MESSER
Gases for Life

125uccess Story

Annual Report of
Yeti GermanCo 1 GmbH 2022

Content

Group Management Report of Yeti GermanCo 1 GmbH

General Information on the Group

Overview of the Messer Industries Group

Yeti GermanCo 1 GmbH (the "company") is a holding company based in Sulzbach (Taunus) near Frankfurt/Main with a business address in Bad Soden am Taunus. It operates as a holding company and, together with its subsidiaries, associates and joint ventures, forms the Messer Industries Group (the "Group").

Yeti GermanCo 1 GmbH was founded as a joint venture company by Messer SE & Co. KGaA ("Messer Group") and CVC Capital Partners, with the purpose of assuming the management of the businesses in the Americas ("Messer Americas") acquired from Linde and Praxair as of March 1, 2019 and the businesses in Western Europe ("Messer Western Europe") contributed by Messer SE & Co. KGaA. In this context Messer SE & Co. KGaA contributed its Western European operating activities in Spain, Portugal, Switzerland, France, Belgium, the Netherlands, Denmark, Germany and the company in Algeria, plus a right-of-use asset for the 'Messer – Gases for Life' brand, to the joint venture for a period of ten years as of March 1, 2019. Yeti GermanCo 1 GmbH thus has its own subsidiaries in Western Europe, North and South America.

Founded in 1898, Messer is today the world's largest family-operated specialist for industrial, medical and specialty gases. Products and services are offered in Europe, Asia and the Americas under the 'Messer – Gases for Life' brand.

From acetylene to xenon, the Messer Industries Group offers a wide-ranging industrial and medical gas product portfolio – the company produces and markets industrial gases such as oxygen, nitrogen, argon, carbon dioxide, hydrogen, helium, welding shielding gases, specialty gases, medical gases and many different gas mixtures.

Changes in Group reporting in fiscal 2022

No changes were made to the consolidated group in the past fiscal year.

Financial performance indicators

The Messer Industries Group uses control parameters derived from operating performance indicators to manage its business. The most significant performance indicators are revenue, EBITDA, capital expenditure and net debt. Further explanations and a breakdown of indicators can be found in the sections on financial performance and financial position.

Non-financial performance indicators*

Safety, health, environmental protection and quality (SHEQ) have been firmly embedded in the family-operated Messer's guiding principles since its inception in 1898, and continue to be its top priority today. Messer is aware that well-organized safety and quality guidelines form the basis for handling operational risks safely and for improving operational performance. For this reason, the health and safety of our employees and environmental protection are an integral part of global quality management, which is reflected in various standards of the Messer Group. These have been regularly revised against the backdrop of the COVID-19 pandemic to continue effectively countering it.

Our research and development activities focus on new application technologies for using gases. All research aims to develop and optimize customer processes to maintain and improve our competitive standing. Customer-specific solutions are developed at our centers of competence. Research and development thus plays an important role. Costs are not recognized separately and development costs are not capitalized.

The following information on the six material non-financial performance indicators relates to the Group as a whole.

* The content of this section is voluntary and unaudited, but has been read critically by the auditor.

Occupational safety

Occupational safety is of great importance to the Messer Industries Group. Messer's safety guidelines reflect our position: "All work-related illnesses, injuries and accidents are avoidable."

The Messer Industries Group uses its management system to identify and control possible operational risks. The principles of this system are documented in a SHEQ manual and cover all relevant safety-related areas, such as risk management, safety training, safety tests, personal protective equipment, communication safety and accident investigation. The SHEQ manual is a part of compliance management at the Messer Industries Group and is updated and improved regularly.

In order to measure the success of the safety measures and initiatives, the following performance indicators are determined annually: work accidents with lost days and frequency of accidents (number of work-related accidents with lost days per million working hours) and accident severity rate (missing days per million working hours).

In 2022, 21 work accidents with lost days were reported in the Americas (previous year: 17) and 9 (previous year: 10) in Western Europe. The absenteeism rate of employees per million hours worked (accident frequency) was 1.9 (previous year: 1.5) in the Americas in 2022 and 6.0 (previous year: 7.0) in Western Europe, while the number of days lost (accident severity) was 74.0 (previous year: 29.5) per million hours in the Americas and 163.6 (previous year: 140.8) in Western Europe.

	2022 Americas / WEU	2021 Americas / WEU	2020 Americas / WEU	2019 Americas / WEU
Working accidents with lost days	21/9	17/10	19/4	18/10
Accident rate*	1.9/6.0	1.5/7.0	1.7/2.9	1.6/7.1
Accident severity*	74.0/163.6	29.5/140.8	27.8/34.4	21.6/186.4

*per million hours worked

Messer Western Europe is an active member of the European Industrial Gas Association (EIGA) and the International Oxygen Manufacturers Association ("IOMA") and Messer North America of the Compressed Gas Association (CGA) and the American Chemistry Council (ACC). Our experts regularly share experiences in order to learn from incidents in the industrial gas sector.

Transport safety

The transportation of gases and equipment by road and customer deliveries are activities that have high risk potential in the gas industry. The Messer Industries Group therefore pays special attention to the area of transport safety.

Most of the drivers who work for Messer in Europe are employed by external transport companies. These companies are responsible for training the drivers in accordance with the ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road).

In 2022, the number of avoidable accidents when transporting our cylinder gases was 47 in the Americas (previous year: 65) and nine in Western Europe (previous year: three). For every million kilometers driven, this corresponds to a frequency rate of 3.3 in the Americas (previous year: 4.3) and 1.4 in Western Europe (previous year: 0.5). The number of avoidable accidents when transporting liquefied gases was 180 in the Americas (previous year: 149) and five in Western Europe (previous year: one). The frequency rate for every million kilometers driven thus rose to 1.9 in the Americas (previous year: 1.6) and 0.3 in Western Europe (previous year: 0.1) in 2022. Unavoidable accidents are those caused by external factors beyond the driver's control. All other accidents are considered avoidable.

Accidents are to be reduced further in the future with the help of suitable supplier management, information on defensive driving and load safety. Messer also operates its own modular driver training package. The main issues covered by the training are:

- Statutory regulations (European and national regulations for the transport of dangerous goods by road)
- Technical aspects (hazards arising from product, vehicle and tank technology, vehicle checks, safety technology)
- Accident avoidance
- Defensive, economic driving

In addition, all drivers receive a manual specifically tailored to their work (bulk, cylinder or service vehicles). This ensures that the drivers have all the key information about their work to hand at all times.

IT Security and Digitalization

At Messer Western Europe, the Group IT Security Officer is responsible for coordinating security measures, creating standards and cultivating the corresponding expertise for all the individual companies. IT security supports the sustainability of our digitization and the physical security of our information, in addition to helping to ensure that our key business processes can be carried out by safeguarding the necessary availability of our systems. IT security services are devised by the IT Security team and its international members.

The duties of the Group Security Officer and the Group Digital Officer are performed by Messer SE & Co. KGaA for Messer Western Europe.

As part of the IT security campaign, a phishing simulation was also organized for employees this year. Employees were actively trained in the dangers of cybercrime using an awareness platform to improve their knowledge and reduce potential IT risks. As additional preventive measures, employees also took part in an assessment focusing on e-mail security, social engineering and password rules. The aim here too was to raise user awareness of risky or rash behavior and to improve information security proficiency.

At Messer Americas, cyber security is embedded in the general risk management program. This includes regular audits and checks on the part of third parties to assess the general cyber security situation and timely compliance with targets. At least twice a year, the Messer Americas Executive Committee is informed by the Chief Information Officer on the current status of cyber security as part of a formal update presentation. This allows us to monitor target achievement and agree and approve the necessary funding for additional tools and resources.

As part of redesigning the general management of the "cybersecurity roadmap," Messer Americas is currently implementing the "NIST Cybersecurity Framework". Within the IT environment, Messer Americas carries out checks and implements technologies to protect itself against cyber-attacks and threats. These include numerous cross-sector tools to monitor and protect end user devices, servers, business applications and cloud platforms. Members of the infrastructure and security organization monitor these regularly to ensure that weaknesses are resolved and ensure a quick reaction to attacks or emerging threats. Messer Americas has IT security guidelines and processes in place designed to ensure appropriate control and management of infrastructure, user access and data protection. Increasing awareness among staff and providing training are important aspects of the cyber security program at Messer Americas. This is achieved on the basis of a combination of training, communication and the use of online tools. Social engineering concepts heighten employee awareness and thus reduce potential vulnerability for threats and attacks.

In Western Europe, the change to the new IT infrastructure was almost completed in the reporting year. A cloud data center provided by Kyndryl Deutschland GmbH has supported central applications in line with current globally established standards since the previous year. The implementation of a standard, centrally administered software-based network technology ("SD-WAN") to link Messer locations in Western Europe was also completed. In conjunction with this, the previously mixed security infrastructure at the locations and their administration was standardized by Kyndryl Deutschland GmbH. Parallel to this, all client PCs and mobile devices were transferred to a central administration to ensure standard, state-of-the-art software and current security updates. This standardization process will be completed in fiscal 2023 with the full integration of some Messer companies that were not yet fully integrated as of the end of the reporting period. As well as these fundamental measures, there were also many additional local, regional and central digitalization initiatives. These are intended to promote digitalization, ensure flexibility and speed and at the same time meet our cybersecurity obligations.

Digitalization is one of the most important pillars in Messer Americas' operating strategy and provides a fundamental framework for using IT to drive growth at the companies. Management is responsible for increasing efficiency within information services, providing technologies which support the business strategy, while at the same time ensuring excellent service. The identification and prioritization of digitalization projects is what guides the IT strategy when selecting and implementing business software and flexible technology infrastructure. In the current technology landscape, platforms by leading providers such as SAP, Salesforce and Microsoft are used to help transform business processes, automation and data management. The use of cloud-based technology platforms is also an increasingly important element of the IT strategy to promote digitalization, ensure flexibility and speed and at the same time meet our cybersecurity obligations.

Data protection

Messer is committed to compliance with the applicable data protection regulations. Corresponding structures are therefore created to guarantee a high level of data protection at Messer in the long term.

The Messer SE & Co. KGaA Group Privacy Officer ("GPO") is responsible for the coordination of the central data protection department in Western Europe and also oversees implementation of data protection by the national subsidiaries. The GPO also provides a number of templates and processes to ensure a uniform standard of data protection.

Using a list of questions and an audit report developed by the GPO, a total of two (previous year: three) basic audits to establish the fundamental data protection level in the respective company were implemented in western Europe in 2022.

For Messer Americas, the data protection regulations are set out in a supplement to the Messer Group Code of Conduct and addressed in an e-learning module on "ethics and Code of Conduct". North America, Brazil, Colombia and Chile also have their own data protection policies.

In North America, Colombia and Chile employees from the Legal and Compliance and HR departments are listed who are responsible for data protection matters and requests. In Brazil, an external law firm has been engaged to respond to data protection matters and requests.

Environmental management

Ensuring the highest level of environmental protection is of the utmost importance to Messer. To live up to this, Messer uses its global management system for environmental protection. The internal environmental protection policies are documented in the Messer Industries Group's SHEQ Manual. The environmental management systems of the Western European and American subsidiaries are consistent with the international ISO 14001 standard, and those of the Western European companies also adhere to the recommendations of the European Industrial Gases Association (e.g. EIGA IGC Doc. 107 – Guidelines on Environmental Management Systems). As in the previous year, six of our subsidiaries in Western Europe had their environmental management systems externally certified in 2022. Messer Americas follows "the American Chemistry Council's Responsible Care Program". under which 28 (previous year: 29) locations in the US are certified. As in the previous year, in Colombia both air separation units and the CO_2 production site and four of nine locations in Brazil were ISO 14001-certified.

The efficient use of energy is in Messer's own interests. Pursuing the main goal of reducing costs and conserving resources, energy management is an ongoing process that also helps to reduce our carbon emissions. Our energy management system is certified according to ISO 50001 at all Messer production sites in Germany and Spain.

At its production sites, Messer uses atmospheric air and electricity as the main raw materials for producing air gases such as nitrogen, oxygen and argon. Production by air separation units accounts for more than 75 % of total energy consumption. The focus here is on the ongoing enhancement of energy efficiency. Messer SE & Co. KGaA has engaged a Global Energy Manager (GEO) specifically to improve the energy efficiency of air separation units. The GEO also performs this task for the Western European companies of the Messer Industries Group.

The continuous monitoring of unit performance means that deviations in energy consumption can be detected and potential for improvement identified. In cooperation with local managers, projects to improve energy efficiency are being initiated on an ongoing basis.

The volume of the gases produced in western Europe decreased by 1.4 % year-on-year in 2022. Specific energy consumption, measured as the energy consumption per cubic meter of gas sold, decreased by 0.4 % as against the previous year. The number of units in Messer Americas was updated, resulting in a 7.9 % reduction in production volume and a 8.2 % rise in specific energy consumption.

Being a member of the European Clean Energy Alliance and the H2BZ-Initiative e.V., Messer can contribute its comprehensive expertise in the field of industrial gases in the interests of the efficient and effective use of clean hydrogen with partners throughout Europe.

Customer satisfaction/quality

Taking the opinions and satisfaction of our customers into account is self-evident for Messer Industries as a responsible company, which is why we measure customer satisfaction in systematic surveys and integrate the results into our management processes. The analysis is repeated every two years at every European national company.

In Western Europe, we conducted customer satisfaction surveys in Germany, France, Spain and Switzerland in 2022 (previous year: France and Spain). In total, 8,529 customers (previous year: 2,612) were contacted, which yielded 913 responses (previous year: 391).
The results of the various surveys are summarized by region. On a scale from 1 for very dissatisfied to 10 for very satisfied, the performance of the Messer Industries Group in Western Europe was only slightly worse year on year at between 8.1 and 9.0 (previous year: between 8.4 and 9.0). However, the results remain at a high level overall.

A satisfaction survey for liquefied gases was performed in the US in fiscal 2022 (previous year: USA, Canada, Brazil, Colombia and Chile). 1,669 questionnaires were sent out (previous year: 16,026), 484 (previous year: 3,138) of which were analyzed. Satisfaction here was rated 8.3 (previous year: 8.7 for the entire Americas region). No data from customer surveys are available for Canada, Brazil, Colombia or Chile for fiscal 2022.

Economic Report

General economic conditions

The various industrial gases offered by the Group and the associated services and technologies are used in almost all industrial sectors, not to mention food technology, medicine, research and science. Gross domestic product (GDP), as it applies to all sectors and to the economy at large, is therefore a relevant indicator for the performance of the Messer Industries Group.

Oxford Economics Ltd., an independent economic research and advisory firm[1], stated that global GDP was 3.1 % lower than expected at the start of 2022 (4.1 % - 4.4 %). The International Monetary Fund (IMF) estimates GDP slightly higher at 3.4 %. Despite the war in Ukraine, high inflation, rising financing costs, the ongoing COVID-19 pandemic and supply chain disruption, particularly at the start of the year, the economy proved very stable. This was driven by factors including relatively high consumer spending after COVID-19 restrictions were eased and higher investment. Energy costs rose across the world.

There were considerable regional differences for GDP in 2022, with industrialized nations growing by 2.6 % (previous year: 5.4 %) and emerging markets by 3.7 % (previous year: 7 %). GDP growth within the industrialized nations in the eurozone came to 3.5 % in 2022 (previous year: 5.3 %), higher than the US figure of 2.1 % (previous year: 5.9 %). Higher growth in emerging markets compared to industrialized nations is primarily due to India, which picked up by 6.9 % (previous year: 8.3 %). China and Brazil generated growth of 3 % (previous year: 8.1 % and 5.3 %). Most countries thus proved very resilient despite high levels of uncertainty and exceeded the expectations made during the year[2].

Eurozone GDP grew by 3.5 % in 2022 compared to 5.3 % in the previous year, which was affected by the easing of COVID-19 restrictions. The war in Ukraine had an impact on inflation, which averaged 8.4 % (previous year: 2.6 %). The ECB raised its key interest rate to 2.5 % at the end of the year. Nevertheless, the economy was surprisingly resilient. This was bolstered chiefly by consumer spending, which picked up by 4.0 % (previous year: 3.7 %), and by capital investment (3.4 %). Energy prices experienced a sharper drop towards the end of the year than expected after peaking half way through the year. In this environment, eurozone growth was far stronger and more rapid than expected, with Germany up 1.9 % (previous year: 2.6 %), France up 2.5 %, (previous year: 6.8 %), Spain up 5.5 %, (previous year: 5.5 %) and Italy up 3.8 %, (previous year: 6.7 %).[3]

Economic growth in eastern European countries slowed markedly as a result of the war in Ukraine and the impact of this conflict, especially on energy and consumer prices. Nonetheless, GDP growth in eastern European countries in 2022 was between 2.5 % (Czechia) and 5.0 % (Hungary). Consumer spending increased in Poland (3.0 %), Romania (6.4 %) and Hungary (7.2 %) and declined year on year in Czechia (0.5 %).[4]

China’s economic growth in 2022 was hit hard by numerous lockdowns due to outbreaks of COVID-19. The number of COVID-19 cases climbed rapidly in December after strict measures to contain the pandemic

[1] Oxford Economics Inc. – World Economic Prospects, February 2023
[2] Oxford Economics Inc. – World Economic Prospects, February 2023
[3] Oxford Economics Inc. – World Economic Prospects, February 2023
[4] Oxford Economics Inc. – Country Economic Forecast, January 2023

were lifted. Investment in the Chinese real estate market continued to fall, with restructuring making only slow progress. Consumer spending declined by 0.1 % year on year in 2022. Consumer confidence and future income expectations were far lower than they have been for the last decade.[5]

In the USA, GDP picked up by 2.1 % despite the challenging environment (previous year: 5.9 %), but still fell short of expectations. This reflected higher inflation of 8.0 % (previous year: 4.7 %) and the resulting increase in financing costs to 4.4 % (previous year: 0.1 %), which rose to the highest level seen since the first quarter of 2001. At 2.8 %, consumer spending was down on the previous year's figure of 8.3 %, partly due to lower private savings on account of high inflation. Investment in housing construction also slumped by a considerable 26.7 % on the previous year.[6]

Brazil boosted its GDP by 3.0 %, compared to growth of 5.3 % in 2021. Consumer spending in the country rose by 4.1 % (previous year: 3.7 %).[7]

Business performance

Industrial gases business is defined by a pronounced and highly varied diversification across economic sectors, customer segments and national activities. Furthermore, industrial gases business is locally structured, which means that it is not directly dependent on global supply chains. The economic recovery that continued in 2022 thanks to the easing of pandemic restrictions resulted in rising demand for industrial gases on our relevant markets, especially in Europe.

For the Messer Industries Group, like the global economy as a whole and especially in Europe, fiscal 2022 was shaped by the war in Ukraine and its macroeconomic effects. Nonetheless, demand remained high for liquefied gases and hardware in North America. Business in Western Europe also performed well in connection with the general economic recovery, driven by massive, inflation-related price increases as well as higher demand for industrial gases. South American business activities remained strong over the entire year, with rising demand for both medical and industrial gases. Particularly the Brazilian economy continued to prove robust across most markets.

The Messer Industries Group even exceeded the forecast of a moderate increase in revenue growth, picking up by 22.3 % K€ to 2,590,456. Contrary to our expectations of a moderate decline, EBITDA (K€ 749,325) climbed by 18.2 %, a considerable improvement. This good performance primarily reflected successful pricing.

We anticipated a sharp decline in the Messer Industries Group's net debt. Despite reducing high levels of cash and cash equivalents, however, debt declined by only a moderate K€ 38,018 (2.1 %). This stems largely from currency effects from the change in the USD exchange rate.

As forecast, the Messer Industries Group capital expenditure (K€ 360,197) moved up strongly against the previous year, by 21.7 %. This was driven largely by capital expenditure for large projects in the North America region.

[5] Oxford Economics Inc. – Country Economic Forecast, February 2023
[6] Oxford Economics Inc. – World Economic Prospects, February 2023
[7] Oxford Economics Inc. – Country Economic Forecast, January 2023

Overall situation of the Group

Results of operations

In fiscal 2022, the Group generated global revenue of K€ 2,590,456 (previous year: K€ 2,118,710), which breaks down among the individual regions as follows:

Revenue	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021	Change in 2022
North America	1,742,131	1,431,168	21.7 %
Western Europe	488,762	391,530	24.8 %
South America	359,563	296,012	21.5 %
Total	**2,590,456**	**2,118,710**	**22.3 %**

Business activities in the various regions developed as follows:

North America
North America generated revenue of € 1,742 million (previous year: € 1,431 million). This year-on-year improvement is essentially thanks to price increases combined with largely stable sales volumes. One reason for the pricing measures was that the higher cost of sales due to inflation was passed on. This mainly affected liquefied gases such as oxygen, nitrogen and argon, but also had an impact on electronic gases. Favorable helium prices were partially offset by lower sales volumes. The appreciation of the US dollar and the Canadian dollar against the euro also had a positive effect here.

Western Europe
Revenue of the Western European companies was up by € 97 million as against the previous year at € 489 million. This upturn is entirely due to successfully implementing price increases. This were the result of consistently high energy prices compared to the previous year that peaked in the middle of the year and recovered slightly at the end of the year. Sales volumes were mostly constant in the past fiscal year, with increases achieved only for liquid CO_2 after two new plants were commissioned in France and Belgium.

South America
The South America division generated revenue of € 360 million (previous year: € 296 million). Brazil accounted for a significant portion of this (€ 241 million, previous year: € 181 million). This rise was primarily due to price hikes as a result of passing on higher energy prices to customers. Lower demand for medical oxygen as the COVID-19 pandemic eased in Brazil and Colombia partially offset the positive price effect. Revenue performance was also shored up by the appreciation of the Brazilian real against the euro.

The Group generated global EBITDA of K€ 749,325 in fiscal 2022 (previous year: K€ 634,130).

EBITDA	**Jan. 1 – Dec. 31, 2022**	Jan. 1 – Dec. 31, 2021
Operating profit/EBIT	357,337	279,162
Depreciation of property, plant and equipment, amortization of intangible assets and impairment	391,915	354,837
Income from investments	73	131
EBITDA	**749,325**	**634,130**
Revenue	2,590,456	2,118,710
Margin:	**28.9 %**	**29.9 %**

The operating profit essentially includes costs of sale of K€ 1,293,760 (previous year: K€ 1,073,993), selling and distribution expenses of K€ 760,208 (previous year: K€ 627,562) and general and administrative expenses of K€ 188,171 (previous year: K€ 171,960).

The EBITDA of the North America region improved considerably to € 481 million (EBITDA margin: 27.6 %) after € 431 million in the previous year with an EBITDA margin of 30.1 %. This development is in line with increased revenue stemming from favorable pricing. The lower EBITDA margin is the result of a K€ 26,917 special effect in the USA in the previous year. On the basis of energy swaps, excess energy was returned to the supplier at a very high market price.

Western Europe generated EBITDA of € 150 million (previous year: € 114 million), corresponding to an EBITDA margin of 30.7 % (previous year: 29.2 %). The increase resulted primarily from passing on higher energy and transport costs to customers. The rise in cost of sales with higher costs of electricity and fuel offset revenue growth, which reduces EBITDA.

South America reported EBITDA of € 118 million (previous year: € 88 million) with an EBITDA margin of 32.8 % (previous year: 29.9 %) in fiscal 2022. This primarily reflects higher selling prices, as well as increased efficiency in the production process and improved cost management.

At K€ 59,517 (previous year: K€ 64,245), the net financial result is largely due to a negative net interest result. During the year € 21 million of the financial liabilities raised in 2019, essentially to finance the Linde/Praxair transaction, were repaid as planned and € 273 million repaid on an unscheduled basis. Capitalized transaction costs of K€ 15,103 (previous year: K€ 17,825) were amortized.

In the reporting year, there was a tax expense of K€ 78,718 (previous year: K€ 52,806), corresponding to a tax rate of 25.6 % (previous year: 26.4 %).

In total, consolidated net income including non-controlling interests of K€ 229,193 (previous year: K€ 147,378) was generated in fiscal 2022. K€ 228,238 (previous year: K€ 146,740) of this relates to the shareholders of the company.

Financial position

The Messer Industries Group's Group Treasury is responsible for overall liquidity, interest rate and currency management. The most important objective for Group Treasury is to ensure that the Group has a minimum level of liquidity to guarantee solvency at all times. High levels of cash funds (K€ 167,370) improve our flexibility, security and independence. We can generate additional liquidity as necessary through various other unutilized credit facilities amounting to € 331 million (previous year: € 322 million).

Financing

The Messer Industries Group is financed by a credit agreement with a syndicate of banks headed by CITIBANK N.A., UK. The loan agreement serves to partially finance the purchase price payment for the Linde AG and Praxair business acquired in North and South America in 2019 and to finance ongoing business operations.

The credit agreement contains three facilities:

- "Facility B-1" of USD 2,225 million, a long-term, fully utilized loan with a term of seven years. The borrower is Messer Industries USA, Inc., USA. The loan will be repaid quarterly at 0.25 % of the original amount, starting on June 28, 2019. There have been unscheduled redemptions totaling USD 490 million since March 31, 2021. The balance will be repaid in full on March 1, 2026. The margin is 2.5 % p. a. or 1.5 % p. a. depending on the underlying refinancing base of the banks. As of December 31, 2022, the margin was 2.5 % p. a.

- "Facility B-2" of € 540 million, a long-term, fully utilized loan with a term of seven years. The borrower is Messer Industries GmbH. There have been unscheduled redemptions totaling EUR 235 million since March 31, 2021. The remaining amount of the loan is due on March 1, 2026. The margin was initially 2.75 % p. a., until August 28, 2019, since when it has been subject to an adjustment mechanism based on the development of the ratio of senior net debt to consolidated EBITDA. As of December 31, 2022, the margin was 2.5 % p. a.

- Revolving facility of USD 450 million: The borrowers are Messer Industries GmbH and Messer Industries USA, Inc., Delaware, and any other company that secures the loan agreement as a guarantor. The facility can be used to finance working capital and for all general financing requirements of the company on a revolving basis. There is no need to reduce the loan to zero at any time during its term. It is available until March 1, 2024. The margin was 1.75 % p. a. or 0.75 % p. a. until August 28, 2019, depending on the underlying refinancing base of the banks. Since this time, it has been subject to an adjustment mechanism based on the development of the ratio of senior net debt to consolidated EBITDA. As of December 31, 2022, the revolving facility was used only for guarantees. The margin here was 0.75 % p. a.

Guarantees provided by individual Group companies serve as collateral for the financing. Investments in Group companies, property, plant and equipment, bank balances, trade receivables and receivables from affiliated companies were also pledged.

Net debt amounted to K€ 1,784,503 (previous year: K€ 1,822,521) as of December 31, 2022 and is calculated as follows:

	Dec. 31, 2022	Dec. 31, 2021	Change in 2022
Financial Liabilities	1,951,873	2,097,438	(6.9) %
Cash and cash equivalents	(167,370)	(274,917)	(39.1) %
Net debt	**1,784,503**	**1,822,521**	**(2.1) %**

The ratio of existing financial liabilities (K€ 1,951,873) to total assets (K€ 5,088,027 was 38.4 % (previous year: 43.0 %). The ratio of existing financial liabilities to EBITDA (K€ 749,325) was 2.6:1 (previous year: 3.3:1).

The change in financial liabilities is shown below:

Financial liabilities as of Jan. 1, 2022	**2,097,438**
Cash changes:	
New debt raised	6,688
Payments of principal	(324,372)
Non-cash changes:	
Additions to lease liabilities	51,312
Changes due to currency translation	105,704
Amortization of transaction costs	15,103
Financial liabilities as of Dec. 31, 2022	**1,951,873**

Statement of cash flows

The statement of cash flows is as follows:

Condensed version in K€	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Profit before tax	307,911	200,184
Cash flow from operating activities	588,177	635,648
Cash flow from investing activities	(336,964)	(282,825)
Cash flow from financing activities	(368,616)	(498,431)
Changes in cash and cash equivalents	**(117,403)**	**(145,608)**
Cash and cash equivalents		
at the beginning of the period	**274,917**	**410,807**
Currency translation effect on cash and cash equivalents	9,856	9,718
at the end of the period	**167,370**	**274,917**

Cash flow from operating activities was K€ 588,177 and therefore K€ 47,471 lower than the previous year's level. Despite the higher consolidated net profit (K€ 307,911, previous year: K€ 200,184), this was chiefly due to price increases and, in turn, higher trade receivables (K€ 359,226, previous year: K€ 283,289) and lower changes in trade payables compared to the previous year. Currencies from cash pooling also had a major impact on the Other liabilities item. Another factor in the decline in cash flow from operating activities was a € 18 million purchase price payment to Linde from unused tax provisions.

