KUKA

Annual Report 2023

beyond automation

Contents

KUKA at a glance

KUKA is a global automation corporation with sales of around 4.1 billion euro and roughly 15,000 employees. As one of the world's leading producers of intelligent automation solutions, KUKA offers customers everything they need from a single source: from the component, such as robots or automated guided vehicles (AGVs), to manufacturing cells and even fully automated systems and their networking in markets such as automotive, plastics, metal, general industry, consumer goods, e-commerce/retail and healthcare. Today, KUKA plays a central role worldwide in the implementation and design of intelligent automation, the digital networking of production, and modular and flexible manufacturing concepts.

2023 key figures

Revenues	Orders received	Employees
€4.1 billion	€4.0 billion	14,726

Key figures

in € millions	2022	2023	Change in %
Orders received	**4,459.5**	**4,026.2**	**-9.7**
Sales revenues	**3,897.0**	**4,053.7**	**4.0**
Order backlog (Dec. 31)	**2,912.4**	**2,766.5**	**-5.0**
EBIT	**118.4**	**158.2**	**33.6**
EBIT in % of sales	**3.0**	**3.9**	**90 Bp**
Earnings after taxes and after loss from discontinued activities	**101.4**	**85.6**	**-15.6**
Financial position			
Free cash flow	-188.3	155.0	>100
Capital expenditure	129.5	127.1	-1.9
Employees (Dec. 31) [1]	15,064	14,726	-2.2
Net assets and financial position			
Balance sheet total	3,955.9	3,971.7	0.4
Equity	1,500.4	1,516.4	1.1
in % of balance sheet total	37.9	38.2	30 Bp

Bp: Basis point (= 1/100%age point)

[1] Figures for employees are based on the full-time equivalent (FTE) throughout the annual report.

Foreword

Ladies and Gentlemen,
Dear Readers

The headlines are currently dominated by challenges: global trouble spots, the gloomy economic situation in Germany and China, and a generally pessimistic atmosphere are weighing on our economy and society.

Yet despite all this, we shouldn't not forget to look ahead, to help shape positive developments and to recognize and use change as an opportunity. We need to focus on change instead of standing still.

Like other companies, we at KUKA are feeling the impact of rising costs and the difficult economic climate. Irrespective of such general economic cycles, a much greater development is becoming clear: modern technologies have become indispensable and have arrived at the heart of the economy and society.

This is underscored by the latest figures from the International Federation of Robotics. According to the report, the number of industrial robot installations reached a new record of 3.9 million robots in 2022 – almost three times as many as ten years ago. Global automation has reached a new high – and is making a major contribution to solving challenges such as the shortage of skilled workers, managing complex logistics flows and maintaining production in high-wage countries. Without this support, our modern economy would have a problem.

We see the following: Robotics and automation are no longer trends, but have become an important main pillar of industrial production. As a result, the automation market has also developed into an extremely competitive industry in which more and more players are appearing on the scene.

Alexander Tan
Chief Financial Officer and Controlling

Peter Mohnen
Chief Executive Officer

However, only those who understand the industries and the needs of their customers can be successful in the dynamic automation market in the long term. And KUKA has prevailed extremely well in this competitive environment.

This is reflected in the business figures for 2023: For the first time, both KUKA’s orders received and revenues are above the four billion euro mark. EBIT also increased to just under 160 million euros for the first time. The key ingredients in KUKA’s recipe for success are tradition and innovation.

In 2023, our company celebrated its 125th birthday. Change is in our DNA; KUKA has completely reinvented itself time and again throughout its long history, helping to shape the development of modern industrial production, from the welding line to the first industrial robot with an electric motor.

This in-depth industry knowledge, combined with innovative strength and a strong local presence in the major growth markets from North America to Asia, is winning over more and more customers. And this is leading KUKA on a strong and long-term growth path, despite macroeconomic challenges and intense competition.

As a globally active company, and faced with varying economic forecasts, proximity to customers and markets at all times is of decisive importance, as is the ability to respond quickly to their requirements.

Thanks to KUKA’s experience and understanding of the markets, combined with the right products and solutions, our customers are well equipped for the major issues of our time, such as the fight against climate change and the transformation towards greater sustainability.

That is why we at KUKA are positive about the future, despite all the challenges we are all currently facing. We know that with the help of innovations in the fields of robotics, automation and artificial intelligence along with, of course, a strong global KUKA team, we will write a new chapter in our success story.

Peter Mohnen

Sincerely, Peter Mohnen

Supervisory Board report

Ladies and Gentlemen,

We can look back on a successful fiscal year 2023. KUKA met and even exceeded its ambitious targets in the past fiscal year. Sales and the operating result (EBIT) in particular were significantly higher than the budgeted figures and those of the previous year. The volume of orders received was in line with expectations. However, the general decline in demand in the systems and mechanical engineering sector in the second half of 2024 also had an impact on orders received at KUKA. Due to the high order backlog, however, we are confident that KUKA will remain on course even in the current phase of weaker growth. This is supported by the fact that KUKA has continued to develop positively in recent years, but above all by the fact that KUKA, with its range of products and solutions, is positioned in the areas of Automation & Robotics and Intralogistics. These are clear growth markets in the medium and long term and we are working on the assumption that these areas will not only grow individually, but will also be more closely interlinked in the future. Another exciting development will be the future interaction of automation & robotics and intralogistics with artificial intelligence. We need to monitor these developments closely and use our expertise in software development to help shape them.

The clear goal remains for KUKA to make the individual business areas sustainably profitable in the coming years. This process also involves scrutinizing business areas that are not expected to be adequately profitable. Specifically, this led to the sale of KUKA Industries GmbH & Co. KG in Obernburg in the 2023 fiscal year.

