Annual Report 2023

Transform to perform

Leadership in Filtration

MANN+HUMMEL

MANN+HUMMEL at a glance[1]

Sales
4.7
billion euros

EBIT
16
million euros

EBIT margin
0.3%

EBITDA
409
million euros

Total assets
4.1
billion euros

Investments in R&D
118
million euros

Locations
80+
on 6 continents

Employees
22,015
worldwide

1 All figures are rounded. This may lead to minor discrepancies when totaling sums and when determining percentages.

Key figures[1]

In EUR million	2023	2022
Sales	**4,702**	4,826
Operating profit or loss (EBIT)	**16**	176
As % of sales	0.3	3.7
Net profit before interest, taxes, depreciation, amortization (EBITDA)	**409**	394
As % of sales	8.7	8.2
Net profit or loss before income tax and changes in capital economically attributable to the shareholders	**–98**	20
As % of sales	–2.1	0.4
Consolidated net income	**–15**	–9.0
As % of sales	–0.3	–0.2
Free cash flow	**84**	68
As % of sales	1.8	1.4
Total assets	**4,119**	4,347
Investments in tangible assets	**197**	263
Depreciation of tangible assets	**163**	162
Value added per employee in EUR thousand	**99**	93
Average number of employees	**22,015**	22,222

1 All figures are rounded. This may lead to minor discrepancies when totaling sums and when determining percentages.

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Foreword by the Management Board

Perform to transform

Dear Ladies and Gentlemen,
Dear Business Partners,

Transformation is not a temporary trend or an invention of modern times. It has always been around and it is here to stay. Change is a natural part of our lives. Standing still is an illusion that we would like to indulge in, but which de facto does not exist. Even as you read these lines, the world around you is changing. Only the intensity of the change may vary.

The good thing is that we are not at the mercy of these changes. We can actively drive them, we can accelerate them, we can extend them to other areas of our business priorities. In short, we can shape them. There may be some levers that take longer to change than others. At the same time, we have so many opportunities every day to make decisions and thus proactively drive and shape change.

At MANN+HUMMEL, we remain focused on our vision of "Leadership in Filtration" and committed to our mission of "Separating the useful from the harmful." We are diligently working to adjust our global presence and structures, to standardize as well as optimize existing processes, and to change our traditional ways of thinking all with the goal of becoming fit for the future now. We are investing heavily in our portfolio and our digital infrastructure. Always for the benefit of our customers and therefore also for the long-term benefit of our organization.

This is one of the reasons why we at MANN+HUMMEL introduced SPEED (Strategy Performance Execution and Excellence Drive) in 2023. It is an OKR-based methodology, used throughout the company to drive forward the implementation of our organization's strategy even more consistently. Strategy without execution is worthless. SPEED makes us more focused, agile, and adaptable. Not only are we able to better adapt to changing conditions, but we are also able to better shape our path into the future and execute our strategy.

Together with our customers, we are shaping the future of the automotive industry by introducing innovative solutions that bring us all closer to our common goal of cleaner mobility. Whether combustion engines or alternative drives: innovative filtration solutions are required everywhere—and we at MANN+HUMMEL are ideally positioned to deliver them with the support of our suppliers and partners.

See for yourself here how MANN+HUMMEL is working with the National New Energy Vehicle Technology Innovation Center in Beijing, China, to shape the future of alternative drives.

We are also accelerating the development of innovative solutions for our partners in the heavy-duty on- and off-highway sectors and in industry. A self-cleaning air filter supports the customers of Fendt, one of the world's leading manufacturers of tractors and agricultural machinery, in their important task: a reliable food supply for more than eight billion people. Extended service and maintenance intervals and reduced downtimes enable efficient farming. You can find the story here.

However, our core competence—separating the useful from the harmful—does not end at the bumper of a truck, a tractor, or any other vehicle. It goes far beyond. Cleaner air and cleaner water are not just basic human needs, they are human rights. With our filtration, separation, and digital solutions, we actively contribute to the sustainable use of precious resources.

Ever since the Covid pandemic, everyone has been aware of the fundamental importance of clean air. Read here how MANN+HUMMEL ensures excellent air quality in Terminal 5 of Europe's largest and busiest airport, London Heathrow.

At the same time, our subsidiary STREAMETRIC is supporting the Hilton Head Public Service District with innovative digital solutions to ensure the water supply and disposal of an entire island. You can find out more here.

These are four examples that underline the innovative strength of MANN+HUMMEL and how it benefits both our customers and theirs. At the same time, we are working persistently on diversifying our portfolio. With the acquisitions of M-Filter and U-Air, we have significantly increased our presence in Scandinavia and the Baltic states, in China and Southeast Asia. This not only gives us a broader base, but also brings us even closer to our customers—on our common way to a cleaner planet.

In the past year, we have seen amazing creativity and outstanding achievements throughout the entire organization. We would therefore like to take this opportunity to thank our more than 22,000 employees around the world who have pushed their limits every day to move MANN+HUMMEL forward. We look forward to collaborating with this strong team on the future of MANN+HUMMEL: One Team. One Goal. One Voice.

We encourage you to read this annual report and to take the opportunity to find out more about MANN+HUMMEL, our projects, and our partnerships.

We perform to transform.

Ludwigsburg, May 2024

MANN+HUMMEL International GmbH & Co. KG

The Management Board

Kurk Wilks CEO	Emese Weissenbacher EVP & CFO

Report of the Supervisory Board of the MANN+HUMMEL Holding GmbH

Transform to perform

What do a tree and a (family-owned) business have in common? They grow. They change. They are part of entire ecosystems. They are deeply rooted. They provide a home. If they want to achieve something, they need to proceed strategically.

This list of attributes could go on and on. And yet there is a fundamental difference. A difference so big that it overshadows any nice analogy—loosely based on Gertrude Stein:

A tree is a tree is a tree.

No matter how hard it tries, a tree will always remain a tree and will never turn into a rose, for example. This may be extremely beneficial for a tree in its ecological niche, but it is fatal for a company. A company must constantly change in order to keep operating successfully and therefore sustainably.

That is why it is a misconception to think that today we are the first generation of companies and entrepreneurs that need to transform ourselves and our business. Let me remind you: MANN+HUMMEL's roots are in the textile industry. A lot has changed since then.

What cannot be denied, however, is the sheer number and speed of changes we are currently facing. Their simultaneity and their fundamental nature may indeed have reached an unprecedented level.

If we look at the world from a Western perspective, we have to realize that this world is changing with an unknown intensity, which at least today's generations have not yet experienced. Maslow's hierarchy of needs has begun to totter: fundamental certainties are suddenly no longer so certain. And this is eroding the basis of all the post-materialistic aspirations of recent decades. We are having to learn (again) that prosperity is not a given but has to be earned. If you want to put it drastically, you can also use the term "fought for."

The big problem is that this insight has not yet been accepted across the board. This is where I believe companies and entrepreneurs have a duty: we need to move forward courageously and actively drive the change we want to see in the world.

However, it must be emphasized: We will not be able to do it alone. We need supporters, allies, and friends. We need understanding and trust. In and from politics and society. This is the only way to overcome rifts and achieve success together.

This requires the widespread realization that multidimensional transformations are here to stay. We need to be bold and willing to shape the future. Our future. We need to develop new products, new fields of business, and new markets. On the way there, however, we must not—in the truest sense of the word—pull the plug on ourselves! We need energy at affordable prices, we need qualified young talent, we want and need to take advantage of the opportunities offered by digitalization, and we need efficient social systems but not social transfer systems.

And for what? As an end in itself? Certainly not.

Nothing less than the future of our environment, our societies, and our economies is at stake. ESG, if you like. Or: real sustainability. On the way to a sustainable future, however, we must not make the mistake of prioritizing one of the aforementioned pillars out of misunderstood or ideological activism. Genuine sustainability is a triad. And a good triad is harmonious, balanced, in equilibrium.

This brings me back to my introductory words: a tree is a tree is a tree. It is a triad as well. But even though it reads well, it is imbalanced, one-sided, and therefore not very forward-looking.

We are aware that we as a company cannot be like a tree. We have to constantly change and transform in order to perform successfully. Or as Henry Ford once said: "If you always do what you've always done, you'll always get what you've always got." Not very tempting.

We have to change and we want to change in order to be sustainably successful. Not only today, but also in the future. We have been following this path of transformation for many years and we will not tire of continuing to do so with great enthusiasm and full commitment. At MANN+HUMMEL, we are convinced that filtration in all its different varieties and applications is a key technology for the 21st century and we are happy to provide it.

We transform to perform.

Ludwigsburg, May 2024

Thomas Fischer
Chairman MANN+HUMMEL Holding GmbH

Performing together

London Heathrow, Great Britain. It's not only 80 million passengers per year traveling through Europe's biggest airport. It is also 2.4 million cubic meters of fresh air per hour traveling through Heathrow's Terminal 5.

MANN+HUMMEL makes sure that every cubic meter of air is being purified to its optimal quality. However, providing a perfect service doesn't just mean supplying high-efficiency air filters, but also making sure the whole value chain is working at its optimum—from production to installation, from delivery to maintenance, from replacement to disposal.

Mark Skyrme explains why working with MANN+HUMMEL is a game changer in his daily business:

VIDEO →

Marktoberdorf, Germany. With 8+ billion people living on earth, a reliable food supply and efficient agriculture are key. Climate change not only affects the food we are growing, but also the soil we are growing it in.

As our fields become dustier with every dry summer, the challenges farmers are facing when operating heavy machinery are increasing. This also means MANN+HUMMEL's air filters protecting the engines of Fendt's tractors need to be performing at their best under demanding conditions at all times. Prolonging machinery's service intervals, reducing downtime, and ensuring a safe and standardized filter cleaning process are key to supporting farmers' daily work.

Andreas Kleinhenz explains why a tractor's engine has to breathe clean air and how MANN+HUMMEL's smart air filter cleaning processes satisfy Fendt's customers:

VIDEO →

Hilton Head Island, South Carolina, USA. Drinking water is a scarce resource. Even more so on a holiday island. Responsible use and management are crucial.

The water level isn't the only thing that fluctuates on Hilton Head Island. The same applies to the number of people living temporarily in one of America's most popular travel destinations. To manage the challenges, Hilton Head Public Service District relies on a decentralized water management system. This is a great way to buffer peaks and deliver a constant supply, but it is also challenging to operate and maintain with 100+ lift stations in the northern part of the island alone. STREAMETRIC, a MANN+HUMMEL brand, offers a digital solution for efficient remote water management, facility monitoring, and predictive asset maintenance.

Dave Disney explains how STREAMETRIC helps him to react quickly, and before a situation becomes an emergency:

VIDEO →

Beijing, China. The mobility transition is at the top of the global agenda. In China, the widespread use of alternatively powered vehicles and the expansion of the corresponding infrastructure is already a reality.

The National New Energy Vehicle Technology Innovation Center (NEVC) in Beijing has a vision of safe and, above all, clean mobility. For China and the global market. Together with partners from the entire automotive industry, it is researching, testing, developing, and standardizing—for the benefit of a global industry. Right in the middle of it all: filtration and solutions from MANN+HUMMEL.

NEVC Director and General Manager **Chengyin Yuan** explains why long-term partnerships are so important:

VIDEO →

Combined management report of MANN+HUMMEL International GmbH & Co. KG, Ludwigsburg, and the Group for the 2023 financial year[1]

1 All figures are rounded. This may lead to minor discrepancies when totaling sums and when determining percentages.

1. Business model of the Group

MANN+HUMMEL is a globally active family-owned company headquartered in Ludwigsburg, Germany. For more than 80 years, the company has been developing and producing filtration solutions, initially for the automotive sector and increasingly for other areas of industry and public utilities. MANN+HUMMEL GmbH & Co. KG is the parent company of the Group and is responsible for the strategic direction of the Group. **The business model is divided into two divisions: Transportation and Life Sciences & Environment.**

In the **Transportation** division, MANN+HUMMEL offers solutions for both **original equipment** (OE) and **aftermarket** (AA). In addition, manufacturers of construction and agricultural machinery, rail vehicles, ships, and energy technology are also among the customers of advanced MANN+HUMMEL filtration technologies.

In the **Life Sciences & Environment** (LS&E) division, we develop and produce forward-looking solutions for **air and water filtration**. These include filters for indoor and outdoor use, clean rooms, and industrial applications, as well as stationary and mobile air purifiers with HEPA filters for the safe separation of viruses, bacteria, and other microorganisms. Some of the cabin filters have anti-allergenic and antimicrobial functionalities. MANN+HUMMEL filters can be found in offices, schools, and commercial and industrial buildings, but they are also used in potentially explosive atmospheres, such as offshore oil platforms. Stationary systems for the filtration of particulate matter and nitrogen dioxide as well as for improving outdoor air quality are also part of our product portfolio.

Our water filtration systems are used for water and wastewater treatment in municipal and industrial applications. In this way, scarce freshwater resources are used efficiently and recycled. Special applications in the food industry, in biotechnology, or in other ultrapure water areas, such as microelectronics, are further areas of application.

The Transportation division generates around 91% of our sales, while the LS&E division generates around 9%. Strategically, both divisions serve the increasing demand for innovative **filtration products for cleaner mobility, cleaner air, cleaner water, and cleaner industry**.

Digital services and intelligent customer-specific solutions are increasingly complementing the portfolio, the networking of product systems via the Internet of Things (IoT), data analysis in the Cloud, specially developed algorithms, and user-friendly apps.

MANN+HUMMEL continuously standardizes processes and makes them available in **Global Business & Technical Solutions** (GBTS), reducing costs and strengthening

With a research and development network of more than 1,100 engineers worldwide, MANN+HUMMEL is constantly working on the development of innovative and sustainable filtration solutions, thus sustainably following the maxim of Leadership in Filtration.

efficiency and service culture. It is only through continuous **standardization** that business processes **can be digitized to increase productivity**.

In addition to the two divisions mentioned above and GBTS, production is also organizationally bundled. A group-wide Management System allows for faster decisions and thus increases the dynamics of the company. This transformative acceleration leads to the optimal use of global synergies and faster adoption of best practices. In this way, we continuously increase efficiency and gain an edge to serve our current and future markets even better.

2. Research and Development

In 2023, MANN+HUMMEL completed numerous new product developments for various application areas. We are also transferring our expertise in filtration and its technologies to new areas, such as telecommunications and the heat pump market.

During the year, the MANN+HUMMEL companies filed more than **120 priority patent applications**. At the end of the year, the intellectual property portfolio comprised around **4,700 patents and patent applications**, as well as approximately **3,300 trademarks and trademark applications**.

Transportation

In the reporting year, the Research and Development departments of the Automotive OE business unit actively supported the strategic goals surrounding the transformation of the MANN+HUMMEL Group.

In the market segment of battery electric vehicles, Chinese manufacturers play a dominant role. They develop new technologies and vehicle models at breathtaking speeds, shaping the entire industry. In order to meet these high and ever-changing requirements, MANN+HUMMEL has opened and established the **New Energy Vehicle Technology Center (NEVTC) in Shanghai**. Here, specialists from China and other nations develop products and technologies for Chinese and globally active automotive manufacturers and their applications.

In addition to battery-powered vehicle technologies, MANN+HUMMEL has continued to invest in the development of filtration products for fuel cells, expanding its portfolio. An important milestone is the market launch of the gas-to-gas humidifier as a membrane-based system that stabilizes the environment of the actual fuel cell. The construction of an in-house test bench for these humidifier technologies at the headquarters in Ludwigsburg in 2023 underlines the company's commitment to fuel cell drives.

Several customer nominations for passenger car and heavy-duty applications clearly show that the continuous development of our cathode air filter portfolio is also gathering broad customer interest.

We have significantly expanded our product range for battery venting devices and filter modules for e-axles. Initial customer orders in various regions highlight the relevance of these new developments for battery electric and fuel cell–powered vehicle technologies. Charging stations for battery-powered electric vehicles also require filtration. For these applications, we now offer a specific air filter portfolio with low pressure drop and high dust storage capacity for air-cooled fast chargers, as well as ion exchange filters for liquid-cooled chargers.

In addition to products for alternative drives, we were able to make significant progress with products and customer projects in the heavy-duty business. The newly developed in-tank return filter line for hydraulic applications has been successfully launched on the market, as has a new range of diesel prefilter systems with Wavelock screw-on and cartridge filters. The flexible component kit also includes integrated electric fuel pumps and heaters. We were also able to expand the Wavelock line with a larger-diameter series for higher flow rates and dust capacities.

In 2023, we continued to focus on further **reducing the carbon footprint of our products**. With new digital solutions, we have been able to further automate the life cycle analysis of our product ranges. The major CO_2 emitters have been identified, and we have found alternative materials and developed processes to significantly optimize the carbon footprint of filter components for air, indoor air, fuel, and oil applications, also taking into account end-of-life recycling options.

Our development of the front-end particulate filter together with Audi in the Urban Mobility Platform was awarded second place in the Best of Mobility Award in the Supplier and Digital Systems category.

At our site in Kunshan, China, we have set up a production line for activated carbon filter media for the Transportation and Life Sciences & Environment divisions. These filter media are specifically designed to meet the needs of Asian markets but are also suitable for global applications.

In order to better understand and optimize the manufacturing processes of non-woven media, we are also involved in **public funding projects**. The ViProFil project, for example, aimed to simulate the production process of spun-blown filter media. The results of the project were presented at the FILTECH conference in Cologne together with the Fraunhofer Institute. In collaboration with the University of Stuttgart and other project partners, we have launched the new NanoFil project, which deals with the development of simulation models for the deposition of the smallest particles on submicron fibers.

Among the customer-specific solutions, the development of an oil module with an integrated coolant pump stood out as a technical highlight in the reporting year.

In the area of heavy-duty air filter systems, we have expanded our product range to include further self-cleaning filter technologies. We are now also using impulse cleaning technology (ICT) for railways and special applications in the industrial sector. An acoustic cleaning technology for air filters introduced in 2023 now enables self-cleaning even without a compressed air supply—all it needs is a power connection.

In order to achieve faster implementation in series production and greater effectiveness, MANN+HUMMEL has established dedicated teams in all major global markets who take care of tasks including application development for the Industrial area.

In order to increase efficiency and effectiveness in product development, we are continuously driving digitalization in the area of research and development. With the introduction and global rollout of the product validation system, we now have a standard tool at our disposal to define, plan, and execute all product and material validation tests worldwide, as well as to store the test results in a central database as a basis for further automated processes and data evaluations. Our “smartFE” digital tool applies machine learning for optimized element designs and is also connected to the results database of the product validation system. After cabin air filters, the tool is now also available for the design of air filter elements.

Life Sciences & Environment

Air Filtration

In the reporting year, MANN+HUMMEL launched 19 new products on the market. These include the first synthetic compact filter with an energy rating of A+, a new, standardized range of compact filters, and the introduction of a dedicated fan filter unit (FFU) to meet the demand for lower noise emissions and reduced energy consumption in clean-room technology.

Additionally, there was the introduction of an innovative honeycomb body solution in a newly developed metal frame for heating, ventilation, and air-conditioning (HVAC) systems, combining reliable corrosion protection with very low pressure loss and high capacity in the smallest installation space.

In Europe, we have introduced the three top-rated ePM 10 filters according to the Eurovent ranking in terms of energy consumption. The technological leadership, even in low-complexity product ranges, has thus become clear.

Through our efforts in developing and releasing new products, we have made progress in reducing energy consumption. We firmly believe that our innovative efforts to reduce CO_2 (and costs) offer genuine value added for customers and support them in their own efforts to become more sustainable.

In the field of molecular filters, we have continuously been involved in the design of new ISO standards, completely redefining a loose-fill portfolio with a wide range of possible applications.

With the acquisition of the majority stake in U-Air, we have strengthened our footprint in the growing Chinese and Southeast Asian air filtration market.

Water & Membrane Solutions

In the reporting year, we developed and validated the BIO-CEL L+ generation, offering a low cost of ownership and meeting strict wastewater reuse criteria for irrigation purposes. Our new-generation BIO-CEL is based on the latest high-performance ultrafiltration membrane UV400. It enables operation with a higher water flow through the membrane, resulting in less energy consumption. Our vertically stackable product design doubles the footprint per area resulting in a lower footprint overall and reducing capital costs.

Our solution can be paired with powdered activated carbon to remove micropollutants such as diclofenac and meet strict requirements for the upcoming changes in the European Water Framework Directive. Our solution solves current and future water quality and water reuse challenges.

Our PureULTRA homogeneous PVDF hollow fiber module has received NSF/ANSI 61 and China Drinking Water Certification in 2023. It is the ideal solution for tertiary treatment in water treatment, effective against nitrogen, phosphorus, suspended solids, refractory organic substances, heavy metals, and dissolved solids. It is also used for prefiltration up to reverse osmosis in the reuse of water and is suitable for zero liquid discharge (ZLD) applications. In this way, a completely loss-free water cycle can be achieved in industrial applications.

Other innovations in the reporting year include the introduction of a new high-pressure version of the AQUADYN hollow fiber membrane module (UA680HP) and a new reverse osmosis spiral module in the Asia-Pacific region.

Corporate Ventures

In the reporting year, MANN+HUMMEL once again focused on researching and evaluating innovative start-ups that can support and strengthen the company in its pursuit of cleaner air, cleaner water, cleaner mobility, and cleaner industry. To this end, we conducted 10 proofs of concept with interesting start-ups that could be potential (investment) partners.

We also invested for the first time in an Assembly Ventures Fund, which is dedicated exclusively to mobility.

2023 was also the year in which we launched joint projects with high-performing portfolio start-ups such as Porifera, Spiffy and ZwitterCo to maximize the value of our investments.

In general, our start-up investments yielded favorable results, and embedding them in the company's strategic goals is having a positive effect.

3. Macroeconomic and sectoral framework conditions

Global economic development in 2023

Contrary to initial fears, there was no stagnation or decline in global economic output in 2023. Instead, tighter monetary policies and the resulting containment of global inflation led to moderate growth[1].

The Kiel Institute for the World Economy revised earlier estimates and forecast a significantly higher growth in global economic output of 3.1%[2] (compared to the original estimate of 2.5%), measured on the basis of purchasing power parities.

Despite the positive economic momentum, the uncertainties triggered by geopolitical tensions, political confrontations, and the gradual reduction of supportive fiscal measures remained. Industrial production faced challenges in the reporting year, which contributed to a significant decline in world trade activity, as shown by the Kiel Trade Indicator[3].

While the US economy proved resilient with significant increases in output and GDP growth of 2.4%[4], Europe experienced weak growth, with little more than stagnation in the euro area (0.6% GDP growth[5]). Japan reported slow GDP growth of 1.2%[6]. In China, GDP growth was 5.4%[7], but economic momentum remained subdued due to structural problems. Emerging markets showed mixed economic performance, with India posting robust growth, while Latin America faced challenges. Meanwhile, the outlook for Russia remained uncertain due to the sanctions policy despite a 2.8% increase in GDP in 2023[8].

Raw material prices rose in the first half of 2023, partly due to carry-over effects from 2022. Falling energy costs, lower demand for raw materials, and the restart of global supply chains then led to a reduction in raw material prices in the second half of the reporting year, however even with these reductions, inflationary pressures keep raw materials elevated over previous years.

1, 2 Kiel Institute: Kiel Institute Economic Outlook, World Economy Winter 2023.
3 Kiel Trade Indicator: November 2023.
4, 5 Kiel Institute: Kiel Institute Economic Outlook, World Economy Winter 2023.
6 Japan Center for Economic Research: GDP Japan.
7, 8 Kiel Institute: Kiel Institute Economic Outlook, World Economy Winter 2023.
9, 10 VDA: International automobile markets.

Transportation

The major international automotive markets recorded a significant increase in new registrations in 2023 as a whole. Compared to 2022, vehicle availability was much better, and passenger car sales increased accordingly. However, the weak sales figures of the previous year formed a low base level[9].

In general, conditions for the automotive industry continued to be challenging in the reporting year: In Europe in particular but also in other regions of the world, geopolitical and macroeconomic uncertainties recently led to subdued aggregate demand and thus only subdued economic growth. Persistently high energy and consumer prices also hampered growth.

In Europe[10] (the EU, EFTA, and UK), a good 12.8 million new vehicles were registered in 2023, 14% more than in the previous year.However, this means that the European passenger car market is still 19% below the pre-crisis level of 2019. At just over 1.0 million units, new vehicles were registered in December, 4% fewer than in December 2022. The decisive factor for the decline is the weak German market: Due to the discontinuation of e-car subsidies, significantly fewer new vehicles were registered overall in December 2023. Sales figures for the five largest markets this month show the differences: France (+15%), Spain (+11%), United Kingdom (+10%), Italy (+6%), Germany (–23%).

By contrast, the US light-vehicle market[11] (passenger cars and light duty) developed dynamically in 2023, with light-vehicle sales rising by 12%. A total of almost 15.5 million vehicles were sold. However, the market in the US is still almost 9% below the pre-crisis level of 2019.

The development in Mexico[12] was also positive. With just under 1.4 million newly registered units, 25% more new vehicles were registered than in 2022.

The situation is similar in Brazil[13], where a total of just under 2.2 million units were sold over the course of the year. That is 11% more than in the previous year but still 18% less than in the pre-crisis year of 2019.

In China[14], almost 25.8 million new passenger cars were registered; this is an all-time high—11% more than in 2022 and 7% more than in the previous record year of 2017. The passenger car market thus resisted the weakening momentum of the Chinese economy as a whole and provided significant support for the economy.

Life Sciences & Environment

Air Filtration

The global heating, ventilation, and air-conditioning (HVAC) market reached a value of approximately USD 168.65 billion in 2023. It is expected to grow at a CAGR[10] of 6.2% from 2024 to 2032 to reach a value of nearly USD 290 billion in 2032.[15]

In the coming years, global demand for heating, ventilation, and air-conditioning technology is expected to increase as construction activity increases internationally. This growth is further supported by a growing population, rapid urbanization, and increasing disposable income[16].

For MANN+HUMMEL, the submarket of HVAC filters is particularly interesting. Its global revenue is approximately USD 5.1 billion in the reporting year and is estimated to grow at a CAGR of over 6% from 2024 to 2032[17]. The filters play an essential role in maintaining indoor air quality, protecting HVAC systems and promoting a healthy living environment.

The Asia-Pacific market accounts for over 45% of the global HVAC filter market.[18]

Water & Membrane Solutions

The global water and wastewater treatment equipment market was valued at USD 208.7 billion in 2023 and is expected to grow at a CAGR of 4.5% until 2028.[19]

Sales of membrane technologies amounted to approximately USD 10 billion in the reporting year and are expected to increase to USD 12.5 billion by 2028.

The Asia-Pacific region is the leading growth market with a share of more than 50%, followed by the Middle East, and Africa region with 18% of the total water and wastewater treatment market.

11, 12, 13, 14 VDA: International automobile markets.
15, 16 expertmarketresearch.com: Global HVAC Market Outlook.
17, 18 gminsights.com: HVAC Filters Market Size, Industry Share Report 2032.
19 GWi: GWi WaterData.

4. Business performance

Business performance in 2023 was not entirely satisfactory for MANN+HUMMEL and was marked by challenges. While some areas fully met expectations, continuing inflationary impacts in the first half of 2023 as well as regional setbacks—especially in North America—both in Transportation and LS&E, could not be avoided.

In the LS&E division, sales did not grow as expected, and special depreciation and amortization had an additional negative impact on earnings.

Transportation

Overall, business performance in the Transportation division was good and exceeded expectations despite a decline in volumes.

Nevertheless, the reporting year presented various challenges, especially in North America, where restrictions in the areas of production and logistics had a negative impact on business development. Moreover, a long-standing core customer in the US reduced the scope of their business relationship.

Positive development in the OE sector with good prospects for the future

The original equipment business was stable in 2023. Even though revenue did not fully meet expectations, reduced volumes were offset by a shift in sales from Passenger Car to the Heavy Duty & Industrial business.

Original Equipment Passenger Car (OE PC)

Revenue in the Passenger Car area declined slightly compared to the previous year. However, there were clear regional differences.

EUROPE

In October 2022, MANN+HUMMEL sold its global business with high-performance plastic parts with its European sites in Bad Harzburg, Sonneberg (both in Germany), and Laval (France) to Mutares SE & Co. KGaA. As a result, the corresponding sales were not recorded in the reporting year. It was not possible to compensate for these lost volumes through sales in the area of filtration and separation solutions in Europe. However, this development was expected and planned by us.

AMERICAS

In North America, the market for passenger car original equipment grew by 9%. In cooperation with our key customers, we participated in this volume growth in the reporting year.

On the other hand, sales revenues in the South American markets remained almost at the previous year's level, which we had expected and had taken into account in our planning.

ASIA

In Asia, too, unit sales remained largely stable and thus satisfactory compared to the previous year, and we were able to record good sales growth in South Korea.

In the area of electromobility, MANN+HUMMEL achieved sales growth in the mid- to high-double-digit range compared to the same period in the previous year. However, volumes were still low.

The sale of the plastic parts business also impacted the conventional combustion car business in this region, particularly in China.

Original Equipment Heavy Duty & Industrial (OE HD&I)

The Heavy Duty & Industrial areas developed positively in the past financial year. Percentage sales growth was in the lower double-digit range, but the growth achieved in Europe and the Americas in particular was significant.

In order to further support this development and to create an increased focus on the respective subareas, the Heavy Duty and Industrial areas were already organizationally separated in 2022, which was fully implemented in 2023. As a result, we are concentrating even more strongly on the defined market segments in the Industrial area with the aim of reducing complexity and generating further growth.

In the Heavy Duty area, we consistently develop new technologies and filtration solutions. As part of our strategy to expand in the markets of new power trains and alternative fuels, we have significantly expanded the product lines for these technologies, further strengthening our commitment to a cleaner and emission-neutral future. For fuel cell products, we are preparing for large-scale production. MANN+HUMMEL also developed further multifunctional filtration solutions for electric drives in the reporting year.

EUROPE
In Europe, we were able to achieve significant growth in the OE HD&I areas.

AMERICAS
We are also seeing significant sales growth in the Americas.

ASIA
While significant growth was recorded in China, the other Asian markets stagnated.

Stagnating Aftermarket sales with stable margins

In the Aftermarket business unit, currency-adjusted sales were almost on a par year over year. This was not in line with the original plans for the 2023 financial year, but the still-closed market in Russia and the restrictions on the North American market already described had a significant impact on sales development that were partially offset with positive gains from India, Middle East, Africa, Latin America and Asia.

Aftermarket OES

Overall, the development of the OES business declined slightly and thus did not meet our expectations. However, we received 26 new orders from new and existing customers across all product lines, laying a good foundation for future growth.

The successful expansion of our cooperation with our major customers in 2023 also suggests that we will expand our market share in the future. Our efforts to meet customers' localization requests offer good opportunities for the future of OES business in all regions.

New product lines for charging infrastructure created sales opportunities in the e-mobility market. The first orders were received in the reporting year.

The further increase in the proportion of innovative filter media produced in-house will also enable MANN+HUMMEL to expand its product range in the field of cabin air filters in the future.

EUROPE
The loss of the Russian market significantly reduced OES sales.

AMERICAS
In the Americas, sales developed positively, with double-digit growth, exceeding our expectations.

ASIA
Sales in China and other Asian markets were also positive.