The development in cash flow from investing activities was defined largely by investments in property, plant and equipment and intangible assets of K€ 352,952 (previous year: K€ 292,464). This was offset chiefly by cash generated from the proceeds of disposals of property, plant and equipment and intangible assets (K€ 5,847, previous year: K€ 5,145) and interest received (K€ 9,986, previous year: K€ 4,259).

The cash flow used in financing activities amounted to K€ 368,616 (previous year: K€ 498,431). In the past fiscal year, financial liabilities were reduced by K€ 298,088, not only on the basis of regular installments, but also by unscheduled repayments (previous year: K€ 414,260). There were cash outflows of K€ 67,110 (previous year: K€ 62,852) for interest essentially related to financing.

The cash funds of the Messer Industries Group amounted to K€ 167,370 (previous year: K€ 274,917) as of December 31, 2022.

Operating business will continue to grow in fiscal 2023. We will make investments and repay maturing loans and interest. We generate the funds required from cash flow from operating activities, available cash and unutilized credit facilities. Medium-term planning is still focused on the consolidation of net debt for our business activities in the US.

The Group has undertaken to invest in the acquisition, construction and maintenance of various production facilities. Obligations of this kind relate to the future purchase of plant and equipment at market prices. There are also long-term contracts giving rise to obligations. The commitments under orders, investment projects and long-term contracts amounted to K€ 648,078 as of December 31, 2022 (previous year: K€ 584,685).

Capital expenditure

Capital expenditure continues to focus on safeguarding existing business and exploiting profitable growth potential. In line with business principles, we primarily invest in projects that safe-guard our product supply or that offer opportunities for profitable growth. We also regularly invest in the modernization of production systems and distribution channels.

The capital expenditure of the Messer Industries Group as a whole is explained below.

In 2022, the Messer Industries Group invested around € 360 million (previous year: € 295 million) in intangible assets and property, plant and equipment. Expressed as a percentage of total revenue, capital expenditure amounts to 13.9 % (previous year: 14.0 %).

Capital expenditure breaks down by region as follows:

Capital expenditure in K€	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
North America	274,892	205,291
Western Europe	61,398	73,717
South America	23,900	16,470
Total	**360,190**	**295,478**

In North America, investment of € 275 million (previous year: € 205 million) again focused on safe-guarding existing business, projects, on site plants and air separation units in the field of liquefied gases with opportunities for profitable growth. These investments in intangible assets and property, plant and equipment related primarily to projects amounting to € 171 million (previous year: € 122 million). These include the laser gas plant in Coolbaugh, Pennsylvania, USA (€ 20 million), new air separation units in Delta, Ohio, (€ 33 million) and McGregor, Texas (€ 13 million), both USA; and the maintenance of air separation units in Coffeyville, Kansas (€ 14 million) and Arroyo, West Virginia, (€ 6 million), both USA. € 104 million (previous year: € 83 million) was also invested in sales equipment, maintenance and boosting productivity.

Of the capital expenditure of € 61 million (previous year: € 74 million) in Western Europe, € 25 million relates to large-scale plant projects (previous year: € 44 million) and € 36 million to operating activities (previous year: € 30 million). The largest project was the € 16.1 million new air separation unit Messer V in Tarragona (Spain). We invested a further € 1.7 million in the LACQII CO2 plant in France and € 1.8 million to maintain the air separation unit in Speyer, Germany. Investments in operating activities mainly related to the investments in tanks, cylinders and trucks to support the core business and maintain machinery and equipment.

In South America, capital expenditure amounted to € 24 million (previous year: € 16 million), € 19 million of which (previous year: € 16 million) related to operating activities and the maintenance of existing systems. A total of € 5 million (previous year: € 1 million) was invested in projects, € 1.1 million of which in a new nitrogen generator in Brazil and € 0.7 million in a nitrogen liquefier in Curitiba, Brazil.

Net assets

Total assets increased by K€ 212,389 in the reporting year to K€ 5,088,027 as of December 31, 2022. The main contributing factors were the increase in property, plant and equipment of K€ 154,604, trade receivables of K€ 75,937 and current financial assets of K€ 55,408. On the other hand, cash and cash equivalents declined by K€ 107,547.

At 79.7 %, non-current assets again accounted for the largest share of total assets (previous year: 79.6 %).

As before, the largest item on the assets side was capital assets (goodwill, right-of-use assets, other intangible assets, property, plant and equipment). At 78.4 %, this item was up by 4.3 % as against the previous year (78.4 %). This change mainly results from investing activities in the current fiscal year, depreciation and amortization and currency effects. Exchange rate changes resulted in an increase of K€ 159,496.

The equity ratio (including non-controlling interests) increased moderately to 35.2 % (previous year: 29.6 %). This was essentially thanks to positive net profit of K€ 229,193 (previous year: K€ 147,378) and the development of the hedging reserve of K€ 101,230 (previous year: K€ 33,027).

Financial liabilities amounted to K€ 1,951,873 in the fiscal year (previous year: K€ 2,097,438) and accounted for 38.4 % (previous year: 43.0 %) of total equity and liabilities. Further information on this can be found under "Financial position".

Operating assets

Net working capital breaks down as follows:

Operating assets in K€	Dec. 31, 2022	Dec. 31, 2021
Inventories	177,255	173,178
Trade receivables	359,226	283,289
Trade payables	(201,792)	(194,171)
Liabilities for outstanding invoices	(109,349)	(96,106)
Prepayments received	(19,623)	(22,187)
	205,717	**144,003**

The increase in operating assets of K€ 61,714 is essentially due to the rise in trade receivables at our companies in the US, Brazil and France.

The ratio of inventories (less prepayments received) and trade receivables to trade payables (plus liabilities for outstanding invoices) was 1.7:1 (previous year: 1.5:1). The ratio of operating assets to revenue was 7.9 % (previous year: 6.8 %).

Days sales outstanding (DSO) slightly increased to 50 (previous year: 48).

Overall statement on the economic situation

Business development in 2022 also exceeded expectations in place when acquiring the new business activities in 2019. The Messer Industries Group has an international presence with its three main regions of Western Europe, North America and South America, and is regionally diversified in a large number of countries within these three core regions. Weak demand on individual markets or downturns in specific industries can therefore often be compensated.

Forecast Report

General economic development

Oxford Economics assumes that GDP growth will shrink to 1.5 % for 2023, lower than the 3.1 % seen in the previous year. This forecast is more cautious than that of the IMF, which anticipates growth of 2.9 %. Inflation will ease in 2023 as a result of lower commodity prices and weaker growth, especially in the second half of the year. This phase of interest rate hikes by central banks will be completed earlier in the US than in the eurozone. Rates are not expected to decline this year. Supply chain disruptions caused by the COVID-19 pandemic are increasingly stabilizing. However, political crises can create further supply uncertainty at any time. Experts assume that the war in Ukraine will continue in 2023 and, in turn, that political and economic relations between Russia and the west will remain strained. Current global trade barriers between China, the US and Europe will not be reduced. As well as these risks, fragile political situations and natural disasters as a result of climate change can present economic risks[8].

Eurozone economic development in 2023 will be shaped by uncertainty regarding energy prices, the war in Ukraine and the impact of tighter monetary policy by the ECB. Accordingly, Oxford Economics expects eurozone GDP to grow more slowly in 2023 than in the previous year (0.4 % versus 3.5 %). Inflation will abate over the course of the year, averaging 4.9 % in the year as a whole (previous year: 8.5 %). Lower prices for energy, food and industrial goods will cause inflation to trend downwards, especially in the second half of the year. Consumer spending, which is recovering only slowly after a weak Q4 2022, will pick up by 0.3 % in 2023 as a whole. Financing costs will continue to increase in 2023[9].

GDP growth in the US is estimated at 0.1 % (previous year: 2 %). Consumer and energy prices in the US will remain high in the first half of the year before declining sharply, with inflation of 4.4 % expected for 2023. Financing costs will thus likely be increased by another 25 basis points in 2023. Consumer spending will pick up by 0.8 % and will therefore be weaker than in the previous year (2.8 %). One reason for this is that incomes are growing more slowly than consumer prices.

Brazil is expected to see slight GDP growth of 0.4 %, after growth of 3 % in 2022. Public debt will increase as a result of the change in political direction and financing costs will remain high.

In Colombia, GDP will shrink by 1.5 % year on year. Consumer spending will slow on account of high inflation and high financing costs.[10]

After the COVID-19 wave at the end of 2022, China is expected to generate growth of 4.5 % in 2023 as a whole (previous year: 3 %). This growth will be driven primarily by higher consumer spending (8.1 %), although it is still lower than average annual growth rates between 2010 and 2019 (9.3 %). Low investment and weak construction activities are still expected on the real estate market in 2023 due to the low number of new buildings completed in 2022.[11]

[8] Oxford Economics Inc. – World Economic Prospect – February 2023
[9] Oxford Economics Inc. – Country Economic Forecast – February 2023
[10] Oxford Economics Inc. – Country Economic Forecast – January 2023
[11] Oxford Economics Inc. – Country Economic Forecast – February 2023

Outlook for the Messer Industries Group

Despite geopolitical challenges and the sharp rise in inflation and interest rates, the Messer Industries Group again exceeded its forecasts for almost all key financial performance indicators as of December 31, 2022. The medium-term planning of the Messer Industries Group is still defined by efforts to boost profitability and to reduce net debt. Through suitable investment, we intend to further increase revenue in line with the general economic conditions and utilize selected measures to stabilize or increase the Messer Industries Group's profitability.

The forecast figures were prepared in fall 2022 and are therefore based on forecasts of economic performance in the planning period prepared at this time. Overall, more cautious economic development is assumed for both Europe and the Americas in 2023.

In line with this moderate performance, the outlook for North America for the fiscal year 2023 anticipates a slight rise in revenue. This primarily reflects inflation-driven price revisions, especially for the helium business. With higher revenue and additional measures to boost productivity, we anticipate a moderate rise in EBITDA.

In Western Europe, we expect energy prices to remain high in the fiscal year ahead on account of the current energy crisis caused by Russia's invasion of Ukraine. This will further drive inflation and hold back economic activity in the region. In this environment, the sharp rise in energy prices will also continue to affect our selling prices. Our business activities in Europe continue to focus on economically optimized utilization of the new production capacity created in recent years, selected customer projects, targeted capacity expansion and mitigation of high energy costs on the back of reducing costs and optimizing business processes.

For South America, we anticipate a moderate decline in revenue and EBITDA. Improved performance indicators due to inflation-driven price hikes will be offset entirely by the expected depreciation of local currencies and resulting currency losses against the euro.

The developments of the most important financial performance indicators of the Messer Industries Group for 2023 are planned as follows:

	2023 vs. 2022
Revenue	Moderate increase
EBITDA	Slight increase
Capital expenditure	Strong increase
Net debt	Strong decrease

Taking account of global economic performance, the Messer Industries Group expects to see a moderate upturn in revenue, chiefly due to higher selling prices in Europe stemming from energy prices and inflation-driven price hikes in the Americas.

In line with the increased revenue, we anticipate a slight rise in EBITDA overall. Positive effects from measures to boost productivity in North America will be partially offset by high costs, especially in Western Europe, and currency losses in South America.

We will make future investment decisions in line with an appropriate development in the net debt of the Messer Industries Group. The investment activities appropriate to this objective are carried out to a chosen degree to support the solid, long-term earnings development of the Messer Industries Group.

Planning for the fiscal year 2023 assumes that the year will no longer be shaped by the effects of the COVID-19 pandemic. On the other hand, we take account of the impact of the war in Ukraine, both in terms of the higher revenue in Europe due to energy prices and in terms of the pressure on margins as a result of the cautious economic outlook. We expect that growth momentum in North America will be more moderate in 2023. In Western Europe, we also anticipate comparatively low economic growth. We expect to see strong market growth in South America that will be reduced in real terms by high inflation.

Forward-looking statements

This forecast contains forward-looking statements based on management's current appraisal of future developments. The statements should not be interpreted as a guarantee that these expectations will actually occur. The future business performance and earnings of the Messer Industries Group are dependent on a number of risks and uncertainties, and can therefore diverge significantly from the forward-looking statements made here.

Report on Opportunities

As an international supplier of industrial gases, opportunities arise for the Messer Industries Group from the versatile applications for industrial gases in the manufacture of products needed in all fields of life and every country of the world. Through our investments, we seize the corresponding opportunities to tap new business potential and to maintain and expand our market position.

Specifically, the following opportunities in particular could be significant to business development and to financial position and financial performance of the Messer Industries Group. They are listed in the order of importance.

Opportunities through sustainable practices

Sustainability is a complex issue that permeates all areas of an organization – from product development and HR issues to digitalization and climate neutrality. To do justice to the requirements of our stakeholders, sustainability must be reflected in our actions and attitudes. One way that this is expressed is the first production facility for air gases in Texas, USA, which will run on energy from our own solar park. This is the first Messer air separation unit to have its energy requirements covered by a nearby renewable energy source to reduce carbon emissions. A further significant contribution to decarbonization is the use of clean hydrogen, which will be a key area for our capital expenditure over the coming years.

Opportunities through digitalization

Digitalization and networking have to keep progressing in the Company if it is to remain competitive. It is therefore essential to improve employees' understanding of cyber and technology risks on an ongoing basis to create a strong, digital corporate culture. We have laid the groundwork for this with the reorganization of our IT infrastructure to create a multi-cloud environment. We work with IBM and Microsoft here as our technology partners and attach great importance to globally established standards at all our national subsidiaries for the operation of our central IT systems and applications. This also applies to protecting the data and information provided by such systems. Our tools used to support our production, bulk and cylinder gases management are subject to continuous improvement, which has wide-ranging impact on the value-added chain of our company and our customers. New, coordinated digital processes with optimized plant management reduce the use of electrical energy and improve our tour planning. This makes a positive contribution to environmental protection, while at the same time reducing our production and operating costs, which could have a positive effect on our bottom line.

Opportunities through our employees

The COVID-19 pandemic transformed the world of work, with working from home becoming increasingly important and establishing itself as a suitable form of work. The Messer Industries Group is developing concepts which allow not only hybrid but also shared working places. By increasing the number of flexible working models, we also want to bolster employee loyalty and satisfaction. The Messer Industries Group promotes ideas and perspective management throughout the organization, allowing our employees to suggest improvements across all national borders. In addition, we support the active development and use of our employees' potential through systematic personnel development programs and training. We firmly believe that investing in the development of our employees promotes our corporate culture as a whole and can have a positive effect on revenue and results.

General economic opportunities

The overall economic environment generally influences our business activities, our financial position and financial performance and our cash flows. Our forecast for 2023 is based on the expectation that the future economic framework will be consistent with the information presented in the forecast section of this management report. If the global economy as a whole or in regions/countries relevant to our business develop better than shown in this forecast, our revenue and earnings could outperform the forecast.

Opportunities through industrial gas applications

Our products are used in a variety of production processes worldwide. In the field of application technology, the Messer Industries Group continuously analyzes processes to enhance production efficiency for our customers through the use of industrial gases. New applications identified in this way could open up corresponding business potential with a positive impact on revenue and earnings.

Risk Report

As an international supplier of industrial gases, we face risks with that are inextricably linked to our entrepreneurial activity. In addition to fluctuating demand for industrial gases and the related products, future earnings development is also dependent on economic trends in individual countries that are beyond the Group's control.

Each of the risks described below can have an adverse impact on our business development and thus on our financial position and financial performance. We present these risks in gross terms, i.e. mitigating factors have not been taken into account.

Geopolitical risks

The geopolitical situation in Central and Eastern Europe (CEE) escalated on February 24, 2022 when Russia invaded Ukraine. In response, the European Union, the United States of America and a number of other states imposed sanctions on the Russian economic and financial system, which put massive constraints on the economy. Russia responded in turn with countermeasures. The impact of this conflict has so far been felt only indirectly by the Messer Industries Group's North and South American subsidiaries, whereas it has had more of an effect on its European subsidiaries due to their geographical proximity. We describe the effects in the cost risks. Overall, however, we consider the geopolitical risk for the Messer Industries Group low.

Economic risks

The Messer Industries Group's business success also depends to a certain extent on economic factors, as an economic downturn can reduce purchasing power in the market in question. The Messer Industries Group supplies a wide range of industries and sectors, including steel production and metal processing, the chemicals industry, petrochemicals industry, food and beverage industry, the glass industry and healthcare. It does so on the basis of long-term supply agreements running from between up to 15 years in Europe to up to 20 years in the Americas. A significant reduction in market demand in any one of these key industries or sectors could adversely affect future earnings. The war in Ukraine prompted a surge in energy costs and rising inflation in the eurozone.
In North America and Canada, inflation is now declining again after rising sharply in 2022 as a result of the COVID-19 pandemic. South America is split into two camps: Brazil is seeing a rapid decline in inflation, whereas inflation in Chile and Colombia is falling only very slowly.[12]

The Messer Industries Group's strong position in North America and Canada, which accounts for a revenue share of more than 60 % and a large share of its earnings, could offset the negative impact of economic down phases in other markets. We rate economic risks for the Messer Industries Group as medium overall.

[12] Source: https://tradingeconomics.com/

Market risks

Industrial gases business is subject to competition, with the effect of globalization on the Messer Industries Group varying according to geographical location. In addition, the highly competitive environment in individual countries could lead to disproportionate price trends that reduce our future revenue and earnings. Any change in the competitive environment could reduce Messer's future earnings and cash flows. The Messer Industries Group operates in a large number of countries, and it is therefore exposed to local political, social and economic conditions and the resulting risks.

The war in Ukraine and the associated rise in energy costs also increases market risks for the Messer Industries Group. This is particularly true for countries where energy supply is dependent on natural gas and for energy-intensive companies that halt or sharply curtail their production. Overall, we currently market risks for the Messer Industries Group as medium.

Health risks

The Messer Industries Group supplies a wide range of industries and sectors, most of which run global production operations. Their supply chains can be severely disrupted by a pandemic or by epidemics in major manufacturing countries. The COVID-19 pandemic that broke out in the spring of 2020 not only had serious consequences for health, it also took a toll on the global economy and public life as a result of strict state restrictions and curfews. The Messer Industries Group also felt the effects of the COVID-19 pandemic but managed to deflect serious consequences thanks to its diversified business portfolio and its corresponding ability to compensate for weaker segments with more profitable ones. COVID-19 precautions for Messer Industries Group employees in place since 2020 have proven effective. We currently rate the risk of prolonged economic disruption as low.

Cost risks

Regulatory or governmental changes or intervention in the energy sector can lead to rising energy prices in individual countries. Rising energy requirements are causing considerable volatility in oil and energy prices with corresponding implications for the operating materials and precursors required by the Messer Industries Group. As a result of the sharp increase in the price of natural gas, the fuel used to generate electrical energy in Europe, energy prices continued to climb in 2022. Overall, demand for energy is rising across the globe, in turn driving energy prices on the international stage. Purchase prices for individual significant products can thus fluctuate considerably. In Western Europe and the USA, management is implementing measures to contain these commodity risks, including the electricity price risk arising from electricity purchases for operating activities. The aim is to hedge these risks as far as possible and reasonable.

The Messer Industries Group can often pass cost electricity price increases on to its customers through price escalation clauses or mitigate them with long-term procurement contracts. Nevertheless, price increases for energy and external procurement costs can reduce the profitability of the Messer Industries Group and pose an EBITDA risk in the low tens of millions. Higher prices for fuel such as diesel also make it more expensive to transport our products. We currently rate the cost risk for the Messer Industries Group as medium, primarily in view of the sanctions currently imposed on Russia.

Product procurement risks

The ability of the Messer Industries Group to serve our clients with a broad range of products and services depends not only on our own production, but also on the products and services that we obtain from internal and external suppliers.
The main objective is to be able to deliver to clients reliably and with appropriate quality at all times. The availability of appropriate quantities of products and services at appropriate prices is the key to achieving this goal. Nevertheless, there is a risk of supply difficulties or breakdowns as a result of product shortages, particularly for helium or raw carbon dioxide, or the loss of individual suppliers. Furthermore, procurement from an alternate source could lead to a cost risk if products and services can only be obtained at higher prices or higher transport costs. This can pose an EBITDA risk in the low tens of millions.

The Messer Industries Group counters this risk on the basis of a broad supplier network and strict monitoring of product availability. Furthermore, we are always on the lookout for additional alternative suppliers. We currently rate product procurement risks for the Messer Industries Group as medium, in part on account of the negative impact on various areas of supply chains as a result of Russia's invasion of Ukraine.

Transportation risks

A further risk at the Messer Industries Group is supplying its clients with the required quantity and quality of products at the right time and the right place. To do this, we deploy internal and external distributors that transport our products to clients, generally by truck. On the other hand, we are also dependent on the distributors of our suppliers to ensure that products are available in sufficient quantities at all times. When using truck transportation, there is the risk of product losses resulting not only from unsuitable product storage but also inadequate transport safeguards or accidents. What is more, closure of relevant transportation routes can result in delays, and thus higher costs. In the USA in particular, the Messer Industries Group operates its own truck fleet and employs its own drivers. There is currently a shortage of skilled staff on the labor market, which poses the risk of it not being possible to employ enough drivers to service demand. Furthermore, there is a cost risk that higher demand for specialist staff could result in higher wages. There has been a shortage of qualified truck drivers in the eurozone since the COVID-19 pandemic. This shortage got worse when Russia invaded Ukraine and may adversely affect our product distribution. The Messer Industries Group counters this risk by carefully selecting a broad network of distributors. We also monitor the resources that are required and available on an ongoing basis. We currently rate transportation risks as medium.

Operational risks

Business interruption due to unexpected infrastructure disruptions caused by accidents, sabotage, criminal activities or climate-related events (such as heat waves, flooding, hurricanes or other natural disasters) and other unpredictable adverse factors may lead to manufacturing and supply disruption at our production facilities. The Messer Industries Group's production facilities are regularly maintained and continuously monitored. In the event of damage, we have emergency and contingency plans in addition to other tools to mitigate the financial consequences of a business interruption for our customers. The Messer Industries

Group is working to improve delivery reliability and flexibility to safeguard delivery capability for our customers even in the event of an emergency. The range and quality of our services are also dependent on the availability of purchased hardware and the production equipment used (e.g. cylinders and tanks), and on the service quality of suppliers and business partners. We currently rate operational risks as medium.

Personnel risks

The Messer Industries Group is highly dependent on the commitment, motivation and skills of its employees. Many countries in which the Messer Industries Group operates are at full employment and so there is a shortage of skilled staff. The lack of skilled workers and managers and lengthy recruitment processes for finding replacement personnel in key positions could strain operating processes and increase hiring costs. In the future, the long-term success of the Messer Industries Group will also depend on its ability to compete with other companies to find and retain qualified employees, regardless of demographic challenges. Country and sector-specific turnover risks are identified and addressed with targeted measures. The Messer Industries Group counters these risks through personnel development and succession processes. Accordingly, we currently rate personnel risks for the Messer Industries Group as low.

IT risks

The use of state-of-the-art information technology plays a key part in handling and securing business processes within the Messer Industries Group, but also has corresponding risks.

The outage of critical IT applications or IT system outages at entire locations could considerably disrupt processes within the Messer Group and lead to business interruptions. IT systems can also be vulnerable by the abuse of digital technologies to commit new types of crimes, known as cybercrime (e-crime). As well as disrupting IT systems or causing outages, phishing or cyber-attacks can also result in confidential data being leaked to third parties and thus constitute a risk.

The security and compliance of the information systems are key issues in our IT organization. On this basis, we are constantly designing, implementing and reviewing measures to protect data, applications, systems and networks. This process takes both preventive and corrective measures into account.

Third parties regularly carry out checks on central European infrastructure to identify vulnerabilities and prioritize how to address these. These vulnerability scans were supplemented in the reporting year by penetration tests for central European IT infrastructure. Access to key cloud solutions was secured by way of multi-factor authentication. Additional measures to reduce IT risks are being prepared and will be implemented in 2023.

We use a checklist defined by the IT security team to perform self-audits of IT security, thereby mapping the current status, and recommend measures to avoid or reduce risks. The analysis focuses on questions about the IT systems and applications used and also examines infrastructure or network areas. This instrument serves to raise awareness and avoid potential risks in IT operations. We currently rate IT risks as medium, but consider ourselves to be exposed to ever-greater risk, which will result in us having to take increasingly far-reaching measures to avert danger in the future.

Financial risks

We require our available cash funds and credit facilities for our growth and investments. We are dependent on a stable and, in particular, liquid financial sector. The Messer Industries Group relies on cash from current business activities to settle the obligations under its borrowing operations, including compliance with covenants. This depends to a large extent on a positive operating cash flow.

The Group has recognized goodwill. Applying IAS 36, i.e. testing for impairment, can lead to impairment losses on goodwill if the market and business prospects of a subsidiary, associate or a cash-generating unit deteriorate significantly compared to their original measurement date. In the event of impairment becoming necessary, this could have a significant impact on earnings and accounting ratios.

Global economic collapse or downturns are a recurrent threat in conjunction with financial or debt crises. The Messer Industries Group closely monitors current developments in order to take countermeasures, if necessary, in the form of cost and investment saving programs. The possible deterioration in the credit ratings of our customers entails the risk of bad debts and delays to joint projects.

Income and operating cash flow are essentially unaffected by market interest rates, as the Group does not hold any significant interest-bearing assets. We partially hedge variable interest loans using interest rate derivatives (cash flow hedges for future interest payments). At the end of the reporting period, there are exclusively derivative financial instruments entered into with international financial institutes with investment grade ratings.

In the Messer Industries Group, financial risks can also arise from changes in exchange rates and interest rates. The management of interest rate, currency and liquidity risks is handled by the Treasury department based on the guidelines set out by management. The Treasury department calculates and measures financial risks and hedges against them. The Messer Industries Group currently uses standard currency forwards, non-deliverable forwards, interest derivatives and electricity swaps as hedging instruments. The Treasury guidelines contain principles for general risk management and individual regulations for specific areas, such as currency and interest rate risks, the use of derivative financial instruments and the investment of surplus cash. The risks are monitored at all times and the extent of protection is adjusted if necessary. We currently rate the impact of relevant financial risks as low to medium.

Currency risks

Transaction risks that can arise when exporting products are largely hedged when entering into a contract. As far as operating activities of the Messer Industries Group are concerned, the individual Group companies predominantly conduct their business locally in their functional currency. The overall currency risk from transaction risks is thus considered low overall. However, a number of Group companies are exposed to foreign currency risks in connection with operational transactions not denominated in their own functional currency. This mainly relates to payments for product or service imports and are hedged as far as possible. Like all market participants, we could unexpectedly encounter appreciation in a functional currency that weakens the country’s international competitive capability for exports and our local activities. We see currency risks from translating foreign currency exposures into euro (functional currency) as a standard part of doing business. Exchange rate losses against the euro could lead to lower consolidated net profit and less consolidated equity. We rate currency risks as medium at this time.

Legal and contractual risks

Time and again, businesses are confronted with allegations that they have infringed industrial rights or legal obligations, delivered defective products of failed to comply with environmental protection laws. Regardless of their chances of success, such claims can result in very high defense costs. Tax laws and competition regulations can also give rise to business risks. The Messer Industries Group relies on the support of both in-house and external experts to handle such matters.

In connection with two accidents in the USA, the Group recognized provisions that are fully covered by existing and recognized insurance claims. In connection with investigations in Spain, the Group still has a provision of € 5 million. Further information on these investigations can be found in note 30 "Contingent liabilities" in the notes to the consolidated financial statements.

In a large number of countries, our business activities in many countries are subject to specific environmental laws and regulations, for example on air emissions, groundwater pollution, the use and handling of dangerous substances and soil analysis and detoxification. This can give rise to liability risks in conjunction with either past or current operations. New environmental requirements in particular necessitate the occasional adjustment of our standards. This could result in higher production costs and modifications to the production process. However, the recent past shows that the integration of stricter environmental regulations results in a more efficient production process and higher quality product. We currently rate legal and contractual risks as medium.