With regard to the ownership structure, it should be noted that the investor agreement concluded with Midea in 2016 expired on December 31, 2023 after seven and a half years. Part of the investor agreement was a separate “ringfencing agreement”, which protects the data of business partners (customers and suppliers) separately. Midea and KUKA renewed this agreement in December 2023 with a term until December 31, 2030.

In the year under review, the Supervisory Board performed the duties incumbent upon it by law, the Articles of Association and the Rules of Procedure in full. The Supervisory Board and its committees monitored and advised the Management Board in its management of the company on the basis of regular and detailed reporting by the Management Board. Furthermore, there was an intensive exchange between the Chairman of the Supervisory Board and the Chairman of the Management Board as well as a regular exchange between the Chairs of the Audit Committee and the Strategy and Technology Committee and the members of the Management Board. In this way, the Supervisory Board was always informed about the business policy, corporate planning, corporate risks and situation of the company and the Group as a whole. Cooperation between the Supervisory Board and the Management Board was constructive.

The Supervisory Board performed its duties in plenary sessions, committee meetings, video conferences, and by means of circular resolutions.

The Supervisory Board has formed a total of five committees. These are (1) the Personnel Committee, (2) the Audit Committee, (3) the Strategy and Technology Committee, (4) the Nomination Committee and the (5) Mediation Committee. The committees perform the essential specialized tasks and prepare decisions for the Supervisory Board. This contributes to the efficient work of the Supervisory Board.

Scheduled elections for the Supervisory Board were held in the 2023 fiscal year. The election of the employee representatives on the Supervisory Board was held on March 28, 2023, in accordance with the provisions of the German

Co-Determination Act (MitbestG), and with effect from the conclusion of the Annual General Meeting on May 3, 2023.

The shareholder representatives on the Supervisory Board were elected at the Annual General Meeting on May 3, 2023.

The term of office of all members of the Supervisory Board ends at the 2028 Annual General Meeting.

The following persons (in alphabetical order) left the Supervisory Board in the 2023 financial year: Manfred Hüttenhofer, Prof. Dr. Henning Kagermann, Tanja Smolenski and Angela Steinecker. The following persons (in alphabetical order) joined during the fiscal year: Larissa Brandis, Peter Kippes, Carina Veit and Dr. Chang Wei.

We would like to take this opportunity to thank all departing members of the Supervisory Board for their work and for their commitment to KUKA as well as their loyal collaboration.

At the time this report was submitted, the Supervisory Board therefore comprised the following members:

Shareholder representatives:	Dr. Yanmin (Andy) Gu (Chairman) Dr. Chang Wei Dr. Myriam Meyer Christoph Schell Wenxin (Marianna) Zhao Helmut Zodl
Employee representatives:	Armin Kolb (Deputy Chairman) Larissa Brandis Wilfried Eberhardt Peter Kippes Carola Leitmeir Carina Veit

At the end of the year under review, the proportion of women on the Supervisory Board was 30%.

Work with the auditors

The annual financial statements of KUKA Aktiengesellschaft as at December 31, 2023 and the consolidated financial statements as at December 31, 2023, as well as the consolidated management report for KUKA Aktiengesellschaft and KUKA Group, including the bookkeeping, were audited by auditors PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main ("PricewaterhouseCoopers"), which issued an unqualified audit opinion in each case on March 27, 2024.

The consolidated financial statements of KUKA Aktiengesellschaft were prepared in accordance with Section 315e of the German Commercial Code (HGB) on the basis of the International Financial Reporting Standards (IFRS).

The Supervisory Board's Audit Committee appointed the external auditors, PricewaterhouseCoopers, as per the resolution at the Annual General Meeting of May 3, 2023. During the course of appointing the auditors of the financial statements of the company and the Group, the chair of the Audit Committee and the Chairman of the Supervisory Board conducted a review with the auditors regarding key audit issues, scope and fees. The auditors agreed to immediately inform the chair of the Audit Committee about any disqualification or bias issues encountered during the audit, provided such disqualification or bias issues could not immediately be resolved. The auditors also agreed to report on an ongoing basis during the audit all material findings and developments arising during the audit that were within the scope of the Supervisory Board's responsibilities.

Finally, the Audit Committee obtained the arm's length declaration of the auditors and monitored the auditors' independence.

As in previous years, focal points were agreed for the audit of the annual financial statements and consolidated financial statements in fiscal 2023.

In a joint meeting with the auditors on March 20, 2024, the Audit Committee reviewed the annual financial statements of KUKA Aktiengesellschaft and the consolidated financial statements for fiscal 2023, taking into consideration the auditors' reports. The Management Board and the auditors presented the highlights of the financial reports to the committee. The Audit Committee members reviewed, discussed and checked in detail the documentation relating to the financial statements and discussed the audit report in depth with the auditors. The auditors answered the questions posed by the Audit Committee members. The Audit Committee reported to the Supervisory Board on the results of its discussions during the Board's meeting on March 20, 2024 and recommended that the Board adopt KUKA Aktiengesellschaft's annual financial statements and approve KUKA Group's consolidated annual financial statements for 2023.

The full Supervisory Board reviewed the draft annual financial statements and the Management Board's recommendation on appropriation of net income on March 27, 2024. The auditors, PricewaterhouseCoopers, attended the Supervisory Board meeting in order to report on material findings in the audit and to provide additional information. All members of the Supervisory Board were in possession of the audit reports provided by the auditors.

The Board and the auditors jointly reviewed and discussed the financial statements and PricewaterhouseCoopers answered all questions posed by the Audit Committee. The audits of the KUKA Aktiengesellschaft and KUKA Group annual financial statements for 2023 were thus fully comprehensible.