Independent Aftermarket (IAM)

Our sales in the Independent Aftermarket grew slightly in the reporting year but fell short of our original expectations.

EUROPE
In Europe, sales increased slightly despite the loss of the Russian market. The significantly improved delivery service to our customers compared to the previous year also contributed to this growth.

AMERICAS
In the US and Canada, sales were significantly weaker than expected and fell short of forecasts. This is partly due to weak delivery performance and the volume reduction of a major customer.

By contrast, Latin America—especially Brazil and Argentina—recorded significant growth in 2023.

INDIA, MIDDLE EAST, AND AFRICA
In these regions, sales growth was in the high double-digit range. We significantly expanded the market coverage of our products, and sales in the Off-Highway and Industrial areas also increased in the reporting year.

We have launched more than 90 new products in India, where the MANN+HUMMEL localization initiative was a strong driver of the positive development in the independent aftermarket.

ASIA
In Asia (excluding China), MANN+HUMMEL was able to achieve growth and expand its market share, continuing the trend from the previous year.

As part of our localization programs, we have launched over 220 new products. In addition to this diversification and the expansion of the regional product portfolio, we have also continuously expanded our supplier network.

As expected, China performed well in the reporting year. There, we launched 1,200 new products on the independent aftermarket, 80% of which have been developed specifically for the Chinese market.

For the growing market share of battery electric vehicles, we have introduced a comprehensive range of specific vehicle cabin filters with a market coverage of 93%.

A new product line of transmission oil filters was ready for series production in the reporting year, and we also established the Purolator brand on the Chinese market as part of our multi-brand strategy.

Sales through various Chinese e-commerce channels developed positively, and we opened a new TikTok flagship store for MANN-FILTER.

Life Sciences & Environment

Business performance in the LS&E division was below our expectations as we were not able to achieve the goals we had set for ourselves. Total sales grew by only 1.4% on a currency-neutral basis. The market development in this division is still challenging. We remain committed to our strategic goals in this area and are confident that we will achieve them in the medium and long term.

Air Filtration: slight revenue growth via acquisitions

The Air Filtration business unit grew in the low single-digit percentage range in the reporting year. However, this growth is attributable to our acquisitions in Northern Europe and Asia. The revenue contribution from the newly acquired subsidiaries amounts to EUR 41.9 million. Sales in the existing business declined.

EUROPE

In the European markets, 2023 fell short of MANN+HUMMEL's own expectations. In the reporting year, we acquired a majority stake in Oy M-Filter Ab from Finland.

Thanks to our competitive advantages as a holistic provider of filtration products and services, we are now the exclusive supplier of HVAC filters for one of the world's largest e-commerce platforms with locations in Spain, Italy, and France.

Various projects to reduce energy consumption, such as the one for London's Heathrow Airport, have developed well, while other projects with the same objective have been launched for a pharmaceutical manufacturer, a global supplier of fresh pasta, and a German confectionery manufacturer.

MANN+HUMMEL is one of the few fan filter unit (FFU) manufacturers that also produce their own filter media. In the reporting year, this competitive advantage led to a tender being won for a clean-room project by a manufacturer of ultrafine optical components in the semiconductor industry.

In the reporting year, we were able to convince one of the world's leading high-tech suppliers of the benefits of MANN+HUMMEL's molecular filtration technology and successfully install the products on a large scale.

For a leading manufacturer of medical and safety technology, we developed and successfully implemented a specific honeycomb solution.

AMERICAS

In 2023, business with air filtration solutions in the Americas did not perform to our satisfaction.

However, brand transformation is progressing. A MANN+HUMMEL Air Filtration Americas website went online, and the social media channels of TRI-DIM, TRI-DIM Hardy, and Pamlico Air were merged under MANN+HUMMEL's corporate social media channels.

Two major orders for private label products increased MANN+HUMMEL's market share in North and South America.

The business and process integration of TRI-DIM and Pamlico Air into a unified ERP system has significantly improved business operations and customer experience. The relocation of the sites in Richmond, Virginia; Elgin, Illinois; Statesville, North Carolina; and Las Vegas and Reno, Nevada, to other MANN+HUMMEL locations improved the quality of service and also reduced the company's overall carbon footprint.

ASIA

In Asia, business performance fell short of our expectations. However, MANN+HUMMEL's exposure to these markets is still low in volume, so the impact on the overall result is not dominant.

In China, MANN+HUMMEL acquired a majority stake in U-Air Environmental Technology Co., Ltd. with its production facilities in Singapore, Suzhou, and Shenzhen.

In Singapore, we have equipped the operating rooms of the Woodlands Health Campus with more than 35 laminar flow ceilings.

Water & Membrane Solutions: stable but slow-growing

The Water & Membrane Solutions unit remained slightly below expectations in 2023 and has stabilized at a low level. MANN+HUMMEL offers the full range of membrane solutions—microfiltration, ultrafiltration, nanofiltration, and reverse osmosis—and thus has a unique market position. Several international trade fairs in all segments, as well as the launch of a new global website with a market-centric approach, helped increase brand awareness.

Some of our focus applications, such as membrane bioreactors for wastewater treatment plants, as well as membrane sheets and process solutions, recorded double-digit growth in the reporting year, exceeding overall market forecasts.

EUROPE
In Italy, we commissioned a new production line for membranes that can both meet local regional demand and serve other European customers.

In Switzerland, we delivered 88 BIO-CEL L-2 modules with activated carbon technology for a wastewater treatment plant. The aim of the operators was to optimize wastewater treatment without increasing the overall plant area and to reliably separate drug residues, bacteria, and germs, which was made possible due to the extremely compact size of the L-2 modules.

AMERICAS
At one of the largest water utilities in South Carolina, we sold and installed 100 STREAMETRIC digital solutions. Not only do they stabilize ongoing operations and secure the water supply, but they also reduce both the time and cost of lifting facilities on Hilton Head Island.

ASIA-PACIFIC
In China, sales grew in the industrial water treatment business in steel industry applications, in cooling towers in the energy industry, and in dyeing plants. An order for a wastewater-free treatment solution, also known as zero liquid discharge (ZLD), for a coal mine made a major contribution to growth as well.

Digital Transformation

In the reporting year, digitalization was once again a focus of transformative efforts on the way to sustainably optimal and efficient filtration. Three objectives, some of which overlap, are the motivating drivers: firstly, the significant improvement of **interactions and cooperation with our customers**; secondly, the **development of innovative digital products and services**; and thirdly, the **training of digital experts** and the development of technologies that in turn provide approaches for completely new opportunities and activities.

To further improve the efficiency and collaboration of our global production sites, we continued the rollout of the SAP S/4HANA platform for all subsidiaries in 2023. The LEAN premise in our production and distribution network specifies the goals and measures. The Smart Factory & Digital Operations team also successfully continued its work. With the central Manufacturing Execution System (MES) for monitoring global production, more than 75% of all machines in the Transportation division are now linked to a uniform system. Our industrial IoT Cloud shows us in real time the process parameters of the connected machines and production lines, allowing for an early reaction to any malfunctions and effectively avoiding imminent downtimes.

We have continued to push ahead with the **global expansion of our energy monitoring systems**, and we massively expanded our metering infrastructure. This allows us to measure and reduce energy consumption at the machine level, an important prerequisite on the way to CO_2-neutral production.

The newly established **Center of Excellence for Automation** offers robotic process automation tools for a wide range of internal processes.

5. Net assets, financial position, and results of operations

Profit situation of the MANN+HUMMEL Group

The MANN+HUMMEL Group’s revenue fell by 2.6% (or EUR 124.3 million) to EUR 4,702.1 million in the past financial year (previous year: EUR 4,826.4 million). However, sales growth was impacted by negative exchange rate effects. Adjusted for these exchange rate effects of EUR –253.4 million, revenue growth was 2.7%. As a result and despite the sale of the high-performance plastic parts business, the MANN+HUMMEL Group is continuing its growth trajectory of recent years.

The 2023 financial year was marked by various geopolitical and macroeconomic challenges. The consequences of the war in Ukraine also had an impact on MANN+HUMMEL’s business development. However, despite these crises, the global economy as a whole has been more stable than expected. International supply chains have largely stabilized, and the restrictions imposed by the Covid crisis in previous years have largely been lifted. Also notable is the weakening of the inflation. We also see a slight easing in the increase in material prices as well as in energy costs. The ongoing transformation of the automotive sector and the associated companies in the supplier sector is also an important focus for us.

In the traditional automotive business (Transportation division), revenue in 2023 was 2.7% lower than in the previous year. However, this decline in sales was impacted by negative exchange rate effects of 5.5%. Adjusted for these currency translation effects, sales growth amounted to 2.8%, with the high-margin spare parts business developing much more positively than the original equipment business despite the negative impact of the Ukraine crisis. In addition to an increase in volume, positive sales price effects had an upward effect on sales. As a result, we were able to pass on a significant part of the inflationary cost development of the past two years to the market. However, the development of the original equipment business should take into account the fact that there is a lack of sales volume compared to the previous year of EUR 173.5 million due to the sale of the high-performance plastic parts business in 2022.

Currency-adjusted sales in the Life Sciences & Environment division also increased by 1.4%. As a result, MANN+HUMMEL generated 9.4% (previous year: 9.3%) of Group sales. Revenue growth was supported by additional revenue from the acquisition of two majority stakes in Finland and China. At the end of October, the MANN+HUMMEL Group announced the acquisition of a majority stake in U-Air Environmental Technology (“U-Air”), a Chinese filtration manufacturer, strengthening the MANN+HUMMEL Group’s presence in the growing Chinese and Southeast Asian market for air filtration in this division. In addition, at the beginning of the past financial year, MANN+HUMMEL acquired a majority stake in the M-Filter Group, a filter manufacturer in Northern and Eastern Europe. Overall, the sales from the two new acquisitions amounted to EUR 41.9 million in the past financial year. Adjusted for inorganic growth, currency-adjusted sales in this business area decreased by around 8%, which is due, among other things, to the slight decline in sales in the Air Filtration area.

Earnings before interest and taxes (EBIT) in the reporting year were significantly lower than in previous years. Despite a positive development in the gross margin, which rose from 22.6% in 2022 to 25.2% in the consolidated income statement in the past financial year, EBIT was offset by significant one-off effects due to, among other things, sustained impairment of assets as part of the impairment test and other necessary impairments, as well as restructuring measures and currency effects from hyperinflationary countries affected. While the significant increase in global costs for the procurement of raw materials and the sharp rise in freight, logistics, and energy costs were important factors in the Group’s profitability in the previous financial year, these price increases were largely passed on to the market in the 2023 financial year and thus did not have a significant impact on the development of operating earnings. However, in 2023, the ongoing efficiency problems at the American sites persisted, impacting both production and logistics processes.

In the Life Sciences & Environment division, our goal remains to sustainably improve margin quality and profitable growth. Unfortunately, we did not succeed sufficiently in this in the past financial year, and the overall result in this area was negative. The focus for the coming financial years is on reversing this trend by improving pricing on the market and by exploiting growth-related economies of scale. The cost of sales in 2022 was still 77.4% in relation to revenue, but it fell to 74.8% in the 2023 financial year due to the effects described above. As a result, the gross margin (i.e., gross profit as a percentage of sales) increased from 22.6% to 25.2%. In absolute terms, gross profit from sales rose to EUR 1,186.5 million (previous year: EUR 1,092.7 million), which is an increase of 8.6% compared to the previous financial year.

EBIT—earnings before interest and taxes—thus amounted to EUR 15.9 million (previous year: EUR 176.3 million), and the operating margin (EBIT in relation to revenues) was 0.3% (previous year: 3.7%). However, as mentioned above, the operating result was impacted by significant one-off effects. In 2023, the most significant effect of EUR 185.6 million was related to the requirement of an impairment charge on the cash-generating unit (CGU) Life Sciences & Environment. This depreciation reflects the adjustment of the carrying amount of this CGU to its fair value. The reduction in fair value was necessary to take into account the increase in the general interest rate level on the one hand and a postponement of the growth of the expected future business development of the Life Sciences & Environment division on the other. The current operational start-up difficulties also played a role in this, and we took these factors into account with the impairment. However, we remain committed to our strategy of sustainable development in this area. MANN+HUMMEL continues to be consistently committed to air and water filtration, with the aim of achieving profitable growth in the future, developing innovative solutions for a more sustainable environment and successfully distributing them on the global market.

In addition to the impairment losses in the Life Sciences & Environment division, impairments on equipment, tools, and receivables were also required in both divisions. In total, these amounted to EUR 5.9 million. As in previous financial years, hyperinflation accounting once again resulted in a negative effect of EUR 7.9 million in the 2023 financial year, which was applied in accordance with IAS 29 (Financial Reporting in Hyperinflationary Economies). In countries with a very high inflation rate, there was a switch to inflation-adjusted values, which led to additional currency-related losses. In the case of MANN+HUMMEL, this involved the revaluation of assets in the economies of Turkey and Argentina.

In order to continue to be successful in the long term, it was also necessary to implement restructuring measures in various locations, including Germany, in the 2023 financial year. The associated expenses amounted to EUR 3.7 million. In addition, there were other miscellaneous special effects from inflation compensation bonus in the amount of EUR 5.8 million.

Overall, extraordinary expenses of EUR 209.0 million were incurred in 2023 (previous year: EUR 20.2 million). Adjusted for these effects, operating profit amounted to EUR 224.9 million (previous year: EUR 156.1 million). The operating adjusted EBIT margin amounted to 4.8% (previous year: 3.2%). Despite the continued development of the Life Sciences & Environment division, which was below previous expectations, and the operational problems in the Americas region, there was a positive development for MANN+HUMMEL. The adjusted EBIT margin increased significantly year over year, driven by improved operational efficiencies in the Transportation division. This result shows that the restructuring and structural adjustment measures of the past—as well as the measures for the realignment of the company, the adjustments to the changed market conditions, and far-reaching cost-saving measures—have been successful. It is now important for us to continue this positive trend and consistently exploit the existing growth opportunities and potential, despite the far-reaching challenges of the dual transformation.

For 2023, the MANN+HUMMEL Group expected currency-adjusted revenue growth of between 6% and 7%. Due to the delay in the ramp-up of business volume in the Life Sciences & Environment division described above, the operational problems in the Americas market, as well as the crisis-related changes in the sales markets in Europe, we fell short of expectations with currency-adjusted sales growth of 2.7%. Despite the lower revenue growth, however, we were able to improve the operating profitability of the Transportation division in particular, thus compensating for the development in Life Sciences & Environment, which did not meet expectations. The EBIT margin of 4.8%, adjusted for non-operating one-off effects, is almost in line with the forecast, which anticipated a value in the mid-single-digit range.

In addition to EBIT, return on capital employed (ROCE) serves as a key performance indicator for the Group. ROCE is defined as the return on capital used to generate reported EBIT. ROCE fell to 0.8% in the reporting year (previous year: 8.8%).

In both the past and previous financial years, ROCE was impacted by one-off effects. The unadjusted, ROCE decreased compared to the previous year. Adjusted, at 10.9%, it was in the lower range of the forecast defined for 2023 between 10% and 12%, but significantly above the previous year (7.8%).

The open order backlog amounted to approximately EUR 2,152 million (previous year: EUR 2,261 million) and was thus EUR 109.3 million, or 4.8%, below the previous year.

Research and development costs amounted to EUR 117.9 million in the reporting year (previous year: EUR 114.3 million). In relation to sales, they increased slightly, from 2.4% in 2022 to 2.5% in 2023. As a result, the MANN+HUMMEL Group's expenditure on research and development remains at a consistently high level. We continue to invest in new technologies and the associated strategic orientation of our company in existing areas and, in particular, the new business area. In this business area in particular, the development of sustainable filtration solutions is an important focus of research and development activities.

Compared to the previous year, sales expenses declined slightly. These fell to EUR 528.7 million in the reporting year (previous year: EUR 546.7 million). The decline by 3.3% is mainly attributable to the reduction in logistics and freight costs. Due to the general weakening of the economy and the associated inflationary effects, among other things, the increase in freight and logistics costs in the previous financial years did not continue in the 2023 financial year. Freight prices recovered, in particular for sea freight. In addition, lower special freight costs were incurred in 2023. Sales and marketing expenses, as well as project management expenses, remained almost at the same level as in the previous year. As a result, the share of selling expenses in relation to sales fell slightly, from 11.3% in the previous year to 11.2% in 2023.

General administrative expenses also increased by EUR 48.2 million, or 21.4%, from EUR 225.4 million to EUR 273.6 million. In relation to sales, this represents an increase from 4.7% to 5.8%. This is mainly due to increased personnel costs, rising rental and leasing costs, and higher legal and consulting costs.

Other operating income declined in the reporting period compared to the previous year, decreasing to EUR 176.7 million (previous year: EUR 192.0 million). The main reason for the decline was the sale of land and buildings at the Ludwigsburg site in the amount of EUR 33.3 million carried out in the previous financial year. In addition, other operating income includes positive effects from the accounting for inflation effects in Argentina and Turkey in the amount of EUR 61.1 million (previous year: EUR 21.7 million).

On the other hand, other operating expenses developed in contrast to the previous year. These increased by EUR 205.1 million to EUR 427.1 million. Here, too, significant exchange rate effects were a major reason for the increase. Overall, foreign currency translation expenses amounted to EUR 114.8 million (previous year: EUR 66.2 million) and were driven by effects in Argentina, Turkey, Poland, and China. In addition to currency translation effects, other operating expenses include negative effects of EUR 66.6 million from the foreign currency translation of hyper-inflationary countries. As in previous financial years, it is not possible to offset this against the income from currency translation at this point. Another significant effect resulted from the impairment of goodwill and intangible assets of the Life Sciences & Environment division, totaling EUR 185.6 million. In addition to the effects described above, the positive cost-reducing effect of EUR 22.8 million (previous year: EUR 24.5 million) in the adjustment of the provision for imminent losses from pending transactions should be emphasized and is due to a weakening of the inflation-related increase in material prices and other production costs. In addition, expenses for restructuring measures amounted to EUR 3.7 million in the reporting year (previous year: EUR –2.0 million).

The financial result developed positively in the reporting year compared to the previous year, improving by EUR 42.7 million to EUR –113.5 million (previous year: EUR –156.2 million). Among other things, the positive deviation from the previous year is due to the loss realized in 2022 from the sale of the global business with high-performance plastic parts in the amount of EUR –38.8 million. In addition, our securities portfolio developed positively in 2023, resulting in income of EUR 14.8 million and an improvement of EUR 35.5 million compared to the previous year. Moreover, the necessary impairments on shares and loans to non-consolidated subsidiaries were EUR 15.4 million lower than in the previous year.

Higher interest expenses had a negative impact on the financial result for the reporting period. These rose by EUR 33.5 million to EUR 73.2 million, which was the result of the rise in the general level of interest rates. However, the higher drawdowns of the existing credit lines also had an impact here.

The financial result also includes expenses due to inflationary effects in connection with MANN+HUMMEL's activities in high-inflation countries. The resulting deterioration in the financial result compared to the previous year amounted to EUR 16.2 million.

Tax expenses as of December 31, 2023, increased from EUR 70.0 million to EUR 97.1 million compared to the previous year. This increase is mainly attributable to the very good earnings performance and the associated increase in the tax burden in the Transportation division. With regard to the amount of the tax expenses in relation to profit before tax, it should be noted that the expense from the impairment of goodwill has no effect on the tax result and therefore does not reduce the tax expense. Likewise, there was no offsetting capitalization of the existing loss carryforwards in the Life Sciences & Environment division.

Financial position of the MANN+HUMMEL Group

MANN+HUMMEL's equity ratio fell significantly from 23.3% to 19.4% in the 2023 financial year, especially against the backdrop of impairment losses in the Life Sciences & Environment division, including the capital economically attributable to the shareholders. In absolute terms, economic equity (the sum of equity and capital economically attributable to the shareholders) also fell to EUR 801.2 million (previous year: EUR 1,012.1 million).

To ensure sufficient liquidity, the MANN+HUMMEL Group has short-term credit lines of EUR 906.3 million (previous year: EUR 867.6 million) available from credit institutions. These credit lines amounted to EUR 355.0 million (previous year: EUR 355.3 million) as of the balance sheet date and were therefore reported as liabilities to banks. The majority of the credit lines amounting to EUR 551.3 million (previous year: EUR 512.3 million) were not used. The existing committed credit line of EUR 800 million has a term of five years and also includes an option, subject to approval, to extend the term by one year.

The new credit line, in turn, has a sustainability component that links an adjustment of the interest rate to an ESG score (i.e., to criteria from the areas of environmental, social, and responsible corporate governance). The interest margin will be increased or decreased by EcoVadis, depending on the rating of MANN+HUMMEL. In 2023, the Group repaid the maturing obligations under promissory note loans and bilateral loans. As a result of the taking out of the new promissory note loan and the further use of existing credit lines, financial liabilities to banks increased by EUR 53.0 million to EUR 1,190.8 million.

In addition, lease liabilities of EUR 57.8 million (previous year: EUR 55.4 million) were paid.

The MANN+HUMMEL Group continues to act conservatively with financial instruments that have a long maturity and essentially fixed interest rates. Most of the loans taken out are denominated in the euro. We have also taken out foreign currency loans in US dollars.

The maturities of these loans are mainly spread over the next six years. Our registered bond and individual tranches of our green promissory notes have maturities until 2034. The associated interest rates are mostly fixed.

The balance sheet of the MANN+HUMMEL Group shows the maturity structure of liabilities to banks separately for non-current and current liabilities. The loan repayments due in 2024 have been reclassified from long-term to short-term obligations in these financial statements. Due to a partial repayment of credit lines, short-term financial liabilities were significantly reduced by EUR 155.2 million.

Off–balance sheet liabilities and liabilities decreased by EUR 30.4 million to EUR 56.4 million compared to the previous year. This is the result of both a reduction in the order obligation—mainly due to investments made in 2022 in the Life Sciences & Environment division in Italy and the expansion of a production site in Germany—and a reduction in off–balance sheet rental and leasing obligations. The majority of lease liabilities are recognized in the balance sheet as a result of the application of IFRS 16 (Leases). The individual items of contingent liabilities and other financial obligations are presented in the notes to the consolidated financial statements under notes 34 and 35.

Capital expenditure amounted to EUR 198.7 million in the reporting year (previous year: EUR 266.4 million) and thus amounted to EUR 67.7 million, or 25.4%, less than in the previous year. As a percentage of sales, the Group thus invested 4.2% (previous year: 5.5%) in property, plant, and equipment, as well as in intangible assets. In addition, capital expenditure and the capital expenditure ratio include EUR 39.0 million (previous year: EUR 121.1 million) additions from the conclusion of new leases. In the previous year, the newly concluded leases included significant investments in a warehouse and the expansion of production facilities in the US.

In the reporting period, MANN+HUMMEL made significant investments at its German sites, as well as in other locations across Europe and North America. Among other things, MANN+HUMMEL GmbH built a spinning mill at the Marklkofen site in Germany to expand the company's own capacities with regard to the production of non-wovens. MANN+HUMMEL also built a new logistics center at the Himmelkron site and simultaneously expanded production at this location, developing this site into a Center of Competence for molecular filtration. In addition, the project to install production equipment at the site in Italy for the water filtration sector, which began in 2022, continued to progress. At the American sites, we strengthened our infrastructure while also expanding production capacities. We also made further investments in the installation of equipment related to customer projects in all regions in which the company operates.

Sufficient liquidity was available for our investments in new customer projects in the reporting year. As in previous years, we financed them through operating cash flow.

Cash flow from operating activities improved by EUR 155.5 million year over year, from EUR 133.2 million to EUR 288.7 million. At EUR –97.6 million, earnings before taxes in the reporting year were significantly lower than in the previous year (EUR 20.1 million). It should be noted, however, that earnings before taxes were significantly impacted by the impairment losses of EUR 185.6 million due to the results of the impairment test. Since these impairments are not relevant to payment, they do not affect the operating cash flow from operating activities. In addition, the operating result for the 2023 financial year was impacted by non-cash income and expenses. These included impairments on receivables of EUR 5.7 million and impairments on inventories, especially at the American sites, amounting to EUR 19 million. Free cash flow was reduced by the improved financial result, which was EUR 42.7 million in 2023, better than in the previous financial year. The financial result is added to net income for the year in connection with the determination of free cash flow and is reported as part of the cash flow from financing activities at the actual payment amounts.

A significant shift compared to the previous financial year resulted from the increase and decrease in short-term provisions. In the same period of the previous year, there was an increase in short-term provisions of EUR 42.8 million. On the other hand, significant provisions were used or reduced in cash in the past financial year, including for restructuring measures and for impending losses from pending transactions. The reduction in short-term provisions amounted to EUR 49.2 million, resulting in a year-over-year deviation of EUR –92.0 million. In contrast to the previous financial year, there were no significant results from the disposal of non-current assets (previous year: EUR –28.5 million).

Compared to the previous year, the effects of free cash flow from changes in working capital were significantly reduced. In the 2023 financial year, there was a decrease in inventories, trade receivables, and other assets of EUR 2.2 million, compared to EUR –130.2 million in the previous year. This change mainly consists of an increase in inventories of EUR 9.4 million, an increase in trade receivables of EUR 4.6 million, and a decrease in other assets of EUR –16.1 million, with the reduction in receivables from advance payments of VAT (EUR –19.3 million) and an increase in bills of exchange receivables of EUR 9.6 million having a significant impact here. In the previous financial year, problems in global supply chains led to a significant buildup of inventories in this position, resulting in a significant outflow of liquidity.

In the past financial year, there was a decrease in trade payables and other liabilities of EUR –34.0 million (compared to EUR –39.4 million in 2022), which had an impact on cash flow from operating activities of EUR +5.5 million. The cash outflow reported in this item was mainly due to a decrease in trade payables of EUR 49.1 million, which was partially offset by an increase in other liabilities of EUR 14.1 million. The increase in other liabilities mainly consists of an increase in other personnel-related liabilities of EUR 4.1 million, a decrease in liabilities from VAT of EUR 7.7 million, an increase in liabilities from customer discounts of EUR 7.6 million, and a decrease in liabilities from other taxes of EUR 8.3 million.

At EUR –205.0 million, cash flow from investing activities was EUR 139.5 million below the previous year's level

(EUR –65.5 million). MANN+HUMMEL continues to invest in a sustainable future for the company and thus in strategically important new business activities. For this reason, the payments for investments in property, plant, and equipment amounted to EUR –157.6 million (previous year: EUR –142.2 million), approximately 10.8% higher than in the previous year. The disbursements for non-current assets of EUR –1.8 million (previous year: EUR –6.8 million) relate to investments in venture capital for smaller and flexible start-ups. These investments will be used to open up new business and product areas in the field of filtration for the MANN+HUMMEL Group. In the previous financial year, the cash flow from investing activities from the sale of properties at the Ludwigsburg site had a positive impact. Here, the MANN+HUMMEL Group was able to realize EUR 54.5 million. In addition, in the 2022 financial year, the Group realized EUR 21.2 million from the sale of the sites for the production of high-performance plastic parts. The MANN+HUMMEL Group was unable to realize such payments in the 2023 financial year. On the other hand, the Group invested a total of EUR 53.5 million in the acquisition of 70% of the shares in U-Air in China and 60% of the shares in M-Filter in Finland.

Free cash flow is a combination of the cash flow from operating activities and the cash flow from investing activities. At EUR 83.7 million, this was EUR 16.0 million higher than in the previous year.

Cash flow from financing activities resulted in a cash outflow of EUR 99.1 million in the reporting period, which is EUR 46.7 million higher than in the previous year. This includes EUR 15.8 million (previous year: EUR 10.8 million) from dividend payments to shareholders, of which EUR 6.4 million relates to dividend payments to minority shareholders of a Chinese subsidiary in the 2023 financial year. In the course of the Group's financing activities, EUR 299.5 million (previous year: EUR 343.0 million) was raised from banks in 2023. Among other things, this related to the use of the EUR 60 million revolving syndicated credit facility. This is the fifth time that the MANN+HUMMEL Group has issued a promissory note in the past financial year. Like the previous promissory notes, this was equipped with a sustainability component and attached to existing ESG guidelines. In total, the final issue volume on the market amounted to EUR 186.5 million.

Additional funds were also raised in the Americas region to finance operational measures. In addition to the expansion of the financing portfolio through the inclusion of the green promissory note, existing loans and lines were also returned to the credit institutions in accordance with the contract during the reporting period. In total, these repayments amounted to EUR 266.0 million in the 2023 financial year (previous year: EUR 208.0 million). In addition, payments for the purchase of securities in the amount of EUR 9.4 million (previous year: EUR 3.2 million) were made. In contrast to the previous financial year, no further minority interests were acquired in 2023. In 2022, MANN+HUMMEL announced the conclusion of an agreement to acquire the remaining shares, specifically the remaining 45%, of the stake in CleanAire, LLC (Pamlico Air), a US manufacturer and supplier of high-quality air filter products, thus acquiring 100% of the shares in the company. The MANN+HUMMEL Group had already acquired 55% of the shares in the 2021 financial year. The associated disbursements amounted to EUR 45.2 million. In addition to payments from lease liabilities of EUR 57.8 million (previous year: EUR 55.4 million), MANN+HUMMEL had to raise EUR 51.9 million for interest payments in the 2023 financial year. The year-over-year increase of EUR 14.9 million was due to the general increase in interest rates.

As a result, the Group's financial resources changed in the 2023 financial year to the amount of EUR –15.3 million. In the previous year, the MANN+HUMMEL Group was able to increase its cash and cash equivalents by EUR 15.4 million.

As MANN+HUMMEL has stable, sufficient liquidity, there were no liquidity bottlenecks in the reporting year. In addition, the Group has a sufficient number of credit lines at its disposal to fully meet financial obligations at maturity.

There are no early repayment obligations. Such obligations would only arise in the event of a breach of the current contractual provisions, such as a change in ownership structures, impending insolvency, or unpaid interest and principal services, resulting in no risk for MANN+HUMMEL.

From our point of view, the Group's liquidity is secured by the existing credit agreements.

For additional information, please refer to our disclosures in the notes to the consolidated financial statements.

Net asset position of the MANN+HUMMEL Group

Total assets decreased year over year to EUR 4,119.3 million (previous year: EUR 4,346.7 million). However, it should be noted that the total assets decreased by EUR 85.2 million due to exchange rate fluctuations.

Intangible assets decreased by EUR 153.5 million from EUR 877.1 million in the previous year to EUR 723.6 million, mainly due to impairments on goodwill (EUR 166.3 million) and on intangible assets resulting from acquisitions (EUR 19.3 million). However, even after the impairments have been made, the assets still include intangible assets from company acquisitions made in recent years. Capitalized goodwill amounted to EUR 593.4 million (previous year: EUR 709.5 million). As a result of the two acquisitions, new intangible assets from company acquisitions in the amount of EUR 11.1 million were acquired from U-Air and EUR 14.8 million from M-Filter in the 2023 reporting year. In the case of U-Air, the valuation of existing hidden reserves has so far been based on a preliminary purchase price allocation.

In addition, EUR 2.1 million (previous year: EUR 3.1 million) was invested in intangible assets, such as licenses, software, and similar rights, as well as development costs. On the other hand, intangible assets in the amount of EUR 43.8 million (previous year: EUR 56.5 million) were written down as planned. These have been reduced compared to the previous year, as the hidden reserves uncovered from the acquisition of Filtron in particular have now been fully amortized. In addition, fluctuations in exchange rates in the amount of EUR 7.1 million (previous year: EUR 24.4 million) led to an increase in this balance sheet item.

