy as a diversified life science company to strengthen our three business units Process Solutions, Life Science Services and Science & Lab Solutions.

As the fields of preventive and personalized medicine evolve, it will be essential to set the standard with robust, scalable and efficient processes for viral vector production, next-generation sequencing and autologous cell therapies. This, in turn, will support the expansion of disruptive cell and gene therapies to treat the most challenging and chronic conditions, including cancer, heart disease, diabetes, and muscular dystrophy.

To accomplish this, more than 1,200 scientists in Research & Development (R&D) across twelve major global sites focus on six strategic innovation vectors: building our core portfolio, factories and labs of the future, novel modalities, next-generation biology, AI and digital, and sustainability. Our R&D teams have enabled our three business units to launch nearly 4,500 products to respond to growth trends, including those launched through our “faucet program” for antibodies, reference materials and nanomaterials. We continue to bring expertise and a diversified and relevant portfolio of products and services to our customers around the world.

We continue to seek opportunities to collaborate with leading universities around the world to advance research. In May, we signed a non-binding Memorandum of Understanding (MoU) with the Korea Advanced Institute of Science and Technology (KAIST). This academia-industry cooperation aims to advance the research and development ecosystem in Korea for industrial applications. Through the partnership, we will provide researchers at KAIST’s labs with products from our chemistry and biology portfolios. A research partnership will also be established for joint R&D projects, focusing on advancing innovation in prioritized research areas.

Process Solutions

The Process Solutions business unit continued to focus on delivering its product offering for the pharmaceutical development and manufacture of filtration devices, chromatography resins, single-use assemblies and systems, processing chemicals, and excipients.

Accordingly, Merck signed a definitive agreement in May to acquire the life science company Mirus Bio for a purchase price of US$ 600 million. Based in Madison, Wisconsin, USA, Mirus Bio specializes in the development and commercialization of transfection reagents, such as its own TransIT-VirusGEN®. These transfection reagents are used to help introduce genetic material into cells and thus play a key role in the production of viral vectors for cell and gene therapies. The transaction with Gamma Biosciences US Holdco LP, Wilmington, Delaware, USA, a life sciences platform established by investment firm KKR & Co. Inc., New York City, New York, USA, for the acquisition of Mirus Bio, is expected to close in the third quarter of 2024 and is subject to regulatory clearance and other customary closing conditions.

Life Science Services

The Life Science Services business unit manufactures traditional and novel modalities, including monoclonal antibodies, high-potency active pharmaceutical ingredients (HPAPIs), antibody-drug conjugates, and viral and gene therapy products as well as mRNA. In addition to manufacturing, Life Science Services covers sales and marketing, research and development and supply chain operations. Our integrated CTDMO services support clients from preclinical phases to commercial production.

In April, Life Science Services launched a first-of-its-kind, all-in-one, validated genetic stability assay. The Aptegra™ CHO (Chinese hamster ovary) genetic stability platform replaces five different assays and four different technologies with one assay utilizing a next-generation sequencing technology digital platform. This approach reduces testing time by 66% compared with traditional methods. The platform meets all regulatory requirements for genetic stability assurance, including copy number assessment.

Science & Lab Solutions

The Science & Lab Solutions business unit serves customers in the pharmaceutical and biotech industries, in addition to other industries in production, testing and research, as well as public authorities and research institutions. We provide customers with access to a broad portfolio including reagents, consumables, devices, instruments, software, and services for scientific discovery in addition to lab water instruments, consumables and services, microbiology and biomonitoring products, test assays, analytical reagents, and flow cytometry kits and instruments.

In the first half of 2024, we introduced our M-Trace® software and the associated mobile app for microbiological quality control, a comprehensive data tracking solution to digitalize sterility testing. The software helps ensure overall process safety by automatically documenting data for every step of the testing process. This reduces the risk of deviations, false positive results and human error.

In June, we announced a collaboration with the Michael J. Fox Foundation, New York City, New York, USA, aimed at advancing Parkinson's research to slow the progression of the disease, leveraging our SMCxPRO® immunoassay technology to help detect low levels of a biomarker associated with cell dysfunction in patients. The service is now available to the scientific community, making it possible to track the response of different therapeutic options to disease progression.

Investments to expand capabilities and production

In February, we opened a new, distribution center costing in excess of € 20 million and spanning more than 10,000 square meters in Cajamar, São Paulo, Brazil, to better serve our Life Science customers in the region and to meet the country's growing demand for life science products.

In March, we announced the expansion of our M Lab™ Collaboration Center as part of the Shanghai Technical Application and Testing Center, which includes several laboratories of the BioReliance® Biologics Testing Center. In the course of the € 14 million investment plan, it will be expanded to include a new biology application lab, a process development training center and an upstream application lab. M Lab™ in Shanghai, China, is the largest of our customer cooperation centers worldwide.

Also in March, we announced an investment of more than € 300 million in a new Bioprocessing Production Center in Daejeon, Korea. The new site is the largest investment in Asia-Pacific to date and demonstrates our commitment to expanding its capacities in the growing region. The facility will include production of essential products, such as dry powder cell culture media and process liquids, as well as sterile sampling systems and small-scale pre-GMP production. By the end of 2028, the center will also have a distribution center and an automated warehouse.

In April, we announced the investment of more than € 300 million in a new research center in Darmstadt, Germany, named the Advanced Research Center. Starting in 2027, the building will be home to more than 500 employees focusing on researching solutions for manufacturing antibodies, mRNA applications and additional products required for biotechnological production.

In June, we announced an investment in a new quality control building at our global headquarters in Darmstadt, which has since been increased to € 68 million. The facility will bring together approximately 135 employees across several departments in a single state-of-the-art collaborative space.

We also opened our newly expanded distribution center in Schnelldorf, Germany. With an investment of more than € 180 million; we have almost doubled its space; alongside a new manual down-filling facility, the site now provides more space for the distribution of a wide range of products to laboratories and research facilities around the world. The Schnelldorf site employs more than 400 engineers and experts in manufacturing and distribution.

Healthcare

Our Healthcare business sector is a global specialty innovator in oncology, neurology and immunology, complemented by established portfolios in the therapeutic areas of fertility as well as cardiovascular, metabolic and endocrinological disorders. We discover, develop, manufacture, and market pharmaceutical and biological prescription drugs to treat cancer, multiple sclerosis (MS), infertility, and growth disorders as well as certain cardiovascular and metabolic diseases.

Our business sector-wide Focused Leadership approach to pipeline enrichment builds on our proven expertise in the underlying biology of our core therapeutic areas of oncology, neurology and immunology as well as our technological capabilities.

We strive to ensure the supply of our high-quality medicines to patients around the world, regardless of circumstances and challenges, while always observing the highest health and safety standards for our people and partners and complying with international laws and worldwide sanctions.

In the first half of 2024, we ensured the supply of our medicines beyond the anticipated demand despite ongoing geopolitical crises. Even as some of our competitors experienced shortages, we provided support and stepped up to ensure, to the best of our ability, that patients could access an alternative therapeutic option. Measures to secure the supply reliability of our medicines include active monitoring of the situation as well as mitigation measures such as building safety stocks of our medicines locally, defining back-up shipment options (e.g. diverting our flow of goods using alternative routes, shifting from sea to air freight or vice versa), increasing agility in our network operation and building strategic contingencies into our site network for sourcing our finished goods.

Oncology

Erbitux® (cetuximab) remains our best-selling cancer drug with € 563 million in sales in the first half of 2024. The drug is a standard of care for patients with epidermal growth factor receptor (EGFR)-expressing, RAS wild-type metastatic colorectal cancer (mCRC) as well as both recurrent and/or metastatic and locally advanced squamous cell carcinoma of the head and neck (SCCHN). With nearly 200 active clinical trials involving Erbitux®, including more than 15 Phase III studies, we are also continuously advancing our broad-based lifecycle management strategy.

We have made progress in changing the standard of care globally for patients with locally advanced or metastatic urothelial carcinoma (UC) as we continue to obtain additional regulatory approvals and reimbursement decisions for our anti-PD-L1 antibody Bavencio® (avelumab). Bavencio® is approved as a first-line maintenance treatment for advanced UC in more than 70 countries. It has become a standard of care in the treatment of this disease based on the results of the JAVELIN Bladder 100 trial, the only Phase III study of an immunotherapy to demonstrate a significant overall survival benefit in the first-line maintenance setting. Bavencio® is also approved in the first-line treatment of advanced renal cell carcinoma in combination with axitinib and is a standard of care as a monotherapy in metastatic Merkel cell carcinoma, a rare form of skin cancer.

We are also continuing to expand the availability of Tepmetko® (tepotinib), our oral MET inhibitor designed to inhibit the oncogenic MET receptor signaling caused by MET (gene) alterations. Tepmetko® is now available in approximately 40 markets globally, with regulatory submissions under review in additional markets. In February, the U.S. Food and Drug Administration (FDA) granted full approval to Tepmetko®, which had previously been available in the United States under accelerated approval.

In June, we announced the discontinuation of the randomized Phase III TrilynX study evaluating xevinapant plus chemoradiotherapy in patients with unresected locally advanced squamous cell carcinoma of the head and neck (LA SCCHN). The Phase III clinical trial XRay Vision evaluating xevinapant plus radiotherapy in patients with resected LA SCCHN was also discontinued.

In the first half of 2024, we also continued to advance our efforts in novel medicines. We presented results from a Phase Ia study of our anti-CEACAM5 antibody-drug conjugate (ADC) M9140 in advanced CRC in an oral presentation at the 2024 annual meeting of the American Society of Clinical Oncology (ASCO). This is the first ADC developed in our labs to enter clinical development. We have progressed this asset to Phase Ib in CRC.

Within our DNA damage response (DDR) portfolio, we are continuing to advance the development of tuvusertib (M1774), our potent and selective inhibitor of ataxia telangiectasia and Rad3-related. We are exploring tuvusertib in four combinations across three Phase II clinical studies. We initiated the ongoing Phase Ib/IIa DDRiver NSCLC 322 study of tuvusertib in combination with cemiplimab in participants with non-squamous non-small cell lung cancer and the recently opened DDRiver EOC 302 study combining tuvusertib with lartesertib (M4076) or niraparib in biomarker-selected PARP-resistant ovarian cancer as well as the JAVELIN DDRiver Bladder study of tuvusertib in combination with Bavencio® in advanced UC.

Neurology & Immunology

In Neurology & Immunology, we aim to develop therapies for people living with neurological and immune-mediated conditions and to help significantly improve quality of life for them and their caregivers. With over two decades of experience in MS research, our current portfolio includes two approved products for the treatment of relapsing MS (RMS) – Rebif® (interferon beta-1a) and Mavenclad® (cladribine tablets).

Rebif®, a disease-modifying drug, has been a standard treatment in RMS for over 20 years with more than 1.9 million patient-years of therapy since approval.

Mavenclad®, a short-course oral therapy for the treatment of adults with various forms of highly active RMS, generated sales of € 527 million in the first half of 2024 and is approved in 95 countries worldwide, including those of the European Union, Switzerland, Australia, Canada, and the United States.

Beyond MS, we are continuing to expand the therapeutic focus areas for our Neurology & Immunology franchise by developing potential first-in-class treatments for conditions with high unmet medical needs. In June 2023, the FDA granted orphan drug designation for a new formulation of oral cladribine for the treatment of myasthenia gravis. We began a global Phase III clinical trial program in June 2024.

Enpatoran, an investigational therapy in Phase II of clinical development, is a toll-like receptor 7 and 8 (TLR7/8) inhibitor targeting a biologic pathway associated with severe forms of lupus. We anticipate Phase II results for enpatoran in cutaneous and systemic lupus in early 2025.

Fertility

We are a global market leader in fertility drugs and treatments.

Infertility is a growing challenge globally due to demographic changes and lifestyle adjustments such as delayed childbearing. Based on the latest data from WHO, one in six people worldwide is affected by infertility.

According to the latest data, more than five million babies have been born worldwide with the help of Gonal-f®, a therapeutic within our Fertility portfolio. It contains the active ingredient follitropin alfa (r-hFSH alfa), which is a recombinant form of the natural hormone FSH and is available in a convenient and ready-to-use pre-filled injection pen.

The latest real-world study from France showed improved live birth outcomes with Gonal-f® compared with other commonly used gonadotropins. Real-world evidence complements randomized clinical trials by providing additional insights into long-term treatment effects in large, heterogeneous patient populations.

To support and meet the needs of a variety of patients, in addition to Gonal-f®, we offer another key product called Pergoveris®. It is a product that combines recombinant human follicle-stimulating hormone (r-hFSH) and recombinant human luteinizing hormone (r-hLH). This represents another treatment option for women with severe FSH and LH deficiency. Pergoveris® is also available as a ready-to-use pre-filled injection pen, eliminating the need for mixing.

Cardiovascular, Metabolism & Endocrinology

Cardiovascular, Metabolism & Endocrinology (CM&E), which includes the medicines Glucophage®, Euthyrox®, Concor®, and Saizen®, is the largest franchise of the Healthcare business sector in terms of sales.

Concor®/Concor Cor®, containing bisoprolol, is a beta-blocker for treating hypertension and cardiovascular diseases such as coronary heart disease and chronic heart failure. In addition to Concor®/Concor Cor®, the Concor® family includes fixed-dose combinations such as Concor Plus®/Lodoz® (bisoprolol with hydrochlorothiazide).

Euthyrox®, with the active ingredient levothyroxine, is a leading medicine for the treatment of hypothyroidism, a disease with high prevalence but still low diagnosis rates in most emerging markets.

Glucophage®, containing the active ingredient metformin, is a drug for first-line treatment of type 2 diabetes and is available in more than 100 countries. In recent years, Glucophage® has been approved by further health authorities for use in prediabetes when intensive lifestyle changes failed.

Saizen®, containing the active ingredient somatropin, is our main endocrinology product and is indicated for the treatment of multiple growth hormone disorders in children and adults. Saizen® can be delivered with the Easypod® electromechanical injection device, the only growth hormone injection device able to wirelessly transfer data such as injection times, dates and doses to the web-based software system Growzen® Connect.

Electronics

We are a major supplier of materials, services and equipment for the semiconductor and display industries with a broad portfolio of materials, systems and services as well as R&D and a global production network close to our customers. In addition, our Materials Intelligence™ contributes to the development of next-generation microchips. We have built our portfolio to cater to continued digitalization and the unabated growth of data. The demand for increasingly sophisticated semiconductors and displays will continue to rise, not least thanks to developments such as artificial intelligence (AI), the Internet of Things and digitalization. In recent years, we have evolved into an important player in the global electronic materials market. In addition, we offer decorative and functional solutions for surfaces of all kinds.