Overall conclusion

The risks set out above show that they can be countered by internal and external measures. We endeavor to actively develop in-house potential and will leverage external potential whenever the opportunity arises. These are not the only risks to which the Group is exposed. Some risks, which have not yet been identified or which are not considered significant today, could possibly have an adverse effect on the Messer Industries Group if the overall conditions were to change.

The assessment of the overall risk situation is the product of consolidated consideration of all individual material risks on the basis of the risk management system in place.

However, no risks were identified in 2022 that, individually or in aggregate, could significantly influence the Group as a going concern. Management does not expect these risks to occur in the following fiscal year either. The main operational risks in the reporting period are the rising costs of energy and product procurement.

We have put all organizational requirements in place to identify potential risks early on. Our vigilant, active risk management system, as described below, helps us to limit risk. The current risk situation has increased considerably compared to previous fiscal years, essentially on account of the strong global increase in energy prices.

Risk Management

The principles of risk policy are defined by the Messer SE & Co. KGaA Management Board in the Messer Group Guidelines. Risk management is designed to ensure that the Group remains a going concern and to increase its enterprise value. It is therefore a key component of all decision-making and business processes. Messer risk management is defined as an ongoing business activity.

We define risks as potential future events that may cause negative deviations from anticipated targets. The management structure and the reporting processes in place ensure that not just the events and developments that could threaten the Group as a going concern, but also developments that could pose a threat to short-term corporate targets (such as EBITDA), are reported to the appropriate persons promptly and regularly. This allows management to initiate measures to mitigate any operating or financial risks early on.

Decentralized risk managers who safeguard the local reporting processes have been appointed at the individual subsidiaries. A risk assessment was conducted at the end of the 2022 fiscal year to provide a general overview. This reflects events/developments that could occur in fiscal 2023. In collaboration with the decentralized risk managers and risk officers, the Messer SE & Co. KGaA risk manager prepares a Group-wide risk report that is submitted to the Managing Director and the Advisory Board. The risks outlined in the risk report are allocated to risk categories and assessed in terms of EBITDA on the basis of their probability of occurrence and potential negative impact on projected financial targets. Risks can be rated low, medium or high.

Risk management at Group level is a function of Group Controlling, Planning and Risk, which reports to the Chief Financial Officer of Messer SE & Co. KGaA. This area is responsible for designing and refining the risk management systems, methods and processes for identifying and evaluating risks and for supporting the decentralized risk manager.

The Messer Industries Group has arranged for adequate insurance for potential losses and liability risks, which ensures that the possible financial consequences of risks that occur are largely contained or eliminated entirely. The extent of this insurance cover is continuously optimized based on the specific requirements of the companies in each country.

State-of-the-art technologies are used in IT to minimize risks in this area. Unauthorized access to data and systems, as well as significant data losses, have therefore been ruled out as far as possible. The efficiency, availability and reliability of systems are constantly being monitored and improved. The security concept also comprises detailed contingency planning. All technologies used are regularly tested as to whether they ensure the security of IT-based business processes so as to minimize risks of all kinds. It is planned to launch the risk management software “Origami” from Origami Risk LLC. in fiscal 2023, a digital tool for the early identification, analysis and management of risks. Corporater Inc.’s “Corporater” risk management software will be introduced at Group level and there are plans to link the two systems. Half-yearly reports will be prepared in the future with the launch of the risk management software. This ensures that the reports are up to date and increases their informative value. However, we cannot say with absolute certainty that all risks will be fully identified and managed.

Compliance Management

With the Messer Compliance Management System (“Messer CMS”), we have implemented an organizational concept which describes our value system and defines its practical implementation and the related responsibilities. The aim of the organizational concept is to prevent breaches of the Messer Code of Conduct before they even arise. It represents a binding framework of action to deal with conflicts of interest as well as complying with applicable laws, regulatory regulations and the local and corporate operating rules in all our business areas. The Messer CMS is supported by a clear commitment from the Management Board, executives and officers, and serves as an instrument for building trust with our customers, partners, employees, competitors, the public and the media.

We have issued binding compliance guidelines for our companies. In particular, these include the Code of Conduct and the Group Guidelines. All employees are informed of the CMS content relevant to them and have confirmed their compliance. Management and employees receive regular information and training on the content and any changes to these guidelines, other policies and rules of conduct.

The management of the company is responsible for monitoring the Messer CMS. This organizational concept is binding for all Messer executives, managers and employees. In line with the applicable statutory regulations, the executives are responsible for implementing this organizational concept in their own national subsidiaries and ensuring that it is complied with. A Chief Compliance Officer has been appointed to support the executives and the supervisory bodies. In addition, there are country compliance officers appointed by the regional managers in coordination with the respective country executives. The group of compliance officers is supported by central compliance officers in the Corporate Office. The tasks, rights and obligations of the compliance officers have been set down in a Compliance Officer directive.

Potential vulnerabilities within Messer have been defined on the basis of a detailed risk analysis incorporating all national subsidiaries and central departments. In addition to classroom training, webinars and e-learning can be held on different areas of the Messer Code of Conduct. The central departments and the local executives and departments determine the content of training and the employees to be trained. They design and carry out training, if necessary with the assistance of external service providers, and ensure the proper documentation. The management can make binding requirements on training and training contents as well as determining the group of employees which should have this training.

Internal Audit monitors the implementation of the Compliance Policy, in particular the Group Guidelines, at all the national subsidiaries. This essentially serves the purpose of risk management on the basis of standards of conduct and reporting, approval regulations and the cross-checking principle for legally binding external declarations.

The Messer Integrity Line is Messer’s communication platform for the straightforward reporting of perceived misconduct. Employees can contact defined persons to comment on or report suspected compliance violations – simply, legally and confidentially. Compliance breaches are followed up and dealt with appropriately. They are also taken as an opportunity to consider preventive measures to stop the associated risk from occurring again in the future if possible.

Each year, the Chief Compliance Officer prepares a Compliance Report which is also discussed with the Audit Committee.

Messer Americas follows the Code of Conduct of the Messer Group, with modifications regarding the parties informed of compliance breaches, in addition to a Code supplement applying to Messer Americas. The basis documents are supplemented by further guidelines on compliance with anti-trust law, anti-corruption regulations, business partner compliance and corresponding data protection guidelines for North America, Brazil, Colombia and Chile.

Messer Americas and the Messer Group share access to the common Messer Integrity Line. In addition, if relevant, reports submitted directly to the Messer Group via a separate e-mail address for compliance issues are transferred to Messer Americas. The reported facts are documented and when the Messer Americas Integrity Line Committee (made up of representatives from the Legal and Compliance, HR and Internal Audit departments) considers this appropriate, are treated as Integrity Line cases.

Compliance training is a key element of the Messer Americas compliance program. In collaboration with the HR department, e-learning courses are aligned by the Legal and Compliance department to the specific circumstances of the Messer Americas unit. Two of these courses, dealing with respectful workplace interaction and "Ethics and Code of Conduct" must be completed by all employees. Additional courses on combating bribery and corruption and anti-trust law are mandatory for a specific group of employees, depending on the professional tasks and expected interaction with third parties. Employees have the obligation to take refresher training every two years, with the training contents being updated regularly.

Internal Audit

The duties of Internal Audit are performed by the Messer Group for Messer Western Europe. In fiscal 2022, Internal Audit implemented status audits at four (previous year: eight) Western European companies. There were also follow-ups on all the audits performed in 2021. All Internal Audit audits include advisory activities. These involve passing on best-practice information and organizing assistance across national borders in line with the respective current standards of the companies in the individual countries. If necessary, other central functions are also consulted on an advisory basis (including SHEQ, Corporate Logistics, Central Sales functions). Compliance with Corporate Guidelines is audited and documentary spot checks and mass data analyses from the SAP systems are performed within the various processes. The aim of this is to monitor the effectiveness and efficiency of these processes as well as the accuracy and reliability of financial reporting. Findings can be investigated and suggestions can be made on how to improve the transparency of business processes. The Audit Committee and Supervisory Board of the Messer Group regularly assess the quality and appropriate intensity of audits. The audit reports from the Western Europe region are submitted not only to the Messer SE & Co. KGaA Management Board, but also to the Senior Vice President Western Europe and the Yeti GermanCo 1 GmbH Managing Director.

The internal audit duties for Messer Americas are performed by the Messer Americas Internal Audit. Internal audits comprise not only operating but also compliance and advisory audits. In fiscal year 2022, we conducted internal audits in the USA, Brazil, Colombia and Canada. The audits related to the appropriateness and effectiveness of existing directives and processes on the basis of spot checks for transactions and internal controls and compliance with corporate directives and guidelines. On the basis of these audits, observations and recommendations are made on optimizing/developing business processing, directives, processes and controls. Messer Americas conducted 15 (previous year: nine) compliance and three (previous year: four) advisory audits in 2022.

Bad Soden am Taunus, March 30, 2023

Yeti GermanCo 1 GmbH

Consolidated Financial Statements of Yeti GermanCo 1 GmbH

Consolidated Income Statement

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus), for the period from January 1 to December 31, 2022 (in K€)

	Note	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Revenue	4	2,590,456	2,118,710
Cost of sales	5	(1,293,760)	(1,073,993)
Gross profit		**1,296,696**	**1,044,717**
Selling and distribution expenses	6	(760,208)	(627,562)
Reversal of impairment/(impairment) on trade receivables	31	8,734	(921)
General and administrative expenses	7	(188,171)	(171,960)
Other operating income	8	18,241	54,218
Other operating expenses	9	(17,955)	(19,330)
Operating income		**357,337**	**279,162**
Income from investments accounted for using the equity method	10, 16	187	228
Other investment result, net	10	73	131
Finance income	10	42,768	13,100
Finance costs	10	(92,454)	(92,437)
Financial result, net		**(49,426)**	**(78,978)**
Profit before tax		**307,911**	**200,184**
Income tax expense	11	(78,718)	(52,806)
Profit after tax		**229,193**	**147,378**
Consolidated net profit		**229,193**	**147,378**
Attributable to:			
Shareholders of the parent company		228,238	146,740
Non-controlling interests		955	638

Consolidated Statement of Comprehensive Income

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus), for the period from January 1 to December 31, 2022 (in K€)

	Note	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Consolidated net profit		**229,193**	**147,378**
Items that may be reclassified to profit or loss			
Change in translation adjustments relating to foreign subsidiaries	29	48,477	39,492
of which: Reclassifications of currency translation differences in conjunction with deconsolidation		–	–
Result from the net investment in a foreign operation	29	(13,780)	998
Deferred taxes	11	3,276	(233)
Derivative financial instruments			
Change in fair value of derivatives used for hedging purposes[1]	31	199,471	61,576
Reclassification to profit or loss	31	(110,828)	(5,233)
Deferred taxes	11	(20,440)	(11,996)
From associates accounted for using the equity method	16	–	–
		106,176	**84,604**
Items that will not be reclassified to profit or loss			
Remeasurement of net defined benefit obligation for pension plans and other employee benefits			
Change in remeasurement of the net defined obligation for pension plans	24	14,244	11,428
Deferred taxes	11	(3,360)	(3,120)
		10,884	**8,308**
Other comprehensive income		**117,060**	**92,912**
Total comprehensive income		**346,253**	**240,290**
Attributable to:			
Shareholders of the parent company		345,116	239,580
Non-controlling interests		1,137	710

[1] Gains/losses on financial instruments in effective hedges

For further information on equity, please refer to the comments on the consolidated statement of changes in equity below and note 29 "Equity" in the notes to the consolidated financial statements.

Consolidated Statement of Financial Position

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus) as of December 31, 2022 (in K€)

Assets	Note	Dec. 31, 2022	Dec. 31, 2021
Goodwill	14	626,620	602,187
Right-of-use assets	14	106,223	80,438
Other intangible assets	14	935,159	975,638
Property, plant and equipment	15	2,318,995	2,164,391
Investments accounted for using the equity method	16	5,917	5,792
Equity investments and other financial investments	17	1,494	1,494
Deferred tax assets	11	24,871	20,569
Other financial assets	18	34,229	28,413
Non-financial assets	18	2,571	1,906
Non-current assets		**4,056,079**	**3,880,828**
Inventories	19	177,255	173,178
Trade receivables	20	359,226	283,289
Current income tax assets		43,840	42,532
Other current financial assets	22	224,955	169,547
Non-financial assets	22	59,302	51,347
Cash	23	167,370	274,917
Current assets		**1,031,948**	**994,810**
Total assets		**5,088,027**	**4,875,638**

Consolidated Statement of Financial Position

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus) as of December 31, 2022 (in K€)

Equity and Liabilities	Note	**Dec. 31, 2022**	Dec. 31, 2021
Issued capital	29	30	30
Capital reserves	29	1,329,973	1,329,973
Retained earnings	29	447,303	208,181
Other components of equity	29	7,519	(98,475)
Equity attributable to share-holders of the parent company		**1,784,825**	**1,439,709**
Non-controlling interests	29	**3,894**	**3,586**
Equity		**1,788,719**	**1,443,295**
Provisions for employee benefits	24	21,487	35,866
Other provisions	25	63,454	69,278
Non-current financial liabilities	26	1,916,289	2,069,561
Deferred tax liabilities	11	548,420	510,753
Non-financial liabilities	27	13,782	12,563
Non-current liabilities		**2,563,432**	**2,698,021**
Other provisions	25	85,771	131,472
Current financial liabilities	26	35,584	27,877
Trade payables	31	201,792	194,171
Current income tax liabilities		69,922	39,958
Other current financial liabilities	28	47,976	71,193
Non-financial liabilities	28	294,831	269,651
Current liabilities		**735,876**	**734,322**
Total equity and liabilities		**5,088,027**	**4,875,638**

Consolidated Statement of Changes in Equity

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus), for fiscal 2022 (in K€)

		Reserves		Other components of equity					
	Issued capital	Capital reserves	Retained earnings	Currency translation reserve	Hedging reserve	Result from net investment	Equity attributable to share-holders of the parent company	Non-controlling interests	**Total equity**
As of Jan. 1, 2021	**30**	**1,329,973**	**53,133**	**(180,374)**	**(11,320)**	**8,687**	**1,200,129**	**3,648**	**1,203,777**
Consolidated net profit	–	–	146,740	–	–	–	146,740	638	147,378
Other comprehensive income	–	–	8,308	39,420	44,347	765	92,840	72	92,912
Total comprehensive income	**–**	**–**	**155,048**	**39,420**	**44,347**	**765**	**239,580**	**710**	**240,290**
Additions to/withdrawals from reserves	–	–	–	–	–	–	–	–	–
Distributions	–	–	–	–	–	–	–	(772)	(772)
Capital increase	–	–	–	–	–	–	–	–	–
Capital reduction	–	–	–	–	–	–	–	–	–
Additions/disposals of non-controlling interests	–	–	–	–	–	–	–	–	–
As of Dec. 31, 2021	**30**	**1,329,973**	**208,181**	**(140,954)**	**33,027**	**9,452**	**1,439,709**	**3,586**	**1,443,295**
As of Jan. 1, 2022	**30**	**1,329,973**	**208,181**	**(140,954)**	**33,027**	**9,452**	**1,439,709**	**3,586**	**1,443,295**
Consolidated net profit	–	–	228,238	–	–	–	228,238	955	229,193
Other comprehensive income	–	–	10,884	48,295	68,203	(10,504)	116,878	182	117,060
Total comprehensive income	**–**	**–**	**239,122**	**48,295**	**68,203**	**(10,504)**	**345,116**	**1,137**	**346,253**
Additions to/withdrawals from reserves	–	–	–	–	–	–	–	–	–
Distributions	–	–	–	–	–	–	–	(829)	(829)
Capital increase	–	–	–	–	–	–	–	–	–
Capital reduction	–	–	–	–	–	–	–	–	–
Additions/disposals of non-controlling interests	–	–	–	–	–	–	–	–	–
As of Dec. 31, 2022	**30**	**1,329,973**	**447,303**	**(92,659)**	**101,230**	**(1,052)**	**1,784,825**	**3,894**	**1,788,719**

For further information on equity, please refer to the comments under note 29 “Equity” in the notes to the consolidated financial statements.

Consolidated Statement of Cash Flows

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus), for fiscal 2022 (in K€)

	Note	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Consolidated net profit before taxes		**307,911**	**200,184**
Income taxes paid		(60,499)	(37,352)
Depreciation of property, plant and equipment, amortization of intangible assets and impairment	14, 15	391,915	354,837
Losses/(gains) on the disposal of fixed assets		(1,389)	344
Changes in investments in associates	16	(187)	(227)
Net interest result	10	59,517	64,245
Changes in inventories		(89)	1,641
Changes in trade receivables		(68,347)	(15,444)
Changes in provisions		(2,477)	(396)
Changes in trade payables		1,329	40,291
Changes in other liabilities and other assets		(39,507)	27,525
Cash flow from operating activities		**588,177**	**635,648**
Investments in property, plant and equipment and intangible assets		(352,952)	(292,464)
Capital reductions and dividends received from associates		155	235
Proceeds from disposals of property, plant and equipment and intangible assets		5,847	5,145
Interest received		9,986	4,259
Cash flow from investing activities		**(336,964)**	**(282,825)**
Proceeds from non-current financial liabilities	26	6,345	115
Proceeds from current financial liabilities	26	343	–
Repayments of non-current financial liabilities	26	(298,088)	(414,144)
Repayments of current financial liabilities	26	–	(116)
Payments for lease liabilities	26	(26,284)	(22,690)
Distributions to non-controlling interests		(829)	(772)
Interest paid		(67,110)	(62,852)
Other net finance costs		17,007	2,028
Cash flow from financing activities		**(368,616)**	**(498,431)**
Changes in cash		**(117,403)**	**(145,608)**
Cash at the beginning of the period		**274,917**	**410,807**
Currency translation effect on cash		9,856	9,718
at the end of the period		**167,370**	**274,917**

Notes to the Consolidated Financial Statements of Yeti GermanCo 1 GmbH

1. General Information

Yeti GermanCo 1 GmbH (the "Company") is a holding company with the business address Messer-Platz 1, 65812 Bad Soden am Taunus, and is based in Sulzbach (Taunus), Germany, registered with the Frankfurt/Main Local Court under the number HRB 111626. Yeti GermanCo 1 GmbH is the parent company of the Messer Industries Group (the "Group"), which produces and sells industrial gases (in particular oxygen, nitrogen, argon, helium, carbon dioxide, hydrogen and rare and high-purity gases), processes for their use and systems located on the customer's property (on site plants) for gas production. The main customers of the Messer Industries Group include important companies from the manufacturing, chemical, steel-producing and pharmaceutical industries, the food industry and waste management.

Yeti GermanCo 1 GmbH was founded as a joint venture by Messer SE & Co. KGaA and CVC Capital Partners (CVC), UK, with the purpose of assuming the management of Messer's business in Western Europe and the Americas. In this context, Messer SE & Co. KGaA has contributed its Western European operating activities in Spain, Portugal, Switzerland, France, Belgium, the Netherlands, Denmark, Germany and the company in Algeria, plus a right-of-use asset for the ‚Messer – Gases for Life' brand, to the joint venture for a period of ten years as of March 1, 2019. The requirements of section 315e (3) of the Handelsgesetzbuch (HGB – German Commercial Code) for the preparation of the consolidated financial statements of Yeti GermanCo 1 GmbH in accordance with the International Financial Reporting Standards (IFRS), as adopted in the EU, have been satisfied.

The reporting date for Yeti GermanCo 1 GmbH and all the subsidiaries included in the consolidated financial statements is December 31 of the calendar year.

After being prepared by the Managing Director, the consolidated financial statements of the Company for the fiscal year ended December 31, 2022 were submitted to the Audit Committee of the Advisory Board of the Messer Industries Group on March 30, 2023. After being discussed by the Audit Committee, the managing directors will present the consolidated financial statements to the shareholders for approval.

Messer GasPack 2 GmbH, Messer Industriegase GmbH, Messer Industries GmbH, Messer Produktionsgesellschaft mbH Salzgitter, Messer Produktionsgesellschaft mbH Siegen, Messer Produktionsgesellschaft mbH Speyer, Yeti GermanCo 2 GmbH, Yeti GermanCo 3 GmbH, all consolidated domestic subsidiaries, will use the exemption provisions in accordance with section 264 (3) HGB and will therefore not disclose their annual financial statements for 2022, nor will they prepare (HGB) notes or a management report.

2. Accounting Policies

Basis of preparation

The consolidated financial statements are prepared in euro. Unless stated otherwise, all amounts are rounded to thousands (K€). Differences may arise due to rounding.

Statement of compliance with IFRS

The consolidated financial statements for 2022 have been prepared in accordance with International Financial Reporting Standards (IFRS) and the Interpretations of the IFRS Interpretations Committee (IFRS IC), as applicable in the EU. The accounting policies on which the 2022 consolidated financial statements are based have been applied consistently.

The consolidated financial statements have been prepared on the basis of historical cost, amortized cost and the fair value from market measurement of available-for-sale financial assets and financial liabilities (including derivative financial instruments). Estimates are required in order to prepare the consolidated financial statements in accordance with IFRS and the Interpretations issued by the IFRS Interpretations Committee, as applicable in the EU. Moreover, the application of uniform Group accounting policies requires judgments on the part of management.

New financial reporting standards and interpretations

The following new or revised standards and interpretations are effective for the first time for these consolidated financial statements on January 1, 2022:

- Amendments to IFRS 16 COVID-19-Related Rent Concessions after June 30, 2021 (effective from April 1, 2021)
- Amendments to IFRS 3 – References to the Conceptual Framework
- Amendments to IAS 16 Property, Plant and Equipment – Proceeds before Intended Use
- Amendments to IAS 37 – Onerous Contracts – Cost of Fulfilling a Contract
- Annual Improvements to IFRSs 2018-2020 Cycle – Amendments to IFRS 1, IFRS 9, IFRS 16 and IAS 41

Amendments to IFRS 16 Covid-19-Related Rent Concessions beyond 30 June 2021

IFRS 16 specifies how lessees should account for changes in lease payments, including concessions. For each lease, the lessee must assess whether the rent concession is a modification of the lease and thus remeasure the lease liability.

A temporary expedient applied for rent concessions granted in connection with the COVID-19 pandemic. Under the practical expedient, lessees may elect not to assess whether certain COVID-19-related rent concessions are lease modifications and account for these rent concessions as if they were not lease modifications.

In response to the ongoing impact of the COVID-19 pandemic, amendments were made to IFRS 16 Leases on March 31, 2021 to allow for a one-year extension of the practical expedient. The amendments extend the practical expedient to rent concessions that reduce lease payments originally due on or before June 30, 2022. Previously, the practical expedient extended only to rent concessions that reduce lease payments due on or before June 30, 2021.

The changes have no material impact on these consolidated financial statements of Yeti GermanCo 1 GmbH.

Amendments to IFRS 3 – References to the Conceptual Framework

Together with the amended Conceptual Framework, references to the Conceptual Framework were revised in various standards, including in IFRS 3. No changes are made to the content of regulations for acquisitions accounting.

The changes have no material impact on these consolidated financial statements of Yeti GermanCo 1 GmbH.

Amendments to IAS 16 Property, Plant and Equipment – Proceeds before Intended Use

The amendments clarify that proceeds received by an entity from selling items produced while preparing the asset for its intended use (such as product samples), and the associated costs, are to be recognized in profit or loss. These amounts must not be taken into account when calculating cost.

The changes have no material impact on these consolidated financial statements of Yeti GermanCo 1 GmbH.

Amendments to IAS 37 – Onerous Contracts – Cost of Fulfilling a Contract

The amendments define which costs an entity should include as the cost of fulfilling a contract when assessing whether a contract is onerous. The cost of fulfilling a contract comprises all costs that directly relate to the contract. This definition also includes incremental costs that would not have been incurred if the contract had not been obtained and other costs directly attributable to the contract.

The changes have no material impact on these consolidated financial statements of Yeti GermanCo 1 GmbH.

Annual Improvements to IFRS Standards 2018-2020

The following standards were amended as part of the Annual Improvements to IFRS.

In IFRS 1, first-time adopter subsidiaries that apply IFRS 1.D16 (a) can measure cumulative translation differences using the amount reported by the parent.

The amendment to IFRS 9 clarifies which fees an entity includes in the 10 % test (IFRS 9.B3.3.6) when assessing whether a financial liability must be derecognized. Only the fees paid or received between the entity as a borrower and the lender are considered.

In IFRS 16, presentation of the reimbursement of leasehold improvements was removed from Illustrative Example 13 on IFRS 16.

In IAS 41, the prohibition on considering tax payments as part of the fair value measurement was removed.

This has no material impact on these consolidated financial statements of Yeti GermanCo 1 GmbH.

New financial reporting standards not yet effective:

The following new standards and amendments to standards were not yet effective for these consolidated financial statements and were therefore not applied, but had already been endorsed by the EU Commission and will be binding from fiscal years starting on January 1, 2023 or later:

- IFRS 17 (including amendments to IFRS 17) – Insurance Contracts (effective from fiscal 2023)
- Amendments to IAS 1 and IFRS Practice Statement 2 – Disclosure of Accounting Policies (effective from fiscal 2023)
- Amendments to IAS 8 – Definition of Accounting Estimates (effective from fiscal 2023)
- Amendments to IAS 12 – Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction (effective from fiscal 2023)

The following new standards and amendments to standards have already been published, but had not yet been endorsed by the EU Commission and were therefore not applied:

- Amendments to IFRS 10 and IAS 28 – Sale or Contribution of Assets between an Investor and its Associate or Joint Venture (effective date deferred indefinitely)
- Amendments to IFRS 16 – Lease Liability in a Sale and Leaseback (effective from fiscal 2024)
- Amendments to IAS 1 – Classification of Liabilities as Current or Non-Current and Non-Current Liabilities with Covenants (effective from fiscal 2024)

The Group is not planning early adoption of the new or amended standards and interpretations that become effective in subsequent fiscal years. Unless stated otherwise, the impact on the consolidated financial statements of Yeti GermanCo 1 GmbH is currently being examined.

Consolidation principles

A complete list of the Group's equity investments can be found in the annex to these notes. Material subsidiaries as of December 31, 2022 are:

Name and registered office of subsidiary	Country	Shareholding in percent Dec. 31, 2022	Shareholding in percent Dec. 31, 2021
Messer LLC, Delaware	United States	100 %	100 %
Messer Canada Inc., Ontario	Canada	100 %	100 %
Messer Gases Ltda., Sao Paulo	Brazil	100 %	100 %
Messer France S.A.S., Suresnes	France	100 %	100 %

The consolidated financial statements comprise the financial statements of Yeti GermanCo 1 GmbH and the financial statements of its subsidiaries as of December 31, 2022. The financial statements of the subsidiaries are prepared using uniform accounting policies and for the same reporting period as the financial statements of the parent company.

a. Subsidiaries

Yeti GermanCo 1 GmbH and its subsidiaries controlled by Yeti GermanCo 1 GmbH are included in the consolidated financial statements as of December 31, 2022. The parent company controls an entity when it has exposure or rights to variable returns from its involvement with the entity and the ability to utilize its control so as to influence the amount of returns from the entity. Subsidiaries are included in the consolidated financial statements from the date on which control is achieved and until the date on which control ends.

All receivables and liabilities, revenue, income and expenses arising from intra-group transactions are eliminated in the consolidated financial statements. Intra-group transactions are performed on the basis of full cost transfer prices.

Subsidiaries are accounted for using the acquisition method. The cost of the acquisition represents the fair value of the assets transferred, the liabilities incurred or assumed and the equity interests issued by the acquirer at the transaction date. It also includes the fair value of any recognized assets or liabilities resulting from a contingent consideration arrangement. Assets, liabilities and contingent liabilities identifiable in conjunction with a business combination are measured at fair value as of the acquisition date on initial consolidation.

Acquisition-related costs are recognized as an expense in the period in which they are incurred.

In a business combination achieved in stages, any previously held equity interest in the acquiree is remeasured at fair value as of the acquisition date. Any resulting gain or loss is recognized in the income statement.