Property, plant, and equipment decreased by EUR 5.4 million to EUR 1,056.3 million. This includes an investment volume in property, plant, and equipment of EUR 196.6 million (previous year: EUR 263.3 million).

Working capital is an important performance indicator at MANN+HUMMEL and is the result of the difference between current assets and current liabilities. Overall, working capital increased by EUR 9.5 million, or 1.2%, year over year to EUR 779.2 million. As a percentage of revenues, working capital amounted to 16.6% (previous year: 15.9%). Inventories included in working capital decreased slightly to EUR 697.7 million (previous year: EUR 717.5 million) and thus remain at a high level, as in the previous financial year.

In order to ensure and improve the ability to deliver to customers, especially in the spare parts business, it was necessary to maintain the inventory level at the previous year's level. In addition, the starting up of a new warehouse in the US meant that existing process problems had to be covered by higher inventories. These existing problems are currently being intensively analyzed, and suitable remedial measures are being implemented. In addition to inventories, current trade receivables and trade payables changed only marginally. Current trade receivables increased slightly to EUR 822.7 million (previous year: EUR 817.4 million). On the other hand, current liabilities to suppliers decreased by EUR 24.0 million to EUR 741.2 million (previous year: EUR 765.3 million).

Cash and cash equivalents of the MANN+HUMMEL Group amounted to EUR 174.4 million in 2023 (previous year: EUR 205.0 million) and were thus EUR 30.6 million below the previous year. Current investments, disbursements to company owners, company acquisitions, and loan repayments were financed from current cash flow.

On January 1, 2016, MANN+HUMMEL International GmbH & Co. KG became the ultimate parent company of the MANN+HUMMEL Group. Under German commercial law, shareholders who do not meet the requirements for disclosure as equity under International Financial Reporting Standards (IFRS) have termination rights that cannot be excluded. Accordingly, as in the previous year, this item is reported in liabilities under "Capital economically attributable to the shareholders."

In the reporting year, the equity reported in the balance sheet includes the shares of other shareholders of MANN+HUMMEL International GmbH & Co. KG. They hold a 16.67% stake directly in MANN+HUMMEL Holding GmbH but without voting rights. This includes the non-controlling interests of Changchun MANN+HUMMEL Faway Filter Co., Ltd. in Changchun, China, as well as the US shareholders, totaling EUR 161.0 million (previous year: EUR 169.1 million).

Non-current and current financial liabilities increased by EUR 30.4 million year over year to EUR 1,728.9 million (previous year: EUR 1,698.5 million). As a result of the drawdown of short-term credit lines in excess of the scheduled repayments and the issuance of the green promissory note, liabilities to banks increased by EUR 53.0 million to EUR 1,190.8 million. On the other hand, lease liabilities rose by EUR 34.9 million in connection with the application of IFRS 16 (Leases), which is attributable to the scheduled payment of existing lease liabilities.

The dynamic development of the general interest rate level on the financial markets in 2022 weakened in 2023, and the sharp rise in interest rates was replaced by a more moderate interest rate development. This led to some stabilization and a less volatile interest rate situation in the markets. This also led to a slight reduction in the discount factor used to determine pension provisions, which fell from 3.70% in the previous year to 3.18%, leading to an increase in the amount of the provision, partly due to the lower discounting. Overall, pension obligations increased by EUR 21.2 million from EUR 334.4 million to EUR 355.6 million.

Other current and non-current provisions decreased by EUR 47.5 million to EUR 166.4 million. Among other things, this was due to the decrease in provisions for imminent losses from pending transactions in the amount of EUR 23.7 million. This decline is due to the improvement in operating margins for loss-making products. In addition, provisions created in recent years have been used for restructuring measures. These decreased by EUR 11.8 million. Moreover, other provisions, such as guarantee provisions and personnel provisions, also declined year over year.

Other non-current and current liabilities decreased from EUR 192.4 million to EUR 186.9 million. Among other things, this was due to the reduction in liabilities from current and sales taxes. On the other hand, liabilities from personnel costs, liabilities from advance payments received, and commission liabilities increased.

Provisions for existing transfer pricing risks were revalued in the annual financial statements as of December 31, 2023, and, as in the previous year's financial statements, taken into account accordingly.

Group balance sheet structure

Despite the impairments, the MANN+HUMMEL Group has a balanced balance sheet structure. The existing short-term financing obligations can be serviced with the existing cash and cash equivalents, as well as the available lines. The Group's combined equity ratio (i.e., the combination of equity and capital attributable to shareholders) was 19.4% (previous year: 23.3%). The reduction in the equity ratio is due, among other things, to the write-downs made in the financial year and described above. In addition to sustainable growth and a further improvement in the operating margin, our focus in the coming financial years will continue to be on improving working capital, optimizing cash flows, improving return on capital and, at the same time, strengthening the equity ratio.

Overall statement on business performance

The development in our most recent division, Life Sciences & Environment, did not meet expectations. In addition to the predicted longer start-up curve of the business area, this led to a significant impairment and thus had a lasting effect on the Group's result. However, especially in the Transportation division, negative effects for the MANN+HUMMEL Group were offset by an improvement in the operating margin, strict cost management, and improved efficiency, especially at the European sites, so that the adjusted operating result is almost in line with the mid-single-digit operating margin communicated in the previous year. Due to working capital remaining at a high level, high investments in the future of the Group, and additional acquisitions, cash flow remained at a low level and was even lower than in the previous year. We will place a significant focus on this development in the 2024 financial year.

The still-young Life Sciences & Environment division is in the start-up and growth phase, and we will continue to focus on this area in order to further develop operating margins and realize economies of scale. Sales in this area account for almost 10% of the Group's total sales and continue to grow in importance for our company. The division also forms the basis for the strategic transformation of the MANN+HUMMEL Group. As a result, we expect further growth to result in a sustained improvement in margins and earnings in the coming financial years.

Even though we were not able to achieve the forecast targets, we can look back on a satisfactory 2023 financial year, taking into account the one-off effects.

Development and position of MANN+HUMMEL International GmbH & Co. KG

All the following figures refer to the individual financial statements of MANN+HUMMEL International GmbH & Co. KG in accordance with the accounting provisions of German commercial law (HGB).

MANN+HUMMEL International GmbH & Co. KG is the parent company of the MANN+HUMMEL Group. The company is headquartered in Ludwigsburg. In 2023, an average of 131 (previous year: 123) employees worked at MANN+HUMMEL International GmbH & Co. KG. Essentially, these are the Group's administrative divisions: Legal, Treasury, Reporting, Finance, Human Resources, and Communications.

The company's main income results from its function as the parent company of the MANN+HUMMEL Group. The services are invoiced to the domestic investment companies in addition to an appropriate profit margin within the framework of a business, service, and management contract. There is also a profit and loss transfer agreement with MANN+HUMMEL East European Holding GmbH.

In the 2023 financial year, MANN+HUMMEL International GmbH & Co. KG generated revenue of EUR 42.4 million (previous year: EUR 40.4 million), primarily resulting from the billing of intra-group services.

Through the profit and loss transfer agreements with its Group subsidiaries, the company generated profits of EUR 96.1 million (previous year: EUR 1.7 million). Other operating expenses totaling EUR 24.9 million (previous year: EUR 23.0 million) mainly include costs for services provided by affiliated companies, corporate and legal consulting costs, and IT expenses.

Personnel expenses increased slightly by EUR 0.3 million year over year to EUR 16.4 million (previous year: EUR 16.1 million).

Net interest income amounted to EUR 3.3 million (previous year: EUR 0.7 million) and includes both the reduction in the discount interest rate for pensions and interest income on IC loans.

Taking into account income taxes of EUR –2.5 million (previous year: EUR 0.2 million), net income for MANN+HUMMEL International GmbH & Co. KG amounted to EUR 98.6 million in the 2023 financial year (previous year: EUR 4.6 million).

Of this amount, a profit of EUR 96.1 million was taken into account in the special reserves (previous year: EUR 1.7 million).

Total assets amounted to EUR 584.0 million (previous year: EUR 499.3 million). This is attributable to the increase in special reserves to EUR 287.7 million (previous year: EUR 199.6 million) and is mainly due to the profit transfer of MANN+HUMMEL East European Holding GmbH.

Receivables from affiliated companies rose by EUR 159.6 million to EUR 312.5 million (previous year: EUR 152.9 million). The main components are in-house bank balances at MANN+HUMMEL Holding GmbH, as well as receivables from loans from MANN+HUMMEL East European Holding GmbH and receivables from profit and loss transfers from MANN+HUMMEL East European Holding GmbH. Other assets amounted to EUR 5.3 million (previous year: EUR 7.4 million) and mainly included input tax refunds.

Equity amounted to EUR 553.8 million (previous year: EUR 465.7 million).

Provisions amounted to EUR 15.6 million (previous year: EUR 12.9 million). Provisions for pensions and similar obligations amounted to EUR 9.9 million (previous year: EUR 9.6 million). The increase in the pension provision of EUR 0.3 million is mainly due to the regular allocation to the provision. The adjustment of the discount rate for pension provisions from 1.78% to 1.83% led to a reduction of EUR 0.1 million. Other provisions amounted to EUR 2.8 million (previous year: EUR 2.6 million) and mainly include provisions for performance-related additional payments, severance payments, and partial retirement.

Liabilities to affiliated companies amounted to EUR 10.6 million (previous year: EUR 16.8 million) and mainly comprise corporate VAT liabilities as well as intragroup recalculations of services and costs.

In summary, sales increased by 5% in the past financial year. The slight increase in sales and EBIT forecast in the previous year was thus met.

For the 2024 financial year, we have so far anticipated an increase in revenue for MANN+HUMMEL International GmbH & Co. KG, the parent company of the MANN+HUMMEL Group, and thus also in EBIT, compared to the previous year.

6. Opportunity and risk report

With regard to economic, political, and geopolitical conditions, MANN+HUMMEL can look back on a difficult 2023. After the (supposed) end of the Covid pandemic, new risks arose for the economic outlook.

The ongoing war in Ukraine carries the risk of the conflict spreading to other countries, including NATO countries, causing a further strain on the geopolitical situation, which could affect MANN+HUMMEL’s economic development and market environment. The Israel-Gaza conflict can also trigger a supra-regional conflict and involve other parties. Both conflicts could have an impact on energy supply, supply chains, and transport routes. Renewed interruptions, in turn, have a potentially negative impact on sales development, production processes, and purchasing and logistics processes.

These developments can also exacerbate inflationary tendencies, creating wage-price spirals in some regions. In that case, central banks would probably react restrictively (or even overreact) with their monetary policy measures. More restrictive financial conditions could push advanced economies into recession, while highly indebted emerging and developing markets could suffer from rising financing costs, further appreciation of the US dollar, and a loss of investor confidence. This also poses risks to the stability of public finances and the banking sector. Other (potentially military) conflicts—especially in the Baltics, Eastern Europe, the Western Balkans, China, Taiwan, and Iran—could put additional pressure on further economic development.

A possible significant slowdown in the Chinese economy poses a further risk to growth.

A resurgence of Covid-19, the outbreak of another pandemic, a terrorist attack, a significant incident of cybercrime, or a series of such attacks or incidents in major economies could affect economic activity globally and undermine consumer and business confidence. In general, the highly interconnected global economy remains vulnerable to natural disasters or hybrid warfare.

With this in mind, every business decision at MANN+HUMMEL is made taking into account the risks and opportunities involved. In order to take the risks into account, we at MANN+HUMMEL consider risks in our internal risk reporting as possible future events that could lead to the non-achievement of our projected (financial) targets. Mirroring this, we define opportunities as possible events or developments that can be expected to have a positive effect on our planned (financial) goals.

As a globally active company, we counter these risks through diversification (i.e., a diverse product range) as well as through the continuous improvement of our products and processes. We create opportunities by continuously increasing our competitiveness: We are continuously developing our products, expanding our development competencies, and driving forward the development and expansion of new markets. Future-oriented technologies and media as well as vertical integration, digital and intelligent business models, and various service solutions are also opening up new opportunities for us.

We are creating synergy effects and new market access through acquisitions, such as in the Life Sciences & Environment (LS&E) division. In this way, we continue to drive the transformation of the company.

A key driver of our business is sustainability. With our core competency of filtration, we contribute to cleaner air, cleaner water, and cleaner mobility. On this basis, we have developed a strategic approach for sustainable corporate action and also published it in a sustainability report for 2022. This report makes it clear that we are already aligning—and will continue to consistently align—our vision of “Leadership in Filtration” and our mission of “Separating the useful from the harmful” with applications in the LS&E division.

In the course of the global trend towards alternative drive systems, especially in the passenger car sector, there are numerous opportunities, but there are also risks. We are preparing for this. Until now, our product portfolio in the Transportation division has primarily focused on the power train with internal combustion engines. With alternative power trains now displacing these engines, there is a risk of losing sales and market share in the original equipment business. That is why we are investing in the development of innovative filtration solutions for new forms of propulsion, opening up opportunities to offer new products for future technologies and to tap into this market. In addition, the increased environmental awareness of all market participants and end consumers also creates opportunities to offer new products outside the drive or power train sector. This includes, for example, all products that are grouped together under the generic term "fine dust eaters": brake dust particle filters, fine dust filters for vehicle interiors, or stationary fine dust and nitrogen oxide filter columns. These innovative products have great growth potential and are expected to open up new market segments as well as attract new customers.

Risk and opportunity management is therefore an integral part of MANN+HUMMEL's planning and management processes, with the aim of sustainably supporting the achievement of corporate goals as well as strengthening and ensuring risk awareness within the company.

Risk management

The aim of MANN+HUMMEL's risk management is to regularly and continuously identify and assess all material risks for the Group at an early stage and to assess their consequences (including countermeasures) as well as to ensure that the risk management process and its results are adequately documented. In order to comprehensively respond to rapidly changing market conditions and corporate changes (e.g., the establishment of new plants, the integration of newly acquired companies, the disposition of parts of the company), we continued to expand our Risk Management System in the reporting year. Already in 2022, we automated the standard process to a high degree by implementing a risk management tool. In order to make the assessment of the extent of the risk more precise, we have now expanded the process to include a two-step procedure. As part of this process, risk coordinators assess whether previously reported risks continue to exist and the extent to which new risks reported by risk owners are adequately addressed, taking into account the context of the area of responsibility. After the initial validation, a final assessment of the transferred risks is carried out by the Group Risk Management, taking into account the overall organization.

Risk management is integrated into the existing MANN+HUMMEL organization, encompassing all organizational units, functions, and processes. It is based on current standards, such as COSO and ISO, and is precisely tailored to MANN+HUMMEL's conditions. It optimally supports all responsible persons through a company-wide planning, reporting, and controlling system, and it defines precise responsibilities as well as goals and processes. Risk managers are responsible for identifying, assessing, managing, reporting, and reassessing their risk situation annually and reporting their risk portfolio to Group Risk Management.

The Group Treasury & Risk Management function forms the organizational framework for our risk management. This will report directly to the Group Chief Financial Officer (CFO).

On the basis of the information reported, Group Risk Management determines the Group's current risk portfolio, which is made available to the Management Board and the Supervisory Board annually in a report with detailed explanations. This also includes the mathematical aggregation of risks at Group level. Similar risks are aggregated, and their group-wide dependency or impact is taken into account to ensure that overarching risks are identified and managed with overarching measures. In addition, significant changes in the assessment of already known risks as well as new significant risks are reported at any time and reported to the Management Board on an ad hoc basis.

The possible risks are classified on the basis of two criteria: the probability of occurrence and the extent of the risk. The level of risk is divided into five categories, which are classified according to the potential impact on the bottom line within two years. They are as follows:

- **Risk to the company's continued existence** (potential costs of more than EUR 40 million).
- **Significant risk** (potential costs of EUR 25–40 million).
- **High risk** (noticeable effect on business activities, potential costs of EUR 15–25 million).
- **Moderate risk** (potential costs of EUR 5–15 million).
- **Low risk** (potential costs of up to EUR 5 million).

Due to the continuing very tense economic situation, we kept the intervals of the probability of occurrence (i.e., the range of probabilities in which a certain risk may occur) at the previous year's level for 2023 so that the principle of prudence continues to be taken into account.

In the same way, risk-mitigation measures are reported and evaluated. The effectiveness and timing of these measures are monitored by Group Risk Management. The remaining risk after the implementation of the measures is presented as a net risk in the internal risk report.

With regard to the potential negative impacts, a minimum value limit of EUR 5 million for the standard process and a minimum value limit of EUR 25 million for the ad hoc process have been set for the reporting of risks. Risks below these thresholds are managed independently in the divisions. The relevant time frame for internal risk reporting is a maximum of two years. The effects of the risks discussed in the opportunity and risk report are also presented as annual values.

Current geopolitical and trade policy developments may entail additional uncertainties for the further business development of the MANN+HUMMEL Group and thus necessitate a change in the presentation of the Group's risk situation. In particular, a further escalation or expansion of the wars in Ukraine and the Gaza Strip or stricter EU regulations (e.g., the EU Supply Chain Due Diligence Act or stricter CO_2 requirements due to the introduction of the Euro 7 emissions standard within the European Union) can have far-reaching consequences. In view of the war in Ukraine, we are trying to keep the impact as low as possible, especially on our sites in the crisis regions. We have taken measures to ensure the continued existence of MANN+HUMMEL's assets in the best possible way and, if necessary, to counteract the threat of expropriation.

In general, the risk structure of our company has not changed significantly compared to the previous year, with the exception of the risks already mentioned. We have taken various measures to mitigate the potential effects of the various risks. Therefore, we do not currently see any further risks that could have a lasting and material impact on the company's development in the 2024 financial year and beyond.

There have been no relevant changes since the balance sheet date that would have necessitated such a change in the presentation of the Group's risk position.

Financial risks

For our group of companies, exchange rate fluctuations and interest rate changes are part of the narrower circle of financial risks. We continuously and regularly monitor these currency risks, assessing and hedging them with derivative financial instruments, taking into account a risk limit. As a matter of principle, we use these derivative financial instruments to hedge risk-bearing hedged items arising from the Group's operating activities. We also monitor interest rate risk on an ongoing basis and minimize it by maximizing the proportion of financial liabilities with a long-term fixed interest rate.

The MANN+HUMMEL Group’s Group Treasury & Risk Management division is responsible for limiting financing and liquidity risks. Our long-term financing had a major impact on interest rate developments in the past financial year. Nevertheless, the current interest rate development will naturally have an impact on future financing. As a result, we anticipate higher interest expenses in the future. Nevertheless, we assume that we will be able to keep our financing and liquidity risk at a low level in the future.

In addition to currency and interest rate risks, we also regularly review default risks from financial partners and initiate risk-mitigating measures.

Sufficient financial resources form the basis on which MANN+HUMMEL can drive forward its strategic orientation. We keep financial risks low through sound financing, a stable and permanently monitored liquidity position, and sufficient reserve liquidity. The reserve liquidity held is sufficient financial resources that are kept for unforeseen critical situations and cannot be used in operating business. We continuously and regularly monitor receivables, liabilities, and inventories and can thus implement necessary measures to avoid risks on short notice.

Part of our reserve liquidity is invested in a multi-segment master fund: four sub-funds and one overlay. In this way, the defined return and risk parameters can always be adhered to accordingly.

The investment guidelines stipulate that the sub-funds are equipped with a risk mitigation system. As a result, one fund has a fixed lower limit of –5%, and another has a risk controlling without a fixed lower limit. The two remaining funds are absolute return funds, which must not underperform a performance of –10% due to an appropriate risk overlay.

We continuously monitor the tied-up current assets and, if necessary, adjust them in line with the development of sales.

We address balance sheet–related risks, such as the valuation of our fixed assets, the assessment and recording of provisions relevant to provisions in the individual business units, or the accrual recognition and accrual of revenues, with regular and close coordination between the responsible central departments and the individual business units, as well as with a forecast process that is closely coordinated with the divisions and management. Meaningful key figures round off the process. In this way, we ensure that relevant issues are identified at an early stage and are mapped correctly.

Operational opportunities and risks

Market environment

In order to be able to react quickly to a further weakening of economic development in relevant markets, we have defined possible scenarios in advance. Based on these scenarios, we derive measures to adjust the cost level as far as possible to potential declining sales volumes. In addition, we continuously validate our markets and competitive behavior in order to identify such developments at an early stage and to counteract them with suitable, market-specific measures, if necessary. Against this background, we have strengthened our measures—especially in the IP rights implementation process—through a corresponding project and will continue this in 2024, expanding the measures as needed.

In conjunction with society’s ongoing awareness of the topic of sustainability, our focus in product development is on cleaner mobility, cleaner air, and cleaner water. Therefore, in the Transportation division, we are increasingly working on filtration solutions for fuel cells and electric vehicles. At the same time, we are making an important contribution to reducing particulate matter with our brake dust particle and front-end filters. In addition, our filtration and separation solutions in the Life Sciences & Environment division round off our product portfolio, underlining our commitment to the environment.

The historically grown and still-high dependence on the automotive industry also entails risks. As a Tier 1 supplier, we are feeling the cost pressure in the series business particularly strongly. This is also due to the growing market share of alternative drive systems, such as electric motors. In addition, there is the risk of a loss of production at the automotive manufacturer resulting from the failure of individual automotive suppliers to deliver (due to decreased capacity). The conflicts in Ukraine and Gaza and the associated negative effects on the suppliers' production, purchasing, and logistics processes may play a role in this. A further factor may be suppliers' start-up difficulties with new technologies (including overcapacity), leading to negative impacts on sales at MANN+HUMMEL.

We are proactively responding to the imminent phase-out of the internal combustion engine by transferring our core competencies to new business areas and driving technologies, thereby diversifying our product range. At the same time, we are opening up new markets.

The focus here is on competitive behavior. Internal processes for checking any third-party rights or management processes for compliance with all regulations are our basis for legally flawless conduct in competition.

The rapid and far-reaching changes as well as the constant change brought about by the digital age are equally challenging for everyone: MANN+HUMMEL as a company, our management staff, and each and every one of our employees.

We are faced with new challenges not only by transport solutions beyond the combustion engine but also by the digital transformation of the economy and society, as well as the growing demands for sustainable management.

But these changes also open up a multitude of new opportunities for us. Our core competency, filtration, from over 80 years of experience, is an advantage for the development of innovative products in new business areas. A good example of this is the Life Sciences & Environment division. There, broad diversification also enables us to become increasingly independent of the automotive sector, and we also open up our company to new technologies and innovations.

Attracting and retaining skilled workers is an integral part of our corporate philosophy. With measures such as the talent management program and the application of leadership principles, we remain close to our employees and can develop our employees individually.

Purchasing

In our procurement markets, price fluctuations for raw materials in particular pose risks—but also opportunities. We try to minimize the risk of cost increases through long-term contracts and a globally active and heterogeneous supplier base as part of our group-wide category management. For 2024, we see the opportunity for an easing of the market situation and the associated cost relief on the commodity markets.

Due to ongoing international crises, we are constantly exposed to the increased risk of supply chain disruptions and thus possible production interruptions. Measures in cooperation with our suppliers have largely averted supply bottlenecks or interruptions. To ensure that this remains the case, our central purchasing control system makes a significant contribution to transparency, management, and risk minimization: permanent monitoring (by means of performance management and logistical key figures) and close coordination with our system-relevant suppliers stabilize the flow of goods. In the area of material development, it was also possible to make supply chains more flexible by defining, validating, and releasing alternative materials for some product groups.

Insolvencies of business partners also pose a further risk to our supply chains. Persistently high energy prices and the changed interest rate environment could lead to more suppliers getting into economic difficulties next year. MANN+HUMMEL counteracts this risk with a holistic risk management process in procurement. In addition to the ongoing credit check, this process also includes system-supported and permanent monitoring of all key suppliers and regular consultations with the product group managers. Thanks to these measures, MANN+HUMMEL identifies any risks of supplier insolvency at an early stage and can react quickly.

The increasing number of regulations at EU level (e.g., the Carbon Border Adjustment Mechanism (CBAM), the European Union Deforestation Regulation (EUDR), and the planned ban on per- and polyfluoroalkyl substances (PFAS)) has an impact on the procurement of various raw materials, placing an additional burden on companies. These regulations carry the risk of cost increases while also representing additional administrative burdens. MANN+HUMMEL evaluates such regulations at an early stage in a cross-functional team in order to be able to assess possible effects on business operations. If this results in financial burdens (e.g., due to the additional taxation of imported goods), the purchasing department examines, among other things, alternative sources within the framework of the commodity group strategy.

MANN+HUMMEL is committed to corporate social responsibility (CSR) in the supply chain. Such requirements are not only set by the legislator, stakeholders, and society, but are also part of our corporate philosophy. For us, CSR starts with the responsible and sustainable sourcing of materials throughout the entire supply chain. Misconduct in the supply chain also poses a risk to MANN+HUMMEL. For this reason, we conduct regular supplier audits, oblige our suppliers to act sustainably, and thus meet the operational requirements of the Supply Chain Due Diligence Act.

Additionally, since mid-2023, we have been subjecting our supplier base to a sustainability assessment by an external partner. The results of this assessment are continuously incorporated into our supplier strategies and individual purchasing decisions.

Loss of important customers

Both as a Tier 1 supplier and in the spare parts business, we maintain long-term and trusting relationships with our customers. We continuously monitor our risks and dynamically adjust our credit limits to the payment behavior and creditworthiness of our customers. The failure of one of our major customers would have a negative impact on our business development, but it would not threaten our existence. In order to reduce the risks of such dependencies, we pursue a diversification strategy and offer a broad portfolio of innovative products for various filtration markets. On the other hand, we have significantly improved and expanded our existing trade credit insurance and lifted the restriction to individual countries or customer groups. The new trade credit insurance is currently being rolled out globally and only excludes OEMs with very good credit ratings.

Quality, occupational health, safety, and environment

High-quality products and the satisfaction of our customers are the central goals of our company. Problems pertaining to quality and the resulting customer complaints as well as warranty claims therefore represent a considerable risk. Our reputation and the financial situation of our company would be on the line.

For this reason, high quality standards apply within the framework of the IATF 16949–certified MANN+HUMMEL Management System—both for product and process development as well as for production in all plants of the Transportation division. The core elements of this are our quality targets, which we define top-down, concretize bottom-up, and consolidate across our operational areas. This group-wide quality Management System covers all our business processes. However, we take advantage of the greatest opportunity for error detection and avoidance in advance through balanced and conscientious planning.

Customer quality and warranty teams work closely with our customers, development departments and production plants to ensure the quality of the products and to respond quickly to quality risks.

We also take warranty risks into account by making appropriate provisions; insurance for possible damages due to recalls and product liability cases offers further risk protection.

MANN+HUMMEL has established global occupational health and safety and environmental standards and anchored them in a global management policy. These standards take into account the entire product life cycle and also our supply chains.

Numerous production sites are certified according to ISO 45001 (occupational health and safety management) and ISO 14001 (environmental management). This occupational health and safety and environmental management system consists of global and local standards and is continuously being developed further. The implementation of the standards is regularly monitored through internal and external audits.

Despite these high corporate standards, incidents relating to occupational health and safety and environment protection cannot be completely ruled out. Incidents such as work-related accidents, fires or environmental pollution can lead to business interruptions and affect assets and Financial result. We have also taken out appropriate insurance to mitigate these economic risks.

The global occupational health and safety and environmental standards introduced by MANN+HUMMEL also aim to ensure compliance with the relevant legal requirements. As a company with a global footprint, MANN+HUMMEL must comply with a large quantity of different legal occupational health and safety and environment protection regulations as well as local approval requirements. Stricter legal requirements require additional investments, e.g. in the areas of climate protection, energy efficiency, fire protection and machine safety.

In order to further reduce risks in the areas of environment and occupational health and safety, we regularly carry out internal or external Health, Safety and Environment (HSE) compliance audits at numerous production sites.

Sustainability

The sustainability requirements on the part of legislators and customers have increased significantly in 2023; with them, the gross risk of potential non-compliance.

In doing so, we have to take into account the different national and international legal standards in the context of sustainability and ESG. In Europe in particular, the legislative process is very dynamic. New EU ESG laws, including CBAM and EUDR, came into force in 2023, as did national laws, such as the German Supply Chain Due Diligence Act, which applies globally to MANN+HUMMEL. These laws, as well as other requirements, such as the CSRD/EU taxonomy and US UFLPA, can increase our costs and reduce sales opportunities or lead to sales bans altogether. Moreover, changes in tax law can lead to a higher tax burden.

To avoid violations, we have established the necessary processes and roles and trained our employees. To this end, we work with local legal experts and consultants throughout the Group and across companies.

In order to clear up ambiguities in the interpretation of the underlying laws (CBAM) and future reporting obligations (CSRD from 2025), we work in global teams with external subject matter experts based on the published reporting standards. A major risk lies in the availability and quality of the data requested, especially in reporting to tax authorities. We have introduced appropriate quality control processes and are gradually expanding them.

Information technology

Our global digital networks are the foundation for our Group's global presence. Fast and secure data traffic provides opportunities to streamline processes and collaborate with customers and suppliers. Ensuring the constant availability of valid data places high demands on our company's information technology. Redundant data centers and systems provide high data availability. Our IT landscape and architecture supports continuous review, expansion, and development in the areas of data security, data accessibility, and process acceleration. Digitalization and digital transformation are core components of our corporate strategy and serve to streamline and automate operational processes. We continuously invest in our IT systems and their environment to achieve these goals.

In 2023, MANN+HUMMEL formed a Business Process Management Organization (BPMO) to establish a consistent business process landscape with globally efficient end-to-end processes. Standardization plays a key role in process efficiency, as eliminating redundancies, strengthening quality assurance, and minimizing errors all reduce organizational risk. Consistent and unified procedures simplify work for employees and maximize overall economic outcomes. Therefore, aligning IT solutions with standardized business processes is crucial.

In 2023, we saw an increase in ransom extortion at other companies. This cyber risk poses an existential risk due to possible business interruptions. Hackers are increasingly targeting IT and physical supply chains, launching mass cyberattacks, and finding new ways to blackmail companies, large and small. MANN+HUMMEL took preventive measures and was able to fend off such attacks on our company in the reporting year.

As a globally active company, MANN+HUMMEL is exposed to various existing and new regulations, the legally compliant implementation of which in the respective national organizations entails both opportunities and risks. A competitive advantage comes from more efficient compliance compared to our competitors and from the comparatively higher trust that our business partners have in our actions. Challenges arise from the large number of new laws, such as the Artificial Intelligence Act (AI Act), the Cyber Resilience Act (CRA), the Directive on Security of Network and Information Systems (NIS 2 Directive), the Personal Information Protection Law (PIPL), and many others. The Information Security and Data Protection department is trying to prevent the risk of non-compliance by MANN+HUMMEL by analyzing and preparing for the entry into force of these new laws at an early stage, partly supported by external advice, the affected areas in the company, and the legal area.

Our security operations activities and processes are designed to continuously protect MANN+HUMMEL's information systems, data, and assets. The primary key performance indicators (KPIs) are the timely and effective detection, response, and remediation of security threats and incidents. This includes implementing and managing a variety of security controls, technologies, and procedures to protect the organization's digital environment. Key components of security operations include the following:

- Monitoring and detection: continuously monitor network traffic, system logs, and other data sources to identify unusual or suspicious activity, including firewalls and intrusion detection, EDR, IAM/AD, and other sensors that are correlated in a SIEM solution.