In 2021, we started our “Level Up” growth program and are continuing to invest more than € 3 billion in innovation and capacity expansion. We plan to continue this program and align the timeframe of our investments with market demand.

We are also focusing our R&D capabilities on next-generation semiconductor materials to further strengthen our position as one of the leading suppliers to the electronics industry. Our R&D aims to find solutions for the needs that drive our industry: to create smaller, more powerful and more efficient chips and reduce the impact on the environment. Consequently, both sustainability and the use of AI and machine learning are key focus areas of our R&D.

The Electronics business sector consists of three business units: Semiconductor Solutions, Display Solutions and Surface Solutions. Three cross-functional boards support the business units: the Technology Leadership Board, the Supply Chain Leadership Board and the Commercial Leadership Board. They define cross-sector standards, steer portfolio management, promote exchange on good practices, and encourage transparency.

Semiconductor Solutions

Semiconductor Solutions is the largest business unit in terms of sales within Electronics and comprises our product and service offering for the semiconductor industry. We are developing materials and solutions to enable the next generation of smaller, faster, more powerful, and more sustainable microchips.

Semiconductor Solutions supplies products for the most important production steps in wafer processing: doping, patterning, deposition, planarization, etching, and cleaning. It also supplies delivery equipment for semiconductor manufacturing. Specialty cleans, photoresists and CMP (chemical mechanical planarization) slurries for semiconductor packaging complement the portfolio. Intermolecular is our center for complex material solutions in Electronics, located in San José, California, USA. There, we explore, test and develop combinations of various materials for next-generation electronics.

Our Semiconductor Solutions business unit consists of the following business fields: Formulations, Thin Films, Specialty Gases, and Delivery Systems & Services.

The Formulations business field comprises the Patterning and Planarization businesses. In Patterning, we intensified our development of PFAS (per- and polyfluoroalkyl substances)-free materials over the first half of 2024, reflecting our commitment to sustainable and environmentally conscious solutions. We expect this strategic investment to have a positive business impact, particularly in the area of our advanced EUV (extreme ultraviolet) rinse materials. Additionally, we have marked a pivotal step in our innovation efforts to finalize the development of new PFAS-free i-Line (365 nm wavelength) and KrF (248 nm wavelength) photoresists, which we are sampling with customers. These photoresists are key in the semiconductor manufacturing process, enabling intricate patterns with light sources of these wavelengths when producing integrated circuits.

Furthermore, our long-term focus on directed self-assembly (DSA) has proven successful. To this end, we have invested in new facilities in Darmstadt in order to be prepared for high-volume manufacturing. The industry’s response to DSA has been encouraging as it addresses stochastic defects and demonstrates a compelling improvement in cost of ownership.

In Planarization, we have seen substantial growth in China, driven by legacy memory and logic applications. In addition, some of our BEOL (back end of line) products are now in the advanced stages of qualification for use in heterogeneous integration, thus paving the way for further AI-driven chip developments. We are continuing to leverage the first customer for our tungsten slurries, which we gained in 2023, to expand use in memory applications.

The Thin Films business field provides best-in-class advanced materials for wafer production, such as materials for atomic layer deposition and chemical vapor deposition as well as spin-on materials. We mainly supply to leading-edge customers that require a high level of innovation to produce next-generation logic and memory chips. In the first half of 2024, we completed the integration of M Chemicals Inc., Korea, into our Thin Films business, complementing our product portfolio with high-k precursors and providing the infrastructure and space to support our future growth.

In R&D, we are continuing to expand our technology and product portfolio by developing novel materials, including molybdenum for the selective deposition and gap fill films, which play a crucial role in enabling the semiconductor technology roadmap. In addition, the business has benefited from the volume ramp-up of advanced nodes at leading-edge fabs and has significantly outgrown the market thanks to higher material content in advanced nodes resulting from BKM (best known method) and POR (process of record) wins. We continue to collaborate with original equipment manufacturers and device makers to enable microchips that power future technologies such as AI.

The Specialty Gases business field provides high-purity gases for precise deposition, doping, etching, and cleaning during wafer fabrication. We are continuing our efforts to develop new less climate-changing, low-emission etching and cleaning gases and expand the range of applications for which we are developing these sustainable solutions. We are also actively participating in consortia and industry-wide projects that bring academia and the semiconductor ecosystem together to advance sustainability through partnership.

The Delivery Systems & Services business field develops and installs reliable delivery equipment to ensure the safe and responsible handling of specialty chemicals and gases. We are continuing to execute our expansion plans in the United States, China and Taiwan as well as ramping up manufacturing capacities to support customer demand in these key markets.

Display Solutions

Our Display Solutions business unit includes the businesses with liquid crystals (LC), materials for display patterning, photoresists, and organic light-emitting diodes (OLED) as well as reactive mesogens and liquid crystal glazing (LC-based windows). We support our customers in developing novel display technologies for TV, IT, mobile devices, automotive, gaming, and other applications. Together with our customers, we are working in the field of AR/VR to expand the use of display materials and enhance the user experience in small and micro-sized displays. We are working very closely with leading panel makers to develop next-generation display products and technologies.

In the first half of 2024, our liquid crystal business stabilized despite fierce competition in mainland China and Taiwan, benefiting from growing demand for high-end large-screen TVs and a well-positioned IT business.

Our OLED and photoresist materials are used in numerous free-form display products. With our OLED materials, we are also supporting our customers in making sustainable OLED structures, which are important for new OLED applications such as IT screens.

In addition, we are actively working with customers on both LC-on-silicon and OLED-on-silicon solutions for AR/VR displays as well as on advancing the development of materials for waveguides and gratings for use in new augmented reality devices.

Surface Solutions

In our Surface Solutions business unit, we provide our customers with solutions that help them create functional and decorative surfaces of all kinds. We focus on markets for automotive coatings, cosmetics and, to a smaller extent, industrial applications. With our portfolio of active ingredients, we enable cosmetics manufacturers to enhance their skin care products with moisturizing, protecting and anti-aging effects. Moreover, our functional solutions serve many innovative applications, from dirt-repellent and easy-care surfaces to laser markings on plastic parts and cables.

Despite the current challenging economic environment, Surface Solutions is continuing to implement its strategic transformation. We are continuing to strengthen digitalization and automation in production while adjusting our capacities to the changing demands in our various markets.

Sustainability

Sustainability is a fundamental aspect for us with three key areas of focus: collaboration and partnership along the value chain, sustainable innovation based on our Materials Intelligence™ and improving the environmental footprint of our own operations. Ongoing programs focus on alternative etching gases with a lower global warming potential as well as substituting PFAS with innovative PFAS-free materials in various areas of semiconductor manufacturing, including patterning. In addition, we continue to drive sustainability within our operations through nitrogen trifluoride (NF_3) abatement, more sustainable processes (such as reconditioning OLED materials) and manufacturing technologies, for example.

To enable more sustainable semiconductor manufacturing solutions, we are jointly funding with Intel Corporation, Santa Clara, California, USA, an academic research program over a three-year period. The program was announced in 2023 and is dedicated to specifically leveraging AI and machine learning technologies to innovate semiconductor manufacturing processes and technologies.

Course of Business and Economic Position

Merck

Development of net sales

The development of Group net sales across the individual business sectors in the second quarter of 2024 (quarter under review) was as follows:

Merck Group

Net sales by business sector

€ million	Q2 2024	Share	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change	Q2 2023	Share
Life Science	2,258	42%	-3.7%	-0.4%	–	-4.1%	2,354	44%
Healthcare	2,137	40%	5.3%	-1.1%	–	4.3%	2,049	39%
Electronics	957	18%	7.6%	-0.9%	-0.2%	6.5%	899	17%
Merck Group	**5,352**	**100%**	**1.7%**	**-0.7%**	**–**	**0.9%**	**5,302**	**100%**

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

The development of Group net sales across the individual business sectors in the first half of 2024 was as follows:

Merck Group

Net sales by business sector

€ million	Jan.-June 2024	Share	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change	Jan.-June 2023	Share
Life Science	4,402	42%	-8.3%	-0.8%	–	-9.1%	4,840	46%
Healthcare	4,184	40%	7.6%	-1.8%	–	5.8%	3,955	37%
Electronics	1,886	18%	7.0%	-2.0%	-0.2%	4.8%	1,800	17%
Merck Group	**10,472**	**100%**	**0.2%**	**-1.4%**	**–**	**-1.2%**	**10,595**	**100%**

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

In the second quarter of 2024, the regional breakdown of Group net sales was as follows:

Merck Group

Net sales by region

€ million	Q2 2024	Share	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change	Q2 2023	Share
Europe	1,560	29%	2.5%	-0.3%	–	2.2%	1,527	29%
North America	1,461	27%	-5.2%	1.0%	–	-4.2%	1,524	29%
Asia-Pacific (APAC)	1,761	33%	4.2%	-2.8%	-0.1%	1.3%	1,737	33%
Latin America	370	7%	11.5%	-0.9%	–	10.6%	335	6%
Middle East and Africa (MEA)	200	4%	10.7%	1.4%	–	12.1%	178	3%
Merck Group	**5,352**	**100%**	**1.7%**	**-0.7%**	**–**	**0.9%**	**5,302**	**100%**

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

In the first half of 2024, net sales by region developed as follows:

Merck Group

Net sales by region

€ million	Jan.-June 2024	Share	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change	Jan.-June 2023	Share
Europe	3,076	29%	-0.6%	-0.4%	–	-1.0%	3,107	29%
North America	2,840	27%	-6.3%	–	–	-6.3%	3,031	29%
Asia-Pacific (APAC)	3,462	33%	4.1%	-4.1%	-0.1%	-0.1%	3,466	33%
Latin America	717	7%	7.5%	1.3%	–	8.8%	658	6%
Middle East and Africa (MEA)	378	4%	13.5%	-0.1%	–	13.5%	333	3%
Merck Group	**10,472**	**100%**	**0.2%**	**-1.4%**	**–**	**-1.2%**	**10,595**	**100%**

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

Results of operations

The following table presents the composition of EBITDA pre for the second quarter of 2024 in comparison with the year-earlier quarter. The IFRS figures have been modified to reflect the elimination of adjustments included in the respective functional costs.

Merck Group

Reconciliation EBITDA pre[1]

	Q2 2024			Q2 2023			Change
€ million	IFRS	Elimination of adjustments	Pre[1]	IFRS	Elimination of adjustments	Pre[1]	Pre[1]
Net sales	**5,352**	**–**	**5,352**	**5,302**	**–**	**5,302**	**0.9%**
Cost of sales	-2,119	5	-2,114	-2,139	5	-2,134	-1.0%
Gross profit	**3,233**	**5**	**3,238**	**3,163**	**5**	**3,168**	**2.2%**
Marketing and selling expenses	-1,146	2	-1,143	-1,139	5	-1,134	0.8%
Administration expenses	-336	30	-306	-345	42	-303	1.1%
Research and development costs	-647	5	-642	-600	8	-593	8.4%
Impairment losses and reversals of impairment losses on financial assets (net)	–	1	1	-10	–	-10	>100.0%
Other operating income and expenses	-311	215	-97	-99	79	-20	>100.0%
Operating result (EBIT)[1]	**792**			**969**			
Margin (in % of net sales)[1]	14.8%			18.3%			
Depreciation/amortization/ impairment losses/reversals of impairment losses	680	-222	458	482	-37	445	2.8%
EBITDA[2]	**1,472**			**1,452**			
Margin (in % of net sales)[1]	27.5%			27.4%			
Restructuring expenses	34	-34	–	39	-39	–	
Integration expenses/ IT expenses	21	-21	–	27	-27	–	
Gains (–)/losses (+) on the divestment of businesses	-52	52	–	17	-17	–	
Acquisition-related adjustments	–	–	–	5	-5	–	
Other adjustments	33	-33	–	13	-13	–	
EBITDA pre[1]	**1,509**	**–**	**1,509**	**1,553**	**–**	**1,553**	**-2.9%**
Margin (in % of net sales)[1]	28.2%			29.3%			
thereof: organic growth[1]							-0.8%
thereof: exchange rate effects							-2.1%
thereof: acquisitions/ divestments							–

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

[2] 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.

The following table presents the composition of EBITDA pre for the first half of 2024 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 pre[1]

	Jan.-June 2024			Jan.-June 2023			Change
€ million	IFRS	Elimination of adjustments	Pre[1]	IFRS	Elimination of adjustments	Pre[1]	Pre[1]
Net sales	**10,472**	**–**	**10,472**	**10,595**	**–**	**10,595**	**-1.2%**
Cost of sales	-4,230	9	-4,220	-4,111	7	-4,104	2.8%
Gross profit	**6,242**	**9**	**6,252**	**6,484**	**7**	**6,491**	**-3.7%**
Marketing and selling expenses	-2,233	12	-2,221	-2,249	4	-2,244	-1.0%
Administration expenses	-668	73	-595	-703	114	-589	1.0%
Research and development costs	-1,228	10	-1,218	-1,198	–	-1,198	1.6%
Impairment losses and reversals of impairment losses on financial assets (net)	1	1	2	-12	–	-12	>100.0%
Other operating income and expenses	-391	223	-168	-318	120	-199	-15.5%
Operating result (EBIT)[1]	**1,724**			**2,004**			
Margin (in % of net sales)[1]	16.5%			18.9%			
Depreciation/amortization/ impairment losses/reversals of impairment losses	1,134	-223	911	938	-47	891	2.2%
EBITDA[2]	**2,857**			**2,942**			
Margin (in % of net sales)[1]	27.3%			27.8%			
Restructuring expenses	79	-79	–	84	-84	–	
Integration expenses/ IT expenses	39	-39	–	51	-51	–	
Gains (–)/losses (+) on the divestment of businesses	-56	56	–	17	-17	–	
Acquisition-related adjustments	3	-3	–	14	-14	–	
Other adjustments	42	-42	–	32	-32	–	
EBITDA pre[1]	**2,963**	**–**	**2,963**	**3,140**	**–**	**3,140**	**-5.7%**
Margin (in % of net sales)[1]	28.3%			29.6%			
thereof: organic growth[1]							-3.0%
thereof: exchange rate effects							-2.6%
thereof: acquisitions/ divestments							–

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

[2] 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.

- In the second quarter of 2024 and the first half of 2024, the operating result (EBIT) decreased in comparison with the year-earlier period. The positive business development in the second quarter of 2024 resulted in an increase in gross profit; however, this was more than offset by increased operating expenses compared with the year-earlier quarter due primarily to higher impairments associated mainly with the termination of the xevinapant program. The decrease in gross profit in the first half of 2024 was attributable to the decline in the first quarter of 2024. The decline in Group EBIT in the first quarter of 2024 continued in the second quarter of 2024 and exceeded the decline of net sales, resulting in a decrease in the EBIT margin in the first half of 2024 compared with the year-earlier period.