Goodwill is measured as the excess of the cost of the acquisition, the amount of any non-controlling interest in the acquiree and the fair value of any previously held equity interest at the date of acquisition over the Group's share of the net assets measured at fair value. The option of accounting for goodwill using the full goodwill method is not exercised. If the cost is less than the fair value of the net assets of the subsidiary acquired, the difference is reassessed and then recognized directly in profit or loss. The results of the subsidiaries acquired or sold during the fiscal year are included in the consolidated income statement from the time control is achieved or until control is lost.

b. Transactions with non-controlling interests without loss of control

Transactions with non-controlling interests without a loss of control are treated in the same way as transactions with the Group's equity owners. Any difference arising from the acquisition of a non-controlling interest between the consideration paid and the relevant share in the carrying amount of the net assets of the subsidiary is recognized in equity. Gains and losses arising from the disposal of non-controlling interests are also recognized in equity.

c. Disposal of subsidiaries

If the Group loses control of an entity, the Group's remaining interest is remeasured at fair value and the resulting difference recognized in profit or loss. Furthermore, all amounts reported in other comprehensive income relating to this entity are accounted for as if the parent company had directly disposed of the related assets or liabilities. This means that any profit or loss previously recognized in other comprehensive income is reclassified either to profit and loss or to retained earnings.

d. Associates, joint ventures and joint operations

Investments in entities over which the Group has significant influence but without control or joint control over financial and operating policy and joint ventures over which the Group has joint control are accounted for using the equity method (equity investments). These are initially measured at cost, including transaction costs. Significant influence is assumed if the Group holds 20 % or more of the voting power but does not control the investee. The Group's share in earnings of equity investments is shown under "Income from investments accounted for using the equity method". The carrying amounts of equity investments are written down if impaired. The Group's interest in associates and joint ventures includes the goodwill arising on acquisition (net of accumulated impairment losses).

If the ownership interest in an associate or joint venture is reduced but the investment continues to be an associate or joint venture, only a proportionate amount of the gain or loss previously recognized in other comprehensive income is reclassified to profit or loss, if this would also occur on the disposal of the individual assets and liabilities.

The Group's share of the profit or loss of associates and joint ventures is recognized in profit or loss from the acquisition date. Changes in reserves are recognized pro rata in consolidated reserves. Accumulated changes after acquisition are offset against the carrying amount of the investment. If the Group's share of the loss in an associate or joint venture is equal to or exceeds the Group's share in this investee, including other unsecured receivables, the Group recognizes no further losses unless it has entered into commitments for the associate or joint venture or has made payments for the associate or joint venture.

As of the end of each reporting period, the Group determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If this is the case, the difference between the carrying amount and the recoverable amount is recognized as an impairment loss and reported in the income statement under the income from the investment in the associate or joint venture.

To the extent that a Group entity performs transactions with an associate or joint venture, any unrealized gains or losses are eliminated on the basis of the Group's interest in this entity.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement.

The associated assets and liabilities, income and expenses from joint operations are included in the consolidated financial statements according to the economically attributable share.

The Group recognizes its direct rights to the assets, liabilities, revenue and expenses of joint operations and their share in any assets, liabilities, revenue and expenses jointly managed or incurred. These are included in the financial statements under the corresponding line items. Details of joint operations recognized in the financial statements can be found under note 16 "Interests in Other Entities".

Currency translation

a. Functional currency and reporting currency
The consolidated financial statements are presented in euro, the Group's reporting currency. The functional currency of individual foreign operations is determined by the economic environment in which they operate. The items included in the financial statements of the respective company are measured using this functional currency.

b. Transactions and balances
Foreign currency transactions are initially translated using the spot exchange rate between the foreign currency and the functional currency at the transaction date. Monetary assets and liabilities denominated in a foreign currency are translated into the functional currency at the closing rate. All exchange differences are recognized in profit or loss. This does not include exchange differences from certain intragroup foreign currency borrowings to the extent that they are used to hedge net investments in foreign operations. These exchange differences, and any deferred taxes arising from them, are recognized directly in equity. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined.

Foreign currency gains and losses that essentially result from trade receivables and trade payables denominated in foreign currencies are included in "Other operating income" or "Other operating expenses".

c. Group companies
The functional currency of foreign operations not based within the area of the European Currency Union (ECU) is the respective local currency. As of the end of the reporting period, assets and liabilities of these subsidiaries are translated into the Messer Industries Group's reporting currency using the closing rate. Income and expenses are translated at average rates for the fiscal year. The resulting exchange differences are recognized through other comprehensive income and included in currency translation reserves within equity. They therefore do not affect profit or loss. When a foreign operation is deconsolidated, the cumulative amount recognized in equity for this foreign operation is reversed to profit or loss.

The following table shows an overview of the exchange rates used for the principal currencies:

Selected currencies	ISO code	Average rates Jan. 1 – Dec. 31, 2022 € 1	Average rates Jan. 1 – Dec. 31, 2021 € 1	Closing rates Dec. 31, 2022 € 1	Closing rates Dec. 31, 2021 € 1
Brazilian real	BRL	5.47	6.38	5.64	6.31
Canadian dollar	CAD	1.38	1.49	1.44	1.44
Swiss franc	CHF	1.00	1.08	0.98	1.03
US dollar	USD	1.06	1.19	1.07	1.13

Reporting

The reporting of prior-year disclosures for individual items was adjusted to match the presentation in the fiscal year. This affects notes 5 "Cost of sales" and 32 "Related Parties".

Intangible assets and goodwill

The differences between the consideration transferred by the Messer Industries Group for acquirees and the fair value of the assets acquired, liabilities assumed and contingent liabilities are recognized in accordance with IFRS 3.32 et seq. The remaining goodwill is tested for impairment in accordance with IAS 36 at least once a year.

The other intangible assets such as brands, patents, licenses, customer bases, software, etc. are initially measured at cost. Patents, licenses, customer bases and software, etc. are amortized on a straight-line basis over their expected useful lives of three to 47.5 years. The amortization charge on other intangible assets is reported within the related expense item, usually cost of sales or distribution and selling expenses. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each fiscal year.

Property, plant and equipment

Property, plant and equipment are recognized at cost and depreciated over their expected useful lives. The cost of acquired property, plant and equipment includes all costs directly attributable to their acquisition. The cost of self-constructed items of property, plant and equipment includes all directly attributable direct costs and an appropriate share of overheads, including depreciation, and are therefore measured taking all costs required to construct the assets into account. In the event of a statutory requirement to restore an item to its original condition, the cost also includes the present value of expected future payments for decommissioning and restoration. When each major inspection is performed, in accordance with IAS 16.14, its cost is recognized in the carrying amount of the item of property, plant and equipment as a replacement if the recognition criteria are satisfied.

Subsequent costs are only recognized as part of the cost of the asset or as a separate asset when it is probable that they will result in future economic benefits to the Group and the costs can be measured reliably.

Expenditure for repairs and maintenance, which does not represent a significant replacement investment, is recognized as an expense in the fiscal year in which it is incurred.

Gains and losses on the disposal of property, plant and equipment are calculated as the difference between proceeds from disposal and the carrying amounts of the assets and recognized in the consolidated income statement.

Depreciation is recognized on a straight-line basis over the following useful lives:

Depreciation	Useful life in years
Buildings	10 - 50
Plant and machinery thereof air separation units	5 - 20 15
Other operating and office equipment	3 - 10

The residual carrying amounts and useful lives are reviewed at the end of each reporting period and adjusted as necessary. If the carrying amount of an item of property, plant and equipment exceeds the estimated recoverable amount, it is written down to that recoverable amount.

Borrowing costs are recognized as an expense in the period in which they are incurred, except when they relate to qualifying assets. Within the Messer Industries Group, these chiefly relate to air separation units. Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized as part of the cost of that asset up to the date when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete. A qualifying asset is an asset that necessarily takes a substantial period of time to get ready for its intended use or sale.

Leases

a. Leases in which the Group is the lessee

The Group leases various offices, warehouses, equipment and vehicles. Leases are generally concluded for fixed periods of one to 12 years for movable assets and for one to 50 years for immovable assets but may have extension options.

At the inception of a contract, the Group assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Group uses the IFRS 16 definition of a lease to assess whether a contract includes the right to control an identifiable asset.

Contracts may contain both lease and non-lease components. The Group allocates the transaction price to these components based on their relative stand-alone prices. However, for leases of real estate for which the Group is a lessee, it has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. Leased assets may not be used as security for borrowing purposes.

Leases are recognized as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- variable lease payment that are based on an index or a rate, initially measured using the index or rate as of the commencement date;
- amounts expected to be payable by the Group under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise that option; and
- payments of penalties for terminating the lease, if the lease term reflects the Group exercising that option.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability. The lease payments are discounted using the interest rate implicit in the lease. Otherwise, and this is typically the case in the Group, the lessee's respective incremental borrowing rate is used.

To determine the incremental borrowing rate, the Group:

uses recent third-party financing received by the individual lessee as a starting point. Lessees are divided into regions according to geographical segments. The financing is divided into groups based on the remaining terms of the contracts (up to 1 year, up to 2 years, up to 3 years, up to 4 years, up to 5 years and longer than 5 years). The calculated average interest rates for each group and region are used in measuring the right-of-use asset and lease liability.

The Group is exposed to potential future increases in variable lease payments based on an index or rate. These possible changes in lease payments are not taken into account in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date less any lease incentives received;
- any initial direct costs; and
- estimated costs incurred by the lessee in dismantling or removing the underlying asset, restoring the location where it is to be found or restoring the underlying asset to the condition required in the lease agreement.

Right-of-use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life.

Depreciation is recognized on a straight-line basis over the following useful lives:

Depreciation	Useful life in years
Land	1 - 50
Buildings	1 - 22
Plant and machinery	1 - 10
Other operating and office equipment	1 - 12

Payments associated with short-term leases of equipment and vehicles and all leases of low-value assets are recognized as an expense in profit or loss. Short-term leases are leases with a lease term of twelve months or less. Low-value assets essentially comprise IT equipment and other equipment.

Extension and termination options are included in a number of property and equipment leases across the Group. These are used to maximize operational flexibility in terms of managing the assets used in the Group's operations. These options are taken into account in the measurement of right-of-use assets and lease liabilities when it is reasonably certain that they will be exercised.

The assessments of reasonable certainty are only revised if a significant event or a significant change in circumstances occurs that affects this assessment and that is within the control of the lessee.

b. Leases in which the Group is the lessor

If the Group is the lessor, it classifies each lease as either a finance lease or an operating lease at inception of the lease. At Messer Industries this covers especially certain gas supply contracts, in particular those for the gas generation plants rented on a long-term basis.

Leases in which a significant portion of the risks and rewards of ownership transfers to the lessee are classified as finance leases.

In this case, disposal is assumed at the start of the lease term and revenue is recognized in the amount of the present value of the minimum lease payments attributable to the asset. In return, a claim from the customer that is reduced over the term of the contract is recognized. Interest income earned on finance leases is reported as other financial income.

Leases in which a significant portion of the risks and rewards of ownership remain with the lessor, are classified as operating leases. Payments made in connection with an operating lease are recognized as revenue from other sources in the income statement on a straight-line basis over the term of the lease.

Impairment and reversal of impairment on goodwill, right-of-use assets, other intangible assets and property, plant and equipment

An impairment test for goodwill, right-of-use assets, other intangible assets and property, plant and equipment involves comparing the recoverable amount of the asset against its carrying amount to determine whether it must be written down to recoverable amount. In accordance with IAS 36, goodwill is allocated to the smallest cash-generating unit for which goodwill is monitored by management. The recoverable amount is defined as the higher of the asset's fair value less costs to sell and its value in use. Fair value less costs to sell is defined as the amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal. Value in use is the present value of future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. In the event of impairment, existing goodwill is reduced first. If the impairment loss exceeds the carrying amount of goodwill, the difference is typically distributed among the remaining non-current assets pro rata. With the exception of goodwill, impairment losses are reversed when the reasons for the impairment no longer apply. Impairment losses and required reversals are shown together with depreciation and amortization in the statement of changes in assets under additions to cumulative depreciation and amortization, and are reported and explained separately in the notes.

Inventories

Inventories are measured at the lower of cost or net realizable value at the end of the reporting period using the average cost method. Their production cost includes all directly attributable direct costs, appropriate portions of materials and production overheads and depreciation.

Trade and other receivables

Trade receivables are recognized from the date they arise. Items that do not contain a significant financing component are initially measured at the transaction price. The corresponding impairment loss is measured at an amount equal to lifetime expected credit losses, based on an analysis of historical default data and forecasts of future economic conditions. Expected credit losses are a probability-weighted estimate of credit losses.

Cash and cash equivalents

Cash and cash equivalents include freely available cash on hand and demand deposits. Cash equivalents also include short-term liquid financial assets that can be readily converted into cash at any time. This risk of fluctuations in value is immaterial.

Employee benefits

a. Pension obligations

The Group has both defined benefit and defined contribution pension plans. A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate non-Group entity (a fund). The Group does not have any legal or constructive obligation to pay any additional amounts if the fund does not have sufficient assets to meet the pension entitlements of all employees for the current and past fiscal years.

Typically, defined benefit plans set out an amount of pension benefits that employees will receive on retirement and that is typically dependent on one or more factors (such as age, length of service and salary).

The Group's obligations from defined benefit pension plans are calculated separately for each defined benefit plan and according to actuarial principles. The benefits earned by employees in the current and prior periods – in return for their service – are initially estimated. The present value of the defined benefit obligation, the gross pension obligation, is calculated by actuaries using the projected unit credit method. Plan assets are deducted from the gross pension obligation at fair value. This results in the net liability or the net asset value to be recognized.

The Group determines net interest expense (net interest income) from the net liability (net asset value) by multiplying the net liability (net asset value) at the beginning of the period by the interest rate with which the defined benefit gross pension obligation is discounted at the beginning of the period.

The interest rate is determined by reference to market yields at the end of the reporting period on high quality corporate bonds. The currency and term of the underlying corporate bonds are consistent with the currency and estimated term of the post-employment obligations.

The calculation of the net liability (net asset) is based on an actuarial report prepared by a qualified actuary as of the end of each reporting period.

If the deduction of plan assets from the defined benefit gross pension obligation results in an excess of plan assets, the amount of the net asset value is limited to the present value of the economic benefits associated with the plan asset surplus, e.g. in the form of reimbursements from the plan or reduced future contribution payments if the Group has control over these economic advantages. Control is assumed to exist if the Group can realize the economic benefit within the term of the pension plan or on settlement of plan liabilities.

The calculation of the present value of the economic benefits of the excess of plan assets takes into account any minimum funding requirements.

The amounts arising on remeasurement comprise actuarial gains and losses arising on the measurement of the defined gross pension obligation on the one hand and the difference between the actual return on plan assets and the rate of return assumed at the beginning of the reporting period on the other. In the event that there is an excess of plan assets, the amounts arising on remeasurement also include the change from applying an asset ceiling, to the extent that this has not been considered as part of the net interest component.

The Group recognizes all amounts arising on remeasurement in other comprehensive income (OCI), while other components of the net pension expense (service cost and net interest component) are recognized in profit or loss. The interest portion of the addition to provisions included in pension expense is reported as interest expense within net finance costs. The cumulative remeasurement effects are reported in retained earnings within equity.

If the present value of a defined benefit obligation changes as a result of a plan amendment or curtailment, the Group recognizes the resulting effect as past service cost in profit or loss. The amounts are recognized when the amendment or curtailment occurs.

Defined benefit plans expose the Group to various risks. In addition to general actuarial risks such as longevity risk and interest rate risk, the Group is exposed to currency risk and capital market/investment risk.

b. Obligations from bonus plans
Obligations for bonus payments are recognized as a liability and as an expense. A provision is recognized in the consolidated financial statements in cases in which there is a contractual obligation or a constructive obligation as a result of past business practices.

Other provisions

Other provisions are recognized for present legal and constructive obligations arising from past events that are likely to result in a future outflow of resources embodying economic benefits, provided that a reliable estimate can be made of the amount of the obligations. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as interest expense.

Government grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as income on a systematic basis over the periods that the related costs, for which it is intended to compensate, are expensed. If the grant relates to an asset, it is recognized as deferred income and reversed to profit or loss on a straight-line basis over the expected useful life of the asset.

Financial instruments: principles

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. A distinction is made between derivative and non-derivative financial instruments.

Derivative financial instruments can be embedded in other financial instruments or non-financial instruments. In accordance with IFRS, an embedded derivative must be separated from the host contract and measured separately at its fair value if the economic characteristics of the embedded derivative are not closely related to those of the host contract. The Messer Industries Group had no separable embedded derivatives in the fiscal year. Compound financial instruments issued that contain both an equity and a debt component must be accounted for separately on the basis of the substance of the instruments. The Messer Industries Group was not party to any hybrid or compound financial instruments in the fiscal year. Regular way purchases and sales of financial instruments are typically recognized by the Messer Industries Group as of the settlement date, while derivatives are recognized as of the trade date.

Financial assets and financial liabilities are initially recognized at fair value, including any transaction costs if necessary. The fair value of a financial instrument is the price that would be achieved between market participants on the measurement date for the sale of the financial instrument.

Financial assets are derecognized fully or in part when the contractual rights to receive cash flows have expired or if control over the financial asset and substantially all the risks and rewards of the asset have been transferred to a third party. Financial liabilities are derecognized when the contractual obligations have been settled, cancelled or have expired.

The classes to be formed in accordance with IFRS 7 include the measurement categories presented below. Furthermore, liabilities from leases and hedging derivatives in the context of hedge accounting are included in the classes according to IFRS 7.

Financial assets

Financial assets are classified according to the following IFRS 9 measurement categories:

a. Financial assets at amortized cost (AC)

The Messer Industries Group classifies its financial assets as at amortized cost only if both of the following criteria are met:

- the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- the contractual terms give rise to cash flows that are solely payments of principal and interest.

b. Financial assets at fair value through profit or loss (FVTPL)

The Messer Industries Group classifies the following primary financial assets at fair value through profit or loss:

- debt investments that do not qualify for measurement at either amortized cost or fair value through other comprehensive income;
- equity investments that are held for trading; and
- equity investments for which the entity has not elected to recognize fair value gains and losses through other comprehensive income.

The Group has not designated any primary financial assets at fair value through profit or loss.

c. Financial assets at fair value through other comprehensive income (FVOCI)

Financial assets at fair value through other comprehensive income comprise:

- Equity securities which are not held for trading, and which the Messer Industries Group has irrevocably elected at initial recognition to recognize in this category. These are strategic investments and the Group considers this classification to be more relevant.
- Debt securities where the contractual cash flows are solely principal and interest and the objective of the Group's business model is achieved both by collecting contractual cash flows and selling financial assets.

The results of measuring such investments in equity instruments are reported in other comprehensive income and remain there even in the event of a sale. On disposal of these debt securities, any related balance within other comprehensive income is reclassified to retained earnings.

Financial liabilities

Financial liabilities are classified according to the following IFRS 9 measurement categories:

a. Financial liabilities at amortized cost (AC)
Financial liabilities at amortized cost are non-derivative financial liabilities that are subsequently measured at amortized cost using the effective interest method. Any difference between the amount received and the amount repayable is recognized as income or expense over the term of the instrument. Transaction costs incurred are deducted from the respective financial liabilities and amortized over the term of the underlying liability using the effective interest method. Within the Messer Industries Group, this measurement category includes in particular financial liabilities, trade payables and non-derivative other current and non-current liabilities.

b. Financial liabilities at fair value through profit or loss (FVTPL)
Financial liabilities at fair value are either classified as held for trading or designated upon initial recognition as at fair value through profit or loss.

These financial liabilities are subsequently measured at fair value, with gains and losses from the financial instruments in this category recognized directly in net finance costs in the income statement.

Derivative financial instruments and hedging

Derivatives are initially recognized at fair value on the date a derivative contract is entered into, and they are subsequently remeasured to their fair value at the end of each reporting period. The instruments are subsequently measured at the fair value determined at the end of the respective reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument and, if so, the nature of the item being hedged. When entering into a derivative contract, the Messer Industries Group designates it as either.

(1) a hedge of the fair value of recognized assets or liabilities (fair value hedges); or
(2) a hedge of a forecast transaction or firm commitment (cash flow hedge).

The Messer Industries Group exclusively uses derivatives for hedging if this is required by the hedged items. This applies, for example, to risks from energy purchases, variable interest payments and exchange rate fluctuations. Hedged items are the obligations contractually entered into to achieve the goals of the Messer Industries Group, receivables and anticipatory transactions. Derivative instruments are thus exclusively used to safeguard the Messer Industries Group's business performance to the extent stipulated in its Articles or Association. Macro hedging, i. e. the consolidation of individual positions in order to merely hedge the net amount, is not practiced.

Most of the transactions for which this type of hedging could be applied are hedged in full in terms of scope or amount, using a variety of financial instruments. The selection of individual instruments is always a management decision, made in line with the risk profile, i. e. the opportunity for return associated with the respective risk.

Hedge accounting is used for a majority of the existing hedging transactions. Nevertheless, there are derivatives that have been contracted to hedge risks from items, for which the formal requirements have not been fully met and which are therefore not recognized in hedge accounting, but rather as stand-alone derivatives at fair value through profit and loss in accordance with IFRS 9.

The aim of hedge accounting is to largely offset the changes in the value of the hedging instruments and the hedged items. Messer uses hedge accounting in accordance with IFRS 9 to avoid fluctuations in the income statement due to the different measurement of hedged items and hedging instruments.

When entering into the transaction, the Group documents the relationship between the hedging instrument and the hedged item in addition to the objective of its risk management and its underlying strategy. In addition, at the inception of the hedge and thereafter, the Group documents its assessment of whether the derivatives used in the hedge are highly effective at compensating for the changes in the fair value or cash flow. Hedge accounting is only maintained as long as its effectiveness can be proven. Evidence of this effectiveness is determined by comparing the contract specifics, maturities and volumes (critical terms match) and by means of a regression analysis.

For those hedges for which hedge accounting is used, the gain or loss on remeasurement is broken down into effective and ineffective portions. The effective portion is the portion of the gain or loss on remeasurement that represents an effective hedge against the risk. For cash flow hedges, this is recognized separately in other comprehensive income. The ineffective portion, where necessary, is immediately recognized in the consolidated income statement.

Derivative financial instruments not subject to hedge accounting are also measured at fair value through profit or loss.

The fair value of financial instruments is determined in accordance with IFRS 13. The fair value is derived from financial instruments quoted on an active market or calculated using standard measurement models (discounted cash flow method) from current market prices. If necessary, the market value provided by a bank can also be used.

a. Cash flow hedges

Changes in the fair values of derivatives classified as cash flow hedges that are a close match for the hedged item are recognized in equity. If the forecast transaction or firm commitment results in the recognition of a non-financial asset or non-financial liability, the gains and losses previously deferred in equity are removed from equity and included in the measurement of the cost of the asset or liability. In all other cases, the gains or losses previously recognized in equity are transferred to profit or loss in the same period as that in which the hedged forecast transaction or firm commitment is recognized in profit or loss.

Income and operating cash flow are essentially unaffected by market interest rates, as the Group does not hold any significant interest-bearing assets. Variable interest loans are partially hedged using interest rate swaps and caps (cash flow hedge for future interest payments). This effectively converts loans with floating interest rates into loans with fixed interest rates.

When a hedging instrument expires or is sold, or when a hedging instrument no longer meets the criteria for hedge accounting in accordance with IAS 9, any cumulative gains or losses recognized in equity to date remain there and are not removed until the forecast transaction or firm commitment is recognized in profit or loss. However, if the forecast transaction or firm commitment is no longer expected to occur, the cumulative gain or loss that had been recognized directly in equity is recognized in profit or loss.

b. Fair value hedges
The changes in the fair value of derivatives that are designated as a fair value hedge and are a close match for the underlying transaction are recognized in the income statement together with the changes in the fair value of the hedged assets or liabilities attributable to the hedged risk.

The fair values of the various derivative financial instruments are listed under note 31 "Other Financial Instrument Disclosures".

There were only cash flow hedges on December 31, 2022.

Management of financial risks

In conjunction with its operating activities, the Messer Industries Group is exposed to various financial risks, in particular credit, liquidity, interest and currency risk, which are described in more detail under note 31 "Other Financial Instrument Disclosures". The Group's risk management system takes into account the fact that financial market developments are not foreseeable and is intended to minimize any potential negative impact on the Group's financial position. The Group uses derivative financial instruments to hedge against specific risks.

Risk management is handled by Group Treasury in compliance with guidelines approved by management. Group Treasury identifies, assesses and hedges financial risks. The guidelines contain general principles for risk management and detailed rules for specific areas, such as currency and interest rate risks, the use of derivative financial instruments and the investment of surplus cash.

Use of assumptions, estimates and judgments

The preparation of IFRS financial statements requires management to make certain assumptions, estimates and judgments that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities as of the end of the reporting period and the reported amounts of revenue and expenses for the fiscal year. The estimates and assumptions concern the future. Actual results may therefore differ from these estimates.

Estimates and their underlying assumptions are examined on an ongoing basis. Revisions of estimates are recognized prospectively. If a change in an accounting estimate gives rise to changes in assets and liabilities, or relates to an item of equity, the changes in estimates are recognized by adjusting the carrying amounts of the related assets, liabilities or equity items.

Judgments, assumptions concerning the future and sources of estimation uncertainty that could potentially have the greatest impact on these consolidated financial statements were required in particular for:

a. Income taxes (note 11)
IFRIC 23 clarifies how to apply the recognition and measurement requirements in IAS 12 when there is uncertainty over income tax treatments and comprises current and deferred tax assets and liabilities. Under IFRIC 23, uncertain tax treatments can be considered separately or together with one or more other uncertain tax treatments. The approach that better predicts the resolution of the uncertainty is to be chosen here. In assessing this, it should be assumed that a taxation authority will examine amounts it has a right to examine and have full knowledge of all related information when making those examinations. If it is considered unlikely that a taxation authority will accept an uncertain tax treatment, either the most likely amount or the expected value is to be applied to each uncertain tax treatment in order to account for the effect of the uncertainty, depending on which approach better predicts the resolution of the uncertainty.

The Group companies are subject to income taxes in a number of countries worldwide. When assessing global income tax claims and liabilities, the interpretation of tax provisions may be subject to particular uncertainty. The possibility that the relevant tax authorities will take a different view concerning the correct interpretation of tax standards cannot be ruled out. Changes to the assumptions underlying the correct interpretation of tax standards, for example as a result of changes in legislation, affect the accounting treatment of uncertain income tax assets and liabilities in the fiscal year in question.

Agreements have been reached at global level to address concerns over unequal profit distribution and tax payments at major multinationals, including an agreement by more than 135 countries to introduce a minimum global tax rate of 15 %. The OECD published a draft legal framework in December 2021, followed by detailed rules in March 2022, that are to be used by the individual countries that signed the agreement to make changes to their local tax legislation. The Group may be subject to the minimum tax rate as soon as the changes to tax legislation in the Group's operating countries come into force or are about to come into force. At the time of approving the consolidated financial statements for publication, the tax law in connection with the minimum tax rate was not in force or about to come into force in any of the countries in which the Group operates.

The Group may be subject to the minimum tax rate but as at the end of the reporting period it did not have any subsidiaries where the local tax rate is below 15 %.

The management closely follows how legislation is progressing in each country in which the Group operates. As of December 31, 2022, the Group did not have sufficient information to determine the potential quantitative effects.

b. Goodwill impairment testing (note 14)
Impairment is tested in accordance with IAS 36 on the basis of the expected future cash flows of these cash-generating units or groups of cash-generating units over the detailed planning period of four years and is subject to estimates made by the Group. Judgments are also required to derive capitalization rates. A change in the factors used when testing goodwill and other intangible assets or property, plant and equipment for impairment may lead to higher, lower or no impairment.

c. Determination of useful lives of property, plant and equipment and assessing which cost components can be capitalized (note 15)
Group-wide uniform useful lives for items of property, plant and equipment are determined on the basis of past experience and regularly reviewed. As part of the process of assessing whether an item is eligible for recognition as an asset and which components of cost should be taken into account, we make assumptions regarding the expected future usability of the asset.

d. Assessment of the need for and measurement of allowances for doubtful debts (note 18, 20, 31)
When recognizing allowances for doubtful debts, estimates are made regarding the creditworthiness of individual customers and market segments, and general economic forecasts for the different countries and the history of our bad debts.

e. Measurement of pension obligations (note 24)
Obligations from defined benefit pension commitments are calculated on the basis of actuarial assumptions. These are mainly the discount rate, life expectancy and pension and salary trends. The interest rate is determined by reference to market yields at the end of the reporting period on high quality corporate bonds. Sensitivity analyses with respect to the interest rate used are provided in the notes.

f. Recognition and measurement of other provisions (note 25)
Other provisions are recognized and measured on the basis of an assessment of the probability of a future outflow of benefits, using values based on experience and circumstances known as of the end of the reporting period. The actual outflow of economic resources at a later date could be lower or higher than the amount recognized as a provision. The nature of estimates and judgments used differs for the various categories of provisions.