- Cybersecurity incident response: develop and implement security incident response plans and procedures, including identifying the nature and scope of the incident, mitigating its impact, eliminating the threat, recovering affected systems, and deriving lessons learned.
- Vulnerability management: regularly assessing and managing vulnerabilities in software, systems, and networks, including security assessments, patch management, and other measures to reduce the risk of exploitation.
- Threat intelligence: continuous analysis of the latest security threats and their evolution, including gathering information about potential threats; understanding attacker tactics, techniques, and procedures; and using that information to improve security measures.

Security operations, along with other functions, such as risk management and compliance, are an integral part of the overall cybersecurity strategy. The goal is a robust and resilient security posture that allows us to respond quickly and effectively to attacks.

In 2023, a preliminary project was carried out with the consulting firm Deloitte to introduce a Business Continuity Management System (BCMS), which will be established in the near future. A BCMS is a management method that ensures the continuity of business operations under crisis conditions—or at least under unpredictably difficult conditions. This is to prevent the interruption of our business operations in order to avoid serious damage or devastating losses. We are using insights from Group Risk Management to implement BCMS in line with material risks.

Fraud and Code of Conduct violation

In many countries, antitrust authorities are increasingly conducting investigations. Penalties may apply in the event of violations of competition law or other unlawful conduct. To combat this, our corporate policies, together with our Code of Conduct, govern the correct course of action with regard to antitrust issues, export controls, corruption, and other violations of the law. We also sensitize all employees worldwide to these topics through sustainable training. These training courses do not allow us to completely avoid risks, but they can significantly reduce them. Process controls and policies mitigate the risk of compliance violations, both internal and external. With our whistleblowing system, which is publicly accessible on our website, every employee and every third party has a platform to report suspected cases and risks of compliance at any time.

Performance risks

Performance risks include possible losses due to business interruptions and losses of property, plant, and equipment.

Natural disasters, acts of terrorism, or other disruptions in production facilities or supply chains—both for customers and suppliers—can cause significant damage and loss. To limit these risks, we have taken out insurance policies in an economically reasonable amount.

Taxes

As an internationally active group, MANN+HUMMEL operates in various country-specific tax systems. The tax risks are correspondingly complex. Compliance with the respective tax regulations is therefore ensured by additional local tax advisors who are commissioned by the individual subsidiaries. In addition, MANN+HUMMEL is optimizing internal tax control systems throughout the Group—for example, in the area of indirect taxes and cross-border relations. Ongoing controls are used to identify and minimize any tax risks at an early stage. Group-wide guidelines—for example, on transfer pricing—are therefore continuously updated and transparently communicated to our employees worldwide. In addition, the Group follows a uniform group-wide approach to the documentation of transfer pricing in order to meet the increased formal requirements of tax authorities worldwide.

In the event of a lack of or too little future tax income, there is a balance sheet risk, as the tax advantage from loss carryforwards and tax-deductible temporary differences may not be recognized or may no longer be recognized in full, and this may therefore have a negative impact on the consolidated result.

The CO_2 tax issue is evaluated across business processes because for MANN+HUMMEL, sustainability means creating long-term economic, ecological, and social added value—for our customers, employees, investors, business partners, and MANN+HUMMEL as a whole. This holistic approach is part of our corporate strategy; it is defined as a core objective, is already anchored in our guidelines and business processes, and is reflected in our products.

Overall statement on the opportunity and risk situation

We monitor opportunities and risks on an ongoing basis. The risks are continuously evaluated in an iterative process. This allows us to, on the one hand, minimize risks at an early stage and, on the other, take advantage of opportunities in a timely manner. Despite the current difficult geopolitical situation, there are currently no identifiable risks that would jeopardize the continued existence of the Group.

7. Forecast report

Compared to previous financial years, the 2023 financial year was characterized by much more stable economic conditions. However, the operating result achieved and thus also ROCE were overshadowed by the necessary impairments. As a result, revenue growth, operating profit (EBIT), and ROCE for the MANN+HUMMEL Group as a whole were below our original expectations. However, this needs to be considered in a more differentiated way. In our newest division, Life Sciences & Environment, we realized that the ramp-up of this area would take more time than previously expected, and, for this reason, the results achieved are still below our expectations. In the Transportation division, we were able to improve profitability and will place an increased focus on eliminating the operational problems in the year ahead, especially at the American sites.

For the 2024 financial year, the MANN+HUMMEL Group expects currency-adjusted revenue growth of around 5%. In doing so, we assume that the young Life Sciences & Environment division will develop disproportionately and further increase its share of the Group’s total sales. The Transportation division will grow at a low-single-digit rate, with a further development of margin quality. At the same time, we currently expect MANN+HUMMEL to achieve an EBIT margin adjusted for non-operating one-off effects in the mid-single-digit range. This would represent a slight increase compared to the previous year. Our current expectation for operating profit as a percentage of capital employed (ROCE) is in a range between 10% and 12%. In addition, we expect operating free cash flow of approximately EUR 150 million for the 2024 financial year. In addition to the operating result, this includes moderate growth in working capital and a significantly higher investment volume compared to the previous year.

Current macroeconomic and geopolitical developments entail considerable uncertainties and risks. That is why our primary goal is to increase the efficiency of the company through appropriate measures and thus to sustainably improve the quality of our margins. For this reason, we are constantly reviewing and questioning our location strategy and our product portfolio. Any necessary measures will be taken as soon as possible.

Ludwigsburg, May 7, 2024

MANN+HUMMEL International GmbH & Co. KG

The Management Board

Kurk Wilks	Emese Weissenbacher
CEO	EVP & CFO

MANN+HUMMEL consolidated financial statements in accordance with IFRS[1]

1 All figures are rounded. This may lead to minor discrepancies when totaling sums and when determining percentages.

Consolidated profit and loss statement January 1 to December 31, 2023

In EUR million	Notes	2023	2022
Sales	(10)	4,702.1	4,826.4
Cost of sales	(11)	3,515.6	3,733.7
Gross margin on sales		**1,186.5**	**1,092.7**
Research and development costs	(11)	117.9	114.3
Selling expenses	(11)	528.7	546.7
General administrative expenses	(11)	273.6	225.4
Other operating income	(12)	176.7	192.0
Other operating expenses	(13)	427.1	222.0
Operating profit or loss (EBIT)		**15.9**	**176.3**
Share in the result from associates	(14)	–4.9	0.9
Financial expenses	(14)	217.4	282.5
Financial income	(14)	108.8	125.4
Net financial result		**–113.5**	**–156.2**
Net profit or loss before income tax and changes in capital economically attributable to the shareholders		**–97.6**	**20.1**
Income taxes	(15)	97.1	70.0
		–194.7	–49.9
Changes in capital economically attributable to the shareholders		**–179.8**	**–41.2**
Consolidated net income		–14.9	–8.7
Result attributable to non-controlling interests		–14.9	–8.7

Consolidated statement of comprehensive income January 1 to December 31, 2023

In EUR million	Notes	2023	2022
Consolidated net income		**–14.9**	**–8.7**
thereof attributable to non-controlling interests		–14.9	–8.7
Items that may be reclassified to profit/loss			
Exchange rate differences from the conversion of foreign business operations			
Exchange rate differences occurring during the financial year	(26)	–1.3	2.2
Borrowing instruments			
Changes in fair value of financial assets available for sale	(26)	0.8	–6.5
Reclassifications to profit and loss	(26)	4.8	–1.1
Income taxes attributable to these components	(26)	–1.6	2.2
Cash flow hedge (currency hedging)			
Gains/losses recorded during the financial year	(26)	–1.8	3.3
Income taxes attributable to these components	(26)	1.4	1.3
Items that will not be reclassified to profit/loss			
Revaluation of defined benefit obligations and similar commitments	(26)	–23.4	115.9
Income taxes attributable to these components	(26)	7.6	–32.5
Equity instruments			
Changes in fair value of financial assets available for sale	(26)	6.1	1.5
Income taxes attributable to these components	(26)	–0.1	0.8
Changes in other income attributable to shareholders		4.3	–73.6
Other income		**–3.2**	**13.4**
Total consolidated comprehensive income		**–18.1**	**4.6**
thereof attributable to non-controlling interests		–18.1	4.6

Consolidated balance sheet as of December 31, 2023

In EUR million	Notes	12/31/2023	12/31/2022
Assets			
Non-current assets			
Intangible assets	(17)	723.6	877.1
Tangible assets	(19)	1,056.3	1,061.7
Investments in associates	(20)	3.8	4.9
Trade receivables	(24)	2.9	0.0
Financial assets	(21)	36.2	30.3
Income tax receivables		0.0	0.7
Other assets	(22)	12.1	16.9
Deferred tax assets	(15)	99.5	126.8
		1,934.4	**2,118.3**
Current assets			
Inventories	(23)	697.7	717.5
Trade receivables	(24)	822.7	817.4
Financial assets	(25)	371.9	347.9
Income tax receivables		21.5	18.1
Other assets	(22)	96.7	122.4
Cash		174.4	205.0
		2,184.9	**2,228.4**
		4,119.3	**4,346.7**

In EUR million	Notes	12/31/2023	12/31/2022
Liabilities			
Equity			
Non-controlling interests	(26)	161.0	169.1
		161.0	**169.1**
Non-current liabilities			
Capital economically attributable to the shareholders	(26)	640.2	843.0
Financial liabilities	(28)	1,105.7	920.1
Provisions for pensions	(32)	355.6	334.4
Other provisions	(31)	40.0	38.0
Trade payables	(29)	0.3	0.0
Other liabilities	(30)	9.9	5.8
Income tax liabilities		12.1	4.1
Deferred tax liabilities	(15)	41.7	54.9
		2,205.5	**2,200.3**
Current liabilities			
Financial liabilities	(28)	623.2	778.4
Trade payables	(29)	741.2	765.3
Other liabilities	(30)	177.0	186.6
Other provisions	(31)	126.4	176.0
Income tax liabilities		85.0	71.0
		1,752.8	**1,977.3**
		4,119.3	**4,346.7**

Consolidated cash flow statement January 1 to December 31, 2023

In EUR million	Notes	2023	2022
1. Cash flow from operating activities			
Consolidated net income		–14.9	–8.7
Changes in capital economically attributable to the shareholders		–179.8	–41.2
Income taxes		97.1	70.0
Net profit or loss before income tax and changes in capital economically attributable to the shareholders		–97.6	20.1
Paid (–)/refunded (+) taxes on income		–60.4	–54.4
Depreciation/allowance (+) of fixed assets		392.6	218.0
Increase (+)/reduction (–) in non-current provisions		–1.1	–51.8
Other expenditure (+)/income (–) not affecting payments		22.7	0.4
Financial result		113.5	156.2
Increase (+)/reduction (–) in current provisions		–49.2	42.8
Profit (–)/loss (+) from disposal of assets		0.0	–28.5
Increase (–)/reduction (+) in inventories, trade debtors, and other assets		2.2	–130.2
Increase (+)/reduction (–) in trade creditors and other liabilities		–34.0	–39.4
Cash flow from operating activities	(33)	**288.7**	**133.2**
2. Cash flow from investment activities			
Receipts (+) from the disposal of tangible assets		11.5	12.8
Payments (–) for investment in tangible assets		–157.6	–142.2
Receipts (+) from the disposal of intangible assets		0.0	0.0
Payments (–) for investment in intangible assets		–2.2	–3.2
Receipts (+) from the disposal of non-current financial assets		0.0	1.7
Payments (–) for investment in non-current financial assets		–1.8	–6.8
Receipts (+) from the disposal of assets held for sale		0.0	54.5
Receipts (+) from the sale of consolidated entities, less cash and cash equivalents		0.0	21.2
Payments (–) for the acquisition of consolidated companies, less cash and cash equivalents acquired		–53.5	0.0
Receipts (+) from loans granted		0.1	0.0
Payments (–) for loans granted		–11.4	–9.2
Interest received (+)		9.9	5.5
Cash flow from investment activities	(33)	**–205.0**	**–65.5**
Free cash flow		**83.7**	**67.7**

Continued on page 54

Consolidated cash flow statement January 1 to December 31, 2023 (continued)

In EUR million	Notes	2023	2022
3. Cash flow from financing activities			
Receipts (+) from equity increases		0.0	18.2
Payments (–) to company shareholders		–15.8	–10.8
Receipts (+) from acceptance of (financial) credits and from realized forward exchange transactions on financial loans	(33)	301.7	343.0
Repayment (–) of (financial) credits and of realized forward exchange transactions on financial loans	(33)	–275.3	–265.2
Payments (–) for the acquisition of non-controlling interests		0.0	–45.2
Payments (–) from the repayment of lease liabilities	(33)	–57.8	–55.4
Interest paid		–51.9	–37.0
Cash flow from financing activities	(33)	–99.1	–52.4
4. Cash funds at end of period			
Payment-effective change to cash funds (subtotal 1–3)		–15.3	15.4
Changes in cash funds from exchange rate movements, valuation differences, and changes in Group structure		–15.3	–2.4
Cash funds at beginning of period		205.0	192.0
Cash funds at end of period		**174.4**	**205.0**
5. Composition of cash funds			
Cash	(33)	174.4	205.0
Composition of cash funds		**174.4**	**205.0**

Consolidated changes in equity January 1 to December 31, 2023

	Parent company						Non-controlling interests	Total equity
	Revenue reserves	Total other shareholders' equity				Total equity of the partners of MANN+HUMMEL International GmbH & Co. KG		Total
		Equity and borrowing instruments	Fair value measurement of cash flow hedges	Actuarial gains and losses	Difference from foreign currency translation			
As of 12/31/2021							**170.5**	**170.5**
Changes in capital economically attributable to the shareholders	–82.8	–2.6	3.8	69.9	2.5	–9.2		–9.2
Reclassification to borrowed capital	82.8	2.6	–3.8	–69.9	–2.5	9.2		9.2
Other comprehensive income							13.4	13.4
Consolidated net income							–8.7	–8.7
Total consolidated comprehensive income							**4.6**	**4.6**
Paid dividends							–4.9	–4.9
Changes to the consolidated group							–2.1	–2.1
Other							0.9	0.9
As of 12/31/2022							**169.1**	**169.1**
Changes in capital economically attributable to the shareholders	–198.8	8.4	–0.3	–13.3	0.9	–203.1		–203.1
Reclassification to borrowed capital	198.8	–8.4	0.3	13.3	–0.9	203.1		203.1
Other comprehensive income							–3.2	–3.2
Consolidated net income							–14.9	–14.9
Total consolidated comprehensive income							**–18.1**	**–18.1**
Paid dividends							–3.7	–3.7
Changes to the consolidated group							12.2	12.2
Other							1.5	1.5
As of 12/31/2023							**161.0**	**161.0**

Notes to the consolidated financial statements of MANN+HUMMEL International GmbH & Co. KG 2023

Fundamental principles

1. Corporate structure

MANN+HUMMEL International GmbH & Co. KG (hereinafter also referred to as the "Company" or the "Parent Company") is organized in the legal form of a partnership. The company has its registered office at Schwieberdinger Straße 126, 71636 Ludwigsburg, Germany, and is entered in the Commercial Register of the Stuttgart Local Court under the Commercial Register number HRA 730217. The company has been the ultimate parent company of the MANN+HUMMEL Group (hereinafter also referred to as the "Group," "MANN+HUMMEL," or the "MANN+HUMMEL Group") since January 1, 2016.

The product portfolio includes filtration solutions for automotive and industrial applications, clean indoor and outdoor air, and the sustainable use of water. The MANN+HUMMEL Group's products include air filter systems, intake systems, liquid filter systems, technical plastic parts, filter media, cabin air filters, and industrial filters. In process engineering, industrial applications, and water filtration, the portfolio is supplemented by high-performance membranes, membrane bioreactors, and reverse osmosis technologies. Stationary and mobile systems for the filtration of fine dust and nitrogen dioxide also expand the product range for improving outdoor air quality. The Group increasingly offers digital services and intelligent solutions that meet customers' individual needs. The MANN+HUMMEL Group has more than 80 locations on six continents.

2. General information

The items of the consolidated profit and loss statement, the consolidated statement of comprehensive income, the consolidated balance sheet, the consolidated cash flow statement, and the consolidated statement of changes in equity are broken down or explained in the notes to the consolidated financial statements.

The financial year of MANN+HUMMEL corresponds to the calendar year. The Group currency is the euro. Unless otherwise stated, all amounts are shown in millions of euros (EUR million).

The company's management released the consolidated financial statements for distribution to the Supervisory Board on May 7, 2024.

The consolidated financial statements prepared as of December 31, 2023, and the group management report are published in the Federal Gazette.

The consolidated balance sheet is structured in accordance with terms. Balance sheet items are divided into non-current and current assets or liabilities if they have a remaining term of more than one year or up to one year.

Assets and liabilities held for sale or included in a disposal group classified as held for sale are presented separately from other assets and liabilities in the balance sheet.

Assets and liabilities are generally recognized according to the historical cost principle. This does not apply to derivative financial instruments, securities, and shares in investments, which are recognized at fair value.

3. Application of IFRS

As a non-capital market-oriented company, the company uses the option pursuant to section 315e (3) of the German Commercial Code (HGB) to prepare the consolidated financial statements according to IFRS.

The consolidated financial statements are in accordance with the standards and interpretations of the International Accounting Standards Board (IASB), London, as applicable in the European Union (IFRS), and the supplementary provisions of commercial law applicable in accordance with section 315e (1) of the German Commercial Code (HGB).

4. Adjustment of the accounting methods as well as new standards and interpretations

The accounting and valuation methods applied are the same as those applied in the previous year, with the following exceptions. In the current financial year, the following new or amended standards were applied for the first time, which did not have a material impact on the consolidated financial statements.

- Amendments to IAS 1: Disclosure of Accounting Policies.
- Amendments to IAS 8: Definition of Accounting Estimates.
- Amendments to IAS 12: Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction.
- IFRS 17: Insurance Contracts (including 2020 amendments and 2021 amendments).
- Amendment to IAS 12: concerning BEPS Pillar 2.

The following new or revised standards and interpretations have been published but were not yet mandatory for the financial year beginning on January 1, 2023, and were not applied ahead of schedule:

Amendment to IAS 1[1]	Classification of Liabilities as Current or Non-current
Amendment to IFRS 7 and IAS 7[1, 3]	Amendments regarding supplier finance arrangements
Amendment to IAS 21[2, 3]	Amendments to clarify the accounting when there is a lack of exchangeability
Amendment to IFRS 16[1]	Lease Liability in a Sale and Leaseback

1 Applicable for financial years beginning on or after January 1, 2024.
2 Applicable for financial years beginning on or after January 1, 2025.
3 An EU endorsement is still pending.

MANN+HUMMEL has not early adopted standards and interpretations that have already been issued but are not yet effective. The Group will apply the new or amended standards and interpretations at the latest when their application becomes mandatory following their adoption by the EU. We expect the new standards and interpretations to have either no or very little effect on the MANN+HUMMEL Group.

5. Consolidated group

As part of the reorganization of the Group structure, MANN+HUMMEL International GmbH & Co. KG was founded as the managing holding company on January 1, 2016. This company holds 83.3% of the shares in MANN+HUMMEL Holding GmbH, Ludwigsburg, and, as the ultimate parent company, prepares the consolidated financial statements for the MANN+HUMMEL Group.

The consolidated financial statements include 16 (previous year: 17) domestic and 73 (previous year: 68) foreign Group companies. In addition to the parent company, the scope of consolidation includes all domestic and foreign companies that the parent company directly or indirectly controls or over which it has a significant influence. Subsidiaries are companies in which the parent company, due to the actual or a de facto majority of voting rights, has control over the business and financial policies to benefit from their activities and thus has the possibility of control. In addition, the parent company is exposed to and can affect variable returns from its involvement with investees. Associates are entities in which the parent company has significant influence over operating or financial policies, but which are neither subsidiaries nor joint ventures.

	01/01/2023	Initial consolidations	Deconsolidations/ mergers	12/31/2023
Consolidated companies	85	8	–4	89
thereof domestic	17	0	–1	16
thereof abroad	68	8	–3	73
Associated companies	1	0	0	1

	01/01/2022	Initial consolidations	Deconsolidations/ mergers	12/31/2022
Consolidated companies	90	1	–6	85
thereof domestic	20	0	–3	17
thereof abroad	70	1	–3	68
Associated companies	1	0	0	1

CHANGES IN THE SCOPE OF CONSOLIDATION

COMPANY FOUNDATIONS AND INITIAL CONSOLIDATION

COMPANY ACQUISITIONS

ACQUISITION OF 60% OF THE SHARES IN OY M-FILTER AB (FINLAND)

As of February 1, 2023, 60% of the shares in Oy M-Filter Ab from Haapavesi, Finland—including its seven subsidiaries—were acquired for the price of EUR 26.0 million.

The purchase price was paid through the transfer of means of payment.

With the acquisition of Oy M-Filter Ab, the MANN+HUMMEL Group is expanding in the Northern and Eastern Europe region, strengthening its product portfolio in the Life Sciences & Environment division with a focus on HVAC and air filtration in general. The M-Filter Group consists of Oy M-Filter Ab, UAB M-Filter EU (Lithuania), Filterpak Oy, PL-Filter Oy, Filter Partner Oy, Suodatinkeskus Suomi Oy, LM-Filters Oy, and M-Filter GmbH.

The purchase price allocation, which was generally based on the fair values of the assets acquired and liabilities assumed, resulted in the recognition of inventories and property, plant, and tangible assets, as well as the recognition of intangible assets such as customer relationships, brands, and also goodwill. The main assumptions made in the framework of the purchase price allocation concerned the sales and margin development in the corporate planning of the acquired business, the expected synergies, and the capital costs.

The following table shows the distribution of the purchase price among the assets acquired and liabilities assumed at the time of the acquisition:

In EUR million	Book value before acquisition	Adjustment	Fair value
Intangible assets	0.1	11.1	11.2
Tangible assets	6.8	0.0	6.8
Current assets	11.5	0.0	11.5
Cash and cash equivalents	0.9	0.0	0.9
Provisions	0.0	0.0	0.0
Other liabilities	–17.0	0.0	–17.0
Deferred tax liabilities	0.0	–2.2	–2.2
Net assets	2.3	8.9	11.2
Non-controlling interest			4.5
Purchase price			26.0
Goodwill	0.0	19.2	19.2

The fair value of the net assets not applicable to the non-controlling interests was determined by multiplying them by the 40% shares attributable to the non-controlling shareholders.

Based on the purchase price allocation, EUR 19.2 million in goodwill and net assets amounting to EUR 11.2 million were acquired. Hidden reserves in the amount of EUR 11.1 million were discovered in intangible assets, which essentially include the takeover of the existing customer base and the brand. Tangible assets and liabilities increased compared to the local GAAP balances primarily due to the accounting of leases in accordance with IFRS 16. Goodwill cannot be claimed for tax purposes. MANN+HUMMEL expects that the goodwill actually acquired is made up of the expected synergy potential and the know-how of the employees.

The pro forma financial figures below represent the consolidated sales and consolidated earnings before interest and income taxes of the MANN+HUMMEL Group as if Oy M-Filter Ab had already been acquired at the beginning of the 2023 financial year. Scheduled depreciation and amortization on the intangible assets identified in the context of the purchase price allocation, which would also have been valid as of January 1, 2023, was also taken into account.

In EUR million	2023
Pro-forma-sales (Group)	26.6
Pro-forma-Group-EBIT	–3.1

In fact, the acquired Oy M-Filter Ab Group contributed to consolidated sales and earnings in 2023 as follows:

In EUR million	2023
Sales (Group) since acquisition	24.2
EBIT since acquisition	–2.8

ACQUISITION OF 70% OF THE SHARES IN SUZHOU U-AIR ENVIRONMENTAL TECHNOLOGY CO., LTD (CHINA)

As of November 1, 2023, 70% of the shares in Suzhou U-Air Environmental Technology Co., Ltd (“U-Air”), China, including its three subsidiaries, were acquired for the price of EUR 36.7 million.

The purchase price was paid through the transfer of means of payment.

With the acquisition of the U-Air companies, MANN+HUMMEL underlines its strategy to provide intelligent solutions for the increasing global demand for cleaner air while, at the same time, strengthening its presence in the growing Chinese and Southeast Asian air filtration market. The U-Air Group consists of Suzhou U-Air Environmental Technology Co., Ltd; Chongqing U-Air Environmental Technology Co., Ltd; Shenzhen U-Air Environmental Technology Co., Ltd; and Henan U-Air Environmental Technology Co., Ltd.

The analysis and valuation of the assets, in particular the intangible assets and liabilities, of the acquired company had not yet been completed at the time the consolidated financial statements were released. Therefore, there is no final purchase price allocation, and the fair value of the net assets acquired is to be viewed as provisional. The provisionally recorded goodwill of EUR 20.2 million is not tax deductible and represents part of the expected synergy potential as well as the know-how of the employees. A preliminary value of EUR 14.8 million was taken into account as hidden reserves in intangible assets.

The following table shows the preliminary distribution of the purchase price among the assets acquired and liabilities assumed at the time of the acquisition:

In EUR million	Book value before acquisition	Adjustment	Fair value
Intangible assets	0.0	14.8	14.8
Tangible assets	5.0	0.0	5.0
Current assets	63.0	0.0	63.0
Cash and cash equivalents	7.9	0.0	7.9
Provisions	–0.8	0.0	–0.8
Other liabilities	–64.3	0.0	–64.3
Deferred tax liabilities	0.0	–2.2	–2.2
Net assets	10.9	12.6	23.4
Non-controlling interest			7.0
Purchase price			36.7
Goodwill	0.0	20.2	20.2

The fair value of the net assets not applicable to the non-controlling interests was determined by multiplying them by the 30% shares attributable to the non-controlling shareholders.

The gross book value of the acquired trade receivables amounted to EUR 52.2 million at the time of the acquisition. The best possible estimate for likely irrecoverable contractual cash flows is EUR 13.7 million.

The following pro forma financial figures represent the consolidated sales and consolidated earnings before interest and income taxes of the MANN+HUMMEL Group as if U-Air had already been acquired at the beginning of the 2023 financial year:

In EUR million	2023
Pro-forma-sales (Group)	63.4
Pro-forma-Group-EBIT	3.0

In fact, the acquired U-Air Group contributed to the Group's revenue and earnings in 2023 as follows:

In EUR million	2023
Sales (Group) since acquisition	17.7
EBIT since acquisition	3.7

DECONSOLIDATION

MANN+HUMMEL Filter (CHONGQING) CO., LTD., Chongqing, China, and MANN+HUMMEL Verwaltungs GmbH, Ludwigsburg, were deconsolidated in the current financial year. These deconsolidations resulted in a profit of EUR –0,4 million.

Furthermore, PL-Filter Oy, Vimpeli, Finland, and Filter Partner Oy, Salo, Finland, were merged within the Group.

6. Principles of consolidation

The capital consolidation is carried out according to the purchase method. The subsidiaries are fully consolidated from the date of acquisition, i.e., from the date the parent company acquires a controlling influence. Inclusion in the consolidated financial statements ends as soon as control by the parent company no longer exists. At the time control is obtained, the revalued assets and liabilities of the subsidiary and contingent liabilities, insofar as they do not depend on a future event, are offset against the fair value of the consideration paid for the shares. Contingent purchase price payments are recognized at fair value.

Subsequent adjustments to contingent consideration are recognized in profit or loss. Incidental costs incurred in connection with the acquisition are expensed as incurred.

Any difference on the assets side remaining after capital consolidation is capitalized as goodwill and reported under intangible assets. Goodwill is tested for impairment on the balance sheet date. A test is carried out during the year if there are indications of impairment. Negative differences arising from capital consolidation are recognized in the consolidated income statement under other income, provided that the reassessment of the carrying amounts does not lead to a different result.

Insofar as not all shares are acquired in the context of the business acquisition, the shares without controlling influence can be recognized at the proportionate revalued net assets or at their proportionate total enterprise value, including the goodwill attributable to them. The option can be exercised anew for each company acquisition. The non-controlling interests were recognized at the proportionate net assets (partial goodwill approach).

In the case of a successive share acquisition, existing shares in the company to be consolidated are revalued at the fair value when control is obtained. The difference to the carrying amount of the investment is recognized in profit or loss.

The acquisition of additional shares in already fully consolidated subsidiaries is accounted for as an equity transaction. The difference between the acquisition cost of the shares and the carrying amount of the non-controlling interest is offset against retained earnings. The effects of share disposals that do not lead to a loss of control of a subsidiary are recognized directly in equity by offsetting the gain or loss on disposal against retained earnings and increasing the non-controlling interests in the amount of the proportionate net assets.

The deconsolidation of subsidiaries occurs at the time of loss of control or at the time of liquidation. The result of the deconsolidation is reported in the financial result. The remaining shares are capitalized at fair value under shares in investments.

Receivables, liabilities, provisions, sales revenue, and other income and expenses between the companies included in the consolidated financial statements are consolidated. Intercompany profits from intragroup transactions that were not realized by sale to third parties outside the Group are eliminated. Intragroup sureties and guarantees are eliminated.

7. Foreign currency translation

The financial statements of the consolidated group companies prepared in foreign currencies are translated into euros based on the functional currency concept using the modified closing rate method. Since the subsidiaries conduct their business independently in financial, economic, and organizational terms, the functional currency is basically identical to the respective national currency of the company. In the consolidated financial statements, expenses and income from the financial statements of subsidiaries prepared in foreign currencies are translated at the average exchange rate. In contrast, assets and liabilities are translated at the closing rate. The currency difference resulting from the translation of equity at historical rates and the translation differences resulting from the translation of the income statement at the average rate are recognized directly in accumulated other equity.

In the individual financial statements, foreign currency receivables and liabilities are initially valued at the exchange rate valid on the transaction date. The exchange rate on the balance sheet date is used for subsequent valuation. Currency gains and losses from the reporting date valuation of trade receivables and payables are included in other income and expenses. Other financial income and expenses are recognized as currency gains and losses attributable to financial assets and liabilities. The exchange rates used for currency translation with a significant impact on the consolidated financial statements have changed in relation to the euro as follows:

	Spot rate on reporting date		Annual average rate of exchange	
	12/31/2023	12/31/2022	2023	2022
Argentine peso [ARS]	892.85714	188.67925	294.11765	136.61202
Brazilian real [BRL]	5.37440	5.64570	5.39091	5.39354
Renminbi yuan [CNY]	7.86895	7.37325	7.68205	7.07427
Czech koruna [CZK]	24.72053	24.14357	23.97645	24.54301
Pound sterling [GBP]	0.86928	0.88645	0.86870	0.85413
Indian rupee [INR]	92.12175	88.22621	89.45264	82.64941
Japanese yen [JPY]	156.73244	140.78558	152.97537	137.92723
South Korean won [KRW]	1,436.10100	1,338.22231	1,419.99100	1,353.17997
Mexican peso [MXN]	18.75866	20.87870	19.04780	21.01507
Singapore dollar [SGD]	1.46133	1.43207	1.45397	1.44622
Thai baht [THB]	38.00995	36.89506	37.72119	36.81912
US dollar [USD]	1.10755	1.06805	1.08311	1.04848

8. Accounting policies

The companies' financial statements included in the consolidated financial statements are prepared as of December 31 of each financial year in accordance with uniform Group accounting and valuation principles in accordance with IFRS.