Dependency report 2023

On March 27, 2024, the Supervisory Board dealt with the report on relationships with affiliated companies (dependency report) prepared by the Management Board pursuant to section 312 of the German Stock Corporation Act (AktG) for fiscal 2023. This report was reviewed by PricewaterhouseCoopers in its role as auditor for fiscal 2023. Following preparatory discussion by the Audit Committee, the Supervisory Board conducted a further review. All reviews confirmed the Management Board's final declaration that, with regard to the business relationships of KUKA Group with Midea companies in the 2023 fiscal year, appropriate compensation was received and KUKA companies did not suffer any disadvantages therefrom. The audit opinion on the dependency report for fiscal 2023 reads verbatim as follows:

Audit results and audit opinion

In accordance with our mandate and section 313 of the German Stock Corporation Act (AktG), we have audited the report of the Management Board on relations with affiliated companies pursuant to section 312 AktG for the 2023 fiscal year. Since the final results of our audit do not give rise to any objections, we issue the following audit opinion in accordance with section 313 para. 3 sentence 1 AktG:

“Based on our audit and assessment in accordance with professional standards, we confirm that

1. the factual statements made in the report are correct,
2. the consideration paid by the company for the legal transactions listed in the report was not unreasonably high nor were disadvantages compensated,
3. there are no circumstances that would indicate a materially different assessment of the measures listed in the report than that of the Management Board.

Munich, March 12, 2024

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft”

Adoption of 2023 financial statements

After completing its own review of the annual financial statements for 2023 for KUKA Aktiengesellschaft and KUKA Group, and with full knowledge and consideration of the Audit Committee report, the auditors' reports and the explanations provided, the Supervisory Board raised no objections to the results and concurred with the auditors' findings at its meeting on March 27, 2024. In the opinion of the Supervisory Board, the auditors' reports comply with the legal requirements stipulated in sections 317 and 321 of the German Commercial Code (HGB).

The Supervisory Board is satisfied that the consolidated management report compiled for KUKA Aktiengesellschaft and KUKA Group is complete. The assessments made by the Management Board in the management report are in agreement with its reports to the Supervisory Board, and the statements made in the consolidated management report are also in agreement with the Supervisory Board's own evaluations. At the conclusion of its review, the Supervisory Board found no cause to raise objections to the consolidated management report. The Supervisory Board also reviewed the Group's sustainability report at its plenary meeting and raised no objections.

In its financial statements meeting on March 27, 2024, the Supervisory Board therefore adopted KUKA Aktiengesellschaft's annual financial statements for fiscal 2023 as prepared by the Management Board. The Supervisory Board also approved KUKA Aktiengesellschaft's consolidated financial statements for the 2023 fiscal year as prepared by the Management Board.

Thanks to the staff

The Supervisory Board would like to thank all KUKA employees for their great commitment and hard work. We achieved a lot in fiscal 2023 and can be proud of our collective success. This success should be an incentive and motivation for all of us not to let up and to continue to give our best with full commitment to KUKA.

The Supervisory Board once again extends its thanks to the members of the Management Board, the CEOs of the Group companies and the employee representatives.

Augsburg, March 27, 2024
The Supervisory Board

Dr. Yanmin (Andy) Gu
Chairman

Consolidated management report

Consolidated management report

Fundamental information about the Group

Group structure and business activities

KUKA is one of the world's leading automation specialists and supports its customers in the holistic optimization of their value creation by providing comprehensive automation and digitalization know-how.

The global technology corporation offers its customers a full range of products and services from a single source: from the core component (such as robots, automated guided vehicles (AGVs) and other automation components) to production cells, turnkey systems and networked production with the aid of cloud-based IT tools. Through its advanced automation solutions KUKA contributes to increased efficiency and improved product quality for its customers.

Industrie 4.0 – the next stage of the Industrial Revolution – is bringing digital, networked production, flexible manufacturing concepts and logistics solutions, as well as new business models to the fore. With its decades of experience in automation, in-depth process know-how and cloud-based solutions, KUKA ensures its customers have an edge on the competition.

KUKA focuses on its customers and therefore divides its operating activities into the following five segments: Systems, Robotics, Swisslog, Swisslog Healthcare and China. The holding functions are pooled in the Corporate Functions segment, which mainly comprises KUKA AG.

Systems division

The Systems portfolio covers the entire value chain of a system: from individual system components, tools and fixtures to complete turnkey systems. From traditional body-in-white production in the automotive industry through battery production plants in the electromobility sector to initial non-automotive projects: the goal is the efficient design of production processes by means of adaptable, modular and automated manufacturing and logistics processes. Systems works together with its customers on flexible, scalable concepts and solutions for the factory of tomorrow. As an automation specialist for hardware and software solutions, Systems provides impetus for the digital factory.

Markets in Germany and elsewhere in Europe are served from the headquarters in Augsburg, while the Greater Detroit area in the USA is responsible for the North/South America region, and Shanghai in China manages the Asian market. In Toledo, USA, KUKA Toledo Production Operations (KTPO) manufactures the Jeep® Gladiator for Chrysler under the terms of a pay-on-production contract.

Robotics division

The core component for automating production processes is provided by the Robotics division: Industrial, collaborative and autonomous mobile robots (AMR) – combined with the robot controller, the appropriate software and digital services for each phase of the customer journey. The broad product portfolio – ranging from traditional 6-axis robots to DELTA and SCARA robots – covers payload ranges from three to 1,300 kilograms. Robotics also offers comprehensive support services. Customers can attend technical training and professional development courses in KUKA Colleges at more than 30 sites worldwide, for example.