The recognition and measurement of provisions for legal disputes requires a high degree of judgment as to whether a current obligation exists and whether a future outflow of economic resources is probable and can be reliably estimated. We obtain assessments from in-house and external attorneys to assess these matters. Changes in circumstances may result in adjustments to provisions.

Income taxes

The tax expense comprises current and deferred taxes. Current and deferred taxes are recognized in profit or loss, except to the extent that they are associated with a business combination or with an item recognized directly in equity or other comprehensive income.

The Group has determined that interest and penalties on income taxes, including uncertain tax items, do not meet the definition of income taxes and are therefore accounted for in accordance with IAS 37.

a. Current taxes
Current taxes are the expected tax liability or tax receivable on the taxable income or loss for the fiscal year based on tax rates that are enacted or substantively enacted at the end of the reporting period, plus any adjustments to tax liability for prior years. The amount of the expected tax liability or tax receivable reflects the amount that is the best estimate, taking into account tax uncertainty, if any. Current tax liabilities also include all tax liabilities that arise as a result of dividends being determined. Current tax assets and liabilities are only netted under certain conditions.

b. Deferred taxes

Deferred taxes are recognized, in accordance with the asset and liability method, for all temporary differences at the end of the reporting period between the carrying amounts of assets and liabilities in the statement of financial position and their corresponding tax bases, and on the tax loss and for tax loss carryforwards. In accordance with IAS 12.15 in conjunction with IAS 12.21B, temporary differences arising on the initial recognition of goodwill are not included in the calculation of deferred taxes. Deferred taxes are calculated using currently enacted or substantially enacted tax rates that will apply when the temporary differences are expected to reverse. Deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which the unused tax loss carryforwards or asset-side differences between the carrying amounts and the corresponding tax bases can be utilized.

Deferred tax assets and liabilities are only offset if they relate to income taxes levied by the same taxation authority and the entity has a legally enforceable right to offset the tax assets and liabilities.

Income taxes relating to items that are recognized directly in other comprehensive income are also recognized in other comprehensive income and not in profit or loss. Deferred taxes are recognized in other comprehensive income if the underlying transaction is also recognized in other comprehensive income.

Revenue recognition

Revenue includes sales of products (essentially industrial gases) and services as well as rental income, less trade discounts and rebates.

a. Revenue from on-site plant and pipeline sales

Customers requiring large volumes of industrial gases (typically oxygen, nitrogen and hydrogen) and with a relatively constant demand are typically supplied by plants adjacent to or on their facilities, the capacity of which frequently also covers the liquid gas requirements of the surrounding market. These plants are legally owned and operated by the Messer Industries Group. The product supply contracts typically have terms of ten to 15 years and generally include agreements on minimum purchase volumes or minimum prices and price escalation clauses. Revenue is recognized when the gas is delivered to the customer, which is the date on which control of the industrial gases is transferred. If the customer does not take delivery of the minimum purchase requirements, revenue is generally recognized in the amount of the contractual minimum. The same conditions and accounting policies apply to sales via pipelines, with the sole difference that customers are supplied via a pipeline. Estimates are not required as of the end of the year as a result of regular billing.

Certain gas supply contracts, in particular those for the gas generation plants rented on a long-term basis, must be examined for the existence of a finance lease in accordance with IFRS 16 and, if necessary, classified as such. In the event of a finance lease in accordance with IFRS 16, disposal is assumed at the start of the lease term and revenue is recognized in the amount of the present value of the minimum lease payments attributable to the asset. Interest income earned on finance leases is reported as other financial income.

b. Revenue from liquefied gases
Liquid products are typically stored in the Group's own tanks, which are rented to customers on their premises. The gases are delivered to customers in tankers, tank trailers or rail cars from which the gases are transferred to the leased tanks. The agreements customary in liquefied products business typically have a term of two to three years. Revenue from liquefied products is recognized on delivery to the tank. Income from the rental of tanks is recognized according to the terms of the lease agreements in accordance with IFRS 16.

c. Revenue from cylinder gases
Customers who need small amounts of gas (especially for most special gases) receive the products in cylinders, which are typically owned by the Group and rented to customers. Cylinder gases are generally sold by individual purchase orders or by contracts, with terms ranging between one and two years. Revenue from gas sales is realized on delivery to the customer. Income from the rental of cylinders is recognized according to the terms of the lease agreements in accordance with IFRS 16.

d. Construction contracts
Depending on the type of contractual arrangement, revenue from long-term construction contracts in the Engineering division is recognized either at a point in time or over a period of time.
In accordance with IFRS 15, revenue from engineering projects is recognized over a period of time if they satisfy the criteria of IFRS 15.35. In the Messer Industries Group, this typically only applies to air separation units for specific customers. For other engineering projects that do not meet the criteria mentioned, revenue is recognized when the project is completed in accordance with IFRS 15.

3. Consolidated companies

There were no changes to the group of consolidated companies in the last fiscal year and it was as follows as of December 31, 2022:

2022	Germany	Other countries	Total
As of Jan. 1	**10**	**34**	**44**
Consolidated	9	28	37
Equity method	1	4	5
Proportionately consolidated	–	2	2
As of Dec. 31	**10**	**34**	**44**

Notes to the Consolidated Income Statement

4. Revenue

	Jan. 1 – Dec. 31, 2022		Jan. 1 – Dec. 31, 2021	
From contracts with customers	2,310,806	89 %	1,876,380	89 %
From other revenue sources	279,650	11 %	242,330	11 %
Total	**2,590,456**	**100 %**	**2,118,710**	**100 %**

Revenue is mainly generated by the sale of liquefied products, cylinder gases and on site and pipeline sales. Revenue breaks down among the individual sales channels as follows:

	Jan. 1 – Dec. 31, 2022		Jan. 1 – Dec. 31, 2021	
Liquefied gases	1,458,820	56 %	1,241,056	59 %
Cylinder gases	434,849	17 %	303,221	14 %
Pipeline/on-site	239,229	9 %	185,432	9 %
Hardware/other	177,908	7 %	146,671	7 %
From contracts with customers	**2,310,806**	**89 %**	**1,876,380**	**89 %**
From other revenue sources	279,650	11 %	242,330	11 %
Total	**2,590,456**	**100 %**	**2,118,710**	**100 %**

Revenue breaks down among the individual regions as follows:

	Jan. 1 – Dec. 31, 2022		Jan. 1 – Dec. 31, 2021	
North America	1,742,131	67 %	1,431,168	68 %
Western Europe	488,762	19 %	391,530	18 %
South America	359,563	14 %	296,012	14 %
Total	**2,590,456**	**100 %**	**2,118,710**	**100 %**

5. Cost of sales

In addition to directly attributable costs, such as materials purchasing, energy and personnel expenses, the cost of sales also includes overheads attributable to the production process, including depreciation on air separation units.

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Goods purchased	505,603	427,251
Production costs		
Energy	371,744	274,584
Depreciation and amortization	190,648	172,884
Personnel expenses	116,530	100,270
Maintenance	42,371	36,628
Taxes and other fees	19,455	16,684
Security and insurance	5,689	4,943
Others		
Services	4,686	1,865
Hardware	4,049	3,658
Other	32,985	35,226
Total	**1,293,760**	**1,073,993**

6. Selling and Distribution Expenses

Selling and distribution expenses also include the costs of all sales departments and logistics activities.

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Personnel expenses	260,214	222,413
Transportation costs	218,024	169,455
Depreciation and amortization	176,232	160,727
Maintenance	36,059	28,675
Warehousing costs	8,296	7,632
Insurance	4,102	3,174
Advertising	3,926	2,886
Other	53,355	32,600
Total	**760,208**	**627,562**

7. General and Administrative Expenses

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Personnel expenses	101,632	88,019
Depreciation and amortization	25,035	21,224
IT services	18,512	16,334
Insurance and assurance services	11,446	12,619
Other	31,546	33,764
Total	**188,171**	**171,960**

8. Other Operating Income

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Exchange rate gains from operating activities	4,295	4,615
Gains on the disposal of non-current assets	3,047	1,191
Other prior-period income	1,577	1,159
Income from related parties	697	507
Insurance claims	633	118
Change in the fair value of derivatives through profit or loss	486	66
Miscellaneous	7,506	46,562
Total	**18,241**	**54,218**

In February 2021, the south-western states of the USA, particularly Texas, were impacted by extreme cold in the form of a polar vortex. The production facilities of Messer LLC, USA, located in Texas, operates in the deregulated market in the electric grid of the Electric Reliability Council of Texas ("ERCOT"). As a result of the extreme weather, energy prices rose to reach the administrative ceiling approved by ERCOT. Over a long period, Messer LLC, USA, then drastically throttled power consumption so as to limit demand for power grid operations as far as possible. The company had concluded derivative financial instruments for hedging future payments for energy purchases ("energy swaps"). On the basis of the conditions for these energy swaps, Messer LLC, USA, returned the excess energy to the supplier at the prevailing market price resulting in gains for the company of K€ 26,917 in fiscal 2021 which are recognized in the "Miscellaneous" item.

9. Other Operating Expenses

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Exchange rate losses from operating activities	6,573	4,980
Related party expenses	3,568	3,306
Other taxes	2,547	2,779
Losses on the disposal of non-current assets	1,658	1,535
Legal and consulting expenses	308	2,032
Change in the fair value of derivatives through profit or loss	249	–
Miscellaneous	3,052	4,698
Total	**17,955**	**19,330**

10. Financial Result, Net

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Income from investments accounted for using the equity method	**187**	**228**
Other investment result, net	**73**	**131**
Finance income	**42,768**	**13,100**
Interest income from		
Bank balances	1,058	128
Income in connection with the interest effect of provisions	2,862	–
Other interest income	7,359	4,111
Foreign currency gains	8,409	7,206
Gain or loss from the measurement of derivatives	13,887	4
Other finance income	9,193	1,651
Finance costs	**(92,454)**	**(92,437)**
Interest expense from		
Liabilities to banks	(62,814)	(62,536)
Leases	(4,822)	(4,932)
Expenses for the interest effect of provisions	(3,574)	(2,092)
Capitalized borrowing costs	3,923	3,037
Other interest expenses	(3,509)	(1,961)
Foreign currency losses	(1,484)	(3,178)
Write-down on transaction costs	(15,103)	(17,825)
Gain or loss from the measurement of derivatives	(2,541)	–
Other finance costs	(2,530)	(2,950)
Total	**(49,426)**	**(78,978)**

For more information on interest expenses for our bank financing and derivatives, please refer to note 26 “Financial Liabilities” and note 31 “Other Financial Instrument Disclosures”.

11. Tax Result

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Current income taxes	(86,016)	(53,041)
Deferred income taxes	7,298	235
Total	**(78,718)**	**(52,806)**

Deferred income taxes relating to items charged or credited directly to other comprehensive income:

	Dec. 31, 2022	Dec. 31, 2021
Deferred taxes related to gains or losses from the remeasurement of hedges	(30,224)	(9,784)
Deferred income taxes on net investments in foreign operations	322	(2,954)
Deferred taxes related to the remeasurement of net defined benefit obligations	(3,737)	(377)
Deferred tax assets / (liabilities) recognized in other comprehensive income	**(33,639)**	**(13,115)**

The following reconciliation summarizes the individual calculations of deferred taxes for specific companies using the respective tax rates specific to their countries, taking consolidation adjustments into account. The expected income tax is reconciled to the effective reported tax expense. To calculate the expected income tax, the income tax rate for the Group in fiscal 2022, based on the tax rate for the parent company of 30.00 % (previous year: 30.00 %), is multiplied by the profit before tax.

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Tax rate	30.00 %	30.00 %
Profit before tax	**307,911**	**200,184**
Expected income tax/(charge)	(92,373)	(60,055)
Impairment loss/non-recognition of deferred taxes on temporary differences	(4,531)	(5,489)
Effects of previously unrecognized tax losses	7,593	8,609
Effect of tax credits	1,208	574
Non-deductible withholding tax/other taxes	(8,912)	(9,278)
Effect of changes in tax rates	8,906	(1,029)
Associates accounted for using the equity method	(59)	(1)
Tax (expense)/income for previous years	(4,246)	1,544
Non-deductible expenses for tax purposes/tax-free income	321	(3,648)
Tax rate differences at Group companies	15,647	14,240
Others	(2,272)	1,727
Effective tax income/(expense) from operating activities	**(78,718)**	**(52,806)**
Effective tax rate	**25.57 %**	**26.38 %**

As of December 31, 2022, within the Messer Industries Group there were tax loss carryforwards of K€ 273,889 (previous year: K€ 327,246).

For Group companies that had losses in the current or the previous period, a deferred tax asset of K€ 139 (previous year: K€ 107) was capitalized, the realization of which is dependent on future taxable profits that are higher than the effects of the reversal of existing taxable temporary differences. The recognition of deferred tax assets is justified in that their realization is likely on the basis of planning for tax purposes.

Deferred taxes were not recognized for tax loss carryforwards of K€ 170,103 (previous year: K€ 185,905) on unused tax credits of K€ 1,634 (previous year: K€ 1,449) or temporary differences of K€ 1,088 (previous year: K€ 972), as it is assumed – on the basis of planning for tax purposes – that it will not be possible to utilize the tax loss carryforwards or temporary differences. The temporary differences of K€ 1,088 are considered vested.

The loss carryforwards of the Messer Industries Group without deferred tax assets will expire as follows:

Expiring within	Dec. 31, 2022	Dec. 31, 2021
1 year	196	286
2 years	863	59
3 years	1,821	813
After 3 years	165,931	166,480
Indefinite	1,292	18,267
Total	**170,103**	**185,905**

In accordance with IAS 12.39, deferred taxes on the difference between the pro rata equity of a subsidiary recognized in the consolidated statement of financial position and the carrying amount of the investment in that subsidiary must be included in the parent company's tax accounts (outside basis differences) if they are expected to be realized. These differences essentially relate to the retained earnings of German and foreign subsidiaries. Deferred taxes are not recognized for these retained earnings as they are re-invested indefinitely or are not subject to corresponding taxation. Distributions by subsidiaries would be subject to dividend taxation. Distributions from abroad could also trigger withholding tax. As of December 31, 2022, deferred tax liabilities for outside basis differences were not taken into account for planned dividend payments as their realization is not planned.

Deferred taxes are attributable to the following statement of financial position items as of December 31, 2022:

	Dec. 31, 2022	Dec. 31, 2021	Recognized in profit or loss and other changes outside profit or loss*	Recognized in other comprehensive income
Deferred tax assets				
Tax loss carryforwards and tax credits	34,224	39,072	(4,848)	–
Intangible assets and property, plant and equipment	1,569	405	1,164	–
Inventories	638	792	(154)	–
Trade receivables	3,996	6,586	(2,590)	–
Provisions for employee benefits	3,600	17,400	(10,440)	(3,360)
Other long-term provisions	18,625	16,275	2,350	–
Other short-term provisions	3,315	15,384	(12,069)	–
Other current liabilities	29,995	22,248	7,747	–
Miscellaneous	30,002	8,594	18,132	3,276
Total	**125,964**	**126,756**	**(708)**	**(84)**
Offsetting	**(101,093)**	**(106,187)**		
Deferred tax assets, net	**24,871**	**20,569**		
Deferred tax liabilities				
Intangible assets	(201,415)	(185,665)	(15,750)	–
Property, plant and equipment	(386,637)	(389,996)	3,359	–
Inventories	(14,147)	(15,136)	989	–
Other current receivables and assets	(37,723)	(15,518)	(1,765)	(20,440)
Other short-term provisions	(2,678)	(2,858)	180	–
Miscellaneous	(6,913)	(7,767)	854	–
Total	**(649,513)**	**(616,940)**	**(12,133)**	**(20,440)**
Offsetting	**101,093**	**106,187**		
Deferred tax liabilities, net	**(548,420)**	**(510,753)**		
Total deferred taxes, net	**(523,549)**	**(490,184)**	**(12,841)**	**(20,524)**

* of which exchange rate changes recognized in other comprehensive income: K€ (20,139)

Under deferred tax assets, deferred taxes were recognized on non-current and current lease liabilities of K€ 23,467 within the "Other" deferred taxes item.
The "Intangible assets" statement of financial position item under deferred tax liabilities includes deferred taxes on right-of-use assets of K€ 22,441.

Deferred tax assets and liabilities, after offsetting at the individual companies, break down as follows:

Deferred taxes	Dec. 31, 2022	Dec. 31, 2021
Deferred tax assets	24,871	20,569
Deferred tax liabilities	(548,420)	(510,753)
Total deferred taxes, net	**(523,549)**	**(490,184)**

Deferred tax assets and liabilities in the statement of financial position and deferred taxes in the income statement are reconciled as follows:

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Change in deferred tax assets in the statement of financial position	4,302	3,660
Change in deferred tax liabilities in the statement of financial position	(37,667)	(44,734)
Difference	(33,365)	(41,074)
of which:		
Through profit and loss	7,298	235
Offset against other comprehensive income	(20,524)	(15,349)
Exchange rate changes	(20,139)	(25,960)

12. Personnel expenses

Personnel expenses consist of wages and salaries, social security contributions and other employee benefits (e.g. pensions).

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Personnel Expenses	480,105	409,380

The above amount includes wages and salaries of K€ 358,031 (previous year: K€ 314,176), social security expenses of K€ 84,267 (previous year: K€ 77,544) and other personnel expenses of K€ 18,525 (previous year: K€ 12,611). Personnel expenses also comprise expenses for defined contribution plans of K€ 5,071 (previous year: K€ 4,001) and for defined benefit plans of K€ 1,222 (previous year: K€ 1,048).

13. Number of Employees (Annual Average)

The average number of employees breaks down as follows:

By region	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
North America	2,794	2,748
South America	2,219	2,168
Western Europe	821	802
Total number of employees	**5,834**	**5,718**

By function	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Production and filling	2,524	2,517
Logistics	1,414	1,386
Sales and marketing	954	968
Administration	648	562
Engineering	294	285
Total number of employees	**5,834**	**5,718**

Notes to the Consolidated Statement of Financial Position

14. Intangible Assets

Goodwill

	2022	2021
Cost		
As of Jan. 1	**602,187**	**566,429**
Additions	–	–
Exchange rate changes	24,433	35,758
As of Dec. 31	**626,620**	**602,187**
Cumulative amortization		
As of Jan. 1	**–**	**–**
Additions	–	–
Exchange rate changes	–	–
As of Dec. 31	**–**	**–**
Net carrying amounts as of Jan. 1	**602,187**	**566,429**
Net carrying amounts as of Dec. 31	**626,620**	**602,187**

Goodwill is tested for impairment as of December 31 each year. In accordance with IAS 36, goodwill is allocated to the smallest cash-generating unit for which goodwill is monitored and tested for impairment at this level by comparing discounted expected future cash flows against the carrying amount of that cash-generating unit. The smallest identifiable group of assets that generate cash inflows from continued use that are largely independent of the cash inflows of other assets or other groups of assets (cash-generating unit) were identified by the companies of the Messer Industries Group operating in the individual countries. If individual production and distribution companies within a country complement each other economically, they are combined into groups of cash-generating units for the purposes of goodwill monitoring. Accordingly, for Belgium, Brazil, Germany, Colombia (also combined with the business activities in Chile), the Netherlands, Spain and the US, various companies were combined in conjunction with impairment testing.

The following table shows the breakdown of goodwill as of December 31, 2022:

Cash-generating unit	Dec. 31, 2022	Dec. 31, 2021
United States	420,256	395,767
Canada	75,394	75,640
Germany	33,086	33,086
France	23,043	23,043
Switzerland	19,211	18,311
Colombia	15,315	17,215
Spain	13,879	13,879
Brazil	9,754	8,716
Belgium	9,623	9,623
Netherlands	3,649	3,649
Algeria	2,193	2,041
Portugal	1,217	1,217
	626,620	**602,187**

The recoverable amount for an individual operating company is based on calculations of its respective value in use. The value in use is the present value of the estimated future cash flows expected from the continuing operations of each company. The cash flow forecast is based on the most recent financial plans of the respective cash-generating unit that have been approved by management. Starting with the analysis of past results, values in use were calculated on the basis of detailed forecasts of long-term cash flows through 2027. Cash flows for periods after the detailed planning period were based on the final fiscal year of the detailed planning period (using the terminal value model). Forecast cash flows were discounted to their present value at the measurement date using an appropriate capitalization rate specific to that country. The capitalization rate is calculated using the capital asset pricing model (CAPM) after first being broken down into the components of basic interest rate, risk premium and growth discount. The risk-free basic interest rate was derived from yields on long-term government bonds taking into account the respective country rating (Moody's). The risk premium was obtained by multiplying the market risk premium by the beta factor that reflects the relative risk of a given stock compared to the market as a whole. The market risk premium was calculated for each country using the Damodaran model, taking into account the respective country rating (Moody's). The beta factor was calculated on the basis of an analysis of a peer group of listed companies for the Messer Industries Group.

The capitalization rates after tax for the specific countries are as follows:

	Dec. 31, 2022	Dec. 31, 2021
Brazil	12.34 %	8.54 %
Colombia	10.64 %	7.47 %
Algeria	9.96 %	7.70 %
Portugal	9.05 %	7.16 %
Spain	8.73 %	6.86 %
Belgium	7.97 %	5.92 %
Canada	7.92 %	5.62 %
United States	7.85 %	5.61 %
France	7.75 %	5.82 %
Netherlands	7.30 %	5.35 %
Germany	7.25 %	5.34 %
Switzerland	6.41 %	5.37 %

The detailed forecasts up to 2027 used to calculate the values in use of the cash-generating units are based primarily on the assumptions for revenue growth, the development of the EBITDA margin and the long-term growth rate after the detailed planning period. These assumptions for the cash-generating units are as follows:

Cash-generating unit	Goodwill Dec. 31, 2022		Significant planning assumptions		
			Revenue growth (CAGR)	Trend in EBITDA margin[1]	Growth rate[2]
United States	420,256	67 %	Moderate increase	Stable	1.5 %
Canada	75,394	12 %	Slight increase	Stable	1.5 %
Germany	33,086	5 %	Strong increase	Slight decrease	1.0 %
France	23,043	4 %	Strong increase	Strong decrease	1.0 %
Switzerland	19,211	3 %	Strong increase	Strong decrease	1.0 %
Colombia	15,315	2 %	Moderate increase	Strong increase	2.0 %
Spain	13,879	2 %	Slight decrease	Strong increase	1.0 %
Belgium	9,754	2 %	Slight increase	Strong decrease	1.0 %
Brazil	9,623	2 %	Moderate increase	Strong increase	2.0 %
Netherlands	3,649	1 %	Slight increase	Strong increase	1.0 %
Algeria	2,193	0 %	Strong decrease	Strong decrease	1.0 %
Portugal	1,217	0 %	Slight increase	Slight increase	1.0 %
Messer Industries Group	**626,620**	**100 %**			

[1] End of the detailed planning period compared to the current fiscal year
[2] Growth after the detailed planning period

The weighted average growth rate for extrapolating cash flows beyond the planning period is unchanged at 1.0 % for all Western European units. The average growth rate for the American units is unchanged at between 1.5 % and 2.0 %.

The following three scenarios were simulated in conjunction with a sensitivity analysis:

(a) Increase in the capitalization rates for each country by 1 percentage point.
(b) The long-term growth rate after the detailed planning period is reduced by 0.5 %.
(c) Planned EBIT of the cash-generating units consistently falls short of forecasts by 10 % throughout the entire planning period and thereafter from fiscal 2027 onwards.

Under these scenarios, there would there be goodwill impairment requirements at the cash-generating units of France, Switzerland and Spain. As of December 31, 2022, the recoverable amount for France exceeded the carrying amount by K€ 23,045, for Switzerland by K€ 7,155 and for Spain by K€ 1,497.

The changes in the main assumptions which result in the recoverable amount for these cash-generating units corresponding to the carrying amount are shown below:

Cash-generating unit	Sensitivity scenarios (Change in percentage points)		
	Capitalization rate	Growth rate	EBIT below forecast[1]
France	+0.78 %	–	–
Switzerland	+0.47 %	–	–
Spain	+0.08 %	-0.11 %	-2.0 %

[1] Throughout the forecast period

Right-of-use assets

Right-of-use assets relate to assets capitalized in conjunction with leases in accordance with IFRS 16. These consist of the following:

2022	Land and buildings	Plant and machinery	Other operating and office equipment	Total
Cost				
As of Jan. 1, 2022	**74,614**	**48,913**	**112**	**123,639**
Additions	12,828	34,895	230	47,953
Disposals	(1,949)	(7,936)	(37)	(9,922)
Exchange rate changes	2,351	1,542	(2)	3,891
As of Dec. 31, 2022	**87,844**	**77,414**	**303**	**165,561**
Cumulative depreciation				
As of Jan. 1, 2022	**(23,194)**	**(19,938)**	**(69)**	**(43,201)**
Additions	(11,767)	(12,030)	(98)	(23,895)
Disposals	2,105	6,791	37	8,933
Exchange rate changes	(586)	(589)	–	(1,175)
As of Dec. 31, 2022	**(33,442)**	**(25,766)**	**(130)**	**(59,338)**
Net carrying amounts as of Jan. 1, 2022	**51,420**	**28,975**	**43**	**80,438**
Net carrying amounts as of Dec. 31, 2022	**54,402**	**51,648**	**173**	**106,223**

2021	Land and buildings	Plant and machinery	Other operating and office equipment	Total
Cost				
As of Jan. 1, 2021	**63,976**	**43,523**	**430**	**107,929**
Additions	8,353	7,092	14	15,459
Disposals	(1,975)	(3,932)	(345)	(6,252)
Exchange rate changes	4,260	2,230	13	6,503
As of Dec. 31, 2021	**74,614**	**48,913**	**112**	**123,639**
Cumulative depreciation				
As of Jan. 1, 2021	**(15,550)**	**(13,277)**	**(288)**	**(29,115)**
Additions	(8,371)	(9,729)	(105)	(18,205)
Disposals	1,909	3,687	335	5,931
Exchange rate changes	(1,182)	(619)	(11)	(1,812)
As of Dec. 31, 2021	**(23,194)**	**(19,938)**	**(69)**	**(43,201)**
Net carrying amounts as of Jan. 1, 2021	**48,426**	**30,246**	**142**	**78,814**
Net carrying amounts as of Dec. 31, 2021	**51,420**	**28,975**	**43**	**80,438**

Impairment on right-of-use assets in the USA of K€ 1,429 was recognized in fiscal 2022. The impairment loss was reported under "General and administrative expenses" in the income statement.

Interest expenses of K€ 4,822 (previous year: K€ 4,932) were recognized in connection with leases. Furthermore, the following expenses were recognized that were not taken into account in the measurement of right-of-use assets and the corresponding liability:

	2022	2021
Expenses for leases for low-value assets	–	–
Expenses for short-term leases	3,227	2,735
Expenses for variable lease payments	–	–
	3,227	**2,735**

In total, leases resulted in cash outflows of K€ 29,576 (previous year: K€ 25,310) in the year under review.