- EBITDA pre, the most important financial indicator used to steer operating business, decreased both in the second quarter of 2024 and in the first half of 2024 compared with the respective year-earlier periods. In addition to negative foreign exchange effects, an organic earnings decline contributed to this.
- Compared with the year-earlier period, earnings per share pre (earnings per share after eliminating effects of adjustments and amortization on purchased intangible assets presented in the foregoing table after income taxes, EPS pre) remained constant in the second quarter of 2024 at € 2.20. In addition to the downturn in the first quarter of 2024, EPS pre declined in the first half of 2024 to € 4.26 (January-June 2023: € 4.57).

Financial position

Merck Group

Balance sheet structure

	June 30, 2024		Dec. 31, 2023		Change	
	€ million	in %	€ million	in %	€ million	in %
Non-current assets	36,828	73.8%	36,102	74.4%	726	2.0%
Current assets	13,047	26.2%	12,393	25.6%	653	5.3%
Total assets	**49,875**	**100.0%**	**48,495**	**100.0%**	**1,380**	**2.8%**
Equity	**28,616**	**57.4%**	**26,754**	**55.2%**	**1,862**	**7.0%**
Non-current liabilities	11,328	22.7%	13,042	26.9%	-1,714	-13.1%
Current liabilities	9,931	19.9%	8,699	17.9%	1,232	14.2%
Liabilities	**21,259**	**42.6%**	**21,741**	**44.8%**	**-482**	**-2.2%**
Total equity and liabilities	**49,875**	**100.0%**	**48,495**	**100.0%**	**1,380**	**2.8%**

- In the first half of 2024, the total assets of the Merck Group increased slightly, which was mainly attributable to the rise in cash and cash equivalents as well as an increase in goodwill as a result of foreign exchange effects.
- Equity rose in comparison with December 31, 2023 by 7.0% and amounted to € 28,616 million (December 31, 2023: € 26,754 million), improving the equity ratio to 57.4% (December 31, 2023: 55.2%).
- The decrease in liabilities was largely a result of the decline in other current financial liabilities.

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

Merck Group

Net financial debt[1]

			Change	
€ million	June 30, 2024	Dec. 31, 2023	€ million	in %
Bonds and commercial paper	7,856	7,802	53	0.7%
Bank loans	453	283	170	59.8%
Liabilities to related parties	1,727	1,196	532	44.5%
Loans from third parties and other financial liabilities	64	68	-3	-5.1%
Liabilities from derivatives (financial transactions)	7	77	-69	-90.3%
Lease liabilities	642	515	127	24.6%
Financial debt	**10,750**	**9,941**	**809**	**8.1%**
less:				
Cash and cash equivalents	2,685	1,982	703	35.5%
Current financial assets[2]	115	459	-344	-75.0%
Net financial debt[1]	**7,950**	**7,500**	**450**	**6.0%**

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

[2] Excluding current derivatives (operational) and contingent considerations, which are recognized in the context of business combinations according to IFRS 3.

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	Q2 2024	Q2 2023	Change	Jan.-June 2024	Jan.-June 2023	Change
EBITDA pre[1]	**1,509**	**1,553**	**-2.9%**	**2,963**	**3,140**	**-5.7%**
Adjustments[1]	-36	-102	-64.1%	-106	-198	-46.7%
Financial result[2]	-7	-76	-90.6%	-39	-98	-60.0%
Income tax[2]	-180	-188	-4.2%	-379	-400	-5.2%
Changes in working capital[1]	-134	-53	>100.0%	-311	-277	12.4%
thereof: changes in inventories[3]	1	-106	>100.0%	-40	-429	-90.7%
thereof: changes in trade accounts receivable[3]	-110	15	>100.0%	-174	-102	70.6%
thereof: changes in trade accounts payable/refund liabilities[3]	-25	39	>100.0%	-98	254	>100.0%
Changes in provisions[3]	-18	53	>100.0%	22	45	-52.1%
Changes in other assets and liabilities[3]	-265	-421	-37.1%	-232	-608	-61.8%
Neutralization of gains/losses on disposals of fixed assets and other disposals[3]	-1	-146	-99.1%	-9	-146	-93.7%
Other non-cash income and expenses[3]	-6	–	>100.0%	-11	17	>100.0%
Operating cash flow	**861**	**622**	**38.4%**	**1,896**	**1,475**	**28.6%**

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

[2] In accordance with the Consolidated Income Statement.

[3] In accordance with the Consolidated Cash Flow Statement.

Life Science

Development of net sales and results of operations

In the second quarter of 2024, the net sales of the Life Science business sector developed as follows:

Life Science

Net sales by business unit

€ million	Q2 2024	Share	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change	Q2 2023	Share
Science & Lab Solutions	1,192	53%	1.4%	-0.5%	–	0.9%	1,182	50%
Process Solutions	871	38%	-11.8%	-0.5%	–	-12.3%	994	42%
Life Science Services	194	9%	8.2%	1.0%	–	9.2%	178	8%
Life Science	**2,258**	**100%**	**-3.7%**	**-0.4%**	**–**	**-4.1%**	**2,354**	**100%**

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

The development of Life Science net sales across the individual business units in the first half of 2024 was as follows:

Life Science

Net sales by business unit

€ million	Jan.-June 2024	Share	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change	Jan.-June 2023	Share
Science & Lab Solutions	2,362	54%	-2.9%	-1.0%	–	-3.9%	2,458	51%
Process Solutions	1,689	38%	-15.4%	-0.8%	–	-16.2%	2,016	42%
Life Science Services	351	8%	-4.6%	0.5%	–	-4.1%	366	7%
Life Science	**4,402**	**100%**	**-8.3%**	**-0.8%**	**–**	**-9.1%**	**4,840**	100%

[1] 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, saw organic growth in the second quarter of 2024 mainly due to higher demand from large customer accounts in Europe.
  In general, the performance in the first half of 2023 was still driven by higher Covid-19-related sales and a more beneficial economic environment. Therefore, the year-on-year comparison is impacted by a base effect, leading to an overall organic decline in the first half of 2024. Including an unfavorable foreign exchange effect of -1.0%, the decline in sales was mainly driven by Asia-Pacific, followed by North America and Europe.

- The Process Solutions business unit, which markets products and services for the entire pharmaceutical production value chain, saw an organic decrease in sales due to the continued presence of pandemic-related sales in the year-earlier quarter as well as the ongoing effects of destocking by key customers. Including an unfavorable foreign exchange effect of -0.8%, net sales decreased across all core regions (North America, Europe, Asia-Pacific) in the first half of 2024. While the organic decline was visible in both the first and second quarter of 2024 compared with the respective year-earlier quarters, it slowed down in the second quarter.

- The Life Science Services business unit, which offers fully integrated contract development and manufacturing (CDMO) and contract testing services, saw organic sales growth in the second quarter of 2024, mainly driven by higher demand for biotesting services and stronger adoption of next-generation sequencing products in our contract testing services business. However, the organic sales decline in the first quarter of 2024 led to an overall organic decline in the first half of 2024. This was driven by one of our CDMO customers adjusting its supply chain. In addition, sales of our CDMO activities declined organically due to Covid-19-related sales tapering off. Geographically, the decrease in sales was mainly attributable to Europe and North America, while the Asia-Pacific region contributed favorably.

The following table presents the composition of EBITDA pre for the second quarter of 2024 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]

	Q2 2024			Q2 2023			Change
€ million	IFRS	Elimination of adjustments	Pre[1]	IFRS	Elimination of adjustments	Pre[1]	Pre[1]
Net sales	**2,258**	**–**	**2,258**	**2,354**	**–**	**2,354**	**-4.1%**
Cost of sales	-1,042	1	-1,041	-1,078	–	-1,078	-3.5%
Gross profit	**1,216**	**1**	**1,217**	**1,275**	**–**	**1,275**	**-4.6%**
Marketing and selling expenses	-567	4	-563	-566	–	-566	-0.6%
Administration expenses	-104	8	-96	-103	12	-91	5.8%
Research and development costs	-96	–	-96	-99	1	-98	-2.1%
Impairment losses and reversals of impairment losses on financial assets (net)	–	–	–	-1	–	-1	-90.3%
Other operating income and expenses	-78	59	-20	-51	32	-18	9.1%
Operating result (EBIT)[1]	**370**			**455**			
Margin (in % of net sales)[1]	16.4%			19.3%			
Depreciation/amortization/ impairment losses/reversals of impairment losses	269	-56	213	243	-32	211	0.6%
EBITDA[2]	**639**			**698**			
Margin (in % of net sales)[1]	28.3%			29.7%			
Restructuring expenses	9	-9	–	2	-2	–	
Integration expenses/ IT expenses	8	-8	–	12	-12	–	
Gains (-)/losses (+) on the divestment of businesses	–	–	–	–	–	–	
Acquisition-related adjustments	–	–	–	–	–	–	
Other adjustments	–	–	–	–	–	–	
EBITDA pre[1]	**655**	**–**	**655**	**712**	**–**	**712**	**-8.0%**
Margin (in % of net sales)[1]	29.0%			30.2%			
thereof: organic growth[1]							-6.1%
thereof: exchange rate effects							-1.9%
thereof: acquisitions/ divestments							–

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

[2] 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.

The following table presents the composition of EBITDA pre for the first half of 2024 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 pre[1]

	Jan.-June 2024			Jan.-June 2023			Change
€ million	IFRS	Elimination of adjustments	Pre[1]	IFRS	Elimination of adjustments	Pre[1]	Pre[1]
Net sales	**4,402**	**–**	**4,402**	**4,840**	**–**	**4,840**	**-9.1%**
Cost of sales	-2,029	2	-2,028	-2,077	–	-2,077	-2.4%
Gross profit	**2,372**	**2**	**2,374**	**2,763**	**–**	**2,763**	**-14.1%**
Marketing and selling expenses	-1,117	9	-1,108	-1,134	-1	-1,135	-2.4%
Administration expenses	-216	25	-191	-208	23	-185	3.3%
Research and development costs	-192	1	-191	-203	1	-202	-5.5%
Impairment losses and reversals of impairment losses on financial assets (net)	-1	–	-1	-2	–	-2	-50.2%
Other operating income and expenses	-98	61	-37	-88	39	-50	-25.3%
Operating result (EBIT)[1]	**748**			**1,128**			
Margin (in % of net sales)[1]	17.0%			23.3%			
Depreciation/amortization/ impairment losses/reversals of impairment losses	476	-56	420	455	-32	423	-0.7%
EBITDA[2]	**1,224**			**1,583**			
Margin (in % of net sales)[1]	27.8%			32.7%			
Restructuring expenses	27	-27	–	2	-2	–	
Integration expenses/ IT expenses	15	-15	–	23	-23	–	
Gains (-)/losses (+) on the divestment of businesses	–	–	–	–	–	–	
Acquisition-related adjustments	1	-1	–	5	-5	–	
Other adjustments	–	–	–	–	–	–	
EBITDA pre[1]	**1,266**	**–**	**1,266**	**1,612**	**–**	**1,612**	**-21.5%**
Margin (in % of net sales)[1]	28.8%			33.3%			
of which: organic growth[1]							-19.6%
of which: exchange rate effects							-1.9%
of which: acquisitions/ divestments							–

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

- Adjusted gross profit for the Life Science business sector was lower in both the second quarter of 2024 and the first half of 2024 in comparison with the year-earlier periods. This was mainly attributable to the sales decline due to the effects of destocking by key customers in Process Solutions as well as fixed plant costs amid the continued decrease in pandemic-related sales. At 53.9%, the adjusted gross margin for the first half of 2024 was below the year-earlier period (January-June 2023: 57.1%).
- The reduction in gross profit was partially compensated by lower operational expenses. In the first half of 2024, the decrease in marketing and selling expenses was mainly driven by cost programs and efficiencies alongside lower logistics costs. While the decrease in research and development costs was largely driven by project phasing, administration expenses increased organically in the second quarter of 2024 in particular as a result of higher personnel costs. The net position of other operating income and expenses after eliminating adjustments improved in the first half of 2024 due to a one-time disposal of an asset and cost savings in the first quarter of 2024.
- While EBITDA pre saw an organic decline in both the first and second quarter of 2024 compared with the year-earlier quarters, it decelerated in the second quarter and resulted in an EBITDA pre margin of 28.8% for the first half of 2024 (January-June 2023: 33.3%).

Healthcare

Development of net sales and results of operations

In the second quarter of 2024, sales of the key product lines and products developed as follows:

Healthcare

Net sales by major product lines/products

€ million	Q2 2024	Share	Organic growth[1]	Exchange rate effects	Total change	Q2 2023	Share
Oncology	**490**	**23%**	**9.2%**	**-2.1%**	**7.1%**	**458**	**22%**
thereof: Erbitux®	276	13%	8.2%	-2.1%	6.1%	260	13%
thereof: Bavencio®	186	9%	6.4%	-1.9%	4.5%	178	9%
Neurology & Immunology	**434**	**20%**	**-7.4%**	**0.2%**	**-7.2%**	**467**	**23%**
thereof: Mavenclad®	266	12%	1.3%	0.1%	1.4%	262	13%
thereof: Rebif®	168	8%	-18.5%	0.3%	-18.2%	205	10%
Fertility	**403**	**19%**	**-0.5%**	**-0.9%**	**-1.5%**	**409**	**20%**
thereof: Gonal-f®	227	11%	5.0%	-1.0%	4.0%	219	11%
Cardiovascular, Metabolism and Endocrinology	**746**	**35%**	**13.7%**	**-1.6%**	**12.1%**	**665**	**32%**
thereof: Glucophage®	238	11%	23.5%	-2.6%	20.9%	197	10%
thereof: Concor®	158	7%	13.2%	-1.8%	11.4%	142	7%
thereof: Euthyrox®	155	7%	19.2%	-0.8%	18.4%	131	6%
thereof: Saizen®	97	5%	23.0%	-0.6%	22.4%	79	4%
Other	**64**	**3%**				**50**	**3%**
Healthcare	**2,137**	**100%**	**5.3%**	**-1.1%**	**4.3%**	**2,049**	**100%**

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

From January to June 2024, the development of Healthcare net sales across the major product lines and products was as follows:

Healthcare

Net sales by major product lines/products

€ million	Jan.-June 2024	Share	Organic growth[1]	Exchange rate effects	Total change	Jan.-June 2023	Share
Oncology	**990**	**24%**	**14.1%**	**-2.9%**	**11.2%**	**891**	**22%**
thereof: Erbitux®	563	13%	13.6%	-3.2%	10.5%	510	13%
thereof: Bavencio®	372	9%	10.2%	-2.3%	7.8%	345	9%
Neurology & Immunology	**853**	**20%**	**–**	**-0.6%**	**-0.6%**	**858**	**22%**
thereof: Mavenclad®	527	12%	6.5%	-0.9%	5.6%	499	13%
thereof: Rebif®	326	8%	-9.0%	-0.2%	-9.2%	359	9%
Fertility	**786**	**19%**	**3.4%**	**-2.0%**	**1.3%**	**776**	**20%**
thereof: Gonal-f®	431	10%	5.8%	-2.2%	3.6%	416	11%
Cardiovascular, Metabolism and Endocrinology	**1,435**	**34%**	**8.9%**	**-2.0%**	**6.9%**	**1,342**	**34%**
thereof: Glucophage®	459	11%	13.8%	-3.2%	10.6%	415	10%
thereof: Concor®	297	7%	7.4%	-2.7%	4.7%	284	7%
thereof: Euthyrox®	294	7%	14.1%	-1.3%	12.8%	260	7%
thereof: Saizen®	186	4%	20.0%	-0.4%	19.6%	155	4%
Other	**121**	**3%**				**89**	**2%**
Healthcare	**4,184**	**100%**	**7.6%**	**-1.8%**	**5.8%**	**3,955**	**100%**

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

- In the second quarter of 2024, sales of the oncology drug Erbitux® (cetuximab) recorded strong organic growth, driven by the Europe, Latin America and Asia-Pacific regions, whereas sales in the Middle East and Africa region decreased organically. Propelled by higher demand in all regions, Erbitux® saw strong organic sales growth in the mid-teens percentage range in the first half of 2024. This was attributable to factors including weaker pandemic-related sales in China during the year-earlier period as well as its inclusion in drug reimbursement programs in several countries.