KUKA Robotics is continuously expanding its range of products and services in order to be able to offer customers suitable solutions from a wide variety of industries – particularly in markets such as automotive with a focus on e-mobility & battery, electronics, metal & plastic, consumer goods, e-commerce, retail and healthcare. KUKA also offers small and medium-sized companies simple and economical entry into automation. Research & development activities have an important role to play here. The trend is towards robots that are simple to program, flexible to deploy and easily integrated and networked. Supplemented by KUKA's AMR range, robots become flexible and intelligent production assistants.

Swisslog division

With its Swisslog division, KUKA is tapping the growth markets of e-commerce/retail and consumer goods in the field of intralogistics. Based in Buchs (Aarau), Switzerland, Swisslog serves customers in over 50 countries worldwide. The division implements integrated automation solutions for forward-looking warehouses and distribution centers. As a general contractor, Swisslog offers complete turnkey solutions, from planning through to implementation and service, employing data-driven and robot-based automation in particular. Swisslog offers smart technologies, innovative software and adapted support services to improve the long-term competitiveness of its customers in the logistics sector. By combining Swisslog logistics solutions with the robotic automation solutions of the other divisions of the Group, KUKA offers new possibilities of flexible automation along the entire value chain.

Swisslog Healthcare division

The Swisslog Healthcare division (HCS) develops and implements automation solutions for modern hospitals. The aim is to boost efficiency and increase patient safety. With the aid of process optimizations in the field of medication management during and after in-patient treatment, hospital staff can free up more time for patient care. At the same time, the use of automation solutions can reduce the incidence of medication errors.

China division

The China segment comprises all business activities of the Chinese companies in the Systems, Robotics, Swisslog and Swisslog Healthcare divisions. In addition to KUKA industrial robots, automation solutions such as warehouse management systems and automated solutions for the healthcare sector are developed, offered and marketed in China. Industrial robots are manufactured at the Shunde location and sold on the Chinese market. Furthermore, new robot models, such as the SCARA and DELTA robots, have been developed in China.

Markets, trends and competitive positions

Megatrends drive automation in the medium and long term

Megatrends such as digitalization, the customization of products, demographic changes, and also greater regionalization due to global uncertainties necessitate increasingly flexible and at the same time more efficient solutions in production and intralogistics environments. These developments will continue to intensify, based on the experience of recent years. This demonstrates the importance of new approaches and business models that enable customers to adapt their processes flexibly to rapidly changing market requirements.

Cyclical growth in a volatile world

Automation has traditionally been a complex task, from programming through to commissioning. However, the big picture in the world of production has changed in recent years – the trend today is to lower the barriers to entry for automation by simplifying installation, deployment and operation, improving software and safety functions, and reducing costs. This leads to increased productivity and flexibility. Trends in technology, such as digitalization, machine learning and artificial intelligence, are accelerating these developments. The focal point of the factory of the future is the human worker, with the robot as the decisive component.

Already today, as the world's largest robotics market, China's influence on the global automation market is becoming increasingly apparent. Chinese players are not only expanding their domestic market share, but also occupying premium segments with standard technology at low prices.

KUKA is one of the leading automation companies in various industries and regions in Europe, North America and China. In recent years, KUKA has strengthened its presence in China and invested in establishing a local foothold in order to address the specific requirements of Chinese customers and accelerate the time to market.

Robotics and automation solutions are in greater demand to compensate for staff shortages, reduce personnel costs, and promote efficiency and flexible adaptation to changing market needs and dynamics. Furthermore, the increased reshoring trend with the goal of improving the resilience of supply chain systems is also expected to boost demand.

Corporate strategy

One of KUKA's core tasks is acting as a partner to support our customers in their automation and digitalization activities. In a rapidly changing environment characterized by global megatrends and ever-increasing competition, the key to future growth lies in understanding the specific requirements of our customers in different industries and regions in order to create unique added value for them. In doing so, we always remain focused on current developments and trends in our core industries. From easy-to-use, flexible automation to mobile, data-driven and scalable solutions, we offer answers to tomorrow's needs today.

With our strategy, we are focusing on global trends and pursuing a clear goal: to be the most competitive company for robot-based automation. In the long term, KUKA is concentrating on four key areas:

1. KUKA is the clear choice for smart automation
KUKA's long-term goal is to create products, services and solutions along the entire value chain and thus offer a competitive portfolio with clear unique selling points. Additionally, KUKA is working on an all-round package and expanding its digital business.

2. KUKA offers 125 years of pioneering spirit
In the future, the company aims to become a technology trend-setter for mass markets with shorter development cycles and a leading brand in robot-based automation. New market segments are to be gained by expanding experience and capabilities.

3. Together – worldwide
KUKA leverages its global knowledge of local market needs and strengthens the regions that drive the global road map and platform. The goal is to be successful in Asia, Europe, and North and South America. This requires flexible, stable and adaptable supply chains that run as independently as possible even in times of crisis.

4. From people, for people
KUKA creates an environment for this in which its employees can grow and develop professionally with the goal of becoming the most attractive company in the industry.

Business expansion: new markets, software & services

KUKA is continuously diversifying its business activities into high-growth, profitable business segments
KUKA concentrates on markets that are primarily characterized by high growth and profit potential and on regional growth opportunities, especially in fast-growing Asian countries. While KUKA has benefited greatly in the past from its pioneering role in automotive automation, future potential is increasingly emerging in areas outside the automotive sector:

Automotive
The automotive industry has always been of great importance to KUKA and remains a key pillar. It is a very important driver of technology and innovation and has been in a period of transition for some time. Established concepts and business models are undergoing major changes in terms of the way vehicles are developed, built, sold and used. KUKA will continue to grow around the world with its expanding portfolio of automotive and tier 1 customers and support them as a partner in automation, digitalization and electrification.