RECOGNITION OF INCOME AND EXPENSE

Revenue is recognized when control of identifiable goods or services is transferred to the customer, i.e., when the customer can direct the use of the transferred goods or services and substantially obtains all the remaining benefits from them. The prerequisite for this is that a contract with enforceable rights and obligations exists and, among other things, the receipt of the consideration—considering the customer's creditworthiness—is probable. Revenue corresponds to the transaction price to which the Group is expected to be entitled. Variable consideration is included in the transaction price when it is highly probable that there will not be a significant revenue reversal once the uncertainty associated with the variable consideration no longer exists. The amount of variable consideration is determined using either the expected value method or the most likely amount, depending on which value most accurately estimates the variable consideration. If a contract includes multiple separable goods or services, the transaction price is allocated to the performance obligations based on the relative individual selling prices. If standalone selling prices are not directly observable, the Group estimates selling prices reasonably. For each performance obligation, revenue is recognized either at a specific point in time or over a specific period.

Revenue from the sale of goods is recognized when control is transferred to the buyer, usually upon delivery of goods. Invoices are issued at this time; the payment terms usually provide for payment within 30 days of issuance of the invoice.

Sales from the provision of services are recognized depending on the contractually agreed conditions. Invoices are issued in accordance with the contract. The payment terms usually stipulate payment within 30 days of the invoice being issued.

The cost of sales includes the manufacturing costs of the products sold as well as the purchase costs of the merchandise sold. In addition to the directly attributable material and production costs, it also includes the indirect, production-related overheads, including depreciation on the property, plant, and equipment, and intangible assets used. Cost of sales also includes expenses from the write-down of inventories to the lower net realizable value.

Research and non-capitalizable **development costs** are expensed as incurred.

Borrowing costs that are directly attributable to the acquisition or construction of an asset that takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the asset's cost. All other borrowing costs are recognized immediately as an expense.

Interest income is recognized in the income statement as it accrues.

Dividend income is recognized when the legal claim to payment arises.

INCOME TAXES

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authority. The amount calculated is based on the tax rates and tax laws applicable at the balance sheet date.

Deferred tax assets and liabilities are recognized on temporary differences between the tax bases and the IFRS carrying amounts. Deferred tax assets also include tax reduction claims resulting from the expected use of existing loss carryforwards and tax credits in subsequent years. Deferred taxes are calculated based on the tax rates that apply or are expected with sufficient probability to apply under the current legal situation in the individual countries at the time of realization.

Deferred tax assets on temporary differences and on tax loss carryforwards are only recognized if it is sufficiently probable that the resulting tax reductions will occur in the future.

The carrying amount of deferred tax assets is reviewed at each balance sheet date. It is reduced to the extent that it is no longer probable that sufficient taxable profit will be available against which the deferred tax asset can be at least partially utilized. Unrecognized deferred tax assets are reviewed at each balance sheet date and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

In addition, deferred tax assets and liabilities are not recognized if they result from the initial recognition of goodwill, an asset, or a liability in a transaction that is not a business combination and if neither the accounting profit before income taxes nor the taxable profit is affected by this initial recognition.

Deferred taxes relating to items recognized directly in equity are also recognized in equity and not in the consolidated income statement.

Deferred tax assets and deferred tax liabilities are offset against each other if the MANN+HUMMEL Group has a legally enforceable right to set off current tax assets against current tax liabilities. These relate to income taxes levied by the same taxation authority on the same taxable entity.

The Organisation for Economic Co-operation and Development (OECD)/G20 Inclusive Framework on Base Erosion and Profit Shifting published the Pillar Two model rules designed to address the tax challenges arising from the digitalization of the global economy.

It is uncertain if the Pillar Two model rules create additional temporary differences, whether to remeasure deferred taxes for the Pillar Two model rules, and which tax rate to use to measure deferred taxes. In response to this uncertainty, on May 23, 2023, and June 27, 2023, respectively, the IASB and AASB issued amendments to IAS 12 "Income Taxes," introducing a mandatory temporary exception to the requirements of IAS 12 under which a company does not recognize or disclose information about deferred tax assets and liabilities related to the proposed OECD/G20 BEPS Pillar Two model rules. The MANN+HUMMEL Group applied the temporary exception on December 31, 2023.

Pillar Two legislation has been enacted or substantively enacted in certain jurisdictions in which MANN+HUMMEL operates. The legislation will be effective for the Group's financial year beginning January 1, 2024. The MANN+HUMMEL Group is in the process of assessing the potential exposure arising from Pillar Two legislation.

The assessment currently being carried out is based on the country-specific reports for 2022 and the latest financial information for the 2023 financial year. In certain jurisdictions, information required for the assessment is still being gathered and, therefore, the assessment is not complete.

INTANGIBLE ASSETS

Acquired and internally generated intangible assets are capitalized if it is probable that future economic benefits associated with the use of the asset will flow to the entity, and the cost of the asset can be measured reliably.

Regarding the accounting and valuation of **goodwill**, reference is made to explaining the consolidation principles and impairment tests.

The intangible assets identified as part of the significant business acquisitions mainly include customer relationships and brand names. The fair values of the customer lists/relationships were determined using the residual value method based on corporate planning with a useful life of four to 15 years. The brands were valued using the license price analogy method. The main assumptions here were the expected brand sales and the expected license rate. The useful life was set at three to 15 years.

Tooling subsidies paid to suppliers are capitalized if they represent a right granted by the supplier or payment for a service yet to be rendered by the supplier. Tooling subsidies are amortized over a period of one to six years.

Development costs are capitalized at production costs under the conditions of IAS 38 if, among other criteria, technical feasibility and marketability are assured. Furthermore, the development activity must generate a future economic benefit with sufficient probability. Capitalized development costs include all costs directly attributable to the development process. Capitalized development costs are amortized over an expected product life cycle of five years from the start of production.

Other intangible assets are recognized at cost and, as in the previous year, are amortized on a straight-line basis over the following useful lives:

	In years
Independently developed software	4
Software—general (individual licenses)	4
Software—version change, e.g., product data management (PDM) and CAD (CATIA, PTC Creo, NX, etc.)	8
Patents	10

Intangible assets with indefinite useful lives exist only in the form of goodwill as of the balance sheet date.

TANGIBLE ASSETS

All **tangible fixed assets** are subject to operational use and are valued at acquisition or production cost less scheduled depreciation based on usage. Depreciation on property, plant, and equipment is calculated using the straight-line method. As in the previous year, scheduled depreciation is based on the following useful lives throughout the Group:

	In years
Buildings	20 to 40
Components	20 to 25
Building parts	15 to 33
Outdoor facilities	20 to 33
Machines	8 to 20
Operating equipment	12 to 20
Vehicles	6 to 10
Tools	5
Machines/devices in general	8 to 15
Tools and equipment	6 to 10

For machines used in multishift operations, shift surcharges increase depreciation accordingly.

The assets' residual values, depreciation methods, and useful lives are reviewed annually and adjusted if necessary.

GOVERNMENT GRANTS

Government grants are recognized only when there is reasonable assurance that the conditions attached to them will be complied with and that the grants will be received. Investment grants are deducted from fixed assets in the period they are incurred. Expense grants are recognized as income in the same period in which the expenses they were granted to compensate are incurred.

Interest rates customary in the market are used for the valuation of non-interest-bearing and low-interest-bearing public-sector loans. The difference between the discounted and repayment amounts is deferred and reported under other receivables. The deferred amount is amortized over the term of the loan agreement, which is substantially the same as the useful life of the asset and is included in interest expense.

INVESTMENTS IN ASSOCIATES

Investments in associates are generally accounted for using the equity method of accounting and are initially recognized at cost, including transaction costs. An impairment test is carried out if there are objective indications of an impairment of the shares as of the balance sheet date. The Group's share in the profit or loss of the associated companies is reported separately in the consolidated income statement as part of the financial result. Income and expenses recognized directly in the equity of the associated company are also recognized directly in equity in the MANN+HUMMEL Group and presented separately in the consolidated statement of comprehensive income. The cumulative changes after the acquisition date increase or decrease the carrying amount of the investment in the associate accordingly. Gains and losses from transactions between the MANN+HUMMEL Group and associates are eliminated in proportion to the share held.

IMPAIRMENT TESTS

In the case of **shares in associated companies, intangible assets** already in use, and **property, plant, and equipment**, a review is carried out on the balance sheet date to determine any indications of possible impairment. If such indications exist, the value is reviewed (impairment test). Intangible assets not yet ready for use and intangible assets with indefinite useful lives are subject to an annual impairment test.

The impairment test determines the recoverable amount. This is the higher of the asset's fair value or the smallest cash-generating unit, less any costs to sell and its value in use. Cash-generating units are defined as the smallest units whose cash flows are forecast as part of corporate planning.

The fair value is the amount obtainable from the sale of an asset in an arm's-length transaction less the disposal costs.

The value in use was determined as the present value of future cash flows. The future cash flows were derived from the long-term planning of the Group and were approved by management. The calculation of the present value of the estimated future cash flows is essentially based on assumptions about the macroeconomic and general development of the respective markets, future sales prices or quantities, and costs, taking into account changed economic conditions where necessary, including with regard to the transformation of the automotive industry and development in the Life Sciences & Environment division, as well as the discount rate on which the present value is based. Net cash inflows beyond the detailed planning period are determined by applying individual growth rates derived from the respective market information on the basis of long-term business expectations. The planning for the business areas is based on a detailed planning period of five years. The assumptions used for the planning are checked for plausibility against both historical development and external sources of information (e.g., market studies).

An impairment loss is recognized if the recoverable amount is less than the carrying amount of the asset or cash-generating unit.

The carrying amount of each business area, which corresponds to the respective cash-generating unit, is determined by allocating the assets and liabilities, including attributable goodwill and intangible assets. An impairment loss is recognized whenever the recoverable amount of an operation is less than its carrying amount.

If the reason for a previously recognized impairment loss no longer exists, the impairment loss is reversed, but not to more than amortized costs. Impairment losses and reversals of impairment losses on intangible assets and property, plant, and equipment are allocated to the functional areas of the consolidated income statement.

Goodwill from business combinations is allocated to the groups of cash-generating units that derive the benefit from the combinations.

In accordance with IAS 36, goodwill is not amortized over its useful life, but is tested for impairment at least annually at the end of the year using the methods described above, which may lead to a write-down (impairment-only approach).

Impairment losses on goodwill are recognized if the recoverable amount of the corresponding cash-generating unit is less than its carrying amount. Impairment losses on goodwill are recognized in other expenses. Goodwill is not written up.

In order to comply with the regulations of IFRS 3 in conjunction with IAS 36 and to determine any impairment of goodwill, cash-generating units are determined according to internal reporting. Goodwill is therefore allocated to the divisions (= cash-generating units) Transportation and Life Sciences & Environment. For impairment testing, the carrying amount of each division is determined by allocating the assets and liabilities, including attributable goodwill and intangible assets. An impairment loss is recognized whenever the recoverable amount of an operation is less than its carrying amount. The recoverable amount is determined as the higher of the fair value less costs to sell and the value in use of a cash-generating unit. The impairment tests to be performed determine the recoverable amount based on the value in use of the respective cash-generating unit.

FINANCIAL INSTRUMENTS

Under IFRS 9, financial assets are categorized into three measurement categories:

(1) financial assets measured at amortized cost (AC),

(2) financial assets at fair value through other comprehensive income (FVOCI), and

(3) financial assets at fair value through profit or loss (FVPL).

Financial assets are classified according to the underlying business model and the contractual cash flows of the financial assets. MANN+HUMMEL's basic business model is to hold financial assets to collect contractual cash flows. Regular purchases or sales of balance sheet assets are recognized on the settlement date.

Financial assets are measured at amortized cost (AC) if they correspond to the "hold" business model and their contractual cash flows consist exclusively of interest and principal payments.

Financial assets whose cash flows do not consist exclusively of principal and interest payments, such as shares in investment funds and derivatives, are measured at fair value through profit or loss (FVPL). At the MANN+HUMMEL Group, shares, investment funds, and derivatives not included in hedge accounting do not meet the cash flow criterion and are measured at fair value through profit or loss. Further information can be found in note 37 to the consolidated financial statements. For equity instruments, IFRS 9 optionally permits measurement at fair value through other comprehensive income (FVOCI). The MANN+HUMMEL Group applies this option to measure its investments at fair value through other comprehensive income.

The impairment model under IFRS 9 includes expectations about the future and is based on expected credit losses. The impairment model under IFRS 9 provides for three levels and applies to all financial assets (debt instruments) that are measured either at amortized cost or at fair value through other comprehensive income:

Level 1: includes all contracts without a significant increase in credit risk since addition. The impairment is measured based on the expected credit loss within the next twelve months.

Level 2: includes financial assets that have experienced an increase in credit risk but are not yet impaired. The impairment is measured based on the expected credit loss over the entire remaining term. The Group considers an increase in credit risk to be a deterioration in the rating by at least two rating grades compared to the forward rating and a rating that is no longer in the investment-grade range.

Level 3: includes financial assets that show objective evidence of impairment or are in default status. The expected credit losses over the entire term of the financial asset are recognized as an impairment and other qualitative information that indicates significant financial difficulties of the debtor.

The MANN+HUMMEL Group uses the simplified approach (loss rate approach) for trade receivables, i.e., these receivables are immediately allocated to level 2. A grouping or reclassification to level 3 occurs if the rating is no longer in the investment-grade range or if there are objective indications of an impairment of creditworthiness.

MANN+HUMMEL applies a uniform impairment model that considers the business partner's or a group of comparable business partners' default probability.

The calculation is carried out using a credit risk parameter approach.

Accordingly, the expected credit loss (ECL) is determined by multiplying the credit risk parameters exposure at default (EAD), probability of default (PD), and loss given default (LGD). The parameters are determined so that they reflect relevant events in the past, the current situation, and forward-looking information. In principle, this can be done through an economic model that includes all the listed information or by adjusting existing parameters to reflect the current economic environment and forecasts of future changes. This information includes macroeconomic factors (e.g., GDP growth, unemployment rate) and forecasts of future economic conditions.

In the simplified approach for receivables, impairment is determined using external default probabilities by the customer group. In the general approach, the determination is based on credit ratings of the respective business partners.

A financial instrument is derecognized if a financial asset is not reasonably expected to be realizable in whole or in part, e.g., after the termination of insolvency proceedings or court decisions. Currently, non-significant modifications are only carried out to a small extent. In these cases, the contract adjustment does not lead to a de-recognition of the asset. The difference between the gross carrying amount of the original contract and the present value of the modified contract is recognized in the income statement.

After initial recognition, financial liabilities are generally measured at amortized cost using the effective interest method. Gains or losses are recognized in profit or loss upon de-recognition and amortization. Financial liabilities at fair value through profit or loss are measured at fair value after initial recognition. Gains or losses arising from changes in fair value are recognized in profit or loss.

HEDGE ACCOUNTING

Derivative financial instruments are used in the MANN+HUMMEL Group for hedging purposes to reduce currency and interest rate risks. According to IFRS 9, all derivative financial instruments are recognized at fair value.

Hedging relationships are shown in accordance with the regulations of hedge accounting. They are accounted for as cash flow hedges or fair value hedges.

Cash flow hedges are used to hedge against the risk of changes in the value of future cash flows. In the case of changes in the market value of derivative financial instruments used in cash flow hedges, the unrealized gains and losses in the amount of the effective portion are initially recognized directly in retained earnings. A transfer to the consolidated income statement is made at the same time as the hedged underlying transaction affects the result. The ineffective portion of changes in fair value is recognized directly in the consolidated income statement.

Fair value hedges are used to hedge against the risk of changes in the value of balance sheet items. If the criteria are met, the results from the market valuation of derivative financial instruments are recognized in profit or loss at the same time as the related underlying transactions.

Effects on profit or loss from hedging transactions entered into to hedge risks from changes in commodity prices are recognized in cost of sales. Gains and losses from currency hedging transactions are recognized in revenue or in the financial result or are recognized as part of the acquisition cost. Gains and losses from derivative financial instruments used to hedge interest rate risks and price risks from securities are reported in other financial results.

INVENTORIES

Raw materials, supplies, and wares are generally valued using the standard cost method: considering lower net achievable values at the balance sheet date. Work in progress and finished goods are recognized at the lower cost or net realizable value, considering consumption at the balance sheet date. Production costs include all costs directly attributable to the production process and appropriate portions of production-related overheads. These include production-related depreciation, pro rata administrative expenses, and pro rata social security expenses.

LEASING

For lessees, IFRS 16 provides a uniform approach for the accounting of leasing contracts, according to which assets for the right of use of the leased assets and liabilities for the payment obligations entered into are to be recognized in the balance sheet for all leases. The rights of use are included in land, land rights and buildings, in technical equipment and other equipment, and in factory and office equipment. The lease liability is shown in the financial liabilities to third parties.

The main leases relate to production, warehouse, and office buildings as well as land with terms of up to 30 years. Some contracts contain price adjustment clauses that provide for an annual fixed percentage increase. Some contracts include renewal options, termination options, automatic contract extensions, or purchase options.

Other leases relate to vehicle fleets, machinery, hardware and software, and other operating and office equipment with terms of up to five years. For some of these contracts, there are renewal options or automatic contract extensions and options to purchase the leased objects at market value at the end of the contract term. The leasing installments are partly linked to the service used.

For leased assets of low value (less than EUR 5,000) and for short-term leases (less than 12 months), use is made of the application relief, and these are therefore expensed. Furthermore, the option to separate leasing and non-leasing components (service) is used. Non-lease components are not included in the right-of-use asset to be recognized.

Assets and liabilities from leases are initially recognized at present value. The lease liabilities correspond to the present value of the following lease payments not yet made for the right to use the underlying asset:

- Fixed payments, including de facto fixed (in substance fixed) payments, less any lease incentives to be received.
- Variable lease payments linked to an index or (interest) rate, initially measured at the index rate at the commitment date.
- Expected payments by the Group from the utilization of residual value guarantees.
- The exercise price of a call option or a renewal option that is reasonably certain to be exercised by the Group.
- Penalty payments in connection with the termination of a lease, provided that the term considers that the Group will exercise the relevant termination option.

The discount rate used is the interest rate implicit in the lease if it is readily determinable. Otherwise—and this is usually the case in the Group—discounting is carried out at the lessee's marginal borrowing rate, i.e., the interest rate that the respective lessee would have to pay if it had to borrow funds to a comparable extent for a comparable term with comparable security under comparable conditions.

The rights of use are measured at cost on the date of provision, which is as follows:

- The amount of the initial measurement of the lease liability.
- Any lease payments made at or before the date of commitment less any lease incentives received.
- Any initial direct costs incurred by the lessee.
- Estimated costs incurred by the lessee in dismantling or removing the underlying asset, restoring the site on which it is located or returning the underlying asset to the condition required by the lease agreement.

The subsequent measurement of the rights of use is at amortized cost. Depreciation is calculated on a straight-line basis over the shorter of the useful life and the underlying lease term. If the exercise of a purchase option is sufficiently specific from the Group's point of view, the asset is depreciated over the useful life of the underlying asset. Leases for buildings and office space contain renewal and termination options. The measurement of the lease liability requires assessing whether the exercise of these options is considered reasonably certain. The Group considers all facts and circumstances that influence the exercise or non-exercise of these options.

For the presentation of leases in the balance sheet, we refer to our comments in notes 19, 28, and 35. In the income statement, expenses from leases are reported under depreciation and other interest expenses.

The Group is exposed to possible future increases in variable lease payments that may result from a change in an index or interest (rate). These potential changes in lease payments are not reflected in the lease liability until they become effective. However, when changes in an index or interest (rate) affect the lease payments, the lease liability is adjusted against the right of use. Lease payments are divided into principal and interest payments.

The MANN+HUMMEL Group does not act as lessor.

SALE AND LEASEBACK

In a sale and leaseback transaction, criteria from IFRS 15 must first be used to determine if the transfer of an asset should be accounted for as a sale. If the transfer of an asset does not meet the requirements for sale accounting set out in IFRS 15, the asset continues to be recognized and the proceeds received are recognized as a financial liability in accordance with IFRS 9. If the asset transfer constitutes a sale, the leased-back assets are reflected in the consolidated financial statements in accordance with the lessee accounting principles outlined above. Accordingly, any gain or loss is recognized only to the extent that it relates to the rights transferred to the buyer/lessor.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents include cash on hand, bank balances available at any time, and short-term overnight deposits.

ASSETS AND DISPOSAL GROUPS HELD FOR SALE

Assets and liabilities are reported as a disposal group if they are to be sold as a group in a transaction that is highly probable. Individual assets are shown as assets held for sale on the balance sheet. The assets and liabilities are presented separately on the balance sheet within current assets and liabilities as "assets of disposal groups held for sale" or "liabilities of disposal groups." The income and expenses of the assets and liabilities concerned are included in the result from continuing operations until disposal if they do not meet the definition of a discontinued operation. When classified as a disposal group for the first time, it is initially measured in accordance with the relevant IFRS standards, after which the resulting carrying amount of the disposal group is compared with the fair value less costs to sell to determine the lower value to be recognized.

FINANCIAL AND OTHER LIABILITIES

The capital economically attributable to the shareholders is shown within the non-current liabilities. According to German commercial law, commercial partnerships such as MANN+HUMMEL International GmbH & Co. KG have non-excludable termination rights for the shareholders. However, according to IAS 32.16, equity capital only exists for the most subordinate class of shareholders to the extent that a company has neither an unconditional nor a conditional obligation to deliver money or other assets. Due to regulations in the articles of association regarding shareholders' compensation, the shares in MANN+HUMMEL International GmbH & Co. KG do not meet the requirements of IAS 32.16A for the reporting of puttable shares as equity. To this extent, they are reported within the non-current liabilities as "Capital economically attributable to the shareholders." Insofar as IFRS requires the presentation of items in other comprehensive income, this also applies to partnerships that do not have equity according to IFRS. Therefore, such items are not shown in the period result for the MANN+HUMMEL Group either.

The valuation of the capital economically attributable to the shareholders is carried out at the fair value of the obligation. In the present case, this corresponds to the pro rata book value of the respective shareholder in the IFRS Group equity.

Financial liabilities and other liabilities are initially recognized at cost, which corresponds to the fair value of the consideration received. Transaction costs are also considered. Subsequently, liabilities are measured at amortized cost using the effective interest method. If the financial liabilities have not yet been utilized, the transaction costs are accrued within other assets. They are recognized in the income statement under other financial expenses. Financial liabilities and other liabilities are derecognized as soon as the underlying obligations are fulfilled, terminated, or expire.

For financial guarantees issued by the Group, the risk of utilization is assessed as best as possible, insofar as such guarantees exist on the balance sheet date. If the guarantee is probable to be called, a liability is recognized under financial liabilities in the amount of the expected cash outflow.

The MANN+HUMMEL Group generally does not apply the fair value option of classifying financial assets and liabilities as "at fair value through profit or loss" upon initial recognition.

TOOLING COST CONTRIBUTIONS RECEIVED

Tooling subsidies received represent consideration for rights granted or services yet to be rendered to the grantor. The grants are accrued as tooling cost subsidies received under other liabilities. They are released over the term of the project.

OTHER PROVISIONS

Other provisions are formed if an obligation to third parties exists due to a past event, the utilization of which is probable, and the probable amount of the necessary provision can be reliably estimated.

In the valuation of provisions from sales—especially for warranties and expected losses from pending transactions—all cost components are generally included that are also capitalized in inventories. The valuation is carried out at the amount of the best possible estimate of the expenses required to fulfill the obligation on the balance sheet date. Warranty provisions are measured based on actual warranty expenses incurred, considering warranty and goodwill periods and the sales development of the products concerned in the period to be considered.

The personnel-related obligations relate to restructuring measures, long-service awards, and partial retirement obligations. Provisions for long-service anniversaries are determined according to actuarial principles. The provisions for partial retirement obligations include the individually or collectively agreed top-up amounts for pension insurance and the remuneration payments to be made during the release phase. Accruals are made in installments from the beginning of the obligation.

The partial retirement obligations are secured against insolvency through a trust model. Shares in a special fund were assigned to a trustee for this purpose. The shares in the special fund are valued at fair value. The assets that serve exclusively to fulfill the partial retirement obligations and are not accessible to all other creditors are netted against the provisions (plan assets). If these exceed the value of the provisions, the excess amount is reported under non-current other financial receivables. The income from plan assets is netted with expenses from compounding provisions in the income statement.

Non-current provisions with a remaining term of more than one year are recognized at their settlement amount discounted to the balance sheet date. Discounting is carried out at an interest rate that corresponds to the risk and the term of the fulfillment.

PROVISIONS FOR PENSIONS

Provisions for pensions are recognized using the projected unit credit method. This method considers not only the pensions and vested rights known on the balance sheet date but also expected future increases in pensions and current payments. The calculation is based on actuarial reports considering current biometric calculation principles. Actuarial gains and losses are recognized in full in other comprehensive income in the period in which they occur. The net interest is recorded in interest expenses. All other expenses from the allocation of pension obligations are allocated to the affected functional areas in the consolidated profit and loss statement.

9. Judgments and uncertainties in connection with estimates

The preparation of the consolidated financial statements requires assumptions and estimates to be made that affect the recognition, height, and presentation of assets and liabilities, income and expenses, and contingent liabilities. Significant assumptions and estimates applied in the recognition and measurement of balance sheet items are explained below.

The **capitalization of development costs** (note 17 to the consolidated financial statements) is based on the management's assessment of the technical and commercial feasibility of the development projects. The measurement of capitalized development costs depends on assumptions about the amount and period of the expected future cash flows and the discount rates to be applied.

Some leases contain renewal, termination, or purchase options. The measurement of the lease liability requires an assessment of whether the exercise of these options is reasonably certain. If the interest rate underlying the lease cannot be determined, the marginal interest rate is used for discounting. This is derived from country-specific interest rate swaps for different terms and adjusted by a risk premium. Long-term leases are taken into account over a maximum term of 15 years.

In accounting for other **intangible assets** and **property, plant, and equipment** (notes 17 and 19 to the consolidated financial statements), assumptions and estimates mainly relate to determining useful lives. Insofar as intangible assets are concerned that are recognized for the first time as part of a company acquisition (note 5 to the consolidated financial statements) (e.g., customer base), the fair value of these assets is determined as part of a purchase price allocation in accordance with IFRS 3. If a market price–oriented method cannot be applied, the Group generally determines the fair value of intangible assets using capital value–oriented methods. In this case, the value of an asset is the sum of the present values of the future cash flows at the valuation date. The forecast of the valuation-relevant cash flows and the derivation of the cost of capital rate reflecting the risk of the intangible asset in question significantly influences the valuation. The Group essentially applied the license price analogy method within the capital value–oriented method (e.g., for brand names) and the residual value method (e.g., for the customer base).

Intangible assets were identified during purchase price allocations. Regarding the newly acquired companies, these mainly include know-how and customer relationships. The determination of the fair values of the identified customer lists/relationships was made based on the residual value method and corporate planning with a useful life of 6 to 15 years. The brands were valued using the license price analogy method. Key assumptions here were the expected brand sales and the expected license rate. The useful life was set at 10 years.

Within the framework of the **impairment tests** (note 18 to the consolidated financial statements), assumptions and estimates are used to determine the expected future cash flows and the discount rates. Especially in intangible assets and liabilities, this can influence the respective value.

The assessment of the recoverability of **trade receivables** (note 24 to the consolidated financial statements) is subject to discretionary decisions regarding the estimation of the future solvency of the debtors.

The fair values of **securities** (note 37 to the consolidated financial statements), which are allocated to level 3 of the fair value hierarchy, are determined based on inputs that are not observable in the market. The calculation, which is performed using the discounted cash flow method, is based on estimates regarding the expected cash flows and discount rates used.

The amount of impairment losses for **financial assets** (note 37 to the consolidated financial statements) is influenced by discretionary decisions, e.g., regarding the assessment of whether the price losses are significant or prolonged and regarding the evaluation of the creditworthiness of the issuers.

The amounts related to **reverse factoring agreements** in the balance sheet and cash flow statement are not reclassified to financial liabilities and financial cash flow, respectively, based on judgment (note 29 to the consolidated financial statements).

In accounting for **deferred tax assets** (note 15 to the consolidated financial statements), assumptions and estimates essentially relate to the probability that the expected tax reductions will occur in the future.

The actuarial valuation of **provisions for pensions** (note 32 to the consolidated financial statements) is based on assumptions regarding discount rates, future pension trends, age shifts, and the general cost of living development.

The calculation of warranty provisions (note 31 to the consolidated financial statements) is subject to assumptions and estimates that relate to the period between the delivery date and the occurrence of the warranty event, warranty and goodwill periods, and future warranty charges.

The determination of **long-term provisions for impending losses** (note 31 to the consolidated financial statements) is subject to discretionary decisions regarding the interpretation of supply contracts. Significant decision-making criteria are the binding determination of the delivery period, quantities, and prices.

Provisions for **restructuring measures** (note 31 to the consolidated financial statements) are recognized as soon as a formal plan is available and has been communicated to the affected parties or the plan's implementation has begun. In addition to the scope of the planned capacity adjustments, the valuation also considers country- and site-specific regulations and the corresponding remuneration level.

When **recognizing revenue**, assumptions and the exercise of discretion are applied when it is necessary to assess whether there is revenue related to a specific period or point in time. Furthermore, determining the amount of revenue for variable transaction prices is discretionary and subject to certain assumptions (notes 10 and 22 to the consolidated financial statements).

Provisions were made for **tax risks from ongoing tax audits** if the facts are sufficiently concrete and their occurrence is probable.

No other significant discretionary decisions and estimates were made.

In individual cases, the actual values may deviate from the assumptions and estimates made. Changes are recognized in profit or loss when better knowledge becomes available.

At the time of the preparation of the consolidated financial statements, the underlying estimates were not subject to any significant risks, so no material adjustment of the assets and liabilities reported in the consolidated balance sheet is to be expected in the following financial year.

HYPERINFLATION

Since July 1, 2018, Argentina has been classified as a hyperinflationary economy. In addition, Turkey has been classified as a hyperinflationary economy since May 2022. Accordingly, the provisions of IAS 29 are relevant. Accordingly, the financial statements of an entity whose functional currency is that of a hyperinflationary economy, whether based on the historical cost concept or the current cost concept, must be expressed in terms of the measuring unit current at the balance sheet date. Certain procedures must be followed to adjust the financial statements. Amounts in the balance sheet that are not yet expressed in terms of the measuring unit current at the balance sheet date are adjusted using a general price index. Monetary items are not adjusted because they are already expressed in terms of the monetary unit current at the balance sheet date.