- In Immuno-Oncology, the oncology drug Bavencio® (avelumab) generated solid organic sales growth in the quarter under review, with all regions except North America contributing to this. While the Europe region in particular generated favorable growth with organic increases in the low-twenties percentage range, demand in North America was lower due to newly approved alternative treatments for patients with locally advanced or metastatic urothelial carcinoma. In the first half of 2024, Bavencio® recorded organic sales growth of around 10% with similar regional dynamics.

- Sales of the drug Rebif®, which is used to treat relapsing forms of multiple sclerosis (MS), decreased organically in the high-teens percentage range in the second quarter of 2024. This was due to the ongoing difficult competitive situation in the interferon market as well as competition from oral dosage forms and high-efficacy MS therapies, which are expected to cause further declines in sales in the future. In the first half of 2024, Rebif® saw lower organic sales declines than in the year-earlier period, which was attributable to positive effects from changes in inventories in North America.

- Mavenclad®, our oral short-course treatment of highly active relapsing multiple sclerosis, delivered slight organic sales growth in the second quarter of 2024. Rising demand, especially in North America, but also in Latin America and Europe was almost offset by declines in sales in the Middle East and Africa region. In addition, the second quarter of 2023 was a particularly strong quarter, providing for a higher comparative base than usual. Driven by a strong first quarter of 2024, the first half of 2024 as a whole saw solid organic sales growth, with all regions except the Middle East and Africa contributing to this.

- In organic terms, the Fertility product line recorded roughly stable sales in the quarter under review compared with the year-earlier period. Gonal-f®, the leading recombinant hormone for the treatment of infertility, delivered solid organic growth, while other products from the Fertility product line recorded a slight organic decline in sales overall. In the first half of 2024, the Fertility franchise achieved moderate organic growth, which was particularly attributable to the Asia-Pacific region and the Middle East and Africa region.

- The Cardiovascular, Metabolism and Endocrinology franchise, which commercializes products to treat cardiovascular diseases, thyroid disorders, diabetes, and growth disorders, among other things, delivered organic sales growth in the mid-teens percentage range in the second quarter of 2024. The diabetes medicine Glucophage® reported favorable sales growth in the mid-twenties percentage range driven by all regions, especially as a result of the recovering market situation in China after the end of the Covid-19 pandemic. The beta-blocker Concor® saw organic sales growth in the mid-teens percentage range, while the thyroid medicine Euthyrox® recorded a sales increase in the high-teens percentage range compared with the year-earlier period. The favorable organic growth of Saizen® in the mid-twenties percentage range as a result of increasing demand and stock-outs of a competing product once again had a positive impact on the franchise. In the first half of 2024, the Cardiovascular, Metabolism and Endocrinology franchise generated strong organic growth overall in the high single-digit percentage range.

The following table presents the composition of EBITDA pre for the second quarter of 2024 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 pre[1]

	Q2 2024			Q2 2023			Change
€ million	IFRS	Elimination of adjustments	Pre[1]	IFRS	Elimination of adjustments	Pre[1]	Pre[1]
Net sales	**2,137**	**–**	**2,137**	**2,049**	**–**	**2,049**	**4.3%**
Cost of sales	-506	–	-506	-486	-2	-488	3.7%
Gross profit	**1,631**	**–**	**1,631**	**1,564**	**-2**	**1,562**	**4.4%**
Marketing and selling expenses	-437	-2	-439	-422	5	-418	5.1%
Administration expenses	-78	3	-76	-79	3	-76	-0.1%
Research and development costs	-445	5	-441	-401	5	-396	11.2%
Impairment losses and reversals of impairment losses on financial assets (net)	2	–	2	-8	–	-8	>100.0%
Other operating income and expenses	-171	120	-50	-36	–	-36	39.8%
Operating result (EBIT)[1]	**501**			**616**			
Margin (in % of net sales)[1]	23.4%			30.0%			
Depreciation/amortization/ impairment losses/reversals of impairment losses	249	-155	93	76	–	76	22.4%
EBITDA[2]	**749**			**692**			
Margin (in % of net sales)[1]	35.1%			33.8%			
Restructuring expenses	2	-2	–	12	-12	–	
Integration expenses/IT expenses	3	-3	–	3	-3	–	
Gains (-)/losses (+) on the divestment of businesses	-35	35	–	-4	4	–	
Acquisition-related adjustments	–	–	–	–	–	–	
Other adjustments	–	–	–	–	–	–	
EBITDA pre[1]	**720**	**–**	**720**	**704**	**–**	**704**	**2.3%**
Margin (in % of net sales)[1]	33.7%			34.3%			
thereof: organic growth[1]							4.6%
thereof: exchange rate effects							-2.3%
thereof: acquisitions/ divestments							–

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

[2] 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.

The following table presents the composition of EBITDA pre for the first half of 2024 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 pre[1]

	Jan.-June 2024			Jan.-June 2023			Change
€ million	IFRS	Elimination of adjustments	Pre[1]	IFRS	Elimination of adjustments	Pre[1]	Pre[1]
Net sales	**4,184**	**–**	**4,184**	**3,955**	**–**	**3,955**	**5.8%**
Cost of sales	-1,049	–	-1,049	-933	-2	-934	12.3%
Gross profit	**3,135**	**–**	**3,135**	**3,022**	**-2**	**3,021**	**3.8%**
Marketing and selling expenses	-836	2	-834	-803	5	-798	4.5%
Administration expenses	-154	4	-150	-155	7	-147	1.7%
Research and development costs	-843	9	-834	-797	-3	-800	4.2%
Impairment losses and reversals of impairment losses on financial assets (net)	4	–	4	-9	–	-9	>100.0%
Other operating income and expenses	-188	112	-76	-123	–	-123	-38.5%
Operating result (EBIT)[1]	**1,119**			**1,135**			
Margin (in % of net sales)[1]	26.7%			28.7%			
Depreciation/amortization/ impairment losses/reversals of impairment losses	337	-155	182	149	1	150	21.3%
EBITDA[2]	**1,456**			**1,285**			
Margin (in % of net sales)[1]	34.8%			32.5%			
Restructuring expenses	8	-8	–	5	-5	–	
Integration expenses/ IT expenses	4	-4	–	7	-7	–	
Gains (-)/losses (+) on the divestment of businesses	-39	39	–	-4	4	–	
Acquisition-related adjustments	–	–	–	–	–	–	
Other adjustments	–	–	–	–	–	–	
EBITDA pre[1]	**1,428**	**–**	**1,428**	**1,293**	**–**	**1,293**	**10.4%**
Margin (in % of net sales)[1]	34.1%			32.7%			
of which: organic growth[1]							15.4%
of which: exchange rate effects							-5.0%
of which: acquisitions/ divestments							–

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

[2] 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.

- In the second quarter of 2024, gross profit after the elimination of adjustments saw a solid increase, whereas the gross margin was roughly at the level of the year-earlier period, amounting to 76.3% (Q2 2023: 76.2%). In the first half of 2024, gross profit after eliminating adjustments increased moderately, resulting in a gross margin of 74.9% (January-June 2023: 76.4%).

- While administration expenses in the second quarter and the first half of 2024 were roughly at the level of the year-earlier period, marketing and selling expenses increased in the mid single-digit percentage range during the same period. This development occurred against the backdrop of, among other things, the termination of the strategic alliance with Pfizer Inc., USA, (Pfizer) to co-develop and co-commercialize the oncology medicine Bavencio® with effect from June 30, 2023, which made it necessary to place a greater focus on initiating in-house sales activities.

- Research and development costs after eliminating adjustments increased sharply in the second quarter of 2024, which was mainly attributable to provisions recognized for follow-on obligations from the termination of the research program on xevinapant, an antagonist of apoptosis inhibitors, for the treatment of locally advanced head and neck cancer. In line with the aforementioned developments, research and development costs after eliminating adjustments also increased moderately in the first half of 2024; however, this was partly offset by lower costs due to the termination of the research program on evobrutinib in the fourth quarter of 2023.

- The negative net balance of other operating income and expenses after eliminating adjustments grew in the second quarter of 2024 compared with the year-earlier period. After the elimination of adjustments, other operating income in the reporting period remained below that of the year-earlier period due to a lack of income from the disposal of intangible assets compared with the second quarter of 2023. The decline in other operating income was not completely offset by the decrease in other operating expenses after the elimination of adjustments as a result of the inclusion of royalties to Pfizer in connection with sales of the oncology medicine Bavencio® in cost of sales since July 2023. In the first half of 2024, the negative net balance of other operating expenses and income after the elimination of adjustments was lower than in the year-earlier period, which was attributable to the royalties to Pfizer in connection with Bavencio® now being included in cost of sales.

- In the second quarter of 2024, EBITDA pre saw a slight organic increase, leading to an EBITDA pre margin of 33.7% (Q2 2023: 34.3%). In the first half of 2024, EBITDA pre grew by around 10% as a result of the development in the first quarter of 2024, which resulted in an EBITDA pre margin of 34.1% (January-June 2023: 32.7%).

Electronics

Development of net sales and results of operations

In the second quarter of 2024, net sales of the Electronics business sector developed as follows:

Electronics

Net sales by business unit

€ million	Q2 2024	Share	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change	Q2 2023	Share
Semiconductor Solutions	665	69%	11.4%	-0.6%	-0.4%	10.4%	602	67%
Display Solutions	188	20%	-2.4%	-1.5%	–	-3.9%	196	22%
Surface Solutions	104	11%	4.1%	-1.3%	–	2.8%	101	11%
Electronics	**957**	**100%**	**7.6%**	**-0.9%**	**-0.2%**	**6.5%**	**899**	**100%**

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

The development of Electronics net sales across the individual business units in the first half of 2024 was as follows:

Electronics

Net sales by business unit

€ million	Jan.-June 2024	Share	Organic growth[1]	Exchange rate effects	Acquisitions/ divestments	Total change	Jan.-June 2023	Share
Semiconductor Solutions	1,298	69%	9.6%	-1.8%	-0.2%	7.6%	1,207	67%
Display Solutions	375	20%	0.8%	-2.9%	–	-2.0%	383	21%
Surface Solutions	213	11%	2.9%	-1.7%	–	1.1%	210	12%
Electronics	**1,886**	**100%**	**7.0%**	**-2.0%**	**-0.2%**	**4.8%**	**1,800**	**100%**

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

- The Semiconductor Solutions business unit, which comprises the two businesses Semiconductor Materials and Delivery Systems & Services (DS&S), generated strong organic sales growth. The main contributor to this was Semiconductor Materials as it recorded double-digit growth across most business fields in the second quarter as the market recovered from a weak first half of 2023. The DS&S quarterly project phasing resulted in a slight decline in the second quarter of 2024, but the business showed slight growth through the first half of 2024.
- Net sales of the Display Solutions business unit, consisting mainly of the business with liquid crystals, photoresists for display applications and OLED materials, remained roughly stable organically through the first half of 2024. Sales were slightly down in the second quarter of the year as volume growth was more than offset by price erosion for liquid crystals due to continued competitive pressure.
- Net sales of the Surface Solutions business unit built on the growth from the first quarter, growing in the second quarter of 2024 across most business lines.

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

Electronics

Reconciliation EBITDA pre[1]

	Q2 2024			Q2 2023			Change
€ million	IFRS	Elimination of adjustments	Pre[1]	IFRS	Elimination of adjustments	Pre[1]	Pre[1]
Net sales	**957**	**–**	**957**	**899**	**–**	**899**	**6.5%**
Cost of sales	-573	4	-568	-572	6	-566	0.4%
Gross profit	**385**	**4**	**389**	**327**	**6**	**333**	**16.8%**
Marketing and selling expenses	-142		-142	-148	–	-147	-3.8%
Administration expenses	-36	2	-34	-35	4	-31	7.9%
Research and development costs	-75	–	-75	-75	–	-74	1.3%
Impairment losses and reversals of impairment losses on financial assets (net)	-1	1	–	–	–	–	–
Other operating income and expenses	-24	16	-8	40	11	52	>100.0%
Operating result (EBIT)[1]	**107**			**110**			
Margin (in % of net sales)[1]	11.2%			12.2%			
Depreciation/amortization/ impairment losses/reversals of impairment losses	135	-11	125	135	-5	130	-3.9%
EBITDA[2]	**242**			**245**			
Margin (in % of net sales)[1]	25.3%			27.2%			
Restructuring expenses	4	-4	–	7	-7	–	
Integration expenses/ IT expenses	7	-7	–	5	-5	–	
Gains (-)/losses (+) on the divestment of businesses	1	-1	–	–	–	–	
Acquisition-related adjustments	1	-1	–	5	-5	–	
Other adjustments	–	–	–	–	–	–	
EBITDA pre[1]	**255**	**–**	**255**	**262**	**–**	**262**	**-2.5%**
Margin (in % of net sales)[1]	26.7%			29.1%			
thereof: organic growth[1]							-3.1%
thereof: exchange rate effects							0.7%
thereof: acquisitions/ divestments							–

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

[2] 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.