Electronics
The electronics industry is one of the most diverse sectors in the present-day industrial landscape. It includes the production of household electrical appliances, cutting-edge technologies such as semiconductors or solar cells, and industrial electronics. The most important submarket for us with the highest revenues is the 3C market (computers, communications and consumer electronics).

Metal & plastics
Entry into robot-based automation in emerging markets often starts with arc welding applications. Robots are used not only for welding applications and machine handling, but also for a wide range of other tasks, for example polishing or processing, due to their comprehensive functionality. This also opens up new growth opportunities in saturated industries.

E-commerce & retail
Electronic commerce results in large quantities of varied goods being sent to consumers via goods distribution centers. Fast and correct order fulfillment is crucial for profitable operations and can only be achieved in the long term through automation. The e-commerce segment is therefore an important sales market for smart logistics concepts based on intelligent software and combined with innovative, robot-based automation.

Consumer goods
Robots have been efficiently and successfully supporting the production of fast-moving consumer goods (FMCG) for many years, especially in the food and beverage industry, but also in shoe or textile production, cosmetics and pharmaceuticals.

Healthcare

The healthcare sector is one of the most important growth markets of the future. Demographic change, medical innovations and the development of healthcare systems in emerging countries, as well as the shortage of skilled workers and the increasing cost awareness of healthcare facilities, are creating a need for new solutions. The automated supply of medication can be part of the solution to the challenges in the healthcare sector: The aim is to boost efficiency and increase patient safety. With the aid of process optimizations in the field of medication management during and after in-patient treatment, hospital staff can free up more time for patient care. At the same time, the use of automation solutions demonstrably reduces the incidence of medication errors.

KUKA Medical Robotics offers a comprehensive portfolio of robotic components for integration into medical technology products: Applications for KUKA robots range from X-ray imaging to radiation therapy, patient positioning and robot-based assistance systems for surgical procedures in operating rooms, or as a supporting partner in the field of rehabilitation.

Expansion of the software and digital services business

Production and intralogistics systems of the future will be digitally networked and increasingly smart. While value creation through hardware is declining, software is becoming more and more important. This goes hand in hand with the trend towards easy-to-use, intuitive automation with falling barriers to entry. By investing in value-added software and services and digitalizing its product range, KUKA is taking an important step toward ensuring profitable growth in the future.

At the same time, KUKA is using its digital customer portal to optimize its sales and service delivery methods with the goal of improving the customer experience across all regions. With its digital products, KUKA enables its customers to virtually simulate and digitally network machines and systems in the cloud, thereby increasing efficiency in various areas, such as predictive maintenance.

Financial management system

Corporate management is based on the Group’s strategy. The Group is managed on the basis of the key financial performance indicators derived from this. KUKA Group’s financial targets are also KPIs that track the enterprise value of the company.

The most significant KPIs for KUKA Group are orders received, sales revenues, EBIT margin and free cash flow. The development of the financial targets is presented in the “Business performance” section and under “Financial position and performance”. Operating earnings before interest and taxes (EBIT) are compared to sales revenues to determine the return on sales. This results in the EBIT margin. EBIT is determined for KUKA Group and the divisions. Free cash flow represents the funds available to pay the claims of equity and debt capital providers.

These key performance indicators are published and are included as criteria in KUKA Group’s target and remuneration system. This ensures that all employees share the same goals.

An important early indicator of business performance for mechanical and systems engineering companies is the volume of orders received. Order backlog for a certain period is determined by subtracting sales revenues from orders received during that time. Order backlog is an indicator of the expected utilization of operational capacities in the coming months. Orders received and order backlog are determined for KUKA Group and for the divisions.

All key indicators are continuously tracked and reviewed by KUKA Group's management companies and its corporate accounting and controlling departments. Management analyzes any deviations from plan and decides on the necessary corrective actions required to achieve the targets.

Key performance indicators for KUKA Group over 5-year period

in € millions	2019	2020	2021	2022	2023
Orders received	3,190.7	2,792.2	3,565.3	4,459.5	4,026.2
Revenues	3,192.6	2,573.5	3,286.2	3,897.0	4,053.7
EBIT margin	1.5%	-4.4%	1.9%	3.0%	3.9%
Free cash flow	20.7	37.0	100.4	-188.3	155.0

Achievement of targets

In April 2023, KUKA published its targets for the full year 2023. KUKA expected orders received to remain at the prior-year level. Sales were forecast to be slightly above the prior-year level, i.e. less than 10%. Furthermore, the EBIT margin was expected to increase. The margin was expected to be in the single-digit range. Furthermore, earnings after taxes at KUKA Group were forecast to be above the prior-year level. A positive free cash flow was also expected for 2023. Despite the ongoing global uncertainties, KUKA expected demand for automation solutions to remainhigh.

The global uncertainties had an impact on the investment activities of our customers in the year under review. As a result, orders received were down 9.7% on the prior-year level at €4,026.2 million (2022: €4,459.5 million). The forecast was not achieved. At €4,053.7 million, sales were up 4.0% on the previous year and reached the forecast figure for 2023.

An increase in the EBIT margin was expected, which was achieved at 3.9% in 2023 (2022: 3.0%). Earnings after taxes and after losses from discontinued activities amounted to €85.6 million, 15.6% below the previous year's figure of €101.4 million. The forecast of a figure above the prior-year level was achieved.