Other intangible assets

2022	Customer bases	Technologies / patents	Licenses	Miscellaneous intangible assets	Total
Cost					
As of Jan. 1, 2022	**791,895**	**172,870**	**141,358**	**101,312**	**1,207,435**
Additions	–	–	–	644	644
Reclassification	–	–	–	2,874	2,874
Disposals	–	–	–	(179)	(179)
Exchange rate changes	32,920	8,954	(209)	7,962	49,627
As of Dec. 31, 2022	**824,815**	**181,824**	**141,149**	**112,613**	**1,260,401**
Cumulative amortization					
As of Jan. 1, 2022	**(120,422)**	**(36,849)**	**(39,938)**	**(34,588)**	**(231,797)**
Additions	(44,364)	(13,927)	(14,141)	(13,347)	(85,779)
Reclassification	–	–	(117)	119	2
Disposals	–	–	–	72	72
Exchange rate changes	(4,399)	(1,718)	89	(1,712)	(7,740)
As of Dec. 31, 2022	**(169,185)**	**(52,494)**	**(54,107)**	**(49,456)**	**(325,242)**
Net carrying amounts as of Jan. 1, 2022	**671,473**	**136,021**	**101,420**	**66,724**	**975,638**
Net carrying amounts as of Dec. 31, 2022	**655,630**	**129,330**	**87,042**	**63,157**	**935,159**

2021	Customer bases	Technologies / patents	Licenses	Miscellaneous intangible assets	Total
Cost					
As of Jan. 1, 2021	**746,926**	**161,262**	**141,542**	**97,938**	**1,147,668**
Additions	–	–	–	421	421
Reclassification	–	–	–	1,801	1,801
Disposals	–	–	–	(2,166)	(2,166)
Exchange rate changes	44,969	11,608	(184)	3,318	59,711
As of Dec. 31, 2021	**791,895**	**172,870**	**141,358**	**101,312**	**1,207,435**
Cumulative amortization					
As of Jan. 1, 2021	**(73,858)**	**(22,216)**	**(25,950)**	**(19,996)**	**(142,020)**
Additions	(40,824)	(12,490)	(13,946)	(13,483)	(80,743)
Reclassification	–	–	(78)	78	–
Disposals	–	–	–	29	29
Exchange rate changes	(5,740)	(2,143)	36	(1,216)	(9,063)
As of Dec. 31, 2021	**(120,422)**	**(36,849)**	**(39,938)**	**(34,588)**	**(231,797)**
Net carrying amounts as of Jan. 1, 2021	**673,068**	**139,046**	**115,592**	**77,942**	**1,005,648**
Net carrying amounts as of Dec. 31, 2021	**671,473**	**136,021**	**101,420**	**66,724**	**975,638**

The customer bases result from purchase price allocation performed as of March 1, 2019 and will be amortized on a straight-line basis over a period of up to 44 years after December 31, 2022. The useful life of the customer bases is not more than 47.5 years and is higher than the original maximum contract term of 15 years as the respective renewal options are highly likely to be exercised by customers. The amortization expense for the fiscal year is recognized in selling and distribution expenses.

"Technologies" mainly includes patents in the segments of software, oil and gas, energy, food and healthcare, which were acquired from the Linde Group. As of December 31, 2022, the net carrying amounts of the patents are K€ 114,236 (previous year: K€ 119,203) in the US, K€ 6,170 (previous year: K€ 6,744) in Canada, K€ 5,521 (previous year: K€ 6,761) in Colombia and K€ 3,403 (previous year: K€ 3,313) in Brazil.

The licenses include the rights to the brands ‚Messer – Gases for Life' (K€ 86,000, previous year: K€ 99,946) and ‚REMEO' (K€ 1,042, previous year: K€ 1,474) that are amortized over their useful life of ten years.

15. Property, Plant and Equipment

2022	Land and buildings	Plant and machinery	Other operating and office equipment	Construction in progress	Total
Cost					
As of Jan. 1, 2022	**198,245**	**2,179,455**	**268,630**	**196,955**	**2,843,285**
Additions	930	23,089	2,942	332,432	359,393
Reclassification	6,308	175,615	58,201	(242,998)	(2,874)
Disposals	(1,329)	(16,374)	(4,662)	(3)	(22,368)
Exchange rate changes	7,200	88,480	11,198	7,898	114,776
As of Dec. 31, 2022	**211,354**	**2,450,265**	**336,309**	**294,284**	**3,292,212**
Cumulative depreciation					
As of Jan. 1, 2022	**(20,137)**	**(554,432)**	**(103,545)**	**(780)**	**(678,894)**
Additions	(7,477)	(235,198)	(39,566)	–	(282,241)
Reclassification	13	336	(351)	–	(2)
Disposals	256	7,040	3,453	281	11,030
Exchange rate changes	(141)	(19,799)	(3,108)	(62)	(23,110)
As of Dec. 31, 2022	**(27,486)**	**(802,053)**	**(143,117)**	**(561)**	**(973,217)**
Net carrying amounts as of Jan. 1, 2022	**178,108**	**1,625,023**	**165,085**	**196,175**	**2,164,391**
Net carrying amounts as of Dec. 31, 2022	**183,868**	**1,648,212**	**193,192**	**293,723**	**2,318,995**

2021	Land and buildings	Plant and machinery	Other operating and office equipment	Construction in progress	Total
Cost					
As of Jan. 1, 2021	**189,153**	**1,884,571**	**228,368**	**130,845**	**2,432,937**
Additions	802	31,866	2,183	265,695	300,546
Reclassification	2,175	177,778	27,200	(208,954)	(1,801)
Disposals	(583)	(19,293)	(3,831)	(50)	(23,757)
Exchange rate changes	6,698	104,533	14,710	9,419	135,360
As of Dec. 31, 2021	**198,245**	**2,179,455**	**268,630**	**196,955**	**2,843,285**
Cumulative depreciation					
As of Jan. 1, 2021	**(12,857)**	**(335,625)**	**(66,619)**	**–**	**(415,101)**
Additions	(7,068)	(213,729)	(34,347)	(745)	(255,889)
Reclassification	1	843	(844)	–	–
Disposals	90	17,605	2,784	–	20,479
Exchange rate changes	(303)	(23,526)	(4,519)	(35)	(28,383)
As of Dec. 31, 2021	**(20,137)**	**(554,432)**	**(103,545)**	**(780)**	**(678,894)**
Net carrying amounts as of Jan. 1, 2021	**176,296**	**1,548,946**	**161,749**	**130,845**	**2,017,836**
Net carrying amounts as of Dec. 31, 2021	**178,108**	**1,625,023**	**165,085**	**196,175**	**2,164,391**

Borrowing costs of K€ 3,923 (previous year: K€ 3,037) were capitalized for qualifying assets in the fiscal year. The average interest rate was 2.9 % (previous year: 2.9 %).

No impairment was recognized on property, plant and equipment fiscal 2022. Impairment on property, plant and equipment in the USA of K€ 3,030 was recognized in the previous year. This is included in the additions to depreciation on “Plant and machinery” and “Construction in progress” for fiscal 2021. The impairment was reported under “Cost of sales” in the income statement.

Additions to plant and machinery include a net amount of K€ -7,683 thousand (previous year: K€ 4,000) that was capitalized in accordance with IFRIC 1 on the basis of measurement changes in restoration obligations.

In addition, property, plant and equipment includes technical equipment, including tanks, from operating leases in which the Messer Industries Group acts is the lessor. The lease payments to be received from customers from such operating leases in the future break down as follows:

	Dec. 31, 2022	Dec. 31, 2021
Due within 1 year	71,057	63,425
Due between 1 and 5 years	137,513	109,683
Due after more than 5 years	24,855	11,831
	233,425	**184,939**

Income of K€ 79 (previous year: K€ 70) from variable lease payments under operating leases was recognized in the reporting period.

16. Interests in Other Entities

Investments accounted for using the equity method

The following interests in associates were recognized on the basis of the interest in the equity of the relevant entity as of December 31, 2022:

Name and registered office of the company	Shareholding (%)		Carrying amount	
	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Non-significant companies				
Limes S.A.S., Saint-Herblain	50 %	50 %	3,723	3,722
Cliffside Refiners LP, Delaware	26 %	26 %	1,630	1,488
GreenCO2 N.V., Zwijndrecht	35 %	35 %	468	520
Cliffside Helium LLC, Delaware	26 %	26 %	67	56
HyDN GmbH, Jülich	37.5 %	25 %	29	6
			5,917	**5,792**

Interests in associates developed as follows:

	2022	2021
Cost		
As of Jan. 1	**5,792**	**5,680**
Group's share of results/additions	349	233
Dividends/disposals	(317)	(240)
Exchange rate changes	93	119
As of Dec. 31	**5,917**	**5,792**
Cumulative amortization		
As of Jan. 1	**–**	**–**
Additions	–	–
As of Dec. 31	**–**	**–**
Net carrying amount as of Jan. 1	**5,792**	**5,680**
Net carrying amount as of Dec. 31	**5,917**	**5,792**

The following table shows the summarized pro rata financial data of the individually immaterial associates: Limes S.A.S., France, is a 50 % investment of Messer France S.A.S., France. BECO2 B.V.B.A., Belgium, has a 50 % interest in GreenCO2 N.V., Belgium. Messer LLC, USA, holds 26 % in Cliffside Refiners LP, USA, and 26 % in Cliffside Helium LLC, USA. Messer Industriegase GmbH holds a 37.5 % interest in HyDN GmbH.

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Net profit for the year	371	223
Other comprehensive income	32	41
Total comprehensive income	**402**	**263**

Joint operations

Messer LLC, USA, holds a 50 % interest in joint arrangements named East Coast Nitrogen Company LLC, Delaware, USA, and East Coast Oxygen Company LLC, Delaware, USA, which were formed as partnerships with Air Products, USA, to produce liquid nitrogen, oxygen and argon for selected partners of the joint arrangement.

The associated assets and liabilities, income and expenses from joint operations are included in the consolidated financial statements according to the economically attributable share.

The following table shows the summarized pro rata financial data of the individually immaterial joint arrangements:

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Net profit for the year	(3,444)	(3,150)
Other comprehensive income	2,046	2,565
Total comprehensive income	**(1,399)**	**(586)**

17. Equity investments and Other Financial Investments

“Equity Investments” comprises equity investments in the companies Lida S.A.S., France, and Soprogaz S.N.C., France, which are neither consolidated nor accounted for using the equity method.

Other financial investments are investment securities; information on their measurement can be found under note 31 “Other Financial Instrument Disclosures”.

18. Other Non-Current Receivables and Assets

	Dec. 31, 2022	Dec. 31, 2021
Trade receivables	21	91
Other receivables	34,208	28,322
Financial assets	**34,229**	**28,413**
Prepaid expenses	2,571	1,906
Non-financial assets	**2,571**	**1,906**
Total	**36,800**	**30,319**

19. Inventories

	Dec. 31, 2022	Dec. 31, 2021
Raw materials and supplies	33,408	28,014
Work in progress	12,418	17,628
Finished goods and goods for resale	131,429	127,536
Total	**177,255**	**173,178**

K€ 19,452 (previous year: K€ 19,918) of the inventories recognized on December 31, 2022 were measured at their net realizable value. There are impairment losses of K€ 15,547 (previous year: K€ 16,088) on the net realizable value. The impairment losses were recognized in the cost of sales. The amount of inventories recognized as an expense in the reporting period is K€ 636,455 (previous year: K€ 519,751).

20. Trade Receivables

	Dec. 31, 2022	Dec. 31, 2021
Trade receivables	386,276	319,597
Write-downs on receivables	(27,050)	(36,308)
Total	**359,226**	**283,289**

Please refer to the comments under note 31 "Other Financial Instrument Disclosures" regarding write-downs on receivables.

21. Contract Balances

All work related to engineering contracts was billed in fiscal 2022 and 2021 and the corresponding amounts were reported in trade receivables.

Performance obligations from contracts with customers

The following table shows the Group's performance obligations from long-term gas supply contracts with customers:

	Dec. 31, 2022	Dec. 31, 2021
Due in 1st year	295,963	242,474
Due in 2nd year	301,766	239,738
Due in 3rd year	287,271	237,779
Due after more than 3 years	1,645,901	1,265,621
Total	**2,530,901**	**1,985,612**

The amounts shown above essentially relate to contractually agreed fixed payments, known as take-or-pay installments. Variable obligations were not taken into account. Revenue is recognized on delivery of the gases.

22. Other Current Financial and Non-Financial Assets

	Dec. 31, 2022	Dec. 31, 2021
Derivative financial instruments in hedges	137,165	45,667
Derivative financial instruments not in hedges	12,777	935
Other receivables from operating activities	11,489	17,752
Receivables from related parties	7,760	6,654
Deposits and guarantees	707	722
Receivables from employees	35	29
Miscellaneous	55,022	97,788
Financial assets	**224,955**	**169,547**
Other tax receivables	47,187	43,098
Deferred expenses	11,771	8,053
Deferred expenses to related companies	275	138
Prepayments	57	57
Miscellaneous	12	1
Non-financial assets	**59,302**	**51,347**
Total	**284,257**	**220,894**

Derivative financial instruments with an effective hedge include the positive fair values of energy swaps, interest derivatives and currency forwards.

For more information on "Miscellaneous" under financial assets please refer to note 30 "Contingent Liabilities".

23. Cash

The Group holds cash of K€ 167,370 as of December 31, 2022 (previous year: K€ 274,917). Where possible, cash is invested with banks and financial institutions with an investment grade rating or better. The ratings are based on a rating from Standard & Poor's or a comparable rating from another respected rating agency.

Based on the external ratings for the banks and financial institutes, it is assumed that cash has a low risk of default.

Impairment amounts to K€ 0 as of December 31, 2022 (previous year: K€ 0).

24. Provisions for Employee Benefits

	Dec. 31, 2022	Dec. 31, 2021
Pension provisions	20,937	35,296
Provisions for other employee benefits	550	570
Provisions for employee benefits	**21,487**	**35,866**

Pension benefits are provided to employees in a number of countries through both defined benefit and defined contribution pension plans. The benefits vary according to legal, fiscal and economic circumstances of each country. Plan benefits are based on years of service and the level of employee compensation. Provisions for other employee benefits mainly relate to company or statutory severance benefits and early retirement benefits. Some of the obligations under defined benefit pension plans are covered by plan assets held in independent trust funds. The net assets of these funds are predominantly invested equity instruments, bonds and qualified insurance policies.

The amount recognized in the statement of financial position is derived as follows:

	Dec. 31, 2022	Dec. 31, 2021
Present value of funded pension benefits	92,727	119,145
Present value of pension benefits funded by provisions	13,030	13,007
Present value of all pension benefits	**105,757**	**132,152**
Fair value of plan assets of all funds	(84,820)	(96,856)
Net liability recognized	**20,937**	**35,296**

The present value of the funded pension commitments predominantly relates to pension plans of Messer Canada Inc. in the amount of K€ 60,818 (previous year: K€ 82,124).

Messer Canada Inc. operates a funded pension plan that grants members benefits in the form of a guaranteed lifetime pension. The amount of this pension is based on average income and is linked to age and length of service. In Canada, the defined benefit component of the plan has been closed to new entrants since January 1, 2005. Newcomers join a defined contribution plan. In the defined benefit pension plan, future service recognition was discontinued for the remaining employees, with final recognition ending on June 30, 2022.

The Canadian pension plan is managed by a pension committee and its assets are held in a pension fund that is legally independent of the company. The assets cannot be used for any purpose other than the payment of pension benefits and related administrative fees.

The minimum funding requirements in Canada require the company to make special payments to amortize any shortfalls in plan assets in relation to the relevant funding objectives. Instead of these special payments, collateral in the form of letters of credit up to a maximum of 15 % of the actuarial liability used to determine the funding objective is permitted. The company does not currently use any letters of credit.

In accordance with Canadian law, any remainder after accrued benefits have been provided to plan members and after the plan has ended may be returned to the company. Pension legislation in Canada may require the company to make a proposal to members and beneficiaries regarding the allocation of excess assets. Part of this surplus can be used by the company to reduce future contributions or to pay refundable administrative expenses.

The company also offers a limited number of active employees and retirees employer-paid life insurance and post-retirement health plans. The post-retirement benefit plan is not funded.

Defined benefit plans expose the Group to various risks. In addition to general actuarial risks such as longevity risk and interest rate risk, the Group is exposed to currency risk and capital market/investment risk. The risk exposures from the respective plans are not materially different.

The following table shows the reconciliation of the funding of defined benefit plans to the amounts recognized in the consolidated financial statements as of December 31, 2022 and 2021:

	Dec. 31, 2022		Dec. 31, 2021	
	Pension commitments funded by provisions	Pension commitments funded by funds	Pension commitments funded by provisions	Pension commitments funded by funds
Change in the present value of the defined benefit pension plans				
Present value of all pension benefits as of Jan. 1	**13,007**	**119,145**	**16,467**	**120,835**
Change in Group reporting	–	–	–	–
Current service cost	278	1,325	294	1,309
Past service cost	–	–	(1,097)	–
Interest expense on obligations	757	2,590	780	2,274
Employee contributions	–	554	–	512
Actuarial losses (gains)	(420)	(26,030)	(2,793)	(5,871)
Pension payments	(871)	(6,662)	(750)	(8,090)
Others	(230)	(241)	(84)	–
Exchange rate changes	509	2,046	190	8,176
Present value of all pension benefits as of Dec. 31	**13,030**	**92,727**	**13,007**	**119,145**
Change in plan assets of all funds				
Fair value of plan assets of all funds as of Jan. 1	**–**	**96,856**	**–**	**90,645**
Change in Group reporting	–	–	–	–
Interest income/(losses)	–	2,245	–	1,793
Income/(losses) (not including interest income/losses)	–	(12,207)	–	2,711
Contributions paid in – employer	–	2,671	–	2,726
Contributions paid in – employees	–	554	–	513
Pension payments	–	(6,661)	–	(8,090)
Unrecognized excess of plan assets	–	–	–	–
Others	–	(21)	–	(8)
Exchange rate changes	–	1,383	–	6,566
Fair value of plan assets of all funds as of Dec. 31	**–**	**84,820**	**–**	**96,856**

The fair value of plan assets breaks down among the individual asset classes as follows. The amounts shown are weighted averages:

	Dec. 31, 2022 Fair value		quoted on an active market	not quoted on an active market	Dec. 31, 2021 Fair value		quoted on an active market	not quoted on an active market
Equity instruments/funds	39,906	47 %	6,008	33,898	47,051	48 %	5,803	41,248
Bonds	29,802	35 %	6,061	23,740	36,047	37 %	5,833	30,214
Qualifying insurance policies	7,079	9 %	–	7,079	6,818	7 %	–	6,818
Real estate	4,512	5 %	1,579	2,933	3,587	4 %	1,230	2,357
Other assets	2,541	3 %	884	1,658	2,479	3 %	1,366	1,113
Cash funds	980	1 %	980	–	874	1 %	874	–
Total	**84,820**	**100 %**	**15,512**	**69,308**	**96,856**	**100 %**	**15,106**	**81,750**

Plan assets are held exclusively to fulfill defined benefit obligations. The funding of these obligations constitutes a reserve for future cash outflows. This is based on statutory regulations in some countries and is voluntary in others. Given the diversity of pension benefits within the Group, the interest rate is not hedged using financial instruments. Following guidelines stipulated by local management, the bodies responsible for the various pension funds decide on the best possible investment strategy commensurate with the age of beneficiaries and the timing of future payments, in accordance with applicable legislation. Most of the plans are not intended to maximize profit, but rather to ensure optimal provision for the companies and employees concerned. Funds held to pay future benefits are invested responsibly.

Actuarial losses/(gains) arising on the remeasurement of the present value of pension benefits comprise the following:

	Jan. 1 – Dec. 31, 2022		Jan. 1 – Dec. 31, 2021	
	Pension commitments funded by provisions	Pension commitments funded by funds	Pension commitments funded by provisions	Pension commitments funded by funds
Experience adjustments	973	1,289	(1,629)	292
Change in financial assumptions	(1,393)	(25,757)	(1,164)	(5,014)
Change in demographic assumptions	–	(1,562)	–	(1,149)
Actuarial losses/(gains) arising on the remeasurement of the present value of pension benefits	**(420)**	**(26,030)**	**(2,793)**	**(5,871)**

The following items were recognized in profit or loss in the reporting period:

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Current service cost	1,603	1,603
Past service cost	–	(1,097)
Interest expense on obligations	3,347	3,054
Expected return on plan assets	(2,245)	(1,793)
Others	(230)	(84)
Total amounts recognized in profit and loss	**2,475**	**1,683**

The calculation of obligations and, in certain cases, the related plan assets is based on the following actuarial parameters (reported as a weighted average):

	Dec. 31, 2022 in percent	Dec. 31, 2021 in percent
Discount rate	4.66	2.43
Expected rate of salary increases	2.12	1.97
Expected return on plan assets	(2.11)	0.52
Expected rate of pension increases	0.77	0.78

The CPM 2014 tables were used to measure pension obligations in Canada. The pension obligation in Switzerland was measured using the BVG 2021 GT mortality tables. Mortality tables specific to each company were used to measure the pension obligations for other Group companies.

The present value of the defined benefit obligation relates to the following groups of beneficiaries:

	Dec. 31, 2022		Dec. 31, 2021	
Active beneficiaries	63,611	60 %	88,661	67 %
Beneficiaries who have left the company	8,509	8 %	11,522	9 %
Retired employees	33,637	32 %	31,969	24 %
Total	**105,757**	**100 %**	**132,152**	**100 %**

The weighted average term of the defined benefit obligation as of December 31, 2022 is 11.3 years (previous year: 13.2 years).

An increase or decrease in the discount rate by 50 basis points would have the following effect on the present value of pension obligations as of December 31, 2022:

Change in discount rate in basis points	– 50	–/+ 0	+ 50
Present value of all pension benefits	112,617	105,757	99,400

The sensitivity calculations are based on the average term of the pension obligations calculated as of December 31, 2022. The calculation was made for the discount rate, the actuarial parameter classified as material. As the sensitivity analysis is based on the average duration of the expected pension obligations and therefore the expected payment dates are not taken into account, it only produces approximate information or trend statements.

The Group anticipates contributions to the defined benefit plans of K€ 4,752 (previous year: K€ 4,168) in 2022.

25. Other Provisions

2022	Litigation	Restoration obligations	Environmental risks	Personnel	Miscellaneous	Total
As of Jan. 1, 2022	111,410	43,629	23,477	15,822	6,412	**200,750**
Addition	26,185	703	986	10,518	4,039	**42,431**
Utilization	(75,489)	(1,465)	(2,693)	(9,150)	(3,137)	**(91,934)**
Unused amounts reversed	(2,224)	(6,846)	(2,805)	(117)	(650)	**(12,642)**
Interest effect	–	780	(1,846)	3	–	**(1,063)**
Currency translation	7,294	2,473	1,508	497	(89)	**11,683**
As of Dec. 31, 2022	**67,176**	**39,274**	**18,627**	**17,573**	**6,575**	**149,225**
Non-current	**11,405**	**34,173**	**14,792**	**3,048**	**36**	**63,454**
Current	**55,771**	**5,101**	**3,835**	**14,525**	**6,539**	**85,771**

Contracts for which provisions have been recognized essentially have a broad range of remaining terms of between one and 10 years.

The provisions for contractually agreed restoration obligations for existing plants essentially relate to Messer LLC, USA. Messer North America Inc., USA, accounted for a significant portion of the provisions for environmental risks, which were recognized for long-term plant cleaning obligations. Reversals of restoration obligations include an amount of K€ 6,546 that, in accordance with IFRIC 1, was recognized as a negative effect in additions to plant and machinery on the basis of measurement changes in restoration obligations.

The provisions for litigation essentially relate to the areas of antitrust, HR and civil litigation. For more information on two provisions for litigation risks in the USA and Spain, please refer to note 30 "Contingent Liabilities".

Personnel provisions as of December 31, 2022 predominantly relate to bonus payments and outstanding vacation.

26. Financial Liabilities

On March 1, 2019, Messer Industries GmbH and Messer Industries USA, Inc., USA, (as the borrower) and Yeti GermanCo 3 GmbH (as another party), signed a loan agreement with a banking group led by CITIBANK NA, UK.
The loan agreement serves to partially finance the purchase price payment for the Linde AG and Praxair business acquired in North and South America in 2019 and to finance ongoing business operations.

The credit agreement contains three facilities:

- "Facility B-1" of USD 2,225 million, a long-term, fully utilized loan with a term of seven years. The borrower is Messer Industries USA, Inc., USA. The loan will be repaid quarterly at 0.25 % of the original amount, starting on June 28, 2019. There have been unscheduled redemptions totaling USD 490 million since March 31, 2021. The balance will be repaid in full on March 1, 2026. The margin is 2.5 % p.a. or 1.5 % p.a. depending on the underlying refinancing base of the banks. As of December 31, 2022, the margin is 2.5 % p.a.

- "Facility B-2" of € 540 million, a long-term, fully utilized loan with a term of seven years. The borrower is Messer Industries GmbH. There have been unscheduled redemptions totaling EUR 235 million since March 31, 2021. The remaining amount of the loan is due on March 1, 2026. The margin was initially 2.75 % p.a., until August 28, 2019, since when it has been subject to an adjustment mechanism based on the development of the ratio of senior net debt to consolidated EBITDA. As of December 31, 2022, the margin is 2.5 % p.a.

- "Revolving facility" of USD 450 million: The borrowers are Messer Industries GmbH and Messer Industries USA, Inc., Delaware, and any other company that secures the loan agreement as a guarantor. The facility can be used to finance working capital and for all general financing requirements of the company on a revolving basis. There is no need to reduce the loan to zero at any time during its term. It is available until March 1, 2024. The margin was 1.75 % p.a. or 0.75 % p.a., depending on the underlying refinancing base of the banks, until August 28, 2019, since when it has been subject to an adjustment mechanism based on the development of the ratio of senior net debt to consolidated EBITDA. As of December 31, 2022, the revolving facility was used only for guarantees. The margin here is 0.75 % p.a.

Guarantees provided by individual Group companies serve as collateral for the full amount of the financing arrangements:
Messer Industries GmbH, Messer Industries USA Inc., USA, Messer LLC, USA, Messer France S.A.S., France, Messer Canada Inc., Canada, and Messer Gases Ltda., Brazil.

Shares in the following companies have been pledged to the banks:
Messer Industries GmbH, Messer Industries USA, Inc., USA, Messer Gases Ltda., Brazil, and Messer France S.A.S., France.

The assets of the following companies have been pledged to the banks:
Messer Industries USA, Inc., USA, Messer Canada Inc., Canada, and Messer LLC, USA. The carrying amount of the companies' property, plant and equipment is K€ 1,490,962.

The bank accounts of the following companies have been pledged to the banks:
Messer Industries GmbH, Messer Gases Ltda., Brazil, Messer France S.A.S., France and Yeti GermanCo 3 GmbH with a total carrying amount of K€ 41,782.

The receivables of the following companies have been pledged to the banks:
Messer Gases Ltda., Brazil, and the intercompany receivables of Yeti GermanCo 3 GmbH, Messer Industries GmbH and Messer France S.A.S., France. The carrying amount of the pledged receivables is K€ 63,729. Intercompany receivables with a nominal value of K€ 125,066 have also been pledged.

The unutilized credit facilities amount to € 331 million as of December 31, 2022 (previous year: € 322 million).