The following table presents the composition of EBITDA pre for the first half of 2024 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 pre[1]

	Jan.-June 2024			Jan.-June 2023			Change
€ million	IFRS	Elimination of adjustments	Pre[1]	IFRS	Elimination of adjustments	Pre[1]	Pre[1]
Net sales	**1,886**	**–**	**1,886**	**1,800**	**–**	**1,800**	**4.8%**
Cost of sales	-1,153	8	-1,145	-1,098	8	-1,090	5.1%
Gross profit	**733**	**8**	**741**	**702**	**8**	**710**	**4.3%**
Marketing and selling expenses	-280	–	-279	-306	–	-305	-8.6%
Administration expenses	-73	6	-66	-68	6	-62	6.3%
Research and development costs	-148	–	-148	-149	–	-148	-0.3%
Impairment losses and reversals of impairment losses on financial assets (net)	-1	1	–	–	–	–	–
Other operating income and expenses	-29	20	-9	16	27	43	>100.0%
Operating result (EBIT)[1]	**202**			**196**			
Margin (in % of net sales)[1]	10.7%			10.9%			
Depreciation/amortization/ impairment losses/reversals of impairment losses	265	-11	254	277	-15	262	-3.1%
EBITDA[2]	**467**			**473**			
Margin (in % of net sales)[1]	24.8%			26.3%			
Restructuring expenses	8	-8	–	9	-9	–	
Integration expenses/ IT expenses	13	-13	–	8	-8	–	
Gains (-)/losses (+) on the divestment of businesses	1	-1	–	–	–	–	
Acquisition-related adjustments	2	-2	–	9	-9	–	
Other adjustments	–	–	–	–	–	–	
EBITDA pre[1]	**492**	**–**	**492**	**499**	**–**	**499**	**-1.4%**
Margin (in % of net sales)[1]	26.1%			27.7%			
of which: organic growth[1]							0.2%
of which: exchange rate effects							-1.7%
of which: acquisitions/ divestments							–

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

[2] 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.

- Adjusted gross profit for the Electronics business sector increased in the second quarter of 2024 compared with the second quarter of 2023 driven by the aforementioned increase in sales. At 40.6%, the gross margin after eliminating adjustments increased compared with the year-earlier quarter (Q2 2023: 37.0%), which was primarily attributable to higher volumes and the associated better coverage of fixed costs. The effects realized in the second quarter helped to offset the adverse business mix, unfavorable foreign exchange effects and the delayed effects of inflationary cost increases for raw materials seen in the first quarter of 2024. In the first half of 2024, the gross margin remained virtually unchanged at 38.9% (January-June 2023: 39.0%).

- Marketing and selling expenses, administration costs and research and development costs were nearly stable year-on-year in the second quarter of 2024. Compared with the previous year, other operating income and expenses developed unfavorably in both the second quarter and the first half of 2024 as one-time income from the disposal of OLED patents to the Universal Display Corporation, USA (UDC) was realized in 2023.
- Due to the one-time income from the disposal of OLED patents to UDC in 2023, EBITDA pre declined slightly in both the second quarter and the first half of 2024 in comparison with the corresponding year-earlier periods. The EBITDA pre margin was lower year-on-year at 26.7% in the second quarter of 2024 (Q2 2023: 29.1%); this was largely due to the effects of the disposal of OLED patents and was partially offset by the strong operating performance. In the first half of 2024, the EBITDA pre margin decreased from 27.7% in the year-earlier period to 26.1%. Excluding the effect of the disposal of OLED patents, however, the Electronics business sector would have shown an improvement in margins as the business increased its adjusted gross profit while maintaining good cost discipline on marketing and selling, administrative and research and development expenses.

Corporate and Other

Corporate and Other comprises administration expenses for Group functions that cannot be directly allocated to the business sectors.

Corporate and Other

Key figures

€ million	**Q2 2024**	Q2 2023	Change	**Jan.-June 2024**	Jan.-June 2023	Change
Operating result (EBIT)[1]	-186	-212	-12.3%	-345	-455	-24.1%
EBITDA[2]	-158	-184	-14.0%	-289	-398	-27.4%
EBITDA pre[1]	-121	-124	-2.5%	-223	-264	-15.8%

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

[2] 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.

The improvement in the operating result, EBITDA and EBITDA pre in the second quarter of 2024 as well as the first half of 2024 compared with the year-earlier period was due in particular to the positive currency result from cash flow hedging. In fiscal 2023, higher expenses were incurred due to a program to continuously improve processes and align the Group functions more closely with the businesses; these expenses impacted the operating result and EBITDA.

Report on Risks and Opportunities

As a global science and technology enterprise, identifying risks and opportunities is an intrinsic part of making our businesses resilient and generating value. We offer a broad range of products across our three business sectors, operating in highly innovative business fields. While this creates opportunities, it also exposes the company and its business activities to potential risks that could impact its financial and non-financial objectives. Therefore, managing risks and opportunities is essential and a core component of our internal business planning and forecasting. Our opportunity and risk management processes are outlined in detail in the 2023 Annual Report in the "**Report on Risks and Opportunities**" section.

A Group-wide risk management system is in place to identify, evaluate, mitigate, and continuously monitor potential risks, including financial, business, human resources, information technology, sustainability, safety, security, and legal risks. Legal risks in particular encompass a broad range of potential issues, including product liability litigation, patent law disputes and data privacy concerns as well as any risks associated with antitrust and government proceedings.

The risks and opportunities outlined in the 2023 Annual Report remain valid in the current reporting period, which covers the first half of 2024. Many of the risks have been revised based on the latest plan or reevaluated as necessary. The geopolitical situation highlighted in the 2023 Annual Report, along with its associated risks and opportunities, also continue to apply for this reporting period and are being closely monitored. Further details on developments in specific business sectors are available in the corresponding sections of this report. In this context, we also refer to the section on "**Significant events during the reporting period**".

Overall, the risk landscape has not changed significantly. According to the company's assessment, no risks that could endanger the Group's continued existence were present.

Report on Expected Developments

With the publication of the quarterly statement as of March 31, 2024, we specified 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 and provided an estimate of Group operating cash flow in 2024. With the half-yearly financial report, we update this forecast as follows:

Forecast for the Merck Group

Forecast for FY 2024

€ million	Net sales	EBITDA pre[1]	Operating cash flow
Merck Group	**~20,700 to 22,100** Organic +2% to +5% Foreign exchange effect -3% to 0%	**~5,800 to 6,400** Organic +4% to +10% Foreign exchange effect -5% to -1%	**~4,000 to 4,600**
Life Science	**~8,800 to 9,500** Organic -2% to +2% Foreign exchange effect -3% to +1%	**~2,550 to 2,800** Organic -6% to +1% Foreign exchange effect -4% to 0%	
Healthcare	**~8,200 to 8,750** Organic +6% to +9% Foreign exchange effect -4% to 0%	**~2,850 to 3,050** Organic +18% to +23% Foreign exchange effect -6% to -2%	
Electronics	**~3,650 to 3,950** Organic +4% to +8% Foreign exchange effect -3% to 0%	**~950 to 1,020** Organic +5% to +11% Foreign exchange effect -2% to +1%	
Corporate and Other	n/a	**~-450 to -520**	

[1] 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.

EPS pre € 8.20 to € 9.30, based on an effective tax rate of 22%.

Fundamental assumptions

Against the backdrop of the ongoing highly dynamic development of macroeconomic, geopolitical and industry-specific conditions, the forecast continues to be subject to greater uncertainty and volatility in fiscal 2024 than is normally the case. In terms of expected inflation, we assume a slow normalization.

We also expect a persistently volatile environment as regards the development of foreign exchange rates. For 2024, we continue to forecast unfavorable development of exchange rates, albeit to a weaker extent than in fiscal 2023. Compared with the previous forecast, we expect slightly less favorable development of the euro-U.S. dollar exchange rate. In comparison with the previous year, the negative development will mainly be driven by individual Asian and growth market currencies. For the average euro-U.S. dollar exchange rate, our full-year forecast now ranges between 1.07 and 1.11 for 2024.

Net sales

We are specifying our expectations for the Merck Group and now forecast for fiscal 2024 a return to organic sales growth of between 2% and 5% (previously 1% to 5%), which, compared with the previous forecast, is expected to be mainly attributable to stronger growth in the Healthcare and Electronics business sectors. As expected, the Healthcare business sector will once again be the strongest growth driver compared with the previous year, with Mavenclad® and products from the Oncology and Cardiovascular, Metabolism & Endocrinology franchises making the main contributions. For Life Science, we forecast progressive recovery in the fiscal year, which is expected to lead to organic growth again in the second half of 2024 compared with the previous year. We do not expect any further significant contributions from demand for products in connection

with Covid-19 in 2024. In the Electronics business sector, we are already seeing a trend reversal in sub-segments of the market for semiconductor materials in the second quarter. This is expected to lead to further organic sales growth in this business. We now expect the full market recovery to take place gradually over the second half of the year. The anticipated decline in the Display Solutions business will have a negative impact in fiscal 2024 as will the project business within the Semiconductor Solutions business unit, which is generally subject to stronger fluctuations owing to the dependency on major individual orders. We continue to assume foreign exchange effects between -3% and 0% and are specifying our net sales forecast of between € 20.7 billion and € 22.1 billion (2023: € 21.0 billion) for the Merck Group.

EBITDA pre[1]

We are raising our forecast for EBITDA pre and now assume an organic increase of 4% to 10% (previously 1% to 7%). The development compared with the previous forecast is primarily a result of sales increases in the Healthcare and Electronics business sectors. Compared with the previous year, the increase is expected to be driven primarily by the Healthcare business sector. In addition to the expected sales growth, the termination of the alliance with Pfizer Inc., USA, effective June 30, 2023, and the subsequent regaining of the exclusive global rights to develop, manufacture and commercialize Bavencio® will continue to have a positive effect on EBITDA pre. Moreover, lower costs, especially in research and development, as a result of the failure of evobrutinib to meet its primary endpoint as demonstrated by the results of the clinical trials program published on December 6, 2023, will positively influence EBITDA pre. The additional expenses compared with the previous forecast arising from the recognition of a provision for follow-on obligations due to the termination of the clinical trials for xevinapant announced on June 24, 2024 can be more than offset by stronger operating performance. EBITDA pre of the Life Science business sector is expected to be adversely impacted by negative mix effects, which we will mitigate as far as possible with corresponding cost savings. The development in the Electronics business sector follows a favorable mix effect on sales as well as expected positive effects from active cost management. The sale of a portfolio of licenses and patents in fiscal 2023 will have an opposing effect. The rise in costs in Corporate and Other will be mainly attributable to lower foreign currency hedging gains. The forecast foreign exchange development is likely to lower Group EBITDA pre by between -5% and -1% (previously -4% to -1%). As such, we forecast EBITDA pre in a range of between € 5.8 billion and € 6.4 billion (previously € 5.7 billion to € 6.3 billion/2023: € 5.9 billion).

Operating cash flow

The forecast for operating cash flow is generally subject to a higher fluctuation corridor than the forecast for EBITDA pre. We provide an estimate of the development of operating cash flow only for the Group as a whole.

The development of operating cash flow will largely be in line with the positive operating performance. Foreign exchange will have a negative effect. Overall, we are raising our forecast for operating cash flow in line with the development of EBITDA pre and expect a figure between € 4.0 billion and € 4.6 billion (previously € 3.9 billion to € 4.5 billion). As regards the composition of operating cash flow, we refer to the "**Consolidated Cash Flow Statement**" in this report.

[1] 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.

consolidated interim financial statements as of June 30, 2024

Consolidated Income Statement

€ million	Q2 2024	Q2 2023	Jan.-June 2024	Jan.-June 2023
Net sales	**5,352**	**5,302**	**10,472**	**10,595**
Cost of sales	-2,119	-2,139	-4,230	-4,111
Gross profit	**3,233**	**3,163**	**6,242**	**6,484**
Marketing and selling expenses	-1,146	-1,139	-2,233	-2,249
Administration expenses	-336	-345	-668	-703
Research and development costs	-647	-600	-1,228	-1,198
Impairment losses and reversals of impairment losses on financial assets (net)	–	-10	1	-12
Other operating income	105	181	158	213
Other operating expenses	-416	-280	-549	-532
Operating result (EBIT)[1]	**792**	**969**	**1,724**	**2,004**
Finance income[2]	65	42	107	75
Finance costs[2]	-72	-118	-146	-174
Profit before income tax	**785**	**894**	**1,684**	**1,906**
Income tax	-180	-188	-379	-400
Profit after income tax	**605**	**706**	**1,305**	**1,506**
thereof: attributable to Merck KGaA shareholders (net income)	607	704	1,302	1,500
thereof: attributable to non-controlling interests	-2	3	3	6
Earnings per share (€)				
Basic	1.40	1.62	2.99	3.45
Diluted	1.40	1.62	2.99	3.45

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

[2] Previous year's figures have been adjusted.