At the end of fiscal 2023, free cash flow was €155.0 million, and thus considerably above the prior-year level of -€188.3 million. The free cash flow forecast was achieved. For detailed information, please refer to the chapter "Financial position and performance".

2023 target values

in € millions	ACTUAL 2023	Target 2023 (March 2023 forecast)
Orders received	4,026.2	at prior-year level[1]
Revenues	4,053.7	slightly above prior-year level[1]
EBIT margin	3.9%	rising[1]
Earnings after taxes	85.6	above prior-year level[1]
Free cash flow	155.0	positive[1]

[1] Definitions:

slightly above/below prior-year level: absolute change compared to previous year < ±10%

above/below prior-year level: absolute change compared to previous year ≧ ±10%

Research and development

The area of research and development (R&D) is of crucial importance for the sustainable and long-term success of KUKA. Research and development expenditure amounted to €194.9 million in 2023, higher than the value for the previous year (2022: €171.2 million).

KUKA's research and development activities are based on market needs, customer requirements and expected trends. KUKA's Corporate Research is active on a Group-wide scale and develops technologies for the Group companies. It collaborates closely with universities and institutes worldwide. Through its research and development activities, KUKA is able to open up new areas of application and further advance technological progress.

In the year under review, KUKA Group filed a total of 30 patent and utility model applications and 253 patents and utility models were granted. The focus was on innovations in the area of simple and ergonomic use and low-cost robots, as well as on applications for current and future key technologies in industrial production, logistics, mobility and human-robot collaboration, as well as new products for focused growth markets such as Asia.

Procurement

A robust supply chain with efficient purchasing and procurement management is essential for the successful execution of customer orders. The utmost priority is given here to ensuring the required quality at optimum cost and to on-time implementation. The processes and responsibilities pertaining to supply chain management are clearly defined at KUKA. By structuring the overall business into individual business segments, each with its own responsible management, segment-specific requirements can be implemented within the associated functions.

Despite the easing on the commodities markets compared to the previous year, the significant price increase of the most important commodities to pre-pandemic levels is one of KUKA's biggest challenges in the 2023 fiscal year. The expansion of cross-segment networking of selected functions – as part of the company's global orientation – will also be further strengthened with this in mind. The realization of technical requirements for our customers, as well as quality, supplier and procurement management, offer great potential. Due to its complex technological product portfolio, Robotics focuses on strengthening strategic partnerships, among other things, in order to meet the high demands placed on products and services and to establish and expand stable and reliable customer-supplier relationships. Close cooperation with regard to quality and delivery reliability aspects is essential. Process optimization via shared systems is continuously being driven forward.

In the project business, too, structural, system and process optimizations helped to put the business on a stable footing for the challenges ahead by enabling it to act even faster and more efficiently.

Economic report

Macroeconomic and industry conditions

Mixed developments in an overall resilient global economy

Global economic development continued to face mixed challenges in 2023. According to the OECD Outlook from November 2023 (Organization for Economic Cooperation and Development), global growth slowed to 2.9% in 2023. Inflation has fallen significantly in most economies, reducing the pressure on household incomes. However, in order to curb inflation, central banks around the world had to significantly tighten their monetary policy. In view of Russia's ongoing war of aggression against Ukraine, as well as the monetary policy environment, global economic growth has proven resilient overall according to the OECD.

Economic development currently varies significantly from one national economy to another. In many developed countries, and especially in Europe, growth is significantly lower than in many developing countries, China and the USA. According to the OECD, this is due to the greater relevance of bank financing in Europe and the significantly greater impact of higher energy prices on incomes compared to the rest of the world. Consequently, both the OECD in its November outlook and the EU Commission in its fall outlook are forecasting growth of just 0.6% for the eurozone in 2023. The EU Commission expects inflation in the eurozone to be at 5.6% in 2023. Over the next few years, it is expected to approach the 2% target again. By comparison, inflation in the USA is expected to be at 4.2% in 2023.

According to its November outlook, the OECD expects the US economy to grow by 2.4% in 2023. Growth of 5.4% was forecast for China. According to OECD assumptions, the German economy shrank by 0.1%, which is significantly worse than the world's other largest economies and also worse than the eurozone as a whole. Expectations for the German economy also deteriorated somewhat over the course of 2023. The ifo Business Climate Index of the Institute of Economic Research (ifo) is regarded as an early indicator of economic development in Germany. In November 2023, the climate index reached 87.3 points. The index was still at 88.9 points in December 2022. The climate initially improved over the course of the year before deteriorating to 85.8 points and then rising again slightly at the end of the year.

Sluggish recovery of the automotive markets in Europe and the USA – China with record registrations

According to the German Automotive Industry Association (VDA), the international automotive markets primarily recorded an increase in new registrations in the first three quarters of 2023. However, slightly lower growth rates are expected towards the end of the year. Despite the solid performance, geopolitical and macroeconomic uncertainties are also weighing on growth rates in the automotive industry and preventing a more dynamic recovery. High energy and consumer prices also continue to pose challenges for the industry. In the first three quarters of 2023, 9.7 million new vehicles were registered in the European automotive market. This corresponds to growth of 17% on the previous year. With a minus of 20% compared to the pre-crisis level of 2019, the European automotive market still has strong catch-up potential and continues to sit on potential overcapacity. In the Chinese car market, 17.9 million vehicles were sold in the first three quarters which is 7% more than in the same period last year. This record value shows, China has once again, for the second year running, exceeded its pre-crisis level with a sales volume 20% higher than in 2019. The US market grew by 14% compared to the same period last year and is currently still 9% below its 2019 level.