Monetary items are funds held or items for which the entity pays or receives money. Receivables and payables that are contractually linked to price changes, such as index-linked bonds and loans, are contractually adjusted to determine the amount outstanding at the balance sheet date. These items are carried in the adjusted balance sheet at this adjusted amount. All other assets and liabilities are non-monetary. Some of these non-monetary items are carried at the amounts applicable at the balance sheet date, for example, net realizable value and fair value, and are therefore not adjusted. All other non-monetary assets and liabilities are adjusted. Most non-monetary items are carried at cost or amortized cost and are therefore stated at the amount applicable at the date of acquisition. The adjusted or amortized cost of each item is determined by applying to the historical cost and accumulated depreciation the change in a general price index that has occurred between the date of acquisition and the balance sheet date. Property, plant, and equipment, inventories of raw materials and merchandise, goodwill, patents, trademarks, and similar assets are thus adjusted from their acquisition date. Inventories of semifinished and finished goods are adjusted from the date on which the acquisition and production costs were incurred. The adjusted value of a non-monetary item is lowered if it exceeds the recoverable amount. For this reason, the adjusted value reported for property, plant, and equipment, goodwill, patents, and trademarks is reduced to the recoverable amount in such cases, while the figure used for inventories is the net realizable value.

All items in the income statement shall be expressed in the measuring unit current at the balance sheet date. This means that all amounts are to be adjusted using the general price index, starting from the time when the respective income and expenses were first recognized in the financial statements.

The price indices in Argentina (Índice de Precios al Consumidor Nivel General) and Turkey (Turkish Statistical Institute's Consumer Price Index) are used to adjust non-monetary assets and liabilities and income statement items. In Argentina, official inflation rates have been announced by the government as of December 31, 2023, with a change in general purchasing power of 211.4% (2022: 94.8%; 2021: 50.9%). In Turkey, the general price index used was 64.8% (2022: 64.3%; 2021: 36.1%).

Notes to the consolidated profit and loss statement

The consolidated income statement has been prepared using the cost of sales method.

10. Sales

In EUR million	2023	2022
Europe	2,084.9	2,098.0
America	1,943.8	2,052.9
Asia	600.8	629.8
Rest of the world	72.6	45.7
	4,702.1	**4,826.4**

Of the turnover, EUR 4,260.1 million (previous year: EUR 4,379.1 million) was generated from the Transportation division and EUR 442.0 million (previous year: EUR 447.3 million) from the Life Sciences & Environment division. All turnover is revenue from contracts with customers.

11. Cost of sales and other costs

In EUR million	2023	2022
Material expenses	2,557.6	2,749.0
Personnel expenses	672.1	674.0
Amortization	130.1	142.8
Other cost of sales	155.8	167.8
	3,515.6	**3,733.7**

Research and development costs include expenses for the in-house research department and external research and development services and testing activities. The activities in this area serve to develop products for the generation of sales revenues. The financial year's research and development expenses amounted to EUR 117.9 million (previous year: EUR 114.3 million).

Selling expenses mainly include expenses for outbound logistics, advertising, customer support, and commissions and licenses.

Administrative costs mainly include expenses for information technology, finance and controlling, taxes, legal, and human resources.

12. Other operating income

In EUR million	2023	2022
Income from foreign currency translation	74.2	64.0
Income from the disposal of property, plant, and equipment	2.2	34.2
Other	100.3	93.8
	176.7	**192.0**

The other income includes revenues from hyperinflation amounting to EUR 61.1 million (previous year: EUR 21.7 million).

13. Other operating expenses

In EUR million	2023	2022
Expenses (previous year: income) from restructuring	3.7	–2.0
Expenses from foreign currency translation	114.8	66.2
Expenses from the disposal of property, plant, and equipment	2.2	5.6
Warranty expenses	3.1	3.2
Impairment of tangible and intangible assets	190.1	0.1
Other	113.2	148.9
	427.1	**222.0**

Other expenses include costs in connection with consulting services of EUR 22.5 million (previous year: EUR 39.0 million), income from provisions for impending losses of EUR –22.8 million (previous year: expenses of EUR 24.5 million), and expenses from the write-off or value adjustment of receivables of EUR 5.9 million (previous year: EUR 7.3 million). It also includes expenses from hyperinflation in the amount of EUR 66.6 million (previous year: EUR 18.9 million).

14. Net financial result

In EUR million	2023	2022
Share in the result from associates	**–4.9**	**0.9**
Accrued interest of long-term items	16.1	9.2
Interest and similar expenses	117.4	76.4
Currency losses	65.0	108.0
Depreciations on lending, financial assets, and securities	8.7	25.6
Losses from sale of financial assets, securities, and hedging transactions	10.2	63.3
Financial expenses	**217.4**	**282.5**
Interest and similar income	31.3	23.8
Currency gains	58.5	99.5
Income (previous year: expenses) from lending, financial assets, and securities	18.5	–12.1
Income from sale of financial assets, securities, and hedging transactions	0.5	14.2
Financial income	**108.8**	**125.4**
Net financial result	**–113.5**	**–156.2**

The adjustments of the balance sheets and income statements of our subsidiaries in Argentina and Turkey, due to hyperinflation, resulted in an effect on earnings of EUR 17.9 million (previous year: EUR 12.3 million) in the financial year, which was recognized in the financial result.

15. Income taxes

In EUR million	2023	2022
Current tax expense	75.8	59.7
Deferred taxes from temporary differences	7.1	–33.0
Deferred taxes from loss carryforwards and tax credits	14.1	43.3
Total income tax expense	**97.1**	**70.0**
thereof tax revenues previous years	–10.8	–14.2
thereof tax expense previous years	8.8	17.5

A weighted Group tax rate was calculated for the MANN+HUMMEL Group based on the individual Group companies' profit amounts and tax rates. The Group tax rate is 23.6% (previous year: 21.3%). This income tax rate is used as the applicable tax rate for the tax reconciliation statement. The tax rates applied abroad in the financial year range between 9.0% and 36.8% (previous year: 9.0% and 36.9%).

Deferred tax assets and liabilities result from the following balance sheet items:

In EUR million	12/31/2023		12/31/2022	
	Assets	Liabilities	Assets	Liabilities
Intangible assets	20.0	29.5	27.5	37.1
Tangible assets	1.4	53.2	0.9	67.7
Financial assets	9.9	5.0	11.6	2.2
Inventories	14.2	0.9	15.2	1.6
Trade receivables	4.5	1.6	5.3	0.6
Other current assets	10.9	4.6	11.7	15.0
Pension provisions	33.0	6.7	31.6	10.4
Other provisions	29.9	9.2	39.3	7.8
Short-term financial debts	26.8	1.0	31.0	0.8
Trade payables	5.0	1.4	6.2	4.4
Other liabilities	9.9	3.9	18.6	5.4
Deferred taxes related to shares in subsidiaries	0.0	2.1	–0.4	–4.3
Other	2.7	–0.7	–1.8	–1.8
	168.2	**118.4**	**196.7**	**146.9**
Tax losses and tax credits carried forward	8.0	0.0	22.1	0.0
Offsetting	–76.7	–76.7	–92.0	–92.0
	99.5	**41.7**	**126.8**	**54.9**

As of the closing date, there were deferred tax liabilities from the market valuation of securities in the amount of EUR 0.3 million (previous year: deferred tax assets of EUR 1.1 million) and deferred tax assets from cash flow hedges in the amount of EUR 1.1 million (previous year: EUR 0.0 million) recognized directly in profit or loss. The treatment of the actuarial gains for pension obligations arising in the reporting year without affecting income leads to a deferred tax asset of EUR 3.3 million (previous year: deferred tax liability of EUR 4.3 million).

In addition, all other changes, except for changes due to initial consolidations, were recognized in profit or loss.

The amount for temporary deductible differences and unused tax losses and tax credits for which no deferred tax assets were recognized in the balance sheet was EUR 827.0 million (previous year: EUR 625.4 million). Of this amount, EUR 222.5 million (previous year: EUR 245.3 million) relates to loss carryforwards that can be used for a limited period (between 5 and 20 years). Regarding the valuation of deferred tax assets, the expected future business development at the time of preparing the consolidated financial statements was basically based on the corporate planning for the following five financial years. As of the balance sheet date, deferred tax assets of EUR 5.6 million (previous year: EUR 8.1 million) were recognized for Group companies that had incurred losses in the reporting or previous period. In this context, it was taken into account as a substantial indication that, due to the transfer pricing method, individual companies are taxed on a positive EBIT, so that the deferred tax assets are recoverable. In addition, the deferred taxes of MANN+HUMMEL Water & Fluid Solutions S.p.A. and MANN+HUMMEL FILTER (JINAN) CO. LTD. are considered to be recoverable, taking into account current investments in projects and new customer contracts.

The retained earnings at subsidiaries of EUR 2,191.6 million (previous year: EUR 2,200.1 million) are retained based on current planning. In the event of distribution, 5% of the profits would be subject to German taxation; if applicable, foreign withholding taxes would apply. In addition, if the profits of a foreign subsidiary were distributed to a foreign intermediate holding company, further income tax consequences might have to be considered. Distributions would, therefore, generally lead to an additional tax expense. Determining the deferred tax liabilities attributable to the temporary taxable differences would involve a disproportionately high effort.

Reconciliation from expected to reported income tax expense:

In EUR million	2023	2022
Net profit or loss before income tax and changes in capital economically attributable to the shareholders	-97.6	20.1
Expected income tax expense	**–23.0**	**4.3**
Tax effects due to different national tax rates and group taxation systems	–3.1	–4.2
Effects of tax rate changes	–2.9	1.0
Tax effects due to the non-application and value correction due to deferred taxes or their reversal	62.9	45.0
Tax effects due to permanent differences	27.1	14.5
Tax effects due to facts of past periods	–1.8	3.4
Tax effects related to shares in subsidiaries	–7.3	–0.2
Deductible taxes	1.1	3.5
Tax effects due to amortization of non-tax-deductible goodwill	39.2	0.0
Other tax effects	4.9	2.7
Recognized income tax expense	**97.1**	**70.0**

Based on the assessment carried out so far, the MANN+HUMMEL Group has identified potential exposure to Pillar Two income taxes on profits earned in Bosnia and Herzegovina (earnings before taxes 2022: EUR 2.5 million; earnings before taxes 2023: EUR 3.5 million), Morocco (earnings before taxes 2022: EUR 1.2 million; earnings before taxes 2023: EUR 0.7 million), Turkey (earnings before taxes 2022: EUR 4.7 million; earnings before taxes 2023: EUR –1.8 million) and the United Arab Emirates (earnings before taxes 2022: EUR 1.3 million; earnings before taxes 2023: EUR 1.3 million), as in these countries the expected Pillar Two effective tax rate is likely to be lower than 15%. The potential exposure is expected to come from the constituent entities (mainly operating subsidiaries) in these jurisdictions. However, exposure may also exist in other jurisdictions where the assessment is in progress.

Quantitative information to indicate potential exposure to Pillar Two income taxes is currently not known or reasonably estimable. The MANN+HUMMEL Group expects to complete the assessment in the first of half of the 2024 financial year.

16. Other disclosures to the consolidated profit and loss statement

The consolidated income statement includes the following cost of materials:

In EUR million	2023	2022
Expenditure on raw materials, consumables, supplies, and trading goods	2,519.6	2,749.0
Expenditure on purchased services	43.2	52.3
	2,562.8	**2,801.3**

Personnel expenses break down as follows:

In EUR million	2023	2022
Wages and salaries	955.3	935.8
Social duties and expenses for support	156.3	157.8
Expenses for provisions for pensions and similar commitments	15.5	19.4
	1,127.1	**1,113.0**

Personnel expenses include amounts for defined contribution plans of EUR 30.2 million (previous year: EUR 28.4 million). The expenditures for state plans included in this amount of EUR 25.8 million (previous year: EUR 27.1 million) essentially comprise employer contributions to pension insurance, which are included in social security contributions.

Amortization, depreciation, and impairments on intangible assets and property, plant, and equipment are included in the following items of the consolidated income statement:

In EUR million	2023	2022
Cost of sales	130.1	142.8
Research and development costs	5.4	7.0
Selling expenses	8.3	10.0
Administrative expenses	56.5	55.3
Other operating expenses	192.3	2.9
	392.6	**218.0**

Notes to the consolidated balance sheet

17. Intangible assets

In EUR million	Goodwill	Patents, licenses, software, and similar rights and values	Development costs	Total
Acquisition and manufacturing costs as of 01/01/2023	**768.3**	**739.0**	**18.6**	**1,525.9**
Exchange rate effects	7.6	1.8	–0.6	8.8
Changes in consolidated group	39.4	26.1	0.0	65.5
Additions	0.0	2.1	0.0	2.1
Transfer	0.0	0.8	0.0	0.8
Disposals	0.0	–0.6	–0.1	–0.7
Other changes	0.0	2.8	0.0	2.8
Acquisition and manufacturing costs as of 12/31/2023	**815.3**	**772.0**	**17.9**	**1,605.2**
Accumulated amortization as of 01/01/2023	**58.8**	**576.8**	**13.2**	**648.8**
Exchange rate effects	–3.2	5.4	–0.5	1.7
Changes in consolidated group	0.0	0.1	0.0	0.1
Additions	0.0	40.1	3.7	43.8
Impairment	166.3	19.3	0.0	185.6
Transfer	0.0	0.1	0.0	0.1
Disposals	0.0	–0.6	–0.1	–0.7
Other changes	0.0	2.2	0.0	2.2
Accumulated amortization as of 12/31/2023	**221.9**	**643.4**	**16.3**	**881.6**
Carrying amount as of 12/31/2023	**593.4**	**128.6**	**1.6**	**723.6**

In EUR million	Goodwill	Patents, licenses, software, and similar rights and values	Development costs	Total
Acquisition and manufacturing costs as of 01/01/2022	**754.2**	**723.9**	**18.5**	**1,496.6**
Exchange rate effects	14.1	15.1	0.8	30.0
Changes in consolidated group	0.0	-3.4	-1.0	-4.4
Additions	0.0	2.9	0.2	3.1
Transfer	0.0	1.5	0.3	1.8
Disposals	0.0	-1.1	-0.2	-1.3
Other changes	0.0	0.1	0.0	0.1
Acquisition and manufacturing costs as of 12/31/2022	**768.3**	**739.0**	**18.6**	**1,525.9**
Accumulated amortization as of 01/01/2022	**58.4**	**522.2**	**9.8**	**590.4**
Exchange rate effects	0.4	4.9	0.3	5.6
Changes in consolidated group	0.0	-1.7	-0.8	-2.5
Additions	0.0	52.4	4.1	56.5
Impairment	0.0	0.0	0.0	0.0
Transfer	0.0	0.0	0.0	0.0
Disposals	0.0	-1.1	-0.2	-1.3
Other changes	0.0	0.1	0.0	0.1
Accumulated amortization as of 12/31/2022	**58.8**	**576.8**	**13.2**	**648.8**
Carrying amount as of 12/31/2022	**709.5**	**162.2**	**5.4**	**877.1**

Intangible assets in patents, licenses, software, and similar rights and values include customer relationships amounting to EUR 74.7 million (previous year: EUR 111.5 million), which have a remaining useful life of between 2 and 12 years.

In connection with the impairment tests carried out, the value of the intangible assets acquired in the framework of company acquisitions, such as customer relationships, brands, and existing technology, was also assessed. In the past financial year, individual assets in the Life Sciences & Environment division required a write-down of EUR 19.3 million (previous year: no write-down). The write-down was necessary because of the increase in the general interest rate level as well as a shift in the growth of the expected future business development of the Life Sciences & Environment division to later planning years, which had to be taken into account.

GOODWILL

The goodwill from company acquisitions is listed below:

In EUR million	12/31/2023	12/31/2022
Transportation	593.4	581.2
Life Sciences & Environment	0.0	128.3
	593.4	**709.5**

In connection with the acquisitions of Oy M-Filter Ab, Haapavesi, Finland, and Suzhou U-Air Environmental Technology Co., Ltd, China, made during the financial year, goodwill in the amount of EUR 39.4 million was added in the Life Sciences & Environment division. At the same time, the impairment test carried out on the cash-generating units in the Life Sciences & Environment division identified a need for write-downs of goodwill in the amount of EUR 166.3 million (previous year: no need for write-downs).

18. Impairment tests

The goodwill included in the consolidated financial statements relates to the differences between the respective purchase prices and the revalued net assets of the acquired businesses arising from the business combinations.

Goodwill is allocated in full to the smallest cash-generating unit.

The respective recoverable amount is determined in all cases by calculating the value in use using the discounted cash flow method.

In performing the impairment test, the Group carried out various sensitivity analyses for possible changes in the WACC or earnings before interest and taxes.

Cash flows from the five-year plan (2024 to 2028) prepared by the responsible management for all business segments are used as a basis. For the calculation of the impairment tests, assumptions were made regarding the development of turnover, among other things. The annual sales increase assumed in the detailed planning period for Transportation was between 2.0% and 7.7% (previous year: 3.4% and 6.5%) and for Life Sciences & Environment between 9.3% and 48.4% (previous year: 12.4% and 45.8%).

Growth rates of 1.3% to 2.0% (previous year: 1.0% to 1.3%) were used to measure the perpetual annuity. The calculated cash flows were discounted with weighted cost of capital rates after taxes of 9.6% to 10.4% (previous year: 9.7% to 10.4%) and before taxes of 12.2% to 13.8% (previous year: 12.6% to 13.8%). The weighting of equity and debt capital costs was carried out using a capital structure derived from a group of comparable companies. Capital market data and data from comparable companies were used to determine the cost of equity and debt capital.

In %	2023		2022	
	Weighted capital costs	Growth rate	Weighted capital costs	Growth rate
Transportation	10.4	1.3	10.4	1.3
Life Sciences & Environment	9.6	2.0	9.7	1.0

As a result of the impairment test carried out, the goodwill of the Life Sciences & Environment cash-generating unit had to be adjusted by EUR 166.3 million.

For the Transportation cash-generating unit, the value in use exceeds the book value by EUR 2,580.1 million (previous year: EUR 1,755.3 million). If the WACC increases by 13.0 percentage points, or if the sustainable earnings before interest and taxes in relation to sales decrease by 9.6 percentage points, the value in use corresponds to the book value.

After impairment of the cash-generating unit Life Sciences & Environment, the book value corresponds to the value in use. In the previous year, the value in use exceeded the book value by EUR 33.8 million. An increase in the WACC by 0.5 percentage points or a reduction in the sustainable earnings before interest and taxes in relation to sales by 0.5 percentage points would result in a need for impairment of EUR 28.7 million or EUR 38.5 million (previous year: EUR 4.2 million or EUR 15.1 million).

For the cash-generating unit Transportation, the value in use amounts to EUR 4,359.8 million (previous year: EUR 3,465.4 million). For the cash-generating unit Life Sciences & Environment, it amounts to EUR 347.6 million (previous year: EUR 432.9 million).

19. Tangible fixed assets and leasing

In EUR million	Land and buildings	Technical equipment and machinery	Other equipment, operational and office equipment	Advance payments and construction in progress	Total
Acquisition and manufacturing costs as of 01/01/2023	**770.1**	**1,388.9**	**251.4**	**128.9**	**2,539.3**
Exchange rate effects	-17.9	-24.0	-6.0	-0.9	-48.8
Changes in consolidated group	9.5	5.8	0.3	0.0	15.6
Additions	31.2	34.0	20.9	110.5	196.6
Transfer	6.1	53.5	5.2	-65.6	-0.8
Disposals	-45.7	-61.0	-19.7	-0.6	-127.0
Other changes	4.1	12.6	3.3	0.1	20.1
Acquisition and manufacturing costs as of 12/31/2023	**757.4**	**1,409.8**	**255.4**	**172.4**	**2,595.0**
Accumulated depreciation as of 01/01/2023	**315.9**	**981.0**	**179.8**	**0.9**	**1,477.6**
Exchange rate effects	-5.3	-11.1	-2.4	-0.1	-18.9
Changes in consolidated group	1.8	2.2	0.2	0.0	4.2
Additions	53.2	82.1	23.4	0.0	158.7
Impairment	0.0	1.6	0.0	2.9	4.5
Transfer	0.0	-0.5	0.4	0.0	-0.1
Reversals of write-downs	0.0	0.0	0.0	0.0	0.0
Disposals	-19.9	-54.6	-17.3	0.0	-91.8
Other changes	0.2	3.5	0.8	0.0	4.5
Accumulated depreciation as of 12/31/2023	**345.9**	**1,004.2**	**184.9**	**3.7**	**1,538.7**
Carrying amount as of 12/31/2023	**411.5**	**405.6**	**70.5**	**168.7**	**1,056.3**

In EUR million	Land and buildings	Technical equipment and machinery	Other equipment, operational and office equipment	Advance payments and construction in progress	Total
Acquisition and manufacturing costs as of 01/01/2022	**699.6**	**1,574.1**	**261.1**	**97.6**	**2,632.4**
Exchange rate effects	6.4	25.3	3.0	1.7	36.4
Changes in consolidated group	-8.4	-188.8	-15.7	-0.8	-213.7
Additions	110.8	28.3	19.7	104.5	263.3
Transfer	10.5	56.3	5.4	-74.0	-1.8
Disposals	-50.9	-113.1	-23.9	-0.1	-188.0
Other changes	2.1	6.8	1.8	0.0	10.7
Acquisition and manufacturing costs as of 12/31/2022	**770.1**	**1,388.9**	**251.4**	**128.9**	**2,539.3**
Accumulated depreciation as of 01/01/2022	**297.4**	**1,111.6**	**182.4**	**0.9**	**1,592.3**
Exchange rate effects	3.2	18.0	2.4	0.0	23.6
Changes in consolidated group	-4.4	-137.3	-10.1	0.0	-151.8
Additions	51.5	84.5	25.4	0.0	161.4
Impairment	0.1	0.0	0.0	0.0	0.1
Transfer	-0.4	-0.2	0.6	0.0	0.0
Reversals of write-downs	0.0	-0.3	0.0	0.0	-0.3
Disposals	-31.8	-99.2	-21.9	0.0	-152.9
Other changes	0.3	3.9	1.0	0.0	5.2
Accumulated depreciation as of 12/31/2022	**315.9**	**981.0**	**179.8**	**0.9**	**1,477.6**
Carrying amount as of 12/31/2022	**454.2**	**407.9**	**71.6**	**128.0**	**1,061.7**

In the balance sheet, the following items are shown under tangible assets and financial liabilities in connection with leases:

In EUR million	12/31/2023	12/31/2022
Rights-of-use assets		
Land and buildings	177.3	208.2
Technical equipment and machinery	1.8	1.9
Other equipment, operational and office equipment	17.0	17.4
	196.1	**227.5**

In EUR million	12/31/2023	12/31/2022
Lease liabilities		
Short term	41.0	42.7
Long term	169.7	202.9
	210.7	**245.6**

Additions to rights of use during the 2023 financial year amounted to EUR 39.0 million (previous year: EUR 121.1 million).

The income statement contains the following amounts in connection with leases:

In EUR million	12/31/2023	12/31/2022
Amortization of rights-of-use assets		
Land and buildings	38.1	35.3
Technical equipment and machinery	0.6	1.1
Other equipment, operational and office equipment	8.6	9.0
	47.3	**45.4**
Gains from sale and leaseback transactions	0.0	33.3
Interest expenses (included in finance expenses)	6.8	6.4

Payments for leases accounted for in accordance with IFRS 16 amounted to EUR 64.6 million in 2023 (previous year: EUR 61.8 million). Of this, EUR 6.8 million (previous year: EUR 6.4 million) was for interest and EUR 57.8 million (previous year: EUR 55.4 million) for the repayment of financial liabilities. Further payments for short-term leases, for leases of low-value assets, and for variable lease payments amount to EUR 21.1 million (previous year: EUR 36.8 million).

SALE AND LEASEBACK

No gains were realized in 2023 from sale and leaseback transactions (previous year: EUR 33.3 million).

The term of the lease agreement is up to 5.5 years, depending on the property. The Group's obligations under its leases are secured by the lessors' title to the leased asset.

As of December 31, 2023, there are lease liabilities of EUR 10.5 million (previous year: EUR 10.6 million) from the sale and leaseback transaction.

One sale and leaseback transaction took place in the previous year.

20. Investments in associates

The MANN+HUMMEL Group holds a 25.8% share in ABC S.A., Córdoba, Argentina. The proportionate annual result for the year attributable to the MANN+HUMMEL Group amounts to EUR –5.2 million (previous year: EUR 0.8 million).

21. Non-current financial assets

In EUR million	12/31/2023	12/31/2022
Other holdings	27.7	24.9
Other financial assets	3.5	5.4
Derivative financial instruments	5.0	0.0
	36.2	**30.3**

The other financial assets reported as of December 31, 2023, were essentially investments in start-ups (previous year: other loans).

22. Other assets

In EUR million	12/31/2023			12/31/2022		
	Total	Of which non-current	Of which current	Total	Of which non-current	Of which current
Other tax receivables	53.0	0.2	52.8	75.2	0.5	74.7
Contract assets	8.3	7.2	1.1	11.8	10.1	1.7
Deferred income	13.6	1.9	11.7	14.9	2.8	12.1
Other	33.8	2.8	31.0	37.5	3.5	34.0
	108.8	**12.1**	**96.7**	**139.3**	**16.9**	**122.4**

Other assets mainly include VAT refund claims and payments on account. The other assets do not contain any overdue amounts that are not impaired.

The MANN+HUMMEL Group has capitalized the following contract assets from contracts with customers in accordance with IFRS 15:

In EUR million	12/31/2023			12/31/2022		
	Total	Of which non-current	Of which current	Total	Of which non-current	Of which current
Carrying amount as of 01/01	**11.8**	**10.1**	**1.7**	**14.7**	**10.9**	**3.8**
Exchange rate effects	-0.1	-0.1	0.0	0.3	0.3	0.0
Additions	1.0	1.0	0.0	3.7	2.0	1.7
Utilization	-4.4	-1.8	-2.6	-3.8	-1.2	-2.6
Transfer	0.0	-2.0	2.0	0.0	-0.3	0.3
Disposals	0.0	0.0	0.0	-3.1	-1.6	-1.5
Carrying amount as of 12/31	**8.3**	**7.2**	**1.1**	**11.8**	**10.1**	**1.7**

Sales that were realized in 2023 and based on performance obligations that were fulfilled in previous years did not exist in the financial year. As before, no costs from fulfilling or initiating contracts with customers were capitalized. There were still no adjustments to the consideration for the fair value of the financing component, as the period between the transfer of the goods and the payment date was less than 12 months. As before, there are no material repurchase obligations or guarantee obligations that exceed the statutory minimum period. These are assurance-type warranties. The practical expedient according to IFRS 15.129 in connection with IFRS 15.63 is used.

23. Inventories

In EUR million	12/31/2023	12/31/2022
Raw materials, consumables, and supplies	221.8	232.7
Work in progress	59.3	60.8
Finished products and goods	414.6	421.1
Prepayments	2.0	2.9
	697.7	**717.5**

In the 2023 financial year, total write-downs of inventories amounting to EUR –19.0 million were made and recognized (previous year: write-downs of EUR –15.6 million).

24. Trade receivables

Trade receivables amounted to EUR 825.6 million (previous year: EUR 817.4 million).

The value adjustments on current and non-current trade receivables developed as follows:

In EUR million	2023	2022
Carrying amount as of 01/01	**23.1**	**16.4**
Exchange rate effects	–1.1	0.3
Changes in consolidated group	13.7	–0.1
Additions	11.6	8.4
Utilization	–0.7	–0.6
Reversals	–5.8	–1.3
Carrying amount as of 12/31	**40.8**	**23.1**

In the financial year, there were reclassifications of trade receivables from level 2 to level 3 of the impairment model amounting to EUR 24.2 million (previous year: EUR 7.1 million) and reclassifications from level 3 to level 2 amounting to EUR 7.4 million (previous year: EUR 25.3 million).

There were no impaired financial assets for which enforcement proceedings were carried out.

25. Current financial assets

In EUR million	12/31/2023	12/31/2022
Derivative financial instruments	18.8	29.4
Receivables and loans	54.0	40.9
Securities	299.1	277.6
	371.9	**347.9**

The securities are shares, bonds, and fund units. For further information, see note 37 to the consolidated financial statements.

The portfolio of financial receivables does not contain any overdue amounts that are not impaired.

26. Equity

TOTAL OTHER SHAREHOLDERS' EQUITY

Accumulated other equity mainly includes the following components:

DIFFERENCE FROM CURRENCY TRANSLATION

This item contains the differences arising from the currency translation of the financial statements of foreign subsidiaries (non-euro area) from the date of first-time adoption of IFRS.

MARKET VALUATION OF SECURITIES AND CASH FLOW HEDGES

This item includes the effects from the valuation of financial instruments and cash flow hedges after tax, not recognized in profit or loss.

EQUITY INSTRUMENTS

This item includes the effects from the valuation of investments in non-consolidated companies after taxes, not recognized in the income statement.

ACTUARIAL GAINS AND LOSSES

This item contains the actuarial gains and losses from pension obligations recognized directly in equity after tax.

DEFERRED TAXES ON ITEMS RECOGNIZED DIRECTLY IN EQUITY

In EUR million			2023			2022
	Before income taxes	Income taxes	After taxes	Before income taxes	Income taxes	After taxes
Difference from foreign currency translation	-1.3	0.0	-1.3	2.2	0.0	2.2
Equity instruments	6.1	-0.1	6.0	1.5	0.8	2.4
Borrowing instruments	5.7	-1.6	4.1	-7.6	2.2	-5.5
Fair value measurement of cash flow hedges	-1.8	1.4	-0.4	3.3	1.3	4.5
Actuarial gains and losses	-23.4	7.6	-15.8	115.9	-32.5	83.4
Other income	-14.7	7.3	-7.4	115.2	-28.2	87.0

NON-CONTROLLING INTERESTS

In the reporting year, the equity reported in the balance sheet includes the shares of other shareholders of MANN+HUMMEL International GmbH & Co. KG. These hold a direct interest of 16.7% in MANN+HUMMEL Holding GmbH, but without voting rights. The shares of non-controlling interests in equity total EUR 161.0 million (previous year: EUR 169.1 million). They have a direct stake of 16.7% in MANN+HUMMEL Holding GmbH, Ludwigsburg, but without voting rights. In addition, 50.0% are held in Changchun MANN+HUMMEL Faway Filter Co., Ltd., Changchun, China, 40.0% in Oy M-Filter Ab, Haapavesi, Finland, 30.0% in Suzhou U-Air Environmental Technology Co., Ltd, China, and the US shareholders.

CAPITAL ECONOMICALLY ATTRIBUTABLE TO THE SHAREHOLDERS

As the shares in MANN+HUMMEL International GmbH & Co. KG do not meet the requirements of IAS 32.16A for the presentation of puttable shares as equity due to regulations in the articles of association regarding the compensation of shareholders, they were presented as debt capital in "Capital economically attributable to the shareholders." This item amounted to EUR 640.2 million at the end of the financial year (previous year: EUR 843.0 million). The valuation of the capital economically attributable to the shareholders is carried out at the fair value of the obligation. In the present case, this corresponds to the respective shareholder's proportionate book value of the IFRS Group equity.

In the annual financial statements of MANN+HUMMEL International GmbH & Co. KG, the equity capital of EUR 553.8 million (previous year: EUR 465.7 million) is made up of capital shares of the limited partners and reserves.

27. Capital management disclosures

The primary objective of the Group's management is to ensure a stable capital base to support the continuation of business activities and to preserve the benefit of the shareholders. Economic equity is used to determine the total capital ratio economically attributable to shareholders and equity to total assets. This comprises the equity capital shown in the balance sheet and the capital economically attributable to the shareholders shown in the non-current liabilities.