Consolidated Statement of Comprehensive Income

€ million	Q2 2024	Q2 2023	Jan.-June 2024	Jan.-June 2023
Profit after income tax	**605**	**706**	**1,305**	**1,506**
Items of other comprehensive income that will not be reclassified to profit or loss in subsequent periods				
Net defined benefit liability				
Changes in remeasurement	65	-20	152	-33
Tax effect	-16	5	-31	6
Changes recognized in equity	50	-15	122	-27
Equity instruments				
Fair value adjustments	-27	100	15	108
Tax effect	2	6	-3	1
Changes recognized in equity	-25	106	12	109
	24	91	133	82
Items of other comprehensive income that may be reclassified to profit or loss in subsequent periods				
Cash flow hedge reserve				
Fair value adjustments	41	33	36	73
Reclassification to profit or loss	-52	-20	-69	-12
Tax effect	2	-8	4	-8
Changes recognized in equity	-9	6	-29	53
Cost of cash flow hedge reserve				
Fair value adjustments	-2	-7	-1	-17
Reclassification to profit or loss	-2	8	1	13
Tax effect	1	–	1	–
Changes recognized in equity	-3	1	1	-4
Currency translation difference				
Changes taken directly to equity	217	33	741	-576
Reclassification to profit or loss	–	–	4	–
Changes recognized in equity	217	33	745	-576
	205	**40**	**717**	**-527**
Other comprehensive income	**230**	**131**	**850**	**-444**
Comprehensive income	**835**	**837**	**2,155**	**1,061**
thereof: attributable to Merck KGaA shareholders	837	836	2,154	1,057
thereof: attributable to non-controlling interests	-2	1	1	4

Consolidated Balance Sheet

€ million	June 30, 2024	Dec. 31, 2023
Non-current assets		
Goodwill	18,321	17,845
Other intangible assets	6,208	6,551
Property, plant and equipment	9,433	9,056
Investments accounted for using the equity method	3	3
Non-current receivables	25	28
Other non-current financial assets	1,062	981
Other non-current non-financial assets	134	115
Non-current income tax receivables	10	9
Deferred tax assets	1,633	1,514
	36,828	**36,102**
Current assets		
Inventories	4,714	4,637
Trade and other current receivables	4,263	4,004
Contract assets	123	104
Other current financial assets	130	499
Other current non-financial assets	673	633
Current income tax receivables	459	473
Cash and cash equivalents	2,685	1,982
Assets held for sale	–	62
	13,047	**12,393**
Total assets	**49,875**	**48,495**
Total equity		
Equity capital	565	565
Capital reserves	3,814	3,814
Retained earnings	21,379	20,228
Gains/losses recognized in equity	2,792	2,073
Equity attributable to Merck KGaA shareholders	**28,549**	**26,680**
Non-controlling interests	67	75
	28,616	**26,754**
Non-current liabilities		
Non-current provisions for employee benefits	2,064	2,192
Other non-current provisions	240	277
Non-current financial debt	7,822	9,239
Other non-current financial liabilities	131	147
Other non-current non-financial liabilities	12	17
Non-current income tax liabilities	40	39
Deferred tax liabilities	1,019	1,130
	11,328	**13,042**
Current liabilities		
Current provisions for employee benefits	73	83
Current provisions	597	575
Current financial debt	2,927	702
Other current financial liabilities	276	1,005
Trade and other current payables	2,122	2,545
Refund liabilities	891	877
Current income tax liabilities	1,660	1,433
Other current non-financial liabilities	1,385	1,479
	9,931	**8,699**
Total equity and liabilities	**49,875**	**48,495**

Consolidated Cash Flow Statement

€ million	Q2 2024	Q2 2023	Jan.-June 2024	Jan.-June 2023
Profit after income tax	**605**	**706**	**1,305**	**1,506**
Depreciation/amortization/impairment losses/reversals of impairment losses	680	482	1,134	938
Changes in inventories	1	-106	-40	-429
Changes in trade accounts receivable	-110	15	-174	-102
Changes in trade accounts payable/refund liabilities	-25	39	-98	254
Changes in provisions	-18	53	22	45
Changes in other assets and liabilities	-265	-421	-232	-608
Neutralization of gains/losses on disposal of fixed assets and other disposals	-1	-146	-9	-146
Other non-cash income and expenses	-6	–	-11	17
Operating cash flow	**861**	**622**	**1,896**	**1,475**
Payments for investments in intangible assets	-35	-31	-283	-110
Payments from the disposal of intangible assets	2	126	8	130
Payments for investments in property, plant and equipment	-316	-296	-839	-868
Payments from the disposal of property, plant and equipment	6	3	17	13
Payments for investments in other assets[1]	-42	-1,119	-330	-2,038
Payments from the disposal of other assets[2]	354	1,457	701	1,782
Payments for acquisitions less acquired cash and cash equivalents (net)	–	–	–	–
Payments from other divestments	–	–	6	–
Investing cash flow	**-30**	**140**	**-719**	**-1,091**
Dividend payments to Merck KGaA shareholders	-284	-284	-284	-284
Dividend payments to non-controlling interests	-9	-10	-9	-10
Profit withdrawal by E. Merck KG	-694	-778	-747	-868
Proceeds from new borrowings of financial debt from E. Merck KG and E. Merck Beteiligungen KG	666	698	666	697
Repayments of financial debt to E. Merck KG and E. Merck Beteiligungen KG	-110	–	-137	–
Changes in other current and non-current financial debt[3]	72	-206	44	10
Financing cash flow	**-360**	**-580**	**-467**	**-456**
Changes in cash and cash equivalents	**471**	**182**	**710**	**-72**
Changes in cash and cash equivalents due to currency translation	-5	-5	-7	-21
Cash and cash equivalents at the beginning of the reporting period	2,220	1,584	1,982	1,854
Changes in cash and cash equivalents due to reclassification to assets held for sale	–	–	–	–
Cash and cash equivalents as of June 30 (consolidated balance sheet)	**2,685**	**1,761**	**2,685**	**1,761**

[1] The lines “Payments for investments in financial assets” and “Payments from disposal of non-financial assets”, which were presented separately in the previous year, have been summarized to improve clarity and transparency.

[2] The lines “Proceeds from the disposal of other financial assets” and “Proceeds from the disposal of non-financial assets”, which were presented separately in the previous year, have been summarized to improve clarity and transparency.

[3] The lines “Changes in other current and non-current financial debt” as well as “Payments from the issuance of bonds” and “Repayment of bonds”, which were presented separately in the previous year, have been summarized to improve clarity and transparency.

Consolidated Statement of Changes in Net Equity

€ million	Equity capital	Capital reserves	Retained earnings	Gains/losses recognized in equity	**Equity attributable to Merck KGaA shareholders**	Non-controlling interests	**Total equity**
Jan. 1, 2024	**565**	**3,814**	**20,228**	**2,073**	**26,680**	**75**	**26,754**
Profit after income tax	–	–	1,302	–	1,302	3	1,305
Gains/losses recognized in equity	–	–	133	719	852	-2	850
Comprehensive income	**–**	**–**	**1,435**	**719**	**2,154**	**1**	**2,155**
Dividend payments	–	–	-284	–	-284	-9	-293
Profit transfer to/from E. Merck KG including changes in reserves	–	–	–	–	–	–	–
Transactions with no change of control	–	–	–	–	–	–	–
Change in scope of consolidation/Other	–	–	–	–	–	–	–
June 30, 2024	**565**	**3,814**	**21,379**	**2,792**	**28,549**	**67**	**28,616**

€ million	Equity capital	Capital reserves	Retained earnings	Gains/losses recognized in equity	**Equity attributable to Merck KGaA shareholders**	Non-controlling interests	**Total equity**
Jan. 1, 2023	**565**	**3,814**	**18,463**	**3,086**	**25,927**	**78**	**26,005**
Profit after income tax	–	–	1,500	–	1,500	6	1,506
Gains/losses recognized in equity	–	–	82	-524	-442	-2	-444
Comprehensive income	**–**	**–**	**1,582**	**-524**	**1,057**	**4**	**1,061**
Dividend payments	–	–	-284	–	-284	-10	-295
Profit transfer to/from E. Merck KG including changes in reserves	–	–	–	–	–	–	–
Transactions with no change of control	–	–	–	–	–	–	–
Change in scope of consolidation/Other	–	–	–	–	–	–	–
June 30, 2023	**565**	**3,814**	**19,760**	**2,561**	**26,701**	**71**	**26,772**

Notes to the consolidated interim financial statements as of June 30, 2024

These consolidated interim financial statements have been prepared by the parent company, Merck Kommanditgesellschaft auf Aktien (Merck KGaA), Frankfurter Strasse 250, 64293 Darmstadt, Germany, which manages the operations of the Merck Group.

Accounting and measurement principles

The consolidated interim financial statements of the Merck Group dated June 30, 2024 comply with IAS 34. They have been prepared in accordance with the International Reporting Standards (IFRS) in force on the balance sheet date and adopted by the European Union as well as in accordance with section 117 in conjunction with section 115 of the German Securities Trading Act (WpHG). In accordance with IAS 34, a condensed scope of reporting as compared with the consolidated financial statements as of December 31, 2023 was selected. The figures presented in the half-year financial report have been rounded, which may lead to individual values not adding up to the totals presented.

The preparation of these consolidated interim financial statements requires that assumptions and estimates be made to a certain extent. The assumptions and estimates are based on the latest state of knowledge and the data available on the balance sheet date and the preparation date. A detailed presentation of the most significant management judgments and sources of estimation uncertainty can be found in the **Notes to the Consolidated Financial Statements for 2023** of the Merck Group.

The continued dynamic development of the macroeconomic environment means that the degree of uncertainty in the preparation of these consolidated interim financial statements is considerably higher than was typically the case in the past. In particular, uncertainties include the development of inflation, the high interest rates as well as geopolitical challenges, trade restrictions and sanctions. This applies above all to the recoverability of non-financial assets. As in previous years, there are no grounds to suggest that the going concern assumption should not have been applied in preparing the consolidated interim financial statements.

The notes to the consolidated financial statements for 2023 also include a presentation of the accounting and measurement principles used. These apply accordingly to these consolidated interim financial statements for 2024 with the exception of the changes presented in these financial statements as a result of new and binding accounting standards that took effect in fiscal 2024.

Amendments to standards effective for the first time in fiscal 2024

Standard/Interpretation	Title	Date of publication	Date of endorsement by EU law	Impact on the consolidated financial statements
Amendments to IAS 1	Classification of Liabilities as Current or Non-current; Classification of Liabilities as Current or Non-Current — Deferral of Effective Date	January 23, 2020 July 15, 2020	December 19, 2023	No material impact
Amendments to IAS 1	Non-current Liabilities with Covenants	October 31, 2022	December 19, 2023	No material impact
Amendments to IAS 7	Supplier Finance Arrangements	May 25, 2023	May 15, 2024	No material impact
Amendments to IFRS 7	Supplier Finance Arrangements	May 25, 2023	May 15, 2024	No material impact
Amendments to IFRS 16	Lease Liability in a Sale and Leaseback	September 22, 2022	November 20, 2023	No material impact

Scope of consolidation

As of June 30, 2024, 300 (December 31, 2023: 306) companies were fully consolidated. Two companies were accounted for using the equity method as of the balance sheet date. These are Syntropy Technologies LLC, USA, and MM Domain Holdco Limited, UK. Since the beginning of 2024, one company has been added to the scope of consolidation due to materiality. Three companies were deconsolidated due to liquidation and one was deconsolidated due to immateriality. In addition, three companies were merged.

Significant events during the reporting period

Planned acquisition of Mirus Bio LLC, USA

On May 22, 2024, Merck announced the signing of a definitive agreement for the acquisition of life science company Mirus Bio LLC, USA, (Mirus Bio) for a purchase price of US$ 600 million. Mirus Bio specializes in the development and commercialization of transfection reagents. Transfection reagents, such as TransIT-VirusGEN® from Mirus Bio, are used to introduce genetic material into cells and play a key role in the manufacturing of viral vectors for cell and gene therapies.

The transaction for the acquisition of Mirus Bio from Gamma Biosciences US Holdco LP, USA, a life sciences platform established by global investment firm KKR & Co. Inc., USA, is expected to close in the third quarter of 2024 and is subject to regulatory clearances and other customary closing conditions.

Termination of xevinapant program for locally advanced head and neck cancer

On June 24, 2024, Merck announced the discontinuation of the clinical trials of the active ingredient candidate xevinapant, which had been in-licensed from Debiopharm International SA, Switzerland, in fiscal 2021. The pivotal Phase III trial (TrilynX™) investigated xevinapant combined with chemoradiotherapy in patients with unresected locally advanced squamous cell carcinoma of the head and neck (LA SCCHN). Further clinical trials in Phase III and Phase Ib examined various combinations with radiotherapy or chemoradiotherapy in adjacent patient populations with LA SCCHN. The decision was based on a scheduled interim analysis of the TrilynX study, which found that the trial was unlikely to meet its primary endpoint.

The termination of the program led to an impairment loss of € 140 million on an intangible asset, which was recorded under other operating expenses, as well as the recognition of a provision amounting to a mid double-digit million euro figure for subsequent costs, the addition of which was disclosed in research and development costs.

Impairment losses on assets

In the first half of 2024, impairment losses on assets amounted to € 243 million (January-June 2023: € 52 million). In the Healthcare business sector, these were mainly attributable to impairment losses on property, plant and equipment of € 13 million as well as impairment losses on intangible assets of € 162 million due to three stopped development projects, of which € 140 million was in connection with the termination of the xevinapant program. Furthermore, the Life Science business sector recorded impairment losses of € 34 million on property, plant and equipment and € 22 million on intangible assets. In the Electronics business sector, impairment losses of € 11 million were recognized on intangible assets.

Furthermore, an analysis of existing indications of goodwill impairment was conducted in the reporting period with the involvement of the responsible departments and taking external and internal information sources into consideration. The outcome of this analysis did not indicate any need to perform impairment testing.

Segment Reporting

Information by Business Sector

	Life Science				Healthcare				Electronics			
€ million	**Q2 2024**	Q2 2023	**Jan.-June 2024**	Jan.-June 2023	**Q2 2024**	Q2 2023	**Jan.-June 2024**	Jan.-June 2023	**Q2 2024**	Q2 2023	**Jan.-June 2024**	Jan.-June 2023
Net sales[1]	**2,258**	**2,354**	**4,402**	**4,840**	**2,137**	**2,049**	**4,184**	**3,955**	**957**	**899**	**1,886**	**1,800**
Intersegment sales	19	21	41	40	–	–	–	–	–	–	–	–
Operating result (EBIT)[2]	**370**	**455**	**748**	**1,128**	**501**	**616**	**1,119**	**1,135**	**107**	**110**	**202**	**196**
Depreciation and amortization	213	211	420	423	83	72	162	145	125	130	254	262
Impairment losses[3]	56	32	56	32	166	4	175	5	11	5	11	15
Reversals of impairment losses	–	–	–	–	–	–	–	-1	–	–	–	–
EBITDA[4]	**639**	**698**	**1,224**	**1,583**	**749**	**692**	**1,456**	**1,285**	**242**	**245**	**467**	**473**
Adjustments[2]	16	13	42	30	-30	12	-28	9	13	17	25	26
EBITDA pre (Segment result)[2]	**655**	**712**	**1,266**	**1,612**	**720**	**704**	**1,428**	**1,293**	**255**	**262**	**492**	**499**
EBITDA pre margin (in % of net sales)[2]	29.0%	30.2%	28.8%	33.3%	33.7%	34.3%	34.1%	32.7%	26.7%	29.1%	26.1%	27.7%
Assets by business sector[5]	23,970	23,476	23,970	23,476	8,616	8,522	8,616	8,522	10,438	10,275	10,438	10,275
Liabilities by business sector[5]	-1,701	-1,843	-1,701	-1,843	-2,882	-3,146	-2,882	-3,146	-546	-636	-546	-636
Investments in property, plant and equipment[6]	135	122	420	421	56	45	131	156	80	95	207	223
Investments in intangible assets[6]	9	9	20	25	8	8	233	35	8	7	13	39
Non-cash changes in provisions[7]	3	2	34	7	67	5	79	-4	34	6	53	10

	Corporate and Other				Group			
€ million	**Q2 2024**	Q2 2023	**Jan.-June 2024**	Jan.-June 2023	**Q2 2024**	Q2 2023	**Jan.-June 2024**	Jan.-June 2023
Net sales[1]	**–**	**–**	**–**	**–**	**5,352**	**5,302**	**10,472**	**10,595**
Intersegment sales	-19	-21	-41	-40	–	–	–	–
Operating result (EBIT)[2]	**-186**	**-212**	**-345**	**-455**	**792**	**969**	**1,724**	**2,004**
Depreciation and amortization	27	28	55	57	447	441	891	887
Impairment losses[3]	–	–	–	–	233	41	243	52
Reversals of impairment losses	–	–	–	–	–	–	–	-1
EBITDA[4]	**-158**	**-184**	**-289**	**-398**	**1,472**	**1,452**	**2,857**	**2,942**
Adjustments[2]	37	60	66	133	36	102	106	198
EBITDA pre (Segment result)[2]	**-121**	**-124**	**-223**	**-264**	**1,509**	**1,553**	**2,963**	**3,140**
EBITDA pre margin (in % of net sales)[2]	–	–	–	–	28.2%	29.3%	28.3%	29.6%
Assets by business sector[5]	6,851	6,222	6,851	6,222	49,875	48,495	49,875	48,495
Liabilities by business sector[5]	-16,130	-16,115	-16,130	-16,115	-21,259	-21,741	-21,259	-21,741
Investments in property, plant and equipment[6]	45	34	81	68	316	296	839	868
Investments in intangible assets[6]	10	7	17	11	35	31	283	110
Non-cash changes in provisions[7]	-14	64	12	110	89	76	179	123

[1] Excluding intersegment sales.