According to the Kraftfahrt-Bundesamt (KBA = Federal Motor Transport Authority), a total of 11.4% more cars were registered in Germany up to December 2023 than in the previous year. However, registration figures in November were 5.7% down on the same month last year. The comparison with the pre-crisis level remains clearly negative and is currently still a good 22% below the 2019 volume. While the number of registrations for plug-in hybrid vehicles (PHEV) fell significantly by 46% in the first eleven months compared to the previous year, there was a considerable increase of 28% in the number of purely electrically powered vehicles (BEV) registered. Overall, 5% fewer vehicles with alternative drive systems were registered than in the same period last year.

According to an analysis by the Center of Automotive Management (CAM), the number of new registrations of cars with alternative drive systems continues to rise significantly in the rest of the world. China remains by far the largest market for electric cars. After ten months, more than 4 million BEVs were registered there, which corresponds to an increase of 19% compared to the same period last year and a market share of 23.2% of all cars registered in China. The importance of plug-in hybrids in China increased even more significantly in the same period, with growth of 83% compared to the same period of the previous year, bringing the number of registered units to almost 2 million.

Stagnating willingness to invest in mechanical and systems engineering

For several quarters now, experts from the German Engineering Association (VDMA) have been observing a slow-down in orders received. At the time of publication of the report “Maschinenbau Konjunktur International”, the VDMA assumed that the reluctance to invest would continue for a few more months. Geopolitical risks and wars as well as inflation and significantly higher borrowing costs are currently having a negative impact on the willingness to invest. Experts are therefore forecasting stagnation in price-adjusted revenues in the global mechanical engineering industry in 2023. At the beginning of the year, the sentiment in the European mechanical engineering sector was initially positive, with an above-average order backlog of 6.6 months. By October, however, the average order backlog in the EU had fallen to just 5.5 months, leading to growing pessimism and declining expectations in the sector. While the automotive industry and the electronics sector have a somewhat more positive assessment of their situation, the mood in the metal production and chemical sectors is particularly gloomy. The J.P. Morgan and S&P Global Purchasing Managers’ Index for the manufacturing sector has been below the growth threshold value of 50 since September 2022.

The development of real revenues in the first eight months of the year was particularly negative in the key locations: USA, South Korea and Japan. However, locations in the EU and China, which together account for 60% of the global volume, developed positively. Adjusted mechanical engineering sales in Germany are forecast to fall by 2% in 2023 despite stable average growth in the EU. A decline of 3% is expected for the USA. The Chinese market, on the other hand, is likely to grow by 2% in 2023.

Increasing robotic automation in the automotive and electronics industry

In September 2023, the International Federation of Robotics (IFR) published the full-year figures for global robot sales in 2022. These figures indicated that around 553,000 robots were installed worldwide in 2022. This corresponds to growth of 5% compared to the previous year, despite supply chain problems and macroeconomic challenges. Main growth drivers remain to be the electronics industry and the automotive industry. The electronics industry accounted for 28.4% of all installations. This represents an increase of 1.3%age points compared to the previous year. The total number of installations in the electronics industry increased by 10%. The automotive industry accounted for 24.6% of all installations, representing an increase of

2.3 percentage points. The number of installations thus grew by 16% in 2022. The share accounted for by the metal industry decreased by one percentage point to 12%. This corresponds to a 3% decrease in robot installations.

The Asia/Australia area accounts for by far the largest regional share of the market, with 405,000 units. This corresponds to around 73% of all installations. The European market accounts for about 15%, while the share of installations in America is approximately 10%. 79% of all robot installations are attributable to just five markets in China, Japan, the USA, South Korea and Germany.

The long-term expansion of automation by robots is supported by a number of different trends. The technological development of robots is progressing rapidly, allowing new applications to emerge and existing ones to be constantly improved in terms of speed and quality. Cloud computing, 5G networks and artificial intelligence in particular are forming the technological basis for fully digitalized production options. Increasing automation is necessary to achieve the transformation and the goal of a sustainable economy. Cost-efficient production of systems for generating green energy makes these technologies an economically advantageous investment. Robots equipped with sensors are also used in recycling and the circular economy, and higher quality and precision of robots can lead to less rejects and waste in production. Additive manufacturing processes and 3D printing represent another growing field of application for robots. This enables robots to produce increasingly individualized products at low cost.

Business performance

KUKA Group

In 2023, KUKA achieved a new record value for sales revenues in the year under review. Sales rose by 4.0% from €3,897.0 million to €4,053.7 million, the highest figure in the company's history. At €4,026.2 million, orders received remained above the €4 billion threshold, but were unable to match the record result from the previous year. Orders received were 9.7% below the figure for the previous year (2022: €4,459.5 million). Global uncertainties in particular had an impact on customers' investment behavior. At 0.99, the book-to-bill ratio was below the previous year's figure (2022: 1.14). The order backlog decreased by 5.0% from €2,912.4 million as at December 31, 2022 to €2,766.5 million as at December 31, 2023. EBIT increased to €158.2 million in the current fiscal year (2022: €118.4 million). KUKA thus achieved a new record figure in its corporate history. All segments contributed to this record result. The EBIT margin increased to 3.9% (2022: 3.0%).

Financial position and performance

Summary

In 2023, global uncertainties had an impact on growth. Fears of a recession, the energy crisis, labor shortages, the war of aggression in Ukraine and the conflict in the Middle East all had a negative impact on growth prospects and also affected customers' investment behavior. Demand for automation solutions fell in the year under review, but was still at a high level. Orders received amounted to €4,026.2 million, thus remaining 9.7% below the previous year's level (2022: €4,459.5 million). Sales revenues reached a new record level. At €4,053.7 million, KUKA achieved the highest figure in the company's history. This was 4.0% above the figure for the previous year (2022: €3,897.0 million). Free cash flow increased to €155.0 million (2022: -€188.3 million). This development was primarily attributable to the improved working capital management.