The loan balances and maturities are as follows as of December 31, 2022:

2022	Interest rate p. a.	Credit facility	Utilization	Due date
USD 2,225.0 million, facility B-1	7.23 %	1,548,437	1,548,437	March 1, 2026
€ 540.0 million, facility B-2	4.70 %	305,000	305,000	March 1, 2026
USD 263.1 million, revolving facility	0.00 %	246,672	–	March 1, 2024
USD 13.0 million, RFA ancillary facility(1)	0.00 %	53	–	March 1, 2024
USD 45.0 million, RFA ancillary facility(2)	0.00 %	30,202	–	March 1, 2024
USD 44.0 million, RFA ancillary facility(3)	0.00 %	13,953	–	March 1, 2024
USD 39.9 million, RFA ancillary facility(4)	0.00 %	12,664	–	March 1, 2024
USD 45.0 million, RFA ancillary facility(5)	0.00 %	27,658	–	March 1, 2024
Other local loans(6)	4.19 %	7,655	7,655	Various
Lease liabilities(6)	4.59 %	n/a	116,986	Various
		2,192,294	**1,978,078**	
Transaction costs			(26,205)	
			1,951,873	

1 K€ 12,135 was utilized as a guarantee for delivery and performance obligations; foreign currencies were translated using the rate as of December 31, 2022
2 K€ 11,988 was utilized as a guarantee for delivery and performance obligations; foreign currencies were translated using the rate as of December 31, 2022
3 K€ 27,299 was utilized as a guarantee for delivery and performance obligations and to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2022
4 K€ 24,745 was utilized as a guarantee to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2022
5 K€ 14,532 was utilized as a guarantee for delivery and performance obligations and to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2022
6 Weighted interest rate as of December 31, 2022, foreign currencies were translated using the rate as of December 31, 2022

The loan balances and maturities are as follows as of December 31, 2021:

2021	Interest rate p. a.	Credit facility	Utilization	Due date
USD 2,225.0 million, facility B-1	2.72 %	1,654,435	1,654,435	March 1, 2026
€ 540.0 million, facility B-2	2.50 %	390,000	390,000	March 1, 2026
USD 263.1 million, revolving facility	0.00 %	232,297	–	March 1, 2024
USD 13.0 million, RFA ancillary facility(1)	0.00 %	1,063	–	March 1, 2024
USD 45.0 million, RFA ancillary facility(2)	0.00 %	31,917	–	March 1, 2024
USD 44.0 million, RFA ancillary facility(3)	0.00 %	18,593	–	March 1, 2024
USD 39.9 million, RFA ancillary facility(4)	0.00 %	11,926	–	March 1, 2024
USD 45.0 million, RFA ancillary facility(5)	0.00 %	26,046	–	March 1, 2024
Other local loans(6)	2.98 %	3,481	3,481	Various
Lease liabilities(6)	5.91 %	n/a	88,867	Various
		2,369,758	**2,136,783**	
Transaction costs			(39,345)	
			2,097,438	

1 K€ 10,415 was utilized as a guarantee for delivery and performance obligations; foreign currencies were translated using the rate as of December 31, 2022.
2 K€ 7,815 was utilized as a guarantee for delivery and performance obligations; foreign currencies were translated using the rate as of December 31, 2022.
3 K€ 20,255 was utilized as a guarantee for delivery and performance obligations and to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2022.
4 K€ 23,303 was utilized as a guarantee to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2022.
5 K€ 13,685 was utilized as a guarantee for delivery and performance obligations and to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2022.
6 Weighted interest rate as of December 31, 2022, foreign currencies were translated using the rate as of December 31, 2022

Transaction costs relate to the arrangement fees paid to the financing banks and various legal and advisory costs directly attributable to the new financing. These costs are recognized as an expense over the terms of the liabilities using the effective interest method in accordance with IFRS 9.

The following table provides an overview of the Group's financial liabilities, measured on the basis of nominal amounts:

	Dec. 31, 2022	Dec. 31, 2021
Non-current		
Liabilities to banks	1,839,119	2,027,543
Lease liabilities	95,673	72,397
Miscellaneous	–	–
Less transaction costs	(18,503)	(30,379)
	1,916,289	**2,069,561**
Current		
Liabilities to banks	21,973	20,373
Lease liabilities	21,313	16,470
Miscellaneous	–	–
Less transaction costs	(7,702)	(8,966)
	35,584	**27,877**
Total financial liabilities, net	**1,951,873**	**2,097,438**
Liabilities with a fixed interest rate	124,641	92,348
Liabilities with variable interest rates (hedged)	1,853,437	1,877,559
Liabilities with variable interest rates (not hedged)	–	166,876
Total financial liabilities, gross	**1,978,078**	**2,136,783**
Weighted average nominal interest rates for liabilities:		
To banks	6.81 %	2.68 %
Leases	4.59 %	5.91 %
Other loans	–	–

The average interest rate on financial liabilities was 6.67 % p.a. as of December 31, 2022 (previous year: 2.82 % p.a.).

Financial liabilities (not including transaction costs) are due as follows:

2023	43,286
2024	38,991
2025	35,175
2026	1,803,885
2027	11,449
After 2027	45,292
	1,978,078

	2022	2021
Non-current financial liabilities as of Jan. 1	**2,069,561**	**2,333,741**
Cash changes		
New debt raised	6,345	116
Payments of principal	(298,088)	(414,144)
Non-cash changes		
Additions to lease liabilities	47,887	15,307
Changes in maturities	(27,301)	(18,465)
Currency translation	2,690	4,475
Exchange rate changes	101,782	132,893
Amortization of transaction costs	13,413	15,638
Non-current financial liabilities as of Dec. 31	**1,916,289**	**2,069,561**

	2022	2021
Current financial liabilities as of Jan. 1	**27,877**	**23,375**
Cash changes		
New debt raised	343	–
Payments of principal	(26,284)	(22,806)
Non-cash changes		
Additions to lease liabilities	3,425	4,900
Changes in maturities	27,301	18,465
Currency translation	401	777
Exchange rate changes	831	979
Amortization of transaction costs	1,690	2,187
Current financial liabilities as of Dec. 31	**35,584**	**27,877**

Under the credit agreement, the following key financial covenants must be complied with and calculated in each compliance certificate submitted:

- First lien net leverage: ratio of senior consolidated net liabilities to consolidated EBITDA. This covenant relates exclusively to the revolving facility and is only tested if utilized by more than 40 %. It must not exceed 8x the value. Non-compliance is an event of default, but this can only be determined by the lenders under the revolving credit facility.

The following covenants are only relevant for certain planned transactions and compliance with them must be demonstrated on a pro forma basis before the transaction:

- Secured net leverage: ratio of secured, consolidated net liabilities to consolidated EBITDA. The covenant must be tested if collateral is to be provided that is subordinate to the collateral of the credit agreement. The covenant must be less than or equal to 5.25:1.00.

- Total net leverage: The ratio of total net liabilities to consolidated EBITDA must be less than or equal to 5.25:1.00, 4.50:1.00 or 3.75:1.00, depending on the transaction at issue.
- Fixed charge coverage: The ratio of EBITDA to interest paid (substantially) in cash must be greater than 2.0.

27. Other Non-Current Financial and Non-Financial Liabilities

	Dec. 31, 2022	Dec. 31, 2021
Other non-current financial liabilities	–	–
Other non-current non-financial liabilities	13,782	12,563
Total	**13,782**	**12,563**

Other non-current non-financial liabilities essentially represent the right of a customer to obtain the product from the Speyer production facilities.

28. Other Current Liabilities

	Dec. 31, 2022	Dec. 31, 2021
Other liabilities to customers	3,495	2,773
Deposits received for hardware	1,303	1,292
Derivative financial instruments with an effective hedge	1,260	377
Interest payable	706	538
Derivative financial instruments without an effective hedge	201	–
Miscellaneous liabilities	41,011	66,213
Financial liabilities	**47,976**	**71,193**
Deferred income and other deferred liabilities	126,618	112,799
Payroll liabilities	61,691	54,683
Other taxes liabilities	36,476	31,184
Advance payments received on orders	19,623	22,187
Liabilities to social security providers	8,521	9,372
Other financial obligations	41,902	39,426
Non-financial liabilities	**294,831**	**269,651**
Total	**342,807**	**340,844**

The “Miscellaneous liabilities” item includes a purchase price payment to Linde of € 34 million (previous year: € 56 million) under the sale and purchase agreement.

The item “Deferred income and other deferred liabilities” includes liabilities for outstanding invoices of K€ 109,349 (previous year: K€ 96,106). The remainder relates to deferred revenue of K€ 9,644, deferred rental income for gas cylinders (K€ 7,255), government grants (K€ 279) and other deferrals (K€ 91).

The item “Other obligations” includes contingent liabilities recognized in conjunction with purchase price allocation in 2019. The majority of this is attributable to Messer Gases Ltda., Brazil, and relates to obligations arising from pending proceedings.

29. Equity

Issued capital

The issued capital amounts to K€ 30 (previous year: K€ 30) as of December 31, 2022 and is fully paid in.

Capital reserves

By way of deposit agreement dated February 25, 2019, Yeti Investments S.à.r.l., Luxembourg, has agreed with Yeti GermanCo 1 GmbH to pay a capital contribution of K€ 225 into the Company’s capital reserves. In accordance with the payment direction agreement of February 25, 2019, K€ 75 of the deposit was paid in cash directly to Yeti GermanCo 1 GmbH and indirect payments of K€ 75 each were made through Yeti GermanCo 2 GmbH and Yeti GermanCo 3 GmbH.

By way of loan agreement of February 25, 2019, Yeti Investments S.à.r.l., Luxembourg, granted Yeti German-Co 1 GmbH a shareholder loan of K€ 557,657. Subsequently, by way of deposit agreement dated February 27, 2019, a capital deposit in the form of a non-cash contribution was made by transferring the receivable of Yeti Investments S.à.r.l., Luxembourg, to the capital reserves of Yeti GermanCo 1 GmbH in the amount of K€ 557,657.

By way of agreement dated February 27, 2019, Messer Group GmbH and Yeti GermanCo 1 GmbH resolved to transfer receivables and liabilities from the Western European Messer companies to the Company’s equity as a mixed non-cash contribution in the amount of K€ 150,207. K€ 89,549 of this amount relates to receivables, K€ 7,650 to liabilities and K€ 68,308 to the assignment of a purchase price receivable of Messer GasPack GmbH from Messer GasPack 2 GmbH.

On February 27, 2019, Messer SE & Co. KGaA transferred its shares in Yeti GermanCo 2 GmbH in the amount of K€ 600,515 to the capital reserves of Yeti GermanCo 1 GmbH. On February 28, 2019, Messer Group GmbH made a contribution of K€ 16 to the capital reserves of Yeti GermanCo 1 GmbH in order to achieve the intended shareholding in Yeti GermanCo 1 GmbH.

By way of deposit and assignment agreement of May 2/3, 2019, Messer SE & Co. KGaA has undertaken to assign the purchase price receivable for a 11 % minority interest in Messer Industriegase GmbH to Yeti GermanCo 1 GmbH and subsequently to add this to the free capital reserves of Yeti GermanCo 1 GmbH in the form of a non-cash contribution. The capital reserves of Yeti GermanCo 1 GmbH were thus increased by K€ 21,278.

The capital reserves amount to K€ 1,329,973 as of December 31, 2022 (previous year: K€ 1,329,973).

Retained earnings

Retained earnings comprise the undistributed past earnings of consolidated companies and the effects of the remeasurement of the net defined benefit pension liability, net of deferred taxes.

Other components of equity

This item is used to report changes in equity in other comprehensive income, to the extent that such changes do not relate to equity transactions with shareholders (e. g. capital increases or distributions). This includes the difference in currency translation (through other comprehensive income), the result of net investments in foreign operations and changes in the fair value measurement of derivatives used for hedging purposes.

Non-controlling interests

This item comprises the shares held by other shareholders in the equity of consolidated subsidiaries. Non-controlling interests are held by other shareholders in Algeria and Belgium.

The dividend payments to other shareholders include distributions of the previous year's results.

The following companies have insignificant non-controlling interests:

Name and registered office of subsidiary	Country	Shareholding in percent	
		Dec. 31, 2022	Dec. 31, 2021
bECO2 B.V.B.A., Zwijndrecht	Belgium	70 %	70 %
Messer Algérie SPA, Algeria	Algeria	59.86 %	59.86 %

Capital management

A solid capital base is a key requirement for ensuring the continued existence of the Messer Industries Group as a going concern. The items reported in the statement of financial position are considered equity. Other items with the legal status of equity or other instruments similar in nature to equity are not used.

The owners Messer SE & Co. KGaA, CVC, management in key positions and the Advisory Board ensure that the trust of the lending banks, creditors and the market in general in Messer Industries Group is maintained through a strong capital base.

Management in key positions and the Advisory Board regularly review and report to lending banks on compliance with these and other targets under loan agreements.

30. Contingent Liabilities

Guarantees

Obligations from issuing guarantees were as follows:

	Dec. 31, 2022		Dec. 31, 2021	
	Maximum potential obligation	Amount reported as a liability	Maximum potential obligation	Amount reported as a liability
Guarantees	180,138	–	142,521	–

Financial guarantees essentially relate to commitments to cover the contractual obligations of the respective principal debtors. Pledges given to secure the liabilities of Group companies were eliminated in consolidation and are thus not included in the above table.

Other financial obligations

The Group has undertaken to invest in the acquisition, construction and maintenance of various production facilities. Obligations of this kind relate to the future purchase of plant and equipment at market prices. There are also long-term contracts giving rise to obligations. The commitments under orders, investment projects and long-term contracts amounted to K€ 648,078 as of December 31, 2022 (previous year: K€ 584,685).

Litigation

The Group recognizes provisions for legal disputes for court proceedings to the extent that the Group determines that an unfavorable outcome is probable and the amount of the loss can be reasonably estimated. For the other legal disputes, the Group considers the occurrence of a loss to be improbable, or the loss – or the framework of the potential loss – cannot be reasonably estimated at the current time. The outcome of legal disputes is always difficult to predict and results can differ from the current assessment.

On January 28, 2021, six employees from the Foundation Food Group ("FFG", previously Prime Pak Foods) in Gainesville, Georgia, USA, suffocated while they worked in a freezer room of a FFG poultry processing plant, after liquid nitrogen leaked from a tank in freezing equipment supplied by Messer LLC. Eleven further persons were taken to hospital. Others may have come into contact with nitrogen but were not taken to hospital.

Messer leased the freezing equipment operated with liquid nitrogen and the related equipment to FFG and installed it in December 2020. Messer also sold nitrogen, which was stored in an external tank, to FFG, to operate the freezing equipment. In the framework of the product supply and lease agreement with Messer, FFG is responsible for operating and maintaining the freezing equipment.

Separate suits were filed against Messer by the families of the six dead and individual FFG employees claiming for injuries. Due to the current legal situation and the pending proceedings, Messer estimated the expenses resulting from the incident and recognized an appropriate provision for possible plaintiff claims. As of December 31, 2022, a settlement had been reached in four of the six wrongful death civil lawsuits and 35 of the 38 personal injury lawsuits pending at the time.

Disclosing the exact amount recognized as a provision/for the settlement could seriously negatively impact Messer's position in the pending legal proceedings. For this reason, Messer is not disclosing this information.

On December 1, 2020, two employees at the Golden West Food Group ("GWFG") in Vernon, California, USA, suffocated while working in a freezer room with Cryowave freezing equipment. The freezing equipment in question had been installed at GWFG in 2014 and, under the relevant contract, GWFG was responsible for operating and maintaining the freezing equipment. The relatives of the two deceased employees initially took legal action against the employer, GWFG, expanding this to Messer several months later. The two wrongful death cases were merged and are making slow progress. Messer is taking action against these claims and denies any liability.

In November 2022, an employee at a cleaning company that provided cleaning services to GWFG filed a complaint against Messer alleging claims for damages for personal injury allegedly suffered as a result of the accident. Messer is also taking action against this claim and denies any liability.

The taking of evidence is not yet complete and Messer has not yet received a claim in any of the cases. Messer has recognized provisions for the two wrongful death lawsuits. No provision has yet been recognized for the most recent claim by an uninvolved employee as assessing the claim would be premature. Disclosing the exact amount recognized as a provision for the wrongful death claim could seriously negatively impact Messer's position in the pending legal proceedings. For this reason, Messer is not disclosing this information.

Messer intends to reclaim all legal expenses that could result from these two incidents from existing insurance policies that entitle Messer to a valid and enforceable reimbursement claim. The insurance company is actively involved in the defense of the legal disputes and has paid all related attorney costs that exceed the retention. Messer thus believes that the insurance company will continue to pay or reimburse all legal expenses and has recognized corresponding claims to repayment in the statement of financial position. Publication of the exact amount recognized as a claim to repayment could seriously and negatively impact Messer's position in the pending court case. For this reason, Messer is not disclosing this information.

A search was conducted at Messer Ibérica de Gases S.A., Spain, in November 2017. In this context, documents were confiscated relating to permits to build and operate our air separation units and a donation for the renovation of a city hall. A decision on whether an action will be filed is still pending.

The Company was searched again in February 2019 in conjunction with a second investigation. The investigation was focused on the procurement, consumption and redistribution of electricity to Carburos Metallicos.

A third investigation is pending. The investigative records have not yet been disclosed, hence the subject and target of the investigation are still not yet known.

It is currently assumed that the probability of a criminal conviction is low. Fines might be possible in administrative procedures initiated separately at a later date.

After the Spanish regulator issued the Spanish power utility Endesa with a payment order for its grid usage fee, Endesa invoiced Messer Ibérica de Gases S.A. for an additional charge in the same amount of € 35.6 million for allegedly underpaying its grid usage fee in the period 2008 to February 2021. In the opinion of our local Spanish lawyers, both Endesa and Messer Ibérica de Gases S.A. have strong arguments for successfully defending against the claim for payment made by the Spanish regulator in its initial notice in an appeal, and thus also against the claim made by Endesa against Messer Ibérica de Gases S.A.
Even if a claim to payment were assumed, our local lawyers believe there are good arguments for reducing the amount claimed to less than € 10 million on the basis of the statute of limitations and the only partial utilization of electricity by Messer Ibérica de Gases S.A.

Messer Ibérica de Gases S.A. has recognized a provision of € 5 million for any fines for applications not made in accordance with the proper formal requirements and thus any permits not formally in place.

The proceedings are expected to take four to seven years.

Other legal matters

The Messer Industries Group is also exposed to a wide range of legal risks in the areas of competition and antitrust law, civil law, tax law and environmental protection.

Appropriate risk provisions have been recognized for these proceedings, provided that the obligation is reasonably certain. This is not currently expected to have any material impact on the financial position or financial performance of the Group.

31. Other Financial Instrument Disclosures

The following table shows the carrying amount and fair values of the individual financial assets and financial liabilities for each class of financial instruments as of December 31, 2022. It does not contain any information on the fair value of financial assets and financial liabilities not measured at fair value when carrying amount is a reasonable approximation of fair value.

	Measurement category as per IFRS 9	Carrying amount as of Dec. 31, 2022	Measurement in accordance with IFRS 9			Measurement in accordance with IFRS 16	Fair value as of Dec. 31, 2022
			Amortized cost	Fair value through OCI	Fair value through profit or loss		
Financial assets							
Other financial investments	**FVOCI**	**209**	–	209	–	–	**209**[1]
Other non-current receivables and assets	**AC**	**34,229**	34,229	–	–	–	
Trade receivables	**AC**	**359,226**	359,226	–	–	–	
Other current receivables and other assets	**AC**	**75,013**	75,013	–	–	–	
Derivative financial assets							
Derivatives without an effective hedge	**FVTPL**	**12,777**	–	–	12,777	–	**12,777**[1]
Derivatives in an effective hedge relationship	**FVOCI**	**137,165**	–	137,165	–	–	**137,165**[1]
Cash	**AC**	**167,370**	167,370	–	–	–	
Financial liabilities							
Non-current financial liabilities	**AC**	**1,820,616**	1,820,616	–	–	–	**1,864,147**[1]
Non-current lease liabilities	**n/a**	**95,673**	–	–	–	95,673	
Other non-current liabilities	**AC**	**–**	–	–	–	–	
Current financial liabilities	**AC**	**14,271**	14,271	–	–	–	
Current lease liabilities	**n/a**	**21,313**	–	–	–	21,313	
Trade payables	**AC**	**201,792**	201,792	–	–	–	
Other current liabilities	**AC**	**46,515**	46,515	–	–	–	
Derivative financial liabilities							
Derivatives without an effective hedge	**FVTPL**	**201**	–	–	201	–	**201**[1]
Derivatives in an effective hedge relationship	**FVOCI**	**1,260**	–	1,260	–	–	**1,260**[1]

[1] Hierarchy level 2

The following table shows the carrying amounts and fair values for each class of financial instrument in accordance with IFRS 9 as of December 31, 2021:

	Measurement category as per IFRS 9	Carrying amount as of Dec. 31, 2021	Measurement in accordance with IFRS 9			Measurement in accordance with IFRS 16	Fair value as of Dec. 31, 2021
			Amortized cost	Fair value through OCI	Fair value through profit or loss		
Financial assets							
Other financial investments	**FVOCI**	**209**	–	209	–	–	**209**[1]
Other non-current receivables and assets	**AC**	**28,413**	28,413	–	–	–	
Trade receivables	**AC**	**283,289**	283,289	–	–	–	
Other current receivables and other assets	**AC**	**122,945**	122,945	–	–	–	
Derivative financial assets							
Derivatives without an effective hedge	**FVTPL**	**935**	–	–	935	–	**935**[1]
Derivatives in an effective hedge relationship	**FVOCI**	**45,667**	–	45,667	–	–	**45,667**[1]
Cash	**AC**	**274,917**	274,917	–	–	–	
Financial liabilities							
Non-current financial liabilities	**AC**	**1,997,164**	1,997,164	–	–	–	**1,939,772**[1]
Non-current lease liabilities	**n/a**	**72,397**	–	–	–	72,397	
Other non-current liabilities	**AC**	**–**	–	–	–	–	
Current financial liabilities	**AC**	**11,407**	11,407	–	–	–	
Current lease liabilities	**n/a**	**16,470**	–	–	–	16,470	
Trade payables	**AC**	**194,171**	194,171	–	–	–	
Other current liabilities	**AC**	**70,816**	70,816	–	–	–	
Derivative financial liabilities							
Derivatives without an effective hedge	**FVTPL**	**–**	–	–	–	–	
Derivatives in an effective hedge relationship	**FVOCI**	**377**	–	377	–	–	**377**[1]

[1] Hierarchy level 2

The Messer Industries Group uses the following hierarchy of inputs to measure fair value:

Level 1: Prices quoted in active markets accessible to the entity for identical assets or liabilities on the measurement date
Level 2: Inputs other than the quoted prices listed in Level 1 that can be observed either directly or indirectly for the asset or liability
Level 3: Unobservable inputs for the asset or liability

Non-current receivables and Other non-current assets, and non-current financial liabilities and trade payables, are discounted to present value. For these purposes, the measurement model is based on interest rate curves and exchange rates for the respective maturities applicable as of the end of the reporting period.

Given their short remaining terms, the carrying amounts of current receivables, trade payables and cash funds are approximately their fair value.

The following measurement methods were used for measuring derivative financial assets and liabilities:

The fair value of forward exchange contracts is determined using quoted forward prices as of the end of the reporting period and calculations of net present value, based on yield curves with high ratings in corresponding currencies. The fair value is the difference between the forward rate as of the end of the reporting period and the rate quoted at the time of purchase.

For interest rate swaps, the fair value is calculated as the present value of the estimated future cash flows. Estimates of the future cash flows from variable interest payments are based on quoted swap rates and interbank interest rates. The estimated cash flows are discounted using a yield curve constructed from a similar source that reflects the relevant benchmark interbank interest rate as used by market participants when pricing interest rate swaps. The estimate of the fair value is adjusted for the credit risk reflecting the credit risk of the Group and the counterparty. This is calculated on the basis of credit spreads derived from the credit default swap of bond prices.

For energy swaps the fair value is calculated on the basis of the forward electricity prices quoted on the electricity exchange. The market value results from the difference between the exchange price as of the closing date and the price quoted at the time of purchase.

Net gains and losses on financial instruments include the effects on earnings of financial instruments. These essentially include gains or losses on remeasurement from currency translation, adjustments to fair value, impairment losses and their reversals.

The following table shows the effects on earnings of financial instruments by IFRS 9 measurement category:

2022	From interest	Net gains and net losses			
		At fair value	Currency translation	Impairment losses	From disposals
Financial assets and financial liabilities at fair value through profit or loss	–	11,583	–	–	–
Financial liabilities at amortized cost	(74,236)	–	(2,935)	–	–
Financial assets at amortized cost	4,373	–	6,859	8,734	–
Financial assets at fair value through OCI	–	–	–	–	–
Financial liabilities at fair value through OCI	–	–	–	–	–

The following table shows the effects on earnings of financial instruments by IFRS 9 measurement category in 2021:

2021	From interest	Net gains and net losses			
		At fair value	Currency translation	Impairment losses	From disposals
Financial assets and financial liabilities at fair value through profit or loss	–	(198)	–	–	–
Financial liabilities at amortized cost	(78,992)	–	(858)	929	–
Financial assets at amortized cost	1,728	–	4,596	(921)	–
Financial assets at fair value through OCI	–	405	(55)	–	–
Financial liabilities at fair value through OCI	–	(137)	–	–	–

Derivative financial instruments

The Messer Industries Group essentially uses derivative financial instruments to hedge currency and raw material exposures and variable interest payments in order to reduce the related risks. Foreign currency risks from posted transactions are largely hedged. The exposure for raw material and currency hedges is derived from production requirement planning and the future purchases necessary over the hedged period, which are therefore highly probable. Interest hedges are based on a loan with a floating interest rate. The risk and its assessment are monitored continuously. The Messer Industries Group currently uses standard currency forwards, non-deliverable forwards (NDFs), interest derivatives and energy swaps as hedging instruments.

Hedges are entered into only with partners of good credit standing; any potential ineffectiveness resulting from them, if material, would be reported separately in profit or loss.

The Group currently uses derivative financial instruments to hedge future payments for energy purchases in the United States, and currency hedges for future USD payments from foreign currency liabilities in Canada and for future euro payments from foreign liabilities in the United States. It also uses derivative financial instruments to hedge future variable USD interest payments on the USD loan. These hedges are subject to hedge accounting in accordance with IFRS (cash flow hedges). The average hedge rate for energy purchases is USD 31.52 (EUR 29.55) per megawatt hour (previous year: USD 30.58 (EUR 27.00)), and for currency hedges USD 1.26/CAD (previous year: USD 1.23/CAD) and EUR 1.15/USD (previous year: EUR 1.18/USD) and the fixed interest rate is 0.22 % (previous year: 0.46 %).

Furthermore, cash flows in the currencies USD, BRL and COP are essentially hedged outside hedge accounting, using NDFs. To hedge future EUR interest payments on the EUR loan ("Facility B-2") an interest cap is used, the level of which is 0.25 %, unchanged to the previous year.

There are currently no derivative financial instruments in the Group that qualify as fair value hedges or hedges of a net investment in foreign operations.

Furthermore, hedges are entered into outside hedge accounting. These hedges nevertheless comply with the principles of risk management from an economic perspective.

Assets	**Dec. 31, 2022**		Dec. 31, 2021	
Financial derivatives	fair value (carrying amount)	Nominal amount	fair value (carrying amount)	Nominal amount
Currency forwards				
without a hedging relationship	5	2,403	9	627
as a cash flow hedge	544	6,538	662	17,522
Energy swaps				
without a hedging relationship	–	–	–	–
as a cash flow hedge	60,787	75,142	27,874	83,422
Interest derivatives				
without a hedging relationship	12,772	332,000	926	332,000
as a cash flow hedge	75,834	1,548,434	17,131	1,545,559
Other transactions				
without a hedging relationship	–	–	–	–
as a cash flow hedge	–	–	–	–
Total	**149,942**	**1,964,517**	**46,602**	**1,979,130**

Equity and Liabilities	Dec. 31, 2022		Dec. 31, 2021	
Financial derivatives	**fair value (carrying amount)**	Nominal amount	fair value (carrying amount)	Nominal amount
Currency forwards				
without a hedging relationship	201	10,361	–	–
as a cash flow hedge	1,260	16,488	31	824
Energy swaps				
without a hedging relationship	–	–	–	–
as a cash flow hedge	–	–	346	6,284
Interest derivatives				
without a hedging relationship	–	–	–	–
as a cash flow hedge	–	–	–	–
Other transactions				
without a hedging relationship	–	–	–	–
as a cash flow hedge	–	–	–	–
Total	**1,461**	**26,849**	**377**	**7,108**

The nominal volume of derivative financial instruments consists of the total nominal amounts of the individual contracts. By contrast, the fair value is calculated from the measurement of all contracts at prices on the measurement date. It shows how the result would have changed if the derivative contracts had been closed immediately as of the end of the reporting period.

The effective portion of the changes in the value of derivative financial instruments, which was recognized in the OCI in the reporting period, is K€ 199,471 (previous year: K€ 61,576). The amount that was reclassified from equity to the income statement in the context of hedge accounting in the reporting period is K€ -110,828 (previous year: K€ -5,233) and is essentially shown in cost of sales. The ineffective portion of the change in market value is recognized directly in profit or loss.

No significant ineffective portions of the change in the fair value of hedging instruments were identified in the fiscal year.