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

[3] Not including impairment losses on financial assets and inventories.

[4] 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.

[5] Figures for the reporting period ending on June 30, 2024; previous-year figures as of December 31, 2023.

[6] As reported in the consolidated cash flow statement.

[7] 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 2024.

The fields of activity of the individual segments are described under “Fundamental Information about the Group” in the combined management report for 2023. Transfer prices for intragroup sales were determined on an arm’s-length basis.

In addition to direct activities of the central Group functions, Corporate and Other comprises income and expenses, assets and liabilities as well as cash flows that cannot be allocated to the reportable segments as they are managed at Group level in the central Group functions. In particular, this encompasses income and expenses from foreign exchange hedging of operating transactions, finance expenses and finance income, which include interest expenses and interest income, as well as income tax expenses and income. Financial liabilities, pension provisions as well as income tax assets and liabilities are disclosed under Corporate and Other. Moreover, the column serves the reconciliation to the Group figures.

Apart from net sales, the success of a segment is mainly determined by EBITDA pre (segment result). EBITDA pre is a key figure 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.

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

€ million	Q2 2024	Q2 2023	Jan.-June 2024	Jan.-June 2023
EBITDA pre of the operating businesses[1]	**1,630**	**1,677**	**3,186**	**3,405**
Corporate and Other	-121	-124	-223	-264
EBITDA pre of the Merck Group[1]	**1,509**	**1,553**	**2,963**	**3,140**
Depreciation/amortization/impairment losses/reversals of impairment losses	-680	-482	-1,134	-938
Adjustments[1]	-36	-102	-106	-198
Operating result (EBIT)[1]	**792**	**969**	**1,724**	**2,004**
Financial result	-7	-76	-39	-98
Profit before income tax	**785**	**894**	**1,684**	**1,906**

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

Adjustments comprised the following:

€ million	Q2 2024	Q2 2023	Jan.-June 2024	Jan.-June 2023
Restructuring expenses	-34	-39	-79	-84
Integration expenses/IT expenses	-21	-27	-39	-51
Gains (+)/losses (-) on the divestment of businesses	52	-17	56	-17
Acquisition-related adjustments	–	-5	-3	-14
Other adjustments	-33	-13	-42	-32
Adjustments before impairment losses/reversals of impairment losses[1]	**-36**	**-102**	**-106**	**-198**
Impairment losses[2]	-222	-37	-223	-48
Reversals of impairment losses	–	–	–	1
Adjustments to the operating result (total)[1]	**-259**	**-138**	**-328**	**-245**

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

[2] Without impairments on financial assets and inventories.

As in the previous year, restructuring expenses in the first half of 2024 were mainly attributable to a program to further improve processes and align the Group functions more closely with the businesses (€ 31 million; January-June 2023: € 67 million). In addition, expenses were incurred in the financial year for an efficiency program in the Life Science business sector (€ 24 million).

Like last year, integration and IT expenses related to expenses for the further development of ERP systems.

The gains and losses from divested businesses mainly arose from the subsequent measurement of contingent consideration from the sale of the biosimilars business to a subsidiary of Fresenius SE & Co. KGaA, Bad Homburg vor der Höhe.

As in the previous year, other adjustments include the losses on the net position of monetary assets and liabilities resulting from hyperinflationary accounting in Argentina and Turkey.

Impairment losses were mainly attributable to intangible assets in the Healthcare business sector (see explanation under "**Significant events during the reporting period**").

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

€ million	Jan.-June 2024							
Net sales by nature of products	**Life Science**		**Healthcare**		**Electronics**		**Group**	
Goods	3,826	87%	4,174	100%	1,561	83%	9,561	91%
Equipment	190	4%	–	–	261	14%	450	5%
Services	373	9%	6	–	63	3%	443	4%
License income	12	–	–	–	2	–	14	–
Commission income	–	–	4	–	–	–	5	–
Income from co-commercialization agreements	–	–	–	–	–	–	–	–
Total	**4,402**	**100%**	**4,184**	**100%**	**1,886**	**100%**	**10,472**	**100%**
Net sales by region (customer location)								
Europe	1,553	35%	1,357	32%	165	9%	3,076	29%
North America	1,558	36%	899	22%	384	20%	2,840	27%
Asia-Pacific (APAC)	1,047	24%	1,140	27%	1,275	68%	3,462	33%
Latin America	188	4%	508	12%	20	1%	717	7%
Middle East and Africa (MEA)	55	1%	280	7%	42	2%	378	4%
Total	**4,402**	**100%**	**4,184**	**100%**	**1,886**	**100%**	**10,472**	**100%**

€ million	Jan.-June 2023							
Net sales by nature of products	Life Science		Healthcare		Electronics		Group	
Goods	4,229	87%	3,939	100%	1,480	82%	9,648	91%
Equipment	218	5%	–	–	263	15%	481	5%
Services	381	8%	7	–	56	3%	445	4%
License income	12	–	–	–	1	–	13	–
Commission income	1	–	8	–	–	–	9	–
Income from co-commercialization agreements	–	–	–	–	–	–	–	–
Total	**4,840**	**100%**	**3,955**	**100%**	**1,800**	**100%**	**10,595**	**100%**
Net sales by region (customer location)								
Europe	1,666	34%	1,277	32%	165	9%	3,107	29%
North America	1,773	37%	892	23%	366	21%	3,031	29%
Asia-Pacific (APAC)	1,155	24%	1,087	28%	1,224	68%	3,466	33%
Latin America	188	4%	450	11%	20	1%	658	6%
Middle East and Africa (MEA)	59	1%	249	6%	25	1%	333	3%
Total	**4,840**	**100%**	**3,955**	**100%**	**1,800**	**100%**	**10,595**	**100%**

Life Science

€ million	Jan.-June 2024	Share	Jan.-June 2023	Share
Science & Lab Solutions	2,362	54%	2,458	51%
Process Solutions	1,689	38%	2,016	42%
Life Science Services	351	8%	366	7%
Total	**4,402**	**100%**	**4,840**	**100%**

Healthcare

€ million	Jan.-June 2024	Share	Jan.-June 2023	Share
Oncology	**990**	**24%**	**891**	**22%**
thereof: Erbitux®	563	13%	510	13%
thereof: Bavencio®	372	9%	345	9%
Neurology & Immunology	**853**	**20%**	**858**	**22%**
thereof: Mavenclad®	527	12%	499	13%
thereof: Rebif®	326	8%	359	9%
Fertility	**786**	**19%**	**776**	**20%**
thereof: Gonal-f®	431	10%	416	11%
Cardiovascular, Metabolism and Endocrinology	**1,435**	**34%**	**1,342**	**34%**
thereof: Glucophage®	459	11%	415	10%
thereof: Concor®	297	7%	284	7%
thereof: Euthyrox®	294	7%	260	7%
thereof: Saizen®	186	4%	155	4%
Other	**121**	**3%**	**89**	**2%**
Total	**4,184**	**100%**	**3,955**	**100%**

Electronics

€ million	Jan.-June 2024	Share	Jan.-June 2023	Share
Semiconductor Solutions	1,298	69%	1,207	67%
Display Solutions	375	20%	383	21%
Surface Solutions	213	11%	210	12%
Total	**1,886**	**100%**	**1,800**	**100%**

Earnings per share

Basic earnings per share are calculated by dividing the profit after taxes attributable to the shareholders of Merck KGaA (net income) by the weighted average number of theoretical shares outstanding. The calculation of the theoretical number of shares is based on the fact that the general partner's equity is not represented by shares. The subscribed capital of € 168 million was divided into 129,242,252 shares. Accordingly, the general partner's equity of € 397 million was divided into 305,535,626 theoretical shares. Overall, equity capital thus amounted to € 565 million, corresponding to 434,777,878 theoretical shares outstanding. The weighted average (basic) number of shares was likewise 434,777,878 in the first half of 2024.

There were no changes to equity capital in the first half of 2024. The weighted average (basic) number of shares was 434,777,878 and thus corresponded to the number of theoretical shares outstanding. In the first half of 2024, there were no shares with a potential diluting effect; as a result, diluted earnings per share were equivalent to basic earnings per share.

Information on fair value measurement

The following table presents the carrying amounts and the fair values of the individual financial assets and liabilities as of June 30, 2024 for each individual financial instrument class pursuant to IFRS 9:

June 30, 2024

	Carrying amount			Fair value[1]			
€ million	Current	Non-current	**Total**	Fair value determined by official prices and quoted market values (Level 1)	Fair value determined using observable inputs in the market (Level 2)	Fair value determined using unobservable inputs in the market (Level 3)	**Total**
Financial assets							
Subsequent measurement at amortized cost							
Cash and cash equivalents	2,685	–	2,685				
Trade and other receivables (excluding leasing receivables)	4,230	24	4,254				
Other debt instruments	51	4	54				
Subsequent measurement at fair value through other comprehensive income							
Equity instruments	–	703	703	212	–	491	703
Trade and other receivables	29	–	29	–	–	29	29
Other debt instruments	–	1	1	1	–	–	1
Subsequent measurement at fair value through profit or loss							
Contingent considerations	–	135	135	–	–	135	135
Other debt instruments	53	171	224	119	–	106	224
Derivatives without a hedging relationship	16	48	64	–	11	52	64
Derivatives with a hedging relationship	10	–	10	–	10	–	10
Lease receivables (measured in accordance with IFRS 16)[2]	4	1	6				
Total	**7,078**	**1,087**	**8,165**	**332**	**21**	**813**	**1,166**
Financial liabilities							
Subsequent measurement at amortized cost							
Trade payables and other liabilities	2,122	–	2,122				
Financial debt	2,783	7,317	10,100	7,440	2,251	–	9,691
Other financial liabilities	262	107	369				
Subsequent measurement at fair value through profit or loss							
Contingent considerations	–	1	1	–	–	1	1
Derivatives without a hedging relationship	10	22	32	–	7	25	32
Derivatives with a hedging relationship	12	–	12	–	12	–	12
Refund liabilities	891	–	891				
Lease liabilities (measured in accordance with IFRS 16)[2]	137	505	642				
Total	**6,216**	**7,953**	**14,169**	**7,440**	**2,270**	**26**	**9,736**

[1] The simplification option under IFRS 7.29(a) was used for disclosures of certain fair values.

[2] Measurements within the scope of IFRS 16 are exempted from the requirements of IFRS 13 (IFRS 13.6(b)).

The following table presents the carrying amounts and fair values of the individual financial assets and liabilities as of December 31, 2023 for each individual financial instrument class pursuant to IFRS 9:

December 31, 2023

	Carrying amount			Fair value[1]			
€ million	Current	Non-current	Total	Fair value determined by official prices and quoted market values (Level 1)	Fair value determined using observable inputs in the market (Level 2)	Fair value determined using unobservable inputs in the market (Level 3)	Total
Financial assets							
Subsequent measurement at amortized cost							
Cash and cash equivalents	1,982	–	1,982				
Trade and other receivables (excluding leasing receivables)	3,973	25	3,998				
Other debt instruments	201	4	204				
Subsequent measurement at fair value through other comprehensive income							
Equity instruments	–	643	643	207	–	436	643
Trade and other receivables	25	–	25	–	–	25	25
Other debt instruments	198	1	199	199	–	–	199
Subsequent measurement at fair value through profit or loss							
Contingent considerations	–	125	125	–	–	125	125
Other debt instruments	33	161	194	98	–	95	194
Derivatives without a hedging relationship	30	47	77	–	27	50	77
Derivatives with a hedging relationship	37	–	37	–	37	–	37
Lease receivables (measured in accordance with IFRS 16)[2]	6	3	9				
Total	**6,485**	**1,008**	**7,493**	**505**	**65**	**731**	**1,300**
Financial liabilities							
Subsequent measurement at amortized cost							
Trade payables and other liabilities	2,545	–	2,545				
Financial debt	503	8,846	9,349	7,367	2,665	–	10,032
Other financial liabilities	998	127	1,125				
Subsequent measurement at fair value through profit or loss							
Contingent considerations	–	2	2	–	–	2	2
Derivatives without a hedging relationship	79	18	96	–	77	20	96
Derivatives with a hedging relationship	5	–	5	–	5	–	5
Refund liabilities	877	–	877				
Lease liabilities (measured in accordance with IFRS 16)[2]	122	393	515				
Total	**5,129**	**9,387**	**14,515**	**7,367**	**2,747**	**22**	**10,136**

[1] The simplification option under IFRS 7.29(a) was used for disclosures of certain fair values.

[2] Measurements within the scope of IFRS 16 are exempted from the requirements of IFRS 13 (IFRS 13.6(b)).