	12/31/2023	12/31/2022
Capital economically attributable to the shareholders and equity in millions of euros	801.2	1,012.1
Capital economically attributable to the shareholders and equity relative to total assets	19.4%	23.3%

The MANN+HUMMEL Group is not subject to any statutory capital requirements but only to contractually fixed capital requirements (see note 28).

28. Financial liabilities

In EUR million	Carrying amount as of 12/31/2023			Carrying amount as of 12/31/2022		
	Total	Of which non-current	Of which current	Total	Of which non-current	Of which current
Liabilities to banks	1,190.8	816.1	374.7	1,137.9	599.0	538.9
Bonds	99.0	99.0	0.0	98.8	98.8	0.0
Payables from leasing	210.7	169.7	41.0	245.6	202.9	42.7
Derivative financial instruments	8.6	3.0	5.6	24.8	9.0	15.8
Other	219.8	17.9	201.9	191.4	10.4	181.0
	1,728.9	**1,105.7**	**623.2**	**1,698.5**	**920.1**	**778.4**

The liabilities to banks include promissory note loans amounting to EUR 735.5 million (previous year: EUR 641.0 million).

Other financial liabilities consist mainly of customer bonuses and notes payable.

Current financial liabilities include the repayment installments of long-term loans due within one year. Furthermore, liabilities serving short-term financing are included in this item. The country-specific interest rate for these short-term loans ranges between 0.00% (previous year: 1.39%) and 52.85% (previous year: 22.00%).

The country-specific interest rate on the loans reported under non-current financial liabilities ranges between 0.00% (previous year: 0.00%) and 12.30% (previous year: 12.30%). 57.8% (previous year: 63.7%) of the loans have fixed interest rates. Most of the loans are due at the end of the term. Some of the loan agreements contain clauses for the calculation of financial ratios. One of these is the gearing ratio, which is defined as the ratio of the net financial position to EBITDA. A change in the debt–equity ratio has an influence on the annually determined risk premium for some of the loans.

No contractual repayment obligations result from the calculation of the financial ratios. In addition, some loan agreements contain a sustainability component. The interest rate for these loans may be adjusted if the ESG score calculated by the sustainability agency EcoVadis exceeds or falls below certain threshold values.

29. Trade payables

In EUR million	12/31/2023	12/31/2022
Trade payables	741.5	765.3
thereof covered by reverse factoring	150.1	179.2

MANN+HUMMEL has concluded reverse factoring agreements for EUR 205.7 million (previous year: EUR 223.2 million) of the trade payables. Under these programs, suppliers can assign their receivables from MANN+HUMMEL companies to the participating banks in return for a discount and thus receive the discounted invoice amount early on. The Group has not derecognized the reverse factoring liabilities, as neither a legal exemption was obtained, nor was the liability materially changed by entering into the agreement. The Group does not incur any additional interest for paying the suppliers' liabilities to the bank. Amounts factored by suppliers are included in trade payables as the nature and function of the liability are the same as other trade payables. Due to the relationship to the operating business, payments to the bank continue to be reported in cash flow from operating activities.

30. Other liabilities

In EUR million	Carrying amount as of 12/31/2023			Carrying amount as of 12/31/2022		
	Total	Of which non-current	Of which current	Total	Of which non-current	Of which current
Staff liabilities	92.6	0.0	92.6	88.4	0.0	88.4
Down payments received	11.5	0.0	11.5	9.5	0.0	9.5
Taxes	20.6	0.0	20.6	31.1	0.0	31.1
Other	62.2	9.9	52.3	63.4	5.8	57.6
	186.9	**9.9**	**177.0**	**192.4**	**5.8**	**186.6**

Tax liabilities mainly include VAT liabilities. Other liabilities include, among other things, outstanding debits, accrued liabilities and license, and commission liabilities. The disclosures in accordance with IFRS 15.121 are omitted because the performance obligations have an expected original term of no more than one year.

31. Other provisions

In EUR million	Carrying amount as of 12/31/2023			Carrying amount as of 12/31/2022		
	Total	Of which non-current	Of which current	Total	Of which non-current	Of which current
Liabilities from the operating area	94.7	19.5	75.2	121.1	16.7	104.4
Liabilities from the staff area	35.8	17.8	18.0	47.6	19.5	28.1
Other liabilities	35.9	2.7	33.2	45.3	1.8	43.5
	166.4	**40.0**	**126.4**	**214.0**	**38.0**	**176.0**

In EUR million	01/01/2023	Exchange rate effects	Addition	Changes in consolidated group	Accrued interest	Transfers	Other non-cash changes	Utili-zation	Reversal	12/31/2023
Liabilities from the operating area	121.1	0.0	37.2	0.0	0.0	0.0	0.0	–59.3	–4.4	94.7
Liabilities from the staff area	47.6	–0.2	19.5	0.0	0.8	0.0	1.7	–29.3	–4.4	35.8
Other liabilities	45.3	–0.1	13.1	0.5	0.0	0.0	0.0	–21.7	–1.2	35.9
	214.0	**–0.2**	**69.8**	**0.6**	**0.8**	**0.0**	**1.7**	**–110.3**	**–10.0**	**166.4**

In EUR million	01/01/2022	Exchange rate effects	Addition	Changes in consolidated group	Accrued interest	Transfers	Other non-cash changes	Utili-zation	Reversal	12/31/2022
Liabilities from the operating area	109.1	2.4	84.1	–13.4	0.0	0.0	0.0	–50.4	–10.7	121.1
Liabilities from the staff area	87.1	0.7	20.6	–2.1	0.0	0.0	–0.7	–49.5	–8.5	47.6
Other liabilities	34.9	0.3	22.8	–0.1	0.0	0.0	0.0	–11.8	–0.8	45.3
	231.1	**3.4**	**127.5**	**–15.6**	**0.0**	**0.0**	**–0.7**	**–111.7**	**–20.0**	**214.0**

Provisions for operating obligations primarily include provisions for warranty obligations and for impending losses from delivery obligations, and, to a lesser extent, provisions for litigation risks.

Provisions for personnel mainly include profit sharing, restructuring measures, partial retirement agreements, and long-service awards. The provisions for restructuring measures mainly include expenses for severance payments that will be incurred in connection with site closures and relocations. In accordance with IAS 37.72 et seq., the conditions for forming a provision for restructuring costs (including the existence of a corresponding restructuring plan) are met.

Other provisions include other individual risks and uncertain obligations.

The short-term obligations are expected to be used up over the next 12 months.

32. Provisions for pensions

Provisions for pensions are formed for obligations arising from vested rights and current benefits to active and former employees of the MANN+HUMMEL Group and their surviving dependents. In accordance with the legal, economic, and tax circumstances of the respective country, there are different systems of old-age provision, which are generally based on the length of service and remuneration of the employees. In the case of company pension schemes, a distinction must be made between defined contributions and defined benefit plans.

In the case of defined contribution plans, the MANN+HUMMEL Group does not enter into any further obligations beyond the payment of contributions to earmarked funds or private pension insurance providers.

In the case of defined benefit plans, the MANN+HUMMEL Group must fulfill the promised benefits to active and former employees (defined benefit plans). Here, a distinction is made between unfunded and funded pension systems.

Approximately 98.1% (previous year: 98.4%) of the defined benefit obligations of the MANN+HUMMEL Group are based on pension plans for active and former employees of the German locations. Direct pension commitments were—and are—granted to active employees in various pension schemes. Depending on the type of pension scheme, the obligations provide for retirement, disability, and widow's/orphan's pensions, the payment of a fixed capital benefit, or benefits in the form of capital with an annuity option. The amount of the benefits depends on the employee's salary and length of service.

There are no legal or regulatory minimum funding requirements in Germany.

The main valuation risks for the company lie in the actuarial parameters, particularly the interest rate level and pension trend, the longevity risk, and the development of the general cost of living (i.e., inflation).

The changes in the present value of the defined benefit obligation and the fair value of the fund assets can be based on actuarial gains and losses. Their causes may include, among other things, changes in the calculation parameters, changes in estimates regarding the risk experience of the pension obligations, and differences between the actual and expected return on plan assets.

The amount of the pension obligations (defined benefit obligation) was calculated using actuarial methods for which estimates are unavoidable. In addition to the assumptions on life expectancy and fluctuation, the following premises have a significant influence on the amount of the obligation:

In %	2023	2022
Discount factor	3.18	3.70
Pensions dynamics	1.48	1.48
Pay rises	3.00	3.00

The assumptions on life expectancy continue to be based on the "Mortality Tables 2018 G" by Prof. Dr. Heubeck.

The pension obligations resulting from the projected unit credit method are netted with the fund assets measured at fair value in the case of a funded pension scheme. If the pension obligations exceed the fund assets, this results in a liability item that is reported in the provisions for pensions. The pension commitments have the following funded status:

In EUR million	12/31/2023	12/31/2022
Cash value of the unfunded pension entitlements	358.5	331.7
Cash value of the funded pension entitlements	32.2	34.9
Benefit cash value of the funded pension entitlements	**390.7**	**366.5**
Fund assets	35.1	32.1
Net liabilities	**355.6**	**334.4**

The fund assets are composed as follows:

In EUR million	12/31/2023	12/31/2022
Cash	0.5	0.0
Securities	24.4	21.0
Equity instruments	0.0	0.0
Debt instruments	24.4	5.7
Fund shares	0.0	15.3
Other	10.2	11.1
	35.1	**32.1**

The securities are valued at prices quoted on active markets.

The development of the present value of the pension commitments and the fair value of the fund assets in the balance sheet is as follows:

In EUR million		12/31/2023	12/31/2022
Opening balance of defined benefit obligations (DBO)		**366.5**	**509.8**
+/−	Exchange rate effects from abroad	-0.4	-0.5
+	Company acquisitions	0.0	0.0
+	Current service costs	7.5	12.5
+	Past service costs to be calculated	0.2	-0.1
+	Interest expense	13.5	5.5
−	Settlements/curtailments	0.0	0.0
−/+	Actuarial gains/losses from the change in demographic assumptions	-0.1	-0.2
−/+	Actuarial gains/losses from the change in financial assumptions	20.1	-139.4
−/+	Actuarial gains/losses from experience-based adjustments	3.0	15.9
−/+	Actuarial gains/losses	23.0	-123.6
+	Contributions from the participants of the plan	0.0	0.0
−	Pension payments made	-19.7	-20.5
−	Reduction of the present value of the defined benefit obligations resulting from deconsolidations	0.0	-13.1
+/−	Other changes	0.0	-3.4
Closing balance of defined benefit obligations (DBO) as of 12/31		**390.7**	**366.5**
Opening balance of fair value of fund assets		**32.1**	**45.8**
+/−	Exchange rate effects from abroad	-0.5	-0.8
−	Settlements/curtailments	0.0	0.0
+	Expected income from the fund assets	0.0	0.7
+/−	Actual profit/loss on plan assets	1.3	-8.1
+	Contributions made by the participants of the plan	0.0	0.0
+	Contributions made by the employer to the plan	2.9	2.6
−	Pension payments made	-1.3	-1.9
−	Reduction of the fair value of the plan asset resulting from deconsolidations	0.0	-3.4
+/−	Other changes	0.5	-2.8
Fair value of fund assets as of 12/31		**35.1**	**32.1**
Pension provisions as of 01/01		**334.4**	**464.0**
Pension provisions as of 12/31		**355.6**	**334.4**

Pension obligations result in expenses recognized in profit or loss of EUR 20.9 million (previous year: EUR 17.2 million), which are made up of the following components:

In EUR million	2023	2022
Current service costs	7.5	12.5
Past service costs to be calculated	0.3	–0.1
Settlements and curtailments	0.0	0.0
Accrued interest of the net liabilities	13.1	4.8
	20.9	**17.2**

Apart from the interest components, all components of the pension expenses recognized in profit or loss are recognized in the functional areas.

The actuarial losses (previous year: gains) of EUR –21.7 million (previous year: EUR 123.7 million) are recognized directly in the accumulated other comprehensive income.

The fund assets showed a profit of EUR 1.3 million (previous year: EUR –8.1 million). The difference between the actual and expected return of the external pension funds is recognized in the actuarial gains and losses with no effect on profit or loss.

According to the best possible estimate, the contributions to external pension funds will amount to EUR 1.5 million in the following year. The estimate in the previous year for the 2023 financial year was EUR 1.5 million.

The pension payments for subsequent years are as follows:

In EUR million	2023	2022
Within the next financial year	20.9	21.4
Between 2 and 5 financial years	94.3	87.7
Between 5 and 10 financial years	128.3	124.7
Due after more than 10 financial years	516.7	504.5

In the calculation, the actual pension payments were presented, and not only the pension modules earned on the reporting date, i.e., pension modules to be allocated in the future have already been considered. Furthermore, it was assumed that the number of active employees would remain constant. For the other calculation assumptions, the same parameters were used that were used to determine the defined benefit obligation.

The weighted average term of the defined benefit obligations is 11.2 years (previous year: 11.1 years).

The effect of a change in material assumptions on the defined benefit obligation is shown below:

	Change to pension entitlement cash value	
In EUR million	**2023**	**2022**
Discount factor		
− 1.0 percentage points	49.1	43.7
+ 1.0 percentage points	-40.9	-34.5
Pensions dynamics		
− 0.5 percentage points	-5.6	-3.5
+ 0.5 percentage points	6.0	3.7
Life expectancy		
− 1 year	-14.1	-10.8
+ 1 year	14.0	11.0

For the sensitivity analysis, the pension obligations were recalculated. It was assumed that the other factors remain unchanged. In calculating the sensitivity of life expectancy, it was assumed that the average life expectancy of a 65-year-old person would be reduced or extended by one year.

Notes to the consolidated cash flow statement

33. General

In the reporting year, the MANN+HUMMEL Group had credit lines of EUR 906.3 million (previous year: EUR 867.6 million) at its disposal, of which EUR 551.3 million (previous year: EUR 512.3 million) had not been used by the end of the financial year.

The cash and cash equivalents considered in the consolidated cash flow statement include all cash and cash equivalents shown in the consolidated balance sheet, i.e., cash in hand and bank balances, to the extent that the Group can freely dispose of them.

Dividends and interest received are allocated to cash flow from investing activities. Interest paid and transaction costs for taking on financial debt are shown in the cash flow from financing activities.

As part of the indirect calculation, the changes in balance sheet items considered in connection with current business activities are adjusted for effects from currency translation and from changes in the scope of consolidation. The changes in the relevant balance sheet items can therefore not be reconciled with the corresponding values based on the published consolidated balance sheet.

RECONCILIATION OF LIABILITIES FROM FINANCING ACTIVITIES

The following is a reconciliation between the opening and closing balances for liabilities from financing activities:

In EUR million	01/01/2023	Cash flows	Changes in consolidated group	Foreign exchange differences	Fair value changes	New leases	Other	12/31/2023
Lease liabilities	245.6	-57.8	4.5	-4.8	0.0	39.0	-15.8	210.7
Bonds	98.8	0.0	0.0	0.0	0.0	0.0	0.1	99.0
Third-party borrowings	856.0	26.4	7.7	5.0	-18.2	0.0	11.7	888.7
	1,200.4	**-31.4**	**12.2**	**0.2**	**-18.2**	**39.0**	**-4.0**	**1,198.4**

In EUR million	01/01/2022	Cash flows	Changes in consolidated group	Foreign exchange differences	Fair value changes	New leases	Other	12/31/2022
Lease liabilities	172.0	-55.4	-5.9	3.4	0.0	129.5	2.0	245.6
Bonds	98.7	0.0	0.0	0.0	0.0	0.0	0.1	98.8
Third-party borrowings	690.3	77.8	-0.1	64.0	21.5	0.0	2.4	856.0
	961.0	**22.4**	**-6.0**	**67.4**	**21.5**	**129.5**	**4.5**	**1,200.4**

Other disclosures

34. Contingent liabilities

No provisions have been made for the following contingent liabilities, which are stated at nominal value, because their utilization is considered unlikely:

In EUR million	12/31/2023	12/31/2022
Guarantees	3.2	8.6
Other	4.5	3.3
	7.7	**11.9**

If called upon, the guarantees are due in full within one year. The other contingent liabilities mainly relate to potential obligations to tax authorities.

35. Other financial liabilities

In addition to liabilities, provisions, and contingent liabilities, there are other financial obligations arising from investment projects that have been started and from procurement contracts.

In EUR million	12/31/2023	12/31/2022
Rental and lease obligations	21.1	36.8
Purchase obligations	35.3	50.0
	56.4	**86.8**

Lease agreements are accounted for in accordance with IFRS 16. Rental and lease obligations consist of expenses for short-term leases, expenses for leases of low-value assets, and expenses for variable lease payments. In the financial year, expenses of EUR 13.4 million (previous year: EUR 28.6 million) were incurred for short-term leases, EUR 2.4 million (previous year: EUR 3.2 million) for leases of low-value assets, and EUR 5.3 million (previous year: EUR 5.0 million) for variable lease payments.

Purchase commitments of EUR 32.2 million (previous year: EUR 44.0 million) relate to property, plant, and equipment, EUR 0.1 million (previous year: EUR 0.0 million) to intangible assets, and EUR 3.0 million (previous year: EUR 6.0 million) to other services.

36. Legal disputes

During its ordinary business activities, the MANN+HUMMEL Group is confronted with lawsuits and court proceedings, mainly in the areas of labor law, product liability and warranty law, tax law, and intellectual property. Provisions are made for those cases in which it is probable that an obligation exists that arose from a past event, can be reliably estimated, and the settlement of which is likely to result in an outflow of resources embodying economic benefits. A provision of EUR 21.1 million (previous year: EUR 19.6 million) was made for all legal disputes pending on December 31, 2023. The management of the MANN+HUMMEL Group believes that the outcome of all claims and lawsuits brought against the MANN+HUMMEL Group, both individually and collectively, will not have a material adverse effect on its business, financial position, results of operations, or cash flows. The results of currently pending or future proceedings are nevertheless unpredictable. Expenses may arise as a result of court or official decisions or through the agreement of settlements that are not covered or not fully covered by insurance benefits, and could have a material impact on the business of the MANN+HUMMEL Group or its results.

37. Disclosures on financial instruments

BOOK VALUES OF FINANCIAL INSTRUMENTS BY CATEGORY

The balance sheet items for financial instruments are divided into classes and categories. The parent company of the Group is MANN+HUMMEL International GmbH & Co. KG. Insofar as the shares in this commercial partnership do not meet the requirements of IAS 32.16A, amounts reported in equity were reclassified to the item "Capital economically attributable to the shareholders." This item was thus included in the disclosures on the book values of the financial instruments.

Under IFRS 9, financial assets and financial liabilities are categorized according to a uniform model in the following categories:

- Financial assets measured at amortized cost (AC).
- Financial assets at fair value through other comprehensive income (FVOCI).
- Financial assets at fair value through profit or loss (FVPL).
- Financial liabilities measured at amortized cost (AC).
- Financial liabilities at fair value through profit or loss (FVPL).

The carrying amounts for each category are shown in the table below:

CARRYING AMOUNTS OF FINANCIAL ASSETS

12/31/2023 In EUR million	(Amortized) acquisition costs	Fair value recognized directly in equity with recycling (FVOCI)	Fair value recognized directly in equity without recycling (FVOCI)	Fair value through profit or loss (FVPL)	Not in scope of IFRS 9
Cash and short-term deposits	174.4				
Trade receivables	825.6				
Other financial assets	57.5				
Securities					
of which debt instruments of the category FVOCI with recycling		147.2			
of which debt instruments of the category FVPL				78.0	
of which shareholders' equity instruments of the category FVPL				73.9	
Holdings			22.2	4.4	1.1
Derivative financial instruments					
Part of a hedging relationship				17.5	
Freestanding				6.3	

CARRYING AMOUNTS OF FINANCIAL LIABILITIES

12/31/2023 In EUR million	(Amortized) acquisition costs	Fair value recognized in income
Capital economically attributable to the shareholders	640.2	
Trade payables	741.5	
Liabilities to banks	1,190.8	
Other financial liabilities	318.8	
Liabilities from leasing	210.7	
Derivative financial instruments		
Part of a hedging relationship		8.5
Freestanding		0.1

CARRYING AMOUNTS OF FINANCIAL ASSETS

12/31/2022 In EUR million	(Amortized) acquisition costs	Fair value recognized directly in equity with recycling (FVOCI)	Fair value recognized directly in equity without recycling (FVOCI)	Fair value through profit or loss (FVPL)	Not in scope of IFRS 9
Cash and short-term deposits	205.0				
Trade receivables	817.4				
Other financial assets	46.3				
Securities					
of which debt instruments of the category FVOCI with recycling		137.2			
of which debt instruments of the category FVPL				75.4	
of which shareholders' equity instruments of the category FVPL				65.0	
Holdings			19.5	3.2	2.2
Derivative financial instruments					
Part of a hedging relationship				27.0	
Freestanding				2.4	

CARRYING AMOUNTS OF FINANCIAL LIABILITIES

12/31/2022 In EUR million	(Amortized) acquisition costs	Fair value recognized in income
Capital economically attributable to the shareholders	843.0	
Trade payables	765.3	
Liabilities to banks	1,137.9	
Other financial liabilities	290.2	
Liabilities from leasing	245.6	
Derivative financial instruments		
Part of a hedging relationship		24.7
Freestanding		0.1

The MANN+HUMMEL Group generally holds its equity instruments for strategic reasons in order to complement its operating activities. The intention to generate significant short-term income from disposals is not in the foreground. In the current financial year, the fair value of equity instruments whose changes are recognized in other comprehensive income amounted to EUR 22.2 million (previous year: EUR 19.5 million). In the financial year, no dividends were distributed from these investments to MANN+HUMMEL companies. There were no reclassifications to other comprehensive income or dividend distributions from investments sold during the financial year.

The fair values of the financial assets and liabilities are allocated to the three levels of the fair value hierarchy depending on the input parameters used for the valuation. The classification and the need to reclassify are reviewed at each balance sheet date. Level 1 comprises those financial instruments for which quoted prices in active markets are available for identical assets and liabilities. Allocation to level 2 takes place if input parameters are used for the valuation of the financial instruments that are directly (e.g., prices) or indirectly (e.g., derived from prices) observable on the market. Financial instruments whose valuation is based on information that is not observable on the market are reported in level 3.

Due to the short-term maturities of cash and cash equivalents, trade receivables, trade payables, and other current financial assets, their carrying amount generally approximates fair value at the end of the reporting period.

The fair values of non-current financial receivables, trade receivables, liabilities to banks, and other financial liabilities were calculated using the present value method. The future cash flows were discounted using the current risk-free interest rates with matching maturities plus a credit risk premium customary in the industry. The allocation is made to level 2.

Financial liabilities from finance leases are recognized using the contractually agreed interest rate. The fair value was determined considering the market interest rate (level 2).

The fair values of the financial instruments measured at fair value are allocated to the three levels of the fair value hierarchy as follows:

In EUR million				12/31/2023
	Level 1	Level 2	Level 3	Total
Assets				
Holdings	0.0	8.7	17.9	26.6
Securities				
Shares	73.8	0.1	0.0	73.9
Bonds	101.8	123.4	0.0	225.2
Derivative financial instruments	0.0	23.8	0.0	23.8
Liabilities				
Derivative financial instruments	0.0	8.6	0.0	8.6

In EUR million				12/31/2022
	Level 1	Level 2	Level 3	Total
Assets				
Holdings	0.0	6.7	16.0	22.7
Securities				
Shares	65.0	0.0	0.0	65.0
Bonds	79.5	133.1	0.0	212.6
Derivative financial instruments	0.0	29.4	0.0	29.4
Liabilities				
Derivative financial instruments	0.0	24.8	0.0	24.8

The fair values of the financial instruments measured at amortized cost are allocated to the three levels of the fair value hierarchy as follows:

In EUR million				12/31/2023
	Level 1	Level 2	Level 3	Total
Liabilities				
Liabilities to banks	0.0	1,233.2	0.0	1,233.2
Other financial liabilities	0.0	77.7	0.0	77.7
Lease liabilities	0.0	210.7	0.0	210.7

In EUR million				12/31/2022
	Level 1	Level 2	Level 3	Total
Liabilities				
Liabilities to banks	0.0	1,109.9	0.0	1,109.9
Other financial liabilities	0.0	276.4	0.0	276.4
Lease liabilities	0.0	245.6	0.0	245.6

For level 1 securities, the fair value is the quoted market price in an active market at any time. An active market is either the stock exchange of the respective country or a comparable trading platform on which the liquidity and transparency of the underlying asset is given. An active market is characterized by the fact that largely homogeneous assets are traded at publicly accessible prices and, as a rule, willing buyers and sellers can be found at any time, for example, securities or commodity exchanges.

Level 1 derivative financial instruments relate to tradable derivatives such as futures. Their fair value corresponds to the value on the traded futures exchange.

Financial instruments whose prices can be derived or modeled from parameters observable on the market are classified in level 2. Examples are observable interest rates, exchange rates, or comparable instruments. Interest-bearing securities with moderately delayed direct price quotation are also included in level 2. The level 2 derivative financial instruments pertain to non-tradable derivatives. The determination of fair values is based on discounted price quotations for the remaining maturity (exchange rates, interest rates, and commodity price indices) from authorized stock exchanges.

In level 3, investments were already included in the fair value hierarchy in previous financial years. The market values from level 3 were determined on the basis of currently available information from the fund managers and internal valuation methods. A significant difference in the interest rate level and the associated change in market prices would affect the fair value of the securities. A sale of the investments classified in level 3 is not planned in the short term.

The financial investments "at fair value through other comprehensive income" include investments in the amount of EUR 22.2 million (previous year: EUR 19.5 million). In contrast to the multiplier method used in previous years, the valuation was changed in the current financial year. This adjustment was necessary in order to do justice to the increased volume and the market environment. The new valuation model takes into account both current market prices and qualitative factors such as changes and assessments regarding future growth prospects and market potential.

If the estimates used in the valuation model were to increase by 10.0%, the fair value of these investments would increase by EUR 0.5 million (previous year, based on the multiplier method: EUR 0.8 million). If they were to decrease, the fair value would decrease by EUR 0.5 million (previous year, based on the multiplier method: EUR 0.8 million).

The development of the securities, derivatives, and investments classified in level 3 of the fair value hierarchy is shown in the following table:

In EUR million	2023	2022
Balance at 01/01	**16.0**	**13.3**
Fair value changes recognized directly in equity	2.9	1.5
Fair value changes recognized directly in profit or loss	0.0	1.3
Purchases	0.0	0.0
Sales	0.0	–0.1
Reclassification in/from level 3	–1.0	0.0
Balance at 12/31	**17.9**	**16.0**

The corresponding financial assets in the current financial year were reclassified from level 3 to level 2 due to the higher number of price quotations on active markets.

The gains and losses are recorded in other financial income and financial expenses.

NET GAINS AND LOSSES BY MEASUREMENT CATEGORY

In EUR million	Total net profits and losses
2023	
Assets (amortized) acquisition costs	–17.7
Liabilities (amortized) acquisition costs	–45.1
Shareholders' equity instruments of the category FVPL	–8.7
FVOCI debt instruments with recycling	–3.1
FVPL debt instruments	–3.6
Derivative financial assets with hedge relationships (FVPL)	8.5
Derivative financial liabilities with hedge relationships (FVPL)	–21.6
	–91.3

In EUR million	Total net profits and losses
2022	
Assets (amortized) acquisition costs	–7.6
Liabilities (amortized) acquisition costs	–34.7
Shareholders' equity instruments of the category FVPL	–11.7
FVOCI debt instruments with recycling	–1.0
FVPL debt instruments	–6.0
Derivative financial assets with hedge relationships (FVPL)	–8.9
Derivative financial liabilities with hedge relationships (FVPL)	–0.7
	–70.6

The other net gains and losses of “Assets (amortized) acquisition costs” and “Liabilities (amortized) acquisition costs” essentially include currency gains and losses from foreign currency receivables, expenses due to value adjustments on trade receivables, and interest expenses.

The other net gains and losses in the measurement category “FVOCI debt instruments with recycling” are the balance of the realized gains and losses from the disposal of such assets, reduced by the unrealized changes already recognized in equity for this purpose in the previous year, and the unrealized gains or losses of the existing assets recognized in equity in the current financial year. Furthermore, currency gains and losses are also included.

The other net gains and losses in the valuation category “Equity instruments FVOCI without recycling” essentially comprise the value adjustments of the investees to the fair value within equity.

OFFSETTING OF FINANCIAL ASSETS AND LIABILITIES

The following are the financial assets and liabilities that are subject to offsetting agreements, enforceable master netting arrangements, and similar agreements:

In EUR million			12/31/2023
	Gross amount	Offsetting	Net amount
Trade receivables	828.0	2.4	825.6
Trade payables	739.1	2.4	741.5

In EUR million			12/31/2022
	Gross amount	Offsetting	Net amount
Trade receivables	821.9	4.5	817.4
Trade payables	760.8	4.5	765.3

The framework agreements for financial futures concluded with our banks stipulate, among other things, that in the event of insolvency of a contractual partner, the existing contracts must be terminated and settled at the respective market value. If several transactions are settled with one contractual partner, positive and negative market values are netted, and only the remaining peak is settled. As of December 31, 2023, the following offsettable amounts exist:

In EUR million			12/31/2023
	Balance sheet value	Offsetting	Net amount
Derivative assets	23.8	4.5	19.3
Derivative liabilities	8.6	4.5	4.1

In EUR million			12/31/2022
	Balance sheet value	Offsetting	Net amount
Derivative assets	29.4	7.5	21.9
Derivative liabilities	24.8	7.5	17.3

38. Risks from financial instruments

MANAGEMENT OF FINANCIAL RISKS

The MANN+HUMMEL Group's Risk Management System covers, among other things, counterparty and default risks with customers, banks, and suppliers, liquidity, commodity, and interest rate risks, and currency risks.

The measurement of the price risk from securities and the currency risk is based on a value-at-risk analysis. The value-at-risk exclusively indicates the potential risk of loss that will not be exceeded with a given probability within a specified period of time (holding period). However, the method does not provide information on the time of occurrence or expected loss amount if the value-at-risk is exceeded. Consequently, the actual development may deviate from the result of the value-at-risk analysis.

The companies of the MANN+HUMMEL Group hedge their interest rate and currency risks at market conditions either through the cash management of the MANN+HUMMEL Group or directly with banks. Original transactions such as loans with long fixed interest rates are usually used, but—especially in the currency area—also derivative financial instruments with plain vanilla character are also utilized. These are concluded exclusively to hedge existing underlying transactions or planned transactions.

The risk positions of cash management are hedged externally with banks of impeccable credit standing, considering specified risk limits. Hedging transactions are concluded in accordance with uniform Group guidelines and in compliance with the regulations applicable to banks for conducting trading transactions.

DEFAULT AND COUNTERPARTY RISK

The default risk is the risk that counterparties in the area of cash investments, financial receivables, and trade receivables will not meet their payment obligations.

To reduce the counterparty risk in the case of financial investments, all financial transactions are only carried out with banks of first-class credit standing within the framework of defined limits.

In the event of counterparty default, the Group's financial assets are exposed to a maximum default risk equal to the carrying amount of the corresponding balance sheet items without considering collateral received (plus the maximum utilization for any financial guarantees and credit commitments to third parties).