The following table shows when the cash flows from cash flow hedges occur and how they affect fair value in the income statement:

	Fair value (Carrying amount) December 31, 2022	Nominal amount	up to 1 year	1 to 5 years	more than 5 years
Currency forwards					
Assets	544	6,538	6,538	–	–
Equity and Liabilities	(1,260)	16,488	16,488	–	–
Energy swaps					
Assets	60,787	75,142	26,852	48,290	–
Equity and Liabilities	–	–	–	–	–
Interest derivatives					
Assets	75,834	1,548,434	–	1,548,434	–
Equity and Liabilities	–	–	–	–	–

	Fair value (Carrying amount) December 31, 2021	Nominal amount	up to 1 year	1 to 5 years	more than 5 years
Currency forwards					
Assets	662	17,522	16,221	1,301	–
Equity and Liabilities	(31)	824	824	–	–
Energy swaps					
Assets	27,874	83,422	25,211	58,211	–
Equity and Liabilities	(346)	6,284	–	6,284	–
Interest derivatives					
Assets	17,131	1,545,559	15,893	1,529,666	–
Equity and Liabilities	–	–	–	–	–

The Messer Industries Group uses derivatives in accordance with the International Swaps and Derivative Association (ISDA) Agreement. This agreement does not meet the criteria for offsetting derivative assets and liabilities in the consolidated statement of financial position, as it provides for offsetting rights only for future events, such as default or insolvency of the Group or counterparty.
Irrespective of whether these agreements are offset in the consolidated statement of financial position in line with IAS 32.42, as of the end of the reporting period there is no financial impact from an offset as this would only be possible if the derivative assets or liabilities had been concluded with the same counterparty. This does not apply to the Group as of December 31, 2022:

Management of financial risks
In conjunction with its operating activities, the Messer Industries Group is exposed to various financial risks, in particular credit, liquidity, interest and currency risk, which are described in more detail below. The Group's risk management system takes into account the fact that financial market developments are not foreseeable and is intended to minimize any potential negative impact on the Group's financial position. The Group uses derivative financial instruments to hedge against specific risks.

Risk management is handled by Group Treasury in compliance with guidelines approved by management. Group Treasury identifies, assesses and hedges financial risks. The guidelines contain general principles for risk management and detailed rules for specific areas, such as currency and interest rate risks, the use of derivative financial instruments and the investment of surplus cash. Further information on risk management can be found in the risk report section of the Group management report.

Credit risk
Credit risk is the risk of financial losses if customers or the counterparty to a financial instrument do not meet their contractual obligations.

There are no impairment losses for Other financial assets and financial investments such as bank balances, securities and derivatives that are assets, as the credit risk is classified as remote. Such risks are limited by Group Treasury by selecting counterparties of good credit standing and by limiting the investment amounts. Credit risk in the Messer Industries Group mainly arises from trade receivables.

The corresponding impairment loss is measured at an amount equal to lifetime expected credit losses, based on an analysis of historical default data and forecasts of future economic conditions. Expected credit losses are a probability-weighted estimate of credit losses.

Credit risk in the Messer Industries Group is primarily influenced by customers' individual characteristics.

For risk management purposes, the credit rating of each customer is first analyzed individually before the respective Group company offers its standard delivery and payment terms. Where available, the analysis comprises annual financial statements, information from credit agencies, sector information and, in some cases, credit reports from banks. Specific limits are set individually for each customer. These represent the maximum outstanding amount that can be granted without the approval of the Risk Management Committee. The limits are reviewed at least once a quarter.

Due regard is also given to whether the customer is a natural person or a legal entity. Other factors taken into account are geographical location, market sector, the aging structure of receivables and the occurrence and duration of payment problems.

The expected credit loss over the total term of the respective receivables is taken into account in the measurement of the receivables. The Messer Industries Group uses the simplified impairment model for this.

In order to assess the expected credit risk, receivables are grouped on the basis of the existing credit risk and maturity structure of the receivables concerned. Customers are also divided into groups to monitor the risk of default. The groups with comparable credit risks to be taken into account for the Messer Industries Group result from the business areas and registered office of the respective customers.

If there is objective evidence that the forecast future inflows are impaired, a receivable is classified as impaired. Examples of such evidence include impending insolvency or breach of contract due to default. Default occurs if it is unlikely that a debtor will be able to settle its liabilities in full.

Each company in the Messer Industries Group therefore performs an analysis to determine whether there are objective indications of impairment for customers whose receivables are past due by a certain number of days, indicating an increased credit risk. At the latest, there is an increased credit risk when the amount of the receivable past due is higher than the average turnover. This can vary between 90 and 270 days depending on the company.

The following table provides information on the estimated credit risk and the expected credit losses for non-current and current trade receivables as of December 31, 2022, calculated in accordance with the default event:

2022	Receivables	Default rate, in %	Expected credit loss
Individually impaired	119,786	16.2	19,427
Collectively impaired in accordance with default event			
Days past due:			
Not past due	202,055	0.7	1,435
between 1 and 30 days	40,823	2.6	1,053
between 31 and 60 days	9,341	8.3	777
between 61 and 90 days	3,802	16.4	624
between 91 and 120 days	3,196	36.5	1,166
between 121 and 180 days	2,298	22.5	516
between 181 and 270 days	1,474	23.8	351
more than 270 days	3,522	48.3	1,701
	386,297		**27,050**

Impairment losses on non-current and current trade receivables developed as follows:

	2022	2021
As of Jan. 1	**36,308**	**35,428**
Net change in impairment recognized in profit or loss	(8,734)	921
Amounts written off as uncollectible in the fiscal year	(1,015)	(402)
Exchange rate changes	491	361
As of Dec. 31	**27,050**	**36,308**

The impairment loss relates to trade receivables and was calculated exclusively on the basis of lifetime expected credit losses.

The following table provides information on the estimated credit risk and the expected credit losses for non-current and current trade receivables as of December 31, 2021:

2021	Receivables	Default rate, in %	Expected credit loss
Individually impaired	106,196	26.7	28,340
Collectively impaired in accordance with default event			
Days past due:			
Not past due	162,046	1.1	1,738
between 1 and 30 days	30,084	3.4	1,025
between 31 and 60 days	7,199	9.6	692
between 61 and 90 days	3,978	16.9	673
between 91 and 120 days	2,463	39.5	973
between 121 and 180 days	2,450	23.0	563
between 181 and 270 days	1,884	25.9	488
more than 270 days	3,388	53.6	1,816
	319,688		**36,308**

Liquidity risk

Liquidity risk, i.e. the risk that the Messer Industries Group cannot meet its financial obligations, is limited both by creating the necessary financial flexibility and by effective cash management. In addition to cash funds, the Messer Industries Group also has access to long-term, freely available credit facilities to safeguard its liquidity. There are no indications that any of the credit facilities granted are not fully available. Liquidity risks are monitored regularly and reported to management, in particular regarding compliance with the financial covenants described in note 26 "Financial Liabilities".

Trade payables and other current liabilities have remaining terms of less than one year. Information relating to the maturities of financial liabilities can be found in note 26 "Financial Liabilities".

The following table shows the expected cash flows for financial liabilities:

Description	Carrying amount as of Dec. 31, 2022	Expected cash flow	Cash flows 2023		Cash flows 2024 – 2027		Cash flows from 2028	
			Interest	Payment of principal	Interest	Payment of principal	Interest	Payment of principal
Financial liabilities at amortized cost	**2,083,194**	**(2,509,892)**	**(127,371)**	**(270,280)**	**(272,410)**	**(1,836,112)**	**(713)**	**(3,006)**
Financial liabilities[1]	1,834,887	(2,261,585)	(127,371)	(21,973)	(272,410)	(1,836,112)	(713)	(3,006)
Other non-current liabilities	–	–	–	–	–	–	–	–
Trade payables	201,792	(201,792)	–	(201,792)	–	–	–	–
Other current liabilities	46,515	(46,515)	–	(46,515)	–	–	–	–
Financial liabilities at fair value through OCI	**1,260**	**(1,260)**	**–**	**(1,260)**	**–**	**–**	**–**	**–**
Financial derivatives[2]	1,260	(1,260)	–	(1,260)	–	–	–	–
Financial liabilities at fair value through profit or loss	**201**	**(201)**	**–**	**(201)**	**–**	**–**	**–**	**–**
Financial derivatives[2]	201	(201)	–	**(201)**	–	**–**	–	–
Lease liabilities	**116,986**	**(142,115)**	**(4,351)**	**(21,312)**	**(11,880)**	**(53,058)**	**(8,898)**	**(42,616)**

[1] The transaction costs for financing were already reported as cash outflows and are therefore not a component of future cash flows.
[2] Repayments of principal for financial derivatives are contractual cash flows.

This includes all instruments that were in the portfolio on December 31, 2022 and for which payments were already contractually agreed. Forecast figures for future new liabilities are not included. Foreign currency amounts were translated using the rate as of December 31, 2022.

Description	Carrying amount as of Dec. 31, 2021	Expected cash flow	Cash flows 2022		Cash flows 2023 – 2026		Cash flows from 2027	
			Interest	Payment of principal	Interest	Payment of principal	Interest	Payment of principal
Financial liabilities at amortized cost	**2,273,558**	**(2,539,024)**	**(55,173)**	**(285,360)**	**(170,948)**	**(2,027,543)**	**–**	**–**
Financial liabilities[1]	2,008,571	(2,274,037)	(55,173)	(20,373)	(170,948)	(2,027,543)	–	–
Other non-current liabilities	–	–	–	–	–	–	–	–
Trade payables	194,171	(194,171)	–	(194,171)	–	–	–	–
Other current liabilities	70,816	(70,816)	–	(70,816)	–	–	–	–
Financial liabilities at fair value through OCI	**377**	**(377)**	**–**	**(31)**	**–**	**(346)**	**–**	**–**
Financial derivatives[2]	377	(377)	–	(31)	–	(346)	–	–
Financial liabilities at fair value through profit or loss	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Financial derivatives[2]	–	–	–	–	–	–	–	–
Lease liabilities	**88,867**	**(114,302)**	**(4,397)**	**(16,470)**	**(11,916)**	**(38,098)**	**(9,122)**	**(34,299)**

[1] The transaction costs for financing were already reported as cash outflows and are therefore not a component of future cash flows.
[2] Repayments of principal for financial derivatives are contractual cash flows.

Interest risk

Interest risk can arise when interest-bearing liabilities are not hedged in terms of maturity or amount by either corresponding assets or derivative instruments. The objective is to optimize the net interest result and minimize interest risks. The Group has hedged 100 % of its financial liabilities against interest rate changes through fixed interest rate agreements and derivatives.

Variable financial instruments are subject to a cash flow risk with regard to the uncertainty of future interest payments. The cash flow risk is measured using a sensitivity analysis. The sensitivity analysis assumes a shift in the yield curves for all currencies by +/- 100 basis points as of December 31, 2022.

The change in interest rate derivatives measured using the consolidated income statement is recognized in profit or loss using the current market interest at the end of the reporting period. If market interest rates had been 100 basis points higher (lower) as of December 31, 2022, consolidated net profit would have been K€ 3,184 (previous year: K€ 3,167) higher or K€ 3,220 (previous year: K€ 796) lower.

For variable financial liabilities and our financial investments, an interest rate level 100 basis points higher (lower) as of December 31, 2022 would have produced a result (higher) lower by K€ 1,674 (previous year: K€ 1,080). The exposure to interest rate risk was K€ 167,370 as of December 31, 2022 (previous year: K€ 108,041).

Currency risk

Currency risk for the Messer Industries Group arises from both financing and operating activities in an international environment. Foreign currency risks are hedged to the extent that they have a significant influence on the Group's cash flows.

Foreign currency risks relating to financing activities result from foreign currency financial liabilities and loans for the financing of Group companies. Group Treasury hedges these risks. Currency derivatives are used to convert financial obligations and intragroup loans denominated in foreign currencies into the functional currency of the Group companies.

As far as operating activities are concerned, the individual Group companies predominantly conduct their business in their own functional currency. The Messer Industries Group's currency risk from operating activities is therefore considered remote overall. However, a number of Group companies are exposed to foreign currency risks in connection with operational transactions not denominated in their own functional currency. This mainly relates to payments in conjunction with a long-term supply agreement and payments in conjunction with investments. The Messer Industries Group also uses currency derivatives to hedge these risks.

Currency risks as referred to by IFRS 7 result from financial instruments that are denominated in a currency other than the functional currency and that are monetary in nature; exchange rate differences arising from the translation of financial statements into the Group currency are not taken into account.

Currency risk is measured on the basis of sensitivity analyses. The currency analysis assumes an appreciation (depreciation) of all currencies by 10 % compared to the euro.

If the euro appreciated (depreciated) by 10 % against the major currencies, this would produce a hypothetical result K€ 9,457 lower (higher) (previous year: K€ 14,317 lower). The net currency risk from statement of financial position exposures was as follows:

As of Dec. 31, 2022	USD	CAD	CHF	BRL
Foreign currency risk from statement of financial position exposures	8,187	186,408	(200)	(609)
Foreign currency risk from forecast transactions	(88,084)	(20,776)	(3,501)	(3,403)
Transactional foreign currency exposures	**(79,897)**	**165,632**	**(3,701)**	**(4,012)**
Exposures hedged in economic terms by derivatives	16,548	–	–	–
Unhedged foreign currency exposures	**(63,349)**	**165,632**	**(3,701)**	**(4,012)**
Change in foreign currency exposures as a result of a 10 % appreciation of the euro	6,335	(16,563)	370	401

32. Related Parties

Transactions with the following entities and individuals are treated as related party transactions.

Related companies

The ultimate company with significant influence is Messer Industrie GmbH, which is controlled by the Messer family. Associated companies, joint ventures and joint operations and non-consolidated subsidiaries classified as related parties are shown in the list of shareholdings.

The following companies are considered related parties:

- Cultro GmbH
  Cultro GmbH, founded in 2022, is a subsidiary of Messer Industrie GmbH.

- CVC Capital Partners VII (A) L.P., UK
  CVC Capital Partners VII (A) L.P. holds 94.51 % in Yeti Holdings Jersey Limited, USA, as of December 31, 2022.

- Messer SE & Co. KGaA (Messer Group)
  Messer SE & Co. KGaA holds 54.46 % in Yeti GermanCo 1 GmbH and 58.05 % in Yeti Warehouse GmbH as of December 31, 2022.

- Messer Management SE
  Messer Management SE is the general partner (SE) of Messer SE & Co. KGaA.

- Messer Holding GmbH
  Messer Holding GmbH is the parent company of Messer SE & Co. KGaA and holds 100 % in Messer SE & Co. KGaA as of December 31, 2022.

- Messer Industrie GmbH
  Messer Industrie GmbH holds 100 % in Messer Holding GmbH as of December 31, 2022.

- MIG Holding GmbH and Messer Eutectic Castolin Group (MEC Group)
  100 % of the shares in MEC Global GmbH are held by MIG Holding GmbH, an affiliate of Messer Industrie GmbH with the same ownership structure.

- Messer Medical Home Care Holding GmbH (Home Care Group)
  The Messer Group has spun off its home care activities into an independent group since 2011. The parent company of this Group, Messer Medical Home Care Holding GmbH, is wholly owned by MEC Holding GmbH, whose interest is held by MIG Holding GmbH Wages.

- Stefan Messer GmbH, Greenbelt Ltd., British Virgin Islands, and Hardtberg Grundstücks GmbH
  Stefan Messer, Managing Director and co-shareholder of Messer Industrie GmbH, is also a Managing Director and co-shareholder or sole shareholder of these companies.

- Yeti Americas Management Participation GmbH & Co. KG
  Yeti Americas Management Participation GmbH & Co. KG holds 4.21 % in Yeti GermanCo 1 GmbH as of December 31, 2022.

- Yeti Europe Management Participation GmbH & Co. KG
  Yeti Europe Management Participation GmbH & Co. KG holds as 1.98 % in Yeti GermanCo 1 GmbH as of December 31, 2022.

- Yeti Holdings Jersey Limited, Jersey
  Yeti Holdings Jersey Limited holds 100 % in Yeti Holdings S.à.r.l., Luxembourg, as of December 31, 2022.

- Yeti Holdings S.à r.l., Luxembourg
  Yeti, Holdings S.à.r.l., Luxembourg holds 100 % in Yeti Investments S.à.r.l., Luxembourg, as of December 31, 2022.

- Yeti Investments S.à.r.l., Luxembourg
  Yeti Investments S.à.r.l. holds 41.95 % in Yeti Warehouse GmbH and 39.35 % in Yeti GermanCo 1 GmbH as of December 31, 2022.

- Yeti Management Verwaltungs GmbH
  Yeti Management Verwaltungs GmbH is the general partner (GmbH) of Yeti Americas Management Participation GmbH & Co. KG and Yeti Europe Management Participation GmbH & Co. KG as of December 31, 2022.

- Yeti Warehouse GmbH
  Yeti Warehouse GmbH holds 100 % in Yeti Management Verwaltungs GmbH as of December 31, 2022. The Yeti GermanCo 1 GmbH Employee Participation Program is bundled in Yeti Warehouse GmbH.

The following transactions were performed with related companies:

	Jan. 1 – Dec. 31, 2022	Jan. 1 – Dec. 31, 2021
Revenue and services provided		
Messer SE & Co. KGaA	12,068	10,648
Associated companies, joint ventures and joint operations	283	316
Non-consolidated subsidiaries	209	195
Other related parties	8,750	6,022
	21,310	**17,181**
Purchased goods and services		
Messer SE & Co. KGaA	16,906	16,391
Associated companies, joint ventures and joint operations	7,110	4,065
Other related parties	9,541	7,773
	33,557	**28,229**

	Dec. 31, 2022	Dec. 31, 2021
Trade receivables		
Messer SE & Co. KGaA	724	1,340
Associated companies, joint ventures and joint operations	63	47
Other related parties	962	727
	1,749	**2,114**
Inventories, other financial and non-financial assets		
Messer SE & Co. KGaA	124	140
Associated companies, joint ventures and joint operations	7,725	6,536
Non-consolidated subsidiaries	129	128
Other related parties	57	93
	8,035	**6,897**
Trade payables		
Messer SE & Co. KGaA	3,336	6,017
Associated companies, joint ventures and joint operations	534	940
Other related parties	1,836	2,177
	5,706	**9,134**
Other financial and non-financial liabilities		
Messer SE & Co. KGaA	–	–
Associated companies, joint ventures and joint operations	–	–
Other related parties	–	–
	–	**–**

The receivables from related parties result from service agreements and sales transactions with varying maturities. The receivables are not secured by collateral and do not bear interest. There were no impairment losses on receivables from related parties (previous year: K€ 0) and no uncollectible receivables from related parties recognized as an expense for the period (previous year: K€ 0). No loans were granted to related companies or were extended by them to the Messer Industries Group.

Related persons

Members of management in key positions
Management in key positions at Yeti GermanCo 1 GmbH included the following in the fiscal year:

- Carsten Knecht, Managing Director of Yeti GermanCo 1 GmbH
- Nicolas Denis, Senior Vice President Western Europe and Managing Director Messer France S.A.S., France
- Jens Lühring, CEO Messer Industries USA Inc., USA
- Gareth Parkin, CFO Messer Industries USA Inc., USA

The total remuneration of the members of management in key positions at Yeti GermanCo 1 GmbH amounted to K€ 4,604 in the fiscal year (previous year: K€ 3,067).

Of this figure, fixed remuneration including benefits in kind and other fringe benefits amounted to K€ 1,554 (previous year: K€ 1,358). The total amount of variable remuneration was to K€ 2,777 (previous year: K€ 1,476) and is linked to the achievement of certain performance indicators. Post-employment benefits amount to K€ 273 (previous year: K€ 233).

Yeti GermanCo 1 GmbH Employee Participation Program
For persons in key positions and other senior employees of the Group and Messer SE & Co. KGaA a management participation program was created in the form of management investment companies as a shareholder of Yeti GermanCo 1 GmbH. The management participation program enables management and other executives to invest in the Messer Industries Group and, in the event of an exit by the current main shareholders (through sale or IPO), to participate in the expected increase in value. The management participation program gives participants the opportunity to indirectly acquire shares in Yeti GermanCo 1 GmbH through a predetermined structure. These investments participate indirectly in the returns and performance of a particular geographically defined business unit consisting of basic residual amounts and preference interest-bearing equity instruments (VSLs). These instruments bear defined interest on the capital invested and must be served before the residual amounts.

As the companies of Messer Industries Group are not required to settled share-based payments themselves, this constitutes equity-settled share-based payment in accordance with IFRS 2.43B (b).

The purchase prices for the transfer of shares to the participants of the management participation program were determined as of March 1, 2019, taking into account the value of the contribution by Messer SE & Co. KGaA and CVC Capital Partners Fund VII.
The participants can sell the shares they have acquired only to Yeti Warehouse GmbH. If a participant leaves, Yeti Warehouse GmbH is entitled to repurchase his shares.

In the event of an early sale of shares or if a participant leaves the Yeti GermanCo 1 Group as a good leaver, participants receive a formula-based market value of the shares for a contractually determined portion of the portfolio, which is vested up to the date they leave. For the non-vested portion, good leavers receive the lower amount of the formula-based market value and the purchase price less refunds since received. Five years after the specified date of entry, the good leaver receives 100 % of the market value of the respective portfolio on leaving. In the event of leaving as a bad leaver, the employee receives the lower of the formula-based market value and the purchase price.

The program stipulates that, after a defined exit event (which can include an IPO or a similar transaction in which all or substantially all the Group's assets are disposed of so that current investors retain less than

50 % of the shares), the proceeds of the sale, after deduction of the costs, are used to serve the instruments described (first the VSLs and then the residual amounts), taking the intended interest into account. The investors are required to cooperate in the exit event and to participate in the proceeds of the sale in proportion to the portfolio they hold.

In order to determine the expense for the period as referred to by IFRS 2, the purchase prices to be paid by the participants were compared against the fair values of the share classes at the respective date of entry (date of grant). If this shows that the employees acquired the shares at a value lower than the fair value, the fair value of the benefit granted to the employee from the time the instrument was granted is calculated as the difference. As the purchase prices to be paid were equal to the fair value as of the grant date, there was no difference that would have been recognized as the "grant date fair value".

Advisory Board

- Bernd Eulitz, Chairman, Deputy CEO Messer SE & Co. KGaA (since July 20, 2022)
- Dr. Hans-Gerd Wienands-Adelsbach, Chairman, Lawyer (until September 6, 2022)
- Ernst Bode, COO Europe Messer SE & Co. KGaA (until July 19, 2022)
- Helmut Kaschenz, CFO Messer SE & Co. KGaA (since September 7, 2022)
- Stefan Messer, CEO Messer SE & Co. KGaA
- Dr. Alexander Dibelius, Managing Partner CVC Capital Partners, UK
- Dr. Daniel Pindur, Partner CVC Capital Partners, UK
- Lars Haegg, Principal CVC Capital Partners, UK

Mr. Eulitz was appointed Chairman of the Advisory Board as of September 7, 2022. The Advisory Board received no remuneration from Group companies of Yeti GermanCo 1 GmbH for the fiscal year.

33. Events after the Reporting Period

In March 2023, another claim resulting from the accident at the Foundation Food Group in Gainesville, Georgia, USA, was paid by the insurance company. Publication of the exact amount could seriously and negatively impact Messer's position in the pending court case. For this reason, Messer is not disclosing this information.

34. Prior-Year Financial Statements

The financial statements for the previous year as of December 31, 2021 were approved by the Advisory Board on April 21, 2022 and published in the German Federal Gazette.

35. Auditors' Fees

The fees of the auditor of the German Group companies were exclusively for audits of financial statements and amounted to K€ 394 in fiscal 2022 (previous year: K€ 364).

Bad Soden am Taunus, March 30, 2023

Appendix

List of shareholdings as of December, 31 2022

Country	Name	Registered office	Equity (in K€)	Direct / Indirect	Share-holding in %	Net result after taxes (in K€)
Affiliated companies included in the consolidated financial statements						
Algeria	Messer Algérie SPA	Alger	4,257	I	59.86	2,738
Belgium	bECO2 B.V.B.A.	Zwijndrecht	148	I	70.00	18
	Messer Belgium N.V.	Zwijndrecht	36,802	I	100.00	5,343
Brazil	Messer Gases Ltda.	Sao Paulo	178,625	I	100.00	68,731
	Messer Indústria de Gases Ltda	Sao Paulo	11,086	I	100.00	1,412
Canada	Messer Canada Inc.	Ontario	303,888	I	100.00	40,592
Chile	Messer Chile Limitada	Santiago	25,768	I	100.00	2,693
Colombia	Messer Energy S.A.S. E.S.P.	Bogotá	170	I	100.00	77
	Messer Colombia S.A.	Bogotá	61,966	I	100.00	11,405
	REMEO Medical S.A.S.	Bogotá	836	I	100.00	290
France	Messer France S.A.S.	Suresnes	128,015	I	100.00	12,467
Germany	Messer Industries GmbH	Sulzbach	1,096,615	I	100.00	4,292
	Messer GasPack 2 GmbH	Sulzbach	79,024	I	100.00	911
	Messer Industriegase GmbH	Sulzbach	69,276	I	100.00	630
	Messer Produktionsgesellschaft mbH Salzgitter	Sulzbach	11,033	I	100.00	-
	Messer Produktionsgesellschaft mbH Siegen	Sulzbach	10,717	I	100.00	(3)
	Messer Produktionsgesellschaft mbH Speyer	Bad Soden am Taunus	11,529	I	100.00	-
	Yeti GermanCo 1 GmbH	Sulzbach	1,379,666		100.00	33,996
	Yeti GermanCo 2 GmbH	Sulzbach	1,093,387	D	100.00	-
	Yeti GermanCo 3 GmbH	Sulzbach	1,093,282	I	100.00	-
Netherlands	Messer B.V.	Moerdijk	12,793	I	100.00	2,892
	Messer Industries B.V.	Moerdijk	196,106	I	100.00	(48)
Portugal	MesserGas Distribuicao des Gases Industriais, Unip	Lisbon	1,103	I	100.00	345
Puerto Rico	Messer Gas Puerto Rico Inc.	San Juan	5,774	I	100.00	4,612
Switzerland	Messer Schweiz AG	Lenzburg	35,158	I	100.00	4,495
Spain	Adamite Investments S.L.	Tarragona	6,172	I	100.00	408
	Leteira Investments S.L.	Tarragona	126,388	I	100.00	48,308
	Litadas Investments S.L.	Tarragona	31	I	100.00	(12)
	Messer Ibérica de Gases S.A.	Tarragona	25,607	I	100.00	7,250
	MG Industries Iberica S.L.	Tarragona	114,373	I	100.00	6,804
	Toubkal Investments S.L.	Tarragona	9,068	I	100.00	(16)
USA	General Gases of the V.I. Inc.	St. Croix	9,215	I	100.00	322
	Messer Energy Services Inc.	Delaware	(3,065)	I	100.00	(248)
	Messer Industries USA Inc.	Delaware	252,156	I	100.00	(54,785)
	Messer LLC	Delaware	2,143,385	I	100.00	261,841
	Messer Merchant Production LLC	Delaware	5,384	I	100.00	(1,411)
	Messer North America Inc.	Delaware	(42,092)	I	100.00	(61,307)

Country	Name	Registered office	Equity (in K€)	Direct / Indirect	Share-holding in %	Net result after taxes (in K€)
Companies accounted for using the proportional consolidation						
USA	East Coast Nitrogen Company LLC	Delaware	57,286	I	50.00	(5,346)
	East Coast Oxygen Company LLC	Delaware	4,913	I	50.00	(1,541)
Companies accounted for using the equity method						
Belgium	GreenCO2 N.V.	Zwijndrecht	(32)	I	35.00	(103)
France	Limes S.A.S.	Saint-Herblain	4,905	I	50.00	–
Germany	HyDN GmbH	Jülich	90	I	37.50	(370)
USA	Cliffside Helium LLC	Delaware	116	I	26.00	25
	Cliffside Refiners LP	Delaware	2,184	I	25.74	1,399
Affiliated companies not included in the consolidated financial statement						
France	Lida S.A.S	St.Quentin Fallavier	-	I	21.50	– [1]
	Soprogaz S.N.C.	Beauvais	-	I	50.00	– [1]

[1] Affiliated companies not included in the consolidated financial statements owing to immateriality for the net assets, financial position and result of operations