The measurement techniques and main inputs used to determine the fair value of financial instruments are as follows:

Fair value determined by official prices and quoted market values (Level 1)

	Financial instruments concerned	Description of the measurement technique	Main inputs used to determine fair values
Financial Assets			
Subsequent measurement at fair value through other comprehensive income			
Equity instruments	Shares	Derived from active market	Quoted prices in an active market
Other debt instruments	Bonds		
	Other short-term cash investments		
Subsequent measurement at fair value through profit or loss			
Other debt instruments	Publicly-traded funds	Derived from active market	Quoted prices in an active market
	Other short-term cash investments		
Financial liabilities			
Subsequent measurement at amortized cost			
Financial debt	Bonds	Derived from active market	Quoted prices in an active market

Fair value determined using observable inputs in the market (Level 2)

	Financial instruments concerned	Description of the measurement technique	Main inputs used to determine fair values
Financial assets			
Subsequent measurement at fair value through profit or loss			
Derivatives (without a hedging relationship)	Forward exchange contracts and currency options	Use of recognized actuarial methods	Spot and forward rates observable on the market as well as exchange rate volatilities
Derivatives (with a hedging relationship)	Forward exchange contracts and currency options	Use of recognized actuarial methods	Spot and forward rates observable on the market as well as exchange rate volatilities
Financial liabilities			
Subsequent measurement at fair value through profit or loss			
Derivatives (without a hedging relationship)	Forward exchange contracts and currency options	Use of recognized actuarial methods	Spot and forward rates observable on the market as well as exchange rate volatilities
Derivatives (with a hedging relationship)	Forward exchange contracts and currency options	Use of recognized actuarial methods	Spot and forward rates observable on the market as well as exchange rate volatilities
Subsequent measurement at amortized cost			
Financial liabilities	Liabilities to banks and other loan liabilities	Discounting of future cash flows	Interest rates observable on the market

Fair value determined using unobservable inputs in the market (Level 3)

	Financial instruments concerned	Description of the measurement technique	Main inputs used to determine fair values
Financial assets			
Subsequent measurement at fair value through other comprehensive income			
Equity instruments	Equity investments in unlisted companies	Discounting of expected future cash flows	Expected cash flows from recent business planning, average cost of capital, expected long-term growth rate
		Derived from observable prices within the scope of equity refinancing sufficiently close to the balance sheet date, considered risk allowances	Observable prices derived from equity refinancing
		Cost-based determination	Acquisition cost
Trade and other receivables	Trade accounts receivable that are intended for sale due to a factoring agreement	Nominal value less factoring fees	Nominal value of potentially sold trade accounts receivable, average fees for sales of trade accounts receivable
Subsequent measurement at fair value through profit or loss			
Derivatives (without a hedging relationship)	Virtual power purchase agreements	Discounting of expected future cash flows	Electricity future price curves, expected electricity production volumes, discount factors
Contingent considerations	Contingent considerations from the sale of businesses or shares in corporations	Discounting of probability-weighted future milestone payments and license fees	Sales planning, milestone payments, probabilities of regulatory and commercial events, discount rates
Other debt instruments	Loans with variable repayments	Discounting of expected future cash flows	Expected cash flows from recent business planning, discount rates
	Interests in unlisted funds	Consideration of the fair value of companies in which the funds are invested	Net asset values of the fund interests
	Units with cancellation or redemption options	Derived from observable prices in the context of refinancing sufficiently close to the reporting date, considered risk allowances	Derived observable prices from similar refinancing transactions
	Bonds with embedded settlement option for equity in an unlisted company	Use of recognized actuarial methods	Interest rates observable on the market
Financial liabilities			
Subsequent measurement at fair value through profit or loss			
Derivatives (without a hedging relationship)	Hedging instrument for virtual power purchase agreements	Use of recognized actuarial methods	Electricity future price curves, expected electricity production volumes, discount factors
Contingent considerations	Contingent considerations from the purchase of businesses	Discounting of probability-weighted future milestone payments and license fees	Sales planning, milestone payments, probabilities of regulatory and commercial events, discount rates

Counterparty credit risk was taken into consideration for measurements of financial instruments at fair value. In the case of non-derivative financial instruments, such as other liabilities or interest-bearing securities, this was reflected using risk premiums on the discount rate, while discounts on market value (credit valuation adjustments and debit valuation adjustments) were used for derivatives.

Assets from contingent considerations (Level 3)

The fair values of assets from contingent considerations are calculated by weighting the expected future milestone payments and royalties using their probability of occurrence and discounting them. This assessment is subject to significant discretionary judgment. The main parameters when determining contingent considerations are

- the estimated probability of reaching the individual milestone events,
- the underlying sales planning used to derive royalties and
- the discount factor used.

When determining the probability of occurrence of the individual milestone events in connection with the development of drug candidates, the focus is on empirically available probabilities of success of development programs in comparable phases of clinical development in the relevant therapeutic areas. Internal sales plans and sales plans of external industry services are used to determine the sales planning. The discount rates (after tax) as of June 30, 2024 were 6.3% (December 31, 2023: 6.6%) and were calculated using the weighted average cost of capital.

The most significant contingent consideration was the future purchase price claim from the disposal of the Biosimilars business to a subsidiary of Fresenius SE & Co. KGaA, Bad Homburg vor der Höhe, Germany, on August 31, 2017. It was calculated by an external valuation expert on initial recognition in 2017 and continued on this basis. As of June 30, 2024, the carrying amount was € 114 million (December 31, 2023: € 118 million).

As a result of the last contractually agreed milestone payment in connection with the disposal of the Biosimilars business being made in fiscal 2024, the probability of regulatory approval is no longer a value-determining factor for this contingent consideration. If, in the context of determining the fair value of this contingent consideration on the balance sheet date, the discount factor had been estimated to be lower or higher, this would have led to the following changes in the measurement and the corresponding effects on the profit before income tax:

June 30, 2024		**Change in probability of regulatory approval**		
€ million		-10%	**unchanged**	10%
Discount rate	5.8%		3	
	6.3% (unchanged)		–	
	6.8%		-3	

Dec. 31, 2023		**Change in probability of regulatory approval**		
€ million		-10%	unchanged	10%
Discount rate	6.1%	-3	3	9
	6.6% (unchanged)	-6	–	6
	7.1%	-8	-3	3

The changes in financial assets and liabilities allocated to Level 3 and measured at fair value for each individual category of financial instrument were as follows in the period from January 1, 2024 to June 30, 2024:

2024

	Financial assets					Financial liabilities		
	Subsequent measurement at fair value through profit or loss			Subsequent measurement at fair value through other comprehensive income		Subsequent measurement at fair value through profit or loss		
€ million	Other debt instruments	Contingent considerations	Derivatives without a hedging relationship	Equity instruments	Trade and other receivables	Contingent considerations	Derivatives without a hedging relationship	**Total**
Net carrying amounts as of Jan. 1, 2024	**95**	**125**	**50**	**436**	**25**	**-2**	**-20**	**710**
Additions	20	10	–	44	26	–	–	**99**
Transfers into Level 3 out of Level 1/Level 2	–	–	–	–	–	–	–	**–**
Fair value changes								**–**
Gains (+)/losses (–) recognized in the consolidated income statement (other operating result)	-3	36	1		–	1	-6	**29**
thereof: attributable to assets/liabilities held as of the balance sheet date	-3	7	1		–	1	-6	**-1**
Gains (+)/losses (–) recognized in the consolidated income statement (financial income and expenses)	2	6	–		–	–	–	**8**
thereof: attributable to assets/liabilities held as of the balance sheet date	2	6	–		–	–	–	**8**
Gains (+)/losses (-) recognized in other comprehensive income				9	–			**9**
Currency translation difference	2	–	2	–	–	–	–	**3**
Disposals	-9	-42	–	–	-22	–	1	**-71**
Transfers out of Level 3 into Level 1/Level 2	–	–	–	–	–	–	–	**–**
Other	-1	–	–	1	–	–	–	–
Net carrying amounts as of June 30, 2024	**106**	**135**	**52**	**491**	**29**	**-1**	**-25**	**787**

The changes in financial assets and liabilities allocated to Level 3 and measured at fair value for each of the individual classes of financial instruments were as follows in the period from January 1, 2023 to December 31, 2023:

2023

	Financial assets					Financial liabilities		
	Subsequent measurement at fair value through profit or loss			Subsequent measurement at fair value through other comprehensive income		Subsequent measurement at fair value through profit or loss		
€ million	Other debt instruments	Contingent considerations	Derivatives without a hedging relationship	Equity instruments	Trade and other receivables	Contingent considerations	Derivatives without a hedging relationship	Total
Net carrying amounts as of Jan. 1, 2023	**93**	**250**	**53**	**415**	**22**	**-4**	**-23**	**806**
Additions	21	–	–	59	72	–	–	**152**
Transfers into Level 3 from Level 1/Level 2	–	–	–	–	–	–	–	**–**
Fair value changes								
Gains (+)/losses (–) recognized in the consolidated income statement (other operating result)	10	56	2		–	–	1	**69**
thereof: attributable to assets/liabilities held as of the balance sheet date	10	6	-2		–	–	1	**16**
Gains (+)/losses (–) recognized in the consolidated income statement (financial income and expenses)	5	10	–		–	–	–	**14**
thereof: attributable to assets/liabilities held as of the balance sheet date	5	10	–		–	–	–	**14**
Gains (+)/losses (–) recognized in other comprehensive income				47	–			**47**
Currency translation difference	-2	–	-3	-1	–	–	–	**-5**
Disposals	-21	-190	-2	-29	-69	2	3	**-307**
Transfers out of Level 3 into Level 1/Level 2	–	–	–	-3	–	–	–	**-3**
Other	-11	–	–	-51	–	–	–	**-62**
Net carrying amounts as of Dec. 31, 2023	**95**	**125**	**50**	**436**	**25**	**-2**	**-20**	**710**

Related-party disclosures

Transactions were conducted with related parties as follows:

	Income		Expenses		Receivables		Liabilities	
€ million	**Jan.-June 2024**	Jan.-June 2023	**Jan.-June 2024**	Jan.-June 2023	**June 30, 2024**	Dec. 31, 2023	**June 30, 2024**	Dec. 31, 2023
E. Merck KG	1.6	1.0	5.4	5.1	10.9	0.1	734.2	826.5
E. Merck Beteiligungen KG	0.7	0.4	17.4	12.7	10.8	–	990.1	1,100.1
Joint ventures	1.6	1.1	–	–	0.8	0.6	–	–
Associated companies	0.4	–	–	–	10.3	19.5	–	–
Majority interest in non-controlled companies	0.2	0.1	–	–	–	–	2.8	0.9
Non-consolidated subsidiaries	–	–	–	0.4	2.4	2.9	0.3	0.2

The liabilities included financial liabilities to E. Merck Beteiligungen KG in the amount of € 990.0 million (December 31, 2023: € 1,100.0 million) as well as to E. Merck KG, amounting to € 734.2 million (December 31, 2023: € 94.7 million), which were subject to standard market interest rates. Neither collateral nor guarantees existed for any of the balances either in favor or to the disadvantage of the Merck Group. Furthermore, as of December 31, 2023, the other liabilities of Group companies in respect of E. Merck KG in the amount of € 731.7 million primarily resulted from mutual profit transfers between Merck KGaA and E. Merck KG, which did not bear interest until the distribution date in May 2024, as well as the profit transfer by Merck & Cie KmG, Switzerland, to E. Merck KG.

Subsequent Events

On July 25, 2024, Merck announced that it had signed an agreement to divest the Surface Solutions business unit of the Electronics business sector to Global New Material International Holdings Ltd., Cayman Islands, for an agreed purchase price of € 665 million. The agreement comprises the majority of the global production, sales and development activities of the Surface Solutions business. The transaction is subject to regulatory approvals in all key markets as well as the establishment of independent Surface Solutions companies in certain jurisdictions. Accordingly, it is not expected to close within the next twelve months. The sales of the Surface Solutions business unit and the assets to be disposed of, including goodwill of the Electronics business sector to be disposed of on a pro-rata basis, each comprised less than 2.5% of the corresponding value of the Merck Group in the first half of 2024 on the reporting date.

On July 18, 2024, Merck announced that it intends to acquire Unity SC SAS, France, a provider of metrology and inspection instrumentation for the semiconductor industry. The transaction amount includes a payment of € 155 million as well as further milestone-based payments. The transaction is expected to be completed in the second half of 2024, subject to regulatory approval and the fulfillment of other customary closing conditions.

No other events of particular importance that could have a material impact on the net assets, financial position, or results of operations occurred subsequent to the balance sheet date.

Darmstadt, July 30, 2024

Belén Garijo

Kai Beckmann

Peter Guenter

Matthias Heinzel

Helene von Roeder

responsibility statement

To the best of our knowledge, and in accordance with the applicable reporting principles for half-year financial reporting, the consolidated interim financial statements of the Merck Group give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the interim management report of the Group includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group for the remaining months of the financial year.

Darmstadt, July 30, 2024

Belén Garijo

Kai Beckmann

Peter Guenter

Matthias Heinzel

Helene von Roeder

Review Report

To Merck Kommanditgesellschaft auf Aktien (KGaA), Darmstadt, Germany

We have reviewed the condensed interim consolidated financial statements of Merck Kommanditgesellschaft auf Aktien, Darmstadt, which comprise the Consolidated Income Statement, the Consolidated Statement of Comprehensive Income, the Consolidated Balance Sheet, the Consolidated Cash Flow Statement, the Consolidated Statement of Changes in Net Equity and Notes to the Interim Financial Statements, and the Interim Group Management Report for the period from January 1, 2024 to June 30, 2024, that are part of the half-year financial information under Section 115 German Securities Trading Act (WpHG). The preparation of the condensed interim consolidated financial statements in accordance with the International Financial Reporting Standards (IFRS) applicable to interim financial reporting as adopted by the EU and of the interim group management report in accordance with the requirements of the WpHG applicable to interim group management reports is the responsibility of the executive directors of the Company. Our responsibility is to issue a review report on the condensed interim consolidated financial statements and on the interim group management report based on our review.

We conducted our review of the condensed interim consolidated financial statements and of the interim group management report in compliance with the German Generally Accepted Standards for Reviews of Financial Statements promulgated by the Institut der Wirtschaftsprüfer (IDW). Those standards require that we plan and perform the review to obtain a certain level of assurance to preclude through critical evaluation that the condensed interim consolidated financial statements have not been prepared, in material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU, or that the interim group management report has not been prepared, in material respects, in accordance with the requirements of the WpHG applicable to interim group management reports. A review is limited primarily to inquiries of company personnel and to analytical procedures applied to financial data and thus provides less assurance than an audit. Since, in accordance with our engagement, we have not performed an audit, we do not express an audit opinion.

Based on our review, nothing has come to our attention that causes us to believe that the condensed interim consolidated financial statements of Merck Kommanditgesellschaft auf Aktien, Darmstadt, Germany, have not been prepared, in material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU or that the interim group management report has not been prepared, in material respects, in accordance with the requirements of the WpHG applicable to interim group management reports.

Frankfurt am Main, July 30, 2024

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

Signed:
(Christoph Schenk)
Wirtschaftsprüfer
(German Public Auditor)

Signed:
(Daniel Weise)
Wirtschaftsprüfer
(German Public Auditor)

financial calendar

November 14, 2024 Quarterly Statement Q3

March 6, 2025 Annual Report 2024

April 25, 2025 Annual General Meeting

May 15, 2025 Quarterly Statement Q1

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