To mitigate the default risk, the creditworthiness of customers with whom transactions are concluded on a credit basis, as well as our receivables portfolio, are subject to ongoing monitoring. Selectively, default risks are reduced with appropriate hedging instruments, such as trade credit insurance. The carrying amount of trade receivables covered by trade credit insurance is EUR 492.0 million (previous year: EUR 157.6 million).

The value adjustments on cash and short-term deposits developed as follows in the financial year:

In EUR million	2023	2022
Carrying amount as of 01/01	**0.1**	**0.1**
Reversals	0.0	0.0
Carrying amount as of 12/31	**0.1**	**0.1**

The following table provides information on the credit quality of the Group's financial assets by credit rating:

In EUR million	Gross carrying amount (on-balance) 12/31/2023		
Rating	Level 1 impairment model (EL)	Level 2 impairment model (LEL)	Level 3 impairment model (LEL)
Investment grade	186.1	830.6	0.0
Non-investment grade	0.0	11.9	35.6

In EUR million	Gross carrying amount (on-balance) 12/31/2022		
Rating	Level 1 impairment model (EL)	Level 2 impairment model (LEL)	Level 3 impairment model (LEL)
Investment grade	207.2	782.7	0.0
Non-investment grade	0.0	7.1	33.9

LIQUIDITY RISK

Liquidity risk describes the danger that a company will not be able to meet its financial obligations when they fall due. At MANN+HUMMEL, significant liquidity issues and developments are regularly discussed in liquidity planning. The subsidiaries are included in the central financing of the Group. The company maintains sufficient reserve liquidity and credit lines to cover any possible fluctuations, which are also available to cover M&A activities.

The maturity structure of principal and interest payments for the financial liabilities and trade payables are shown in the following table:

In EUR million	Carrying amount as of 12/31/2023			Cash outflows
	Total	2024	2025 to 2028	2029 et seq.
Liabilities to banks	1,190.8	565.8	667.2	108.5
Lease liabilities	210.7	47.4	121.0	65.3
Derivative financial instruments	8.6	326.0	56.5	0.0
Other financial liabilities	318.8	203.8	13.0	119.5
Trade payables	741.5	741.2	0.3	0.0
	2,470.4	**1,884.2**	**858.0**	**293.3**

In EUR million	Carrying amount as of 12/31/2022			Cash outflows
	Total	2023	2024 to 2027	2028 et seq.
Liabilities to banks	1,137.9	492.4	545.8	219.9
Lease liabilities	245.6	50.4	125.4	101.4
Derivative financial instruments	24.8	448.7	93.6	0.0
Other financial liabilities	290.9	187.7	50.0	119.5
Trade payables	765.3	765.1	0.0	0.0
	2,464.5	**1,944.3**	**814.8**	**440.8**

PRICE RISK FROM SECURITIES

The price risk is the risk that the fair value of securities will fall.

Investments in securities are essentially investments in interest-bearing securities, shares, and fund units. This diversification reduces risk, which is a prerequisite for a continuous increase in value with as little fluctuation as possible.

The final decision on strategic asset allocation as well as the control of all investment results and risk budgets are made for the special funds by a specially created committee (investment committee). The basis for the investment decisions of the external portfolio managers are the investment guidelines defined by the investor. In formulating these guidelines, attention is paid to, among other things, a solid issuer credit rating (minimum rating requirement), high marketability of the securities, and a broad sector diversification in order to achieve a further risk reduction.

The company receives monthly reports on the development of the current market values and the performance of the individual asset classes. The performance is assessed based on comparative values, key risk figures, and attribution and allocation analyses by the portfolio managers, among other things.

In addition to qualitative management instruments for risk minimization, such as diversification of investments in different asset classes, risk-oriented design of investment guidelines, analysis of investment results, and evaluation of changes in the capital markets, quantitative management methods and investment styles are preferably used.

Based on a value-at-risk calculation, it can be assumed that with a probability of 99% for a holding period of 10 days, the reduction in market value in the master fund, which bundles the funds with the various fund providers, will not exceed EUR 4.9 million (previous year: EUR 6.4 million). The calculations were made assuming the asset allocation does not change, and no additions are made during the year, which would then have to be reallocated. The historical correlations of the respective funds and securities were considered.

CURRENCY RISK

Due to its international orientation, the MANN+HUMMEL Group carries out transactions in different currencies. Currency risk is the risk that changes in exchange rates will affect the fair values or future cash flows of monetary items.

In the MANN+HUMMEL Group, hedging measures for planned foreign currency cash flows are carried out within defined maximum limits. The hedging ratio is 60% for cash flow hedges (previous year: 60%) and 100% for fair value hedges. The net principle applies to exchange rate hedging, i.e., hedges are carried out for the net positions from opposing cash flows. Exchange rate hedges are mainly carried out through forward exchange transactions. In the financial year, the currencies USD, EUR, SGD, SEK, CNY, and CZK accounted for more than 80% of the hedging volume. To finance the Affinia acquisition, an interest rate/currency swap of USD 400 million was concluded in 2015. This had a nominal amount of EUR 88.4 million (previous year: EUR 123.7 million) as of the reporting date and is designated as a fair value hedge with a fair value as of December 31, 2023, of EUR –2.9 million (previous year: EUR –9.0 million).

To determine the exposure to be hedged, a cash flow plan for the following financial year is prepared annually. Based on this planning, exposures within the approved risk limit are then hedged by forward exchange transactions.

In the MANN+HUMMEL Group, the value-at-risk is determined unchanged from the previous year based on the variance-covariance method assuming a confidence level of 95% with a holding period of 12 months.

As of the balance sheet date, with a one-sided confidence level of 95%, a potential risk of loss of EUR 11.0 million (previous year: EUR 16.8 million), based on the next 12 months, is not exceeded. The calculation was based on an average price volatility of 9.3% (previous year: 9.3%).

The maximum risk of loss is calculated from the average exchange rate volatility of the last twelve months in relation to the open foreign currency position from the operating business. This results from the stock of cash and cash equivalents and loans in foreign currency on the reporting date, which are managed via cash flow management, and the net incoming and outgoing payments expected in the following twelve months based on the current corporate planning, considering the hedged stock.

As of December 31, 2023, the following hedging instruments are in the portfolio:

In EUR million		Maturity				
Nominal amounts of hedging instruments	Total	Up to 3 months	Over 3 months to 1 year	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years
Currency hedging	957.1	387.0	560.1	10.0	0.0	0.0
Interest rate/currency hedging	88.4	0.0	0.0	0.0	88.4	0.0
	1,045.5					

December 31, 2022:

In EUR million		Maturity				
Nominal amounts of hedging instruments	Total	Up to 3 months	Over 3 months to 1 year	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years
Currency hedging	858.2	494.3	362.5	1.4	0.0	0.0
Interest rate/currency hedging	123.7	0.0	0.0	0.0	0.0	123.7
	981.9					

The hedges at the end of the year mainly concern the currencies USD, SGD, CZK, SEK, and CNY (previous year: USD, CZK, SGD, GBP, TRY, SEK, and CNY). The average hedging rates for these currencies were as follows:

Average rate of exchange	
EUR/USD	1.0947
EUR/SGD	1.4560
EUR/CZK	24.7361
EUR/SEK	11.4855
EUR/CNY	7.7695

Average exchange rates 2022:

Average rate of exchange	
EUR/USD	1.0791
EUR/CZK	25.3700
EUR/SGD	1.4421
EUR/GBP	0.8743
EUR/TRY	22.2214
EUR/SEK	10.8360
EUR/CNY	7.1917

CASH FLOW HEDGES

2023:

In EUR million		Fair value of hedging instruments		Change in fair value	Balance sheet item for hedging transactions
Cash flow hedges	**Nominal amount**	**Assets**	**Liabilities**		
Currency hedging	290.2	6.2	–1.7	6.5	Financial assets/ financial liabilities

2022:

In EUR million		Fair value of hedging instruments		Change in fair value	Balance sheet item for hedging transactions
Cash flow hedges	**Nominal amount**	**Assets**	**Liabilities**		
Currency hedging	207.3	8.2	–1.5	5.3	Financial assets/ financial liabilities

In the MANN+HUMMEL Group, the spot-to-spot method is used for designation. The effectiveness measurement is carried out cumulatively.

The following amounts were reclassified:

2023:

In EUR million	Reclassified/recycled amount of OCI in profit and loss statement			
Cash flow hedges	**From prematurely terminated underlying transactions**	**Expired underlying transactions**	**Profit and loss statement item for reclassified amounts**	**Profits/losses from hedges of net positions**
Currency hedging	–0.8	–10.7	Sales, material expense, net financial result	

2022:

In EUR million	Reclassified/recycled amount of OCI in profit and loss statement			
Cash flow hedges	**From prematurely terminated underlying transactions**	**Expired underlying transactions**	**Profit and loss statement item for reclassified amounts**	**Profits/losses from hedges of net positions**
Currency hedging	-4.0	-5.9	Sales, net financial result	

Ineffectiveness amounts to EUR 0.0 million (previous year: EUR 0.0 million) due to the spot-to-spot method applied.

2023:

In EUR million **Cash flow hedges**	**Change in fair value (for effectiveness calculation) of underlying transaction**	**Cash flow hedge reserve**
Currency hedging	-6.5	6.5

2022:

In EUR million **Cash flow hedges**	**Change in fair value (for effectiveness calculation) of underlying transaction**	**Cash flow hedge reserve**
Currency hedging	-5.3	5.3

2023:

In EUR million	Total hedging costs	Of which costs of hedging—fair value	Of which costs of hedging—forward component	Of which costs of hedging—cross-currency basis spread	Cash flow hedge reserve—internal values	Spot component—FX derivatives	Interest rate swaps	Total other result (OCI) (cash flow hedge reserve and costs of hedging)
Other result (OCI) as of 01/01/2023	**1.9**	**0.0**	**1.4**	**0.5**	**0.0**	**5.8**	**0.0**	**7.6**
Additions	-4.3	0.0	-4.8	0.5	0.0	13.6	0.0	9.3
Basis adjustments	1.4	0.0	1.6	-0.2	0.0	-12.1	0.0	-10.7
Reclassification to profit and loss statement	0.4	0.0	0.4	0.0	0.0	-0.7	0.0	-0.3
Other result (OCI) as of 12/31/2023	**-0.6**	**0.0**	**-1.4**	**0.7**	**0.0**	**6.5**	**0.0**	**5.9**

2022:

In EUR million	Total hedging costs	Of which costs of hedging—fair value	Of which costs of hedging—forward component	Of which costs of hedging—cross-currency basis spread	Cash flow hedge reserve—internal values	Spot component—FX derivatives	Interest rate swaps	Total other result (OCI) (cash flow hedge reserve and costs of hedging)
Other result (OCI) as of 01/01/2022	**0.4**	**0.0**	**–0.4**	**0.8**	**0.0**	**4.0**	**0.0**	**4.4**
Additions	0.7	0.0	1.0	–0.2	0.0	8.1	0.0	8.8
Basis adjustments	0.6	0.0	0.8	–0.2	0.0	–6.5	0.0	–5.9
Reclassification to profit and loss statement	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.3
Other result (OCI) as of 12/31/2022	**1.9**	**0.0**	**1.4**	**0.5**	**0.0**	**5.8**	**0.0**	**7.6**

FAIR VALUE HEDGES

2023:

In EUR million		Fair value of hedging instruments		Change in fair value of hedging instruments	Balance sheet item for hedging transactions	Ineffectiveness (result) in profit and loss statement	Profit and loss statement item for hedge accounting
Fair value hedges	**Nominal amounts**	**Assets**	**Liabilities**				
Currency hedging	666.9	10.9	–2.9	8.0	Financial assets/ financial liabilities	0.0	Financial expenses/ financial income
Interest rate/ currency hedging	88.4	0.0	–2.9	–2.9	Financial assets	0.0	Financial expenses/ financial income

2022:

In EUR million		Fair value of hedging instruments		Change in fair value of hedging instruments	Balance sheet item for hedging transactions	Ineffectiveness (result) in profit and loss statement	Profit and loss statement item for hedge accounting
Fair value hedges	**Nominal amounts**	**Assets**	**Liabilities**				
Currency hedging	650.9	18.0	–12.8	5.2	Financial assets/ financial liabilities	0.0	Financial expenses/ financial income
Interest rate/ currency hedging	123.7	0.0	–9.0	–9.0	Financial assets	0.0	Financial expenses/ financial income

MANN+HUMMEL makes use of the exception pursuant to IFRS 9.6.3.6 and designates the intercompany loan receivables as underlying transactions within the scope of hedge accounting. Gains and losses from currency translation are not fully eliminated at Group level, as the intercompany loans are settled between two Group companies with different functional currencies. The fair value changes of hedged items were essentially the same as the fair value changes of hedging instruments.

INTEREST RATE RISK

Interest rate risk is the risk that financial instruments' fair value or future cash flows will fluctuate due to changes in market interest rates.

MANN+HUMMEL monitors the interest rate risk monthly and measures it against a predefined loss limit as a basis for any hedging measures.

An increase/decrease of 100 basis points in the average interest rate on variable-interest financial liabilities would influence earnings before income taxes of EUR +/–1.9 million (previous year: EUR +/–1.1 million).

An increase in the average interest rate on variable-interest financial assets by 100 basis points would change the result before income taxes by EUR +/–0.21 million (previous year: EUR +/–0.06 million).

The company is only marginally affected by the IBOR reform. For those currencies for which IBOR interest rates will no longer be published from 2023 onward, new reference interest rates have been agreed upon in the corresponding financing contracts. The IBOR reform does not affect existing hedging relationships with interest rate swaps or interest rate currency swaps.

RAW MATERIAL PRICE RISK

During the reporting period, no hedging transactions were carried out in the MANN+HUMMEL Group. In principle, MANN+HUMMEL minimizes the existing risks through long-term contracts, a selection of strategic, globally positioned suppliers, and monitoring of exchange rates.

39. Government grants

In the financial year, EUR 3.5 million (previous year: EUR 2.7 million) in government grants were received. These are broken down as follows:

In EUR million	2023	2022
Grants for investments	0.6	1.0
Cost subsidies	2.9	1.7
	3.5	**2.7**

The expense grants mainly comprise grants for research and development projects. The conditions attached to the granting of the investment subsidies in the previous year were fulfilled.

40. Related party disclosures

According to IAS 24, persons or companies that control or are controlled by the MANN+HUMMEL Group must be disclosed if they are not already included in the consolidated financial statements as a consolidated company. Control exists if a shareholder holds more than half of the voting rights or has the power to govern the financial and operating policies of management by virtue of a provision in the articles of association or a contractual agreement. In addition, the disclosure obligation according to IAS 24 extends to transactions with associated companies and affiliated companies in which the MANN+HUMMEL Group holds at least 20%, as well as transactions with persons who exercise a significant influence on the financial and business policy, including close family members or intermediary companies. Significant influence over the financial and operating policies may be based on a shareholding in the parent company of 20% or more, a seat on the Management or Supervisory Board of the parent company, or another key management position. Accordingly, only the members of the Supervisory Board and the Management Board are considered related parties. There are no other related parties.

Mann Familien-Beteiligungsgesellschaft mbH & Co. KG and Hummel Familien-Beteiligungsgesellschaft mbH & Co. KG, which together hold 83.3% of MANN+HUMMEL International GmbH & Co. KG, exercise significant influence as related parties. There were no transactions with these shareholders. In the financial year, withdrawals of EUR 9.5 million (previous year: EUR 8.6 million) were made by the shareholders.

The transactions with related parties and the receivables and liabilities existing as of the balance sheet date essentially result from ordinary business activities and are as follows:

In EUR million	Associates	Other investees
2023		
Deliveries made and services provided		
Sale of goods	9.4	1.2
Services	0.0	0.9
Other services	0.0	0.4
Deliveries received and services procured		
Sale of goods	0.0	0.1
Services	0.0	2.1
Other services	0.0	3.7
Receivables	1.1	3.2
Liabilities	0.0	1.1

In EUR million	Associates	Other investees
2022		
Deliveries made and services provided		
Sale of goods	8.6	0.1
Services	0.0	0.0
Other services	0.0	0.1
Deliveries received and services procured		
Sale of goods	0.0	1.8
Services	0.0	1.7
Other services	0.0	3.4
Receivables	1.1	0.1
Liabilities	0.0	0.3

41. Remuneration of the Management Board

MANAGEMENT BOARD

Emese Weissenbacher, Marbach am Neckar

Kurk Wilks, Portage, MI, USA

SUPERVISORY BOARD OF THE MANN+HUMMEL VERWALTUNGS GMBH UNTIL SEPTEMBER 30, 2022

With effect from September 29, 2022, MANN+HUMMEL International Verwaltungs GmbH, based in Austria, joined MANN+HUMMEL International GmbH & Co. KG and MANN+HUMMEL Verwaltungs GmbH with effect from the end of September 30, 2022. There is no obligation to establish a supervisory board for MANN+HUMMEL International Verwaltungs GmbH.

The current short-term remuneration of active members of the Management Board for the 2023 financial year amounts to EUR 1.2 million (previous year: EUR 1.2 million). Expenses for pension entitlements earned in the current financial year by active members of the Management Board amount to EUR 0.1 million (previous year: EUR 1.0 million).

The pension provision for former members of the Management Board and their surviving dependents amounts to EUR 8.1 million (previous year: EUR 8.4 million).

The short-term remuneration of the Supervisory Board for the 2022 financial year including September amounted to EUR 0.6 million.

Beyond this, companies of the MANN+HUMMEL Group have not carried out any reportable transactions with members of the Management or Supervisory Boards of the MANN+HUMMEL Group or other members of management in key positions or with companies in whose management or supervisory bodies these persons are represented. This also applies to close family members of these persons.

42. Staff

The average number of employees in the MANN+HUMMEL Group during the year was 22,015 (previous year: 22,222), of which 7,077 (previous year: 6,970) were salaried employees and 14,938 (previous year: 15,252) were wage earners.

43. Auditor's fees

The fees of the Group auditors Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Stuttgart, recognized in the consolidated profit and loss statement amount to EUR 2.3 million (previous year: EUR 2.2 million) and are divided into auditing services of EUR 0.7 million (previous year: EUR 0.6 million) and tax consulting services of EUR 1.5 million (previous year: EUR 1.6 million).

44. Indication of section 264 (3) and section 264b item 3 HGB

The companies MANN+HUMMEL East European GmbH & Co. KG, Ludwigsburg, Germany; MANN+HUMMEL East European Holding GmbH, Ludwigsburg, Germany; MANN+HUMMEL Filtration GmbH, Ludwigsburg, Germany; MANN+HUMMEL Beteiligungs- und Verwaltungsgesellschaft mbH, Ludwigsburg, Germany; MANN+HUMMEL Life Sciences & Environment Germany GmbH, Sprockhövel, Germany; MANN+HUMMEL Innenraumfilter GmbH & Co. KG, Himmelkron, Germany; MANN+HUMMEL Water & Fluid Solutions GmbH, Wiesbaden, Germany; and MANN+HUMMEL Molecular GmbH, Gefrees, Germany, make use of the exemption regulations according to section 264 (3) and section 264b HGB.

45. Events after the balance sheet date

There were no significant events after the balance sheet date.

46. List of shareholdings (according to section 313 (2) HGB)

Company name and domicile	Consolidation status[1]	Equity interest %
1. Subsidiaries		
Germany		
MANN+HUMMEL Holding GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL Beteiligungs- und Verwaltungsgesellschaft mbH, Ludwigsburg	F	83.3
MANN+HUMMEL Filtration GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL Innenraumfilter GmbH & Co. KG, Himmelkron	F	83.3
MANN+HUMMEL Innenraumfilter Verwaltungsgesellschaft mbH, Himmelkron	F	83.3
MANN+HUMMEL Komplementär GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL East European Holding GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL East European GmbH & Co. KG, Ludwigsburg	F	83.3
MANN+HUMMEL East European Verwaltungs GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL Life Sciences & Environment Germany GmbH, Sprockhövel	F	83.3
MN Beteiligungsgesellschaft mbH, Wiesbaden	F	83.3
MANN+HUMMEL Water & Fluid Solutions GmbH, Wiesbaden	F	83.3
i2M GmbH, Ludwigsburg	N	83.3
MANN+HUMMEL Molecular GmbH, Gefrees	F	83.3
Seccua Holding AG, Weilheim	N	83.3
Seccua GmbH, Weilheim	N	83.3
M-Filter GmbH, Weidenberg	F	41.7
Europe		
MANN+HUMMEL (UK) LTD., Wolverhampton, UK	F	83.3
MANN+HUMMEL HYDROMATION N.V., Antwerp-Berchem, Belgium	F	83.3
MANN+HUMMEL (CZ) v.o.s., Nová Ves, Czech Republic	F	83.3
MANN+HUMMEL Service s.r.o., Nová Ves, Czech Republic	F	83.3
MANN+HUMMEL Innenraumfilter (CZ), s.r.o., Uherský Brod, Czech Republic	F	83.3
MANN+HUMMEL IBERICA S.A.U., Saragossa, Spain	F	83.3
MANN+HUMMEL Filtration France, Laval, France	F	83.3
MANN+HUMMEL ITALIA S.r.l., Turin, Italy	F	83.3
MANN+HUMMEL OOO, Moscow, Russian Federation	F	83.3
MANN+HUMMEL Filtration Technology Ukraine Ltd., Krasyliv, Ukraine	F	83.3

1 F: Consolidated group; E: Accounted for at equity;
N: No inclusion due to irrelevance.
The shares in capital in % at the subsidiaries are calculated on the basis of an indirect participation in MANN+HUMMEL Holding GmbH, Ludwigsburg, and therefore represent 83.3% of the participation quota in MANN+HUMMEL Holding GmbH.

Company name and domicile	Consolidation status[1]	Equity interest %
MANN+HUMMEL BA J.S.C., Tešanj, Bosnia and Herzegovina	F	83.3
MANN+HUMMEL Filtre San. Ltd. Sti., Istanbul, Turkey	F	83.3
MANN+HUMMEL Vokes Air Treatment Holdings Ltd., Burnley, UK	F	83.3
MANN+HUMMEL Vokes-Air Limited, Burnley, UK	F	83.3
MANN+HUMMEL Vokes Air Filtration Ltd., Burnley, UK	F	83.3
MANN+HUMMEL Wheway Plc, Burnley, UK	F	83.3
MANN+HUMMEL Vokes Air BV, JA Nieuwegein, Netherlands	F	83.3
MANN+HUMMEL Vokes Air AS, Hvidovre, Denmark	F	83.3
MANN+HUMMEL Vokes Air AG, Volketswil, Switzerland	F	83.3
MANN+HUMMEL Vokes-Air GmbH, Vösendorf, Austria	F	83.3
MANN+HUMMEL Vokes-Air Holding AB, Svenljunga, Sweden	F	83.3
MANN+HUMMEL Vokes Air AB, Svenljunga, Sweden	F	83.3
MANN+HUMMEL FT Poland Spolka z Ograniczona Odpowiedzialnoscia sp.k., Gostyń, Poland	F	83.3
MANN+HUMMEL FT Poland Spolka z Ograniczona Odpowiedzialnoscia, Gostyń, Poland	F	83.3
MANN+HUMMEL Jack Filter GmbH, Steindorf, Austria	F	83.3
MANN+HUMMEL Jack Filter Kft., Polgárdi, Hungary	F	83.3
MANN+HUMMEL Water & Fluid Solutions S.p.A., Fano, Italy	F	83.3
Oy M-Filter Ab, Haapavesi, Finland	F	50.0
Filterpak Oy, Hanko, Finland	F	50.0
Suodatinkeskus Suomi Oy, Tampere, Finland	F	50.0
LM-Filters Oy, Haapavesi, Finland	N	41.7
UAB M-Filter EU, Druskininkai, Lithuania	F	50.0
America		
MANN+HUMMEL INC., Gastonia, NC, USA	F	83.3
MANN+HUMMEL USA INC., Portage, MI, USA	F	83.3
MANN+HUMMEL Purolator Filters LLC, Fayetteville, NC, USA	F	83.3
I2M LLC, Raleigh, NC, USA	N	83.3
MANN+HUMMEL Water & Fluid Solutions Inc., Goleta, CA, USA	F	83.3
MANN+HUMMEL Filtration Technology US LLC, Gastonia, NC, USA	F	83.3
MANN+HUMMEL Filtration Technology Products Corp LLC, Gastonia, NC, USA	F	83.3
MANN+HUMMEL Filtration Technology Southern Holdings LLC, Gastonia, NC, USA	F	83.3
MANN+HUMMEL Filtration Technology International Holdings Corp., Gastonia, NC, USA	F	83.3
MANN+HUMMEL Filtration Technology Canada ULC, Ayr, Ontario, Canada	F	83.3
MANN+HUMMEL MEXICO S.A. de C. V., Santiago de Querétaro, Mexico	F	83.3

1 F: Consolidated group; E: Accounted for at equity;
N: No inclusion due to irrelevance.
The shares in capital in % at the subsidiaries are calculated on the basis of an indirect participation in MANN+HUMMEL Holding GmbH, Ludwigsburg, and therefore represent 83.3% of the participation quota in MANN+HUMMEL Holding GmbH.

Company name and domicile	Consolidation status[1]	Equity interest %
MANN+HUMMEL Filtration Technology Mexico S. de R.L. de C.V., Ramos Arizpe, Mexico	F	83.3
MANN+HUMMEL Filtration Technology Distribution Mexico S.A. de C.V., Ramos Arizpe, Mexico	F	83.3
MANN+HUMMEL BRASIL LTDA., Indaiatuba, Brazil	F	83.3
MANN+HUMMEL ARGENTINA S.A., Buenos Aires, Argentina	F	83.3
MANN+HUMMEL Filtration Technology Venezuela C.A., Maracay, Venezuela	N	83.3
MANN+HUMMEL Filtration Technology Commercial Distribution C.A., Maracay, Venezuela	N	83.3
MANN+HUMMEL Filtration Technology Distribution Venezuela C.A., Maracay, Venezuela	N	83.3
MANN+HUMMEL COLOMBIA S.A.S., Bogotá, D.C., Colombia	F	83.3
MANN+HUMMEL LS+E HOLDING INC, Gastonia, NC, USA	F	83.3
Tri-Dim Filter Corporation, Louisa, VA, USA	F	83.3
MANN+HUMMEL (CANADA) INC., Trois-Rivières, Quebec, Canada	F	83.3
Seccua Americas, LLC, Wilmington, DE, USA	N	83.3
CleanAire, LLC, Washington, NC, USA	F	83.3
Asia		
MANN+HUMMEL Life Sciences & Environment Holding Singapore Pte. Ltd., Singapore, Singapore	F	83.3
MANN+HUMMEL FILTER TECHNOLOGY (S.E.A.) PTE LTD., Singapore, Singapore	F	83.3
MANN+HUMMEL Life Sciences & Environment Singapore Pte. Ltd., Singapore, Singapore	F	83.3
MANN+HUMMEL Middle East FZE, Dubai, United Arab Emirates	F	83.3
MANN and HUMMEL (Thailand) Ltd., Bangkok, Thailand	F	83.3
MANN+HUMMEL KOREA CO. LTD., Wonju, South Korea	F	83.3
MANN+HUMMEL JAPAN LTD., Shin-Yokohama, Japan	F	83.3
MANN AND HUMMEL FILTER PRIVATE LTD., Bangalore, India	F	83.3
Changchun MANN+HUMMEL Faway Filter Co., Ltd., Changchun, China	N	50.0
MANN+HUMMEL Filter (CHONGQING) CO., LTD., Chongqing, China	F	83.3
MANN+HUMMEL FILTER (SHANGHAI) CO. LTD., Shanghai, China	F	83.3
MANN+HUMMEL Filter (Shanghai) Trading CO. LTD., Shanghai, China	F	83.3
MANN+HUMMEL (CHINA) CO. LTD., Shanghai, China	F	83.3
MANN+HUMMEL FILTER (JINAN) CO. LTD., Jinan, China	F	83.3
MANN+HUMMEL Filter (Bengbu) Co., Ltd., Bengbu, China	F	83.3
Longkou MANN+HUMMEL Filtration Co., Ltd., Longkou, China	F	83.3
MANN+HUMMEL Ventures Pte. Ltd., Singapore, Singapore	F	83.3
MANN+HUMMEL (China) LIFE SCIENCE AND ENVIRONMENTAL CO., LTD., Kunshan, China	F	83.3
PT MANN and HUMMEL Filtration Indonesia, Jakarta, Indonesia	N	83.3
Chongqing U-Air Environmental Technology Co., Ltd, Chongqing, China	F	58.3

1 F: Consolidated group; E: Accounted for at equity;
N: No inclusion due to irrelevance.
The shares in capital in % at the subsidiaries are calculated on the basis of an indirect participation in MANN+HUMMEL Holding GmbH, Ludwigsburg, and therefore represent 83.3% of the participation quota in MANN+HUMMEL Holding GmbH.

Company name and domicile	Consolidation status[1]	Equity interest %
Henan U-Air Environmental Technology Co., Ltd, Nanyang, China	F	58.3
Shenzhen U-Air Environmental Technology Co., Ltd, Shenzhen, China	N	58.3
Suzhou U-Air Environmental Technology Co., Ltd, Shaxi, China	N	58.3
Australia		
MANN AND HUMMEL AUSTRALIA (PTY) LTD., Arndell Park, NSW, Australia	F	83.3
Africa		
MANN AND HUMMEL Filters South Africa (Pty) Ltd., Boksburg, South Africa	F	83.3
MANN AND HUMMEL FILTERS MOROCCO SARL AU, Casablanca, Morocco	F	83.3
2. Associates		
ABC S.A., Córdoba, Argentina	E	25.8

Ludwigsburg, May 7, 2024

MANN+HUMMEL International GmbH & Co. KG

The Management Board

Kurk Wilks
Emese Weissenbacher

1 F: Consolidated group; E: Accounted for at equity;
N: No inclusion due to irrelevance.
The shares in capital in % at the subsidiaries are calculated on the basis of an indirect participation in MANN+HUMMEL Holding GmbH, Ludwigsburg, and therefore represent 83.3% of the participation quota in MANN+HUMMEL Holding GmbH.

Independent auditor's report

To MANN+HUMMEL International GmbH & Co. KG

Opinions

We have audited the consolidated financial statements of MANN + HUMMEL International GmbH & Co. KG, Ludwigsburg, and its subsidiaries (the Group), which comprise the consolidated profit and loss statement and consolidated statement of comprehensive income for the fiscal year from 1 January to 31 December 2023, and the consolidated balance sheet as at 31 December 2023, consolidated cash flow statement and consolidated changes in equity for the fiscal year from 1 January to 31 December 2023, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of MANN + HUMMEL International GmbH & Co. KG, which was combined with the management report of the Company, for the fiscal year from 1 January to 31 December 2023.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB ["Handelsgesetzbuch": German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as of 31 December 2023, and of its financial performance for the fiscal year from 1 January to 31 December 2023, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Other information

The executive directors are responsible for the other information. The other information comprises the following parts to be included in the annual report, of which we obtained a copy prior to issuing this auditor's report, in particular the sections:

- Foreword by the Management Board
- Report of the Supervisory Board of MANN + HUMMEL Holding GmbH
- Insights

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the executive directors for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group’s ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group’s position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

Auditor’s responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group’s position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor’s report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive

directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Stuttgart, May 08, 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Heubach	Weber
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

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