Earnings

KUKA Group posted orders received amounting to €4,026.2 million in fiscal 2023 – a slight decrease of 9.7% on the record value of the previous year (2022: €4,459.5 million). Sales revenues, on the other hand, rose by 4.0% year on year (2022: €3,897.0 million) to €4,053.7 million. KUKA thus achieved a new record value.

The increase in sales revenues was particularly evident in the Robotics and Swisslog segments. The order backlog dropped slightly by 5.0% from €2,912.4 million as at December 31, 2022 to €2,766.5 million as at December 31, 2023.

The gross profit generated was €810.0 million, up 16.9% on the previous year (2022: €696.7 million). In view of the strong sales revenues and the moderate increase in cost of sales, KUKA Group's gross margin was 23.4% after 20.8% in fiscal 2022. The gross margin increased in all segments.

As a result of the increased business volume, expenses for administration, sales, and research and development rose by €94.2 million to €793.0 million (2022: €698.8 million). The ratio of overhead costs to sales amounted to 19.6% in the year under review after 17.9% in 2022.

Selling expenses increased by €36.4 million, or 11.6%, from €312.6 million in fiscal 2022 to €349.0 million in the fiscal year 2023. As at the balance sheet date 2023, KUKA had 1,694 sales employees worldwide (2022: 1,665 employees). Customer orientation always remains in focus and is continuously optimized and expanded.

Administrative expenses also increased by €34.1 million from €215.0 million in fiscal 2022 year to €249.1 million in the year under review. In the current year, KUKA once again invested in various projects to optimize internal processes. The ratio of administrative expense to sales revenues was thus 6.1% in 2023 (2022: 5.5%).

in € millions	2019	2020	2021	2022	2023
Orders received	3,190.7	2,792.2	3,565.3	4,459.5	4,026.2
Order backlog	1,967.4	1,992.6	2,311.9	2,912.4	2,766.5
Sales revenues	3,192.6	2,573.5	3,286.2	3,897.0	4,053.7
EBIT	47.8	-113.2	61.8	118.4	158.2
in % of revenues	1.5	-4.4	1.9	3.0	3.9
EBITDA	176.5	33.2	202.0	251.2	294.0
in % of revenues	5.5	1.3	6.1	6.4	7.3
Employees (Dec. 31) [1]	14,014	13,700	14,128	15,064	14,726

[1] Figures for employees are based on the full-time equivalent throughout the annual report.

Research and development costs increased by €23.7 million from €171.2 million in fiscal 2022 to €194.9 million in the current reporting period. KUKA places high priority on research and development activities. As at December 31, 2023, 1,620 people were employed in research and development (December 31, 2022: 1,426 employees) – equivalent to 11.0% of the workforce in the year under review and 9.5% in the previous year.

The costs of €29.3 million (2022: €31.6 million) incurred for new developments in fiscal 2023 were capitalized and will be reported as scheduled amortization in subsequent financial statements. Amortization of R&D expenses capitalized in previous years remained at the prior-year level (2023: € 26.0 million; 2022: €26.1 million). Impairment losses for projects not pursued amounted to €5.2 million (2022: €6.8 million). Due to the increase in research and development costs and the relatively constant costs for new developments, the capitalization ratio fell from 17.9% in 2022 to 14.8% in 2023.

Other operating income remained at the prior-year level (2023: €17.6 million; 2022: €17.5 million) and included income from the sale of certain assets of a subsidiary in Belgium in the previous year, income in connection with the newly founded associated company ME Industrial Simulation Software Corporation in Japan in the year under review, and investment subsidies. Other operating expenses increased slightly from €12.0 million in fiscal 2022 to €13.5 million in fiscal 2023. These mainly included impairment losses in connection with assets held for sale in the previous year, expenses for organizational restructuring and the associated legal disputes in the 2023 fiscal year and other taxes.

In total, KUKA Group generated record earnings before interest and taxes (EBIT) of €158.2 million (2022: €118.4 million). This corresponds to an EBIT margin of 3.9% after 3.0% in the previous year. The higher sales volume, investment subsidies and the measures taken to increase efficiency over a sustained period of time, such as the sale of unprofitable business units, improved the margin. In particular, the positive business development in the Robotics, Systems and Swisslog Healthcare segments contributed to KUKA Group's increased earnings.

EBIT in KUKA Group

in € millions	2019	2020	2021	2022	2023
Group	47.8	-113.2	61.8	118.4	158.2
in % of sales revenues	1.5	-4.4	1.9	3.0	3.9

Depreciation and amortization increased by €3.0 million in fiscal 2023 to €135.8 million (2022: €132.8 million). Amortization of capitalized leases in accordance with IFRS 16 increased by €4.9 million to €40.5 million (2022: €35.6 million). In the year under review, impairment losses of €5.6 million (2022: €6.8 million) were recognized for projects not pursued.

As a result of the positive developments within the EBIT, earnings before interest, taxes, depreciation and amortization (EBITDA) also increased from €251.2 million in fiscal 2022 to €294.0 million in the year under review.

EBITDA in KUKA Group

in € millions	2019	2020	2021	2022	2023
Group	176.5	33.2	202.0	251.2	294.0
in % of sales revenues	5.5	1.3	6.1	6.4	7.3

Financial result

The current financial result deteriorated compared to the previous year from €8.0 million to -€5.4 million in fiscal 2023.

Interest income fell by €7.4 million in the year under review to €17.3 million (2022: €24.7 million).

There was a year-on-year decline in interest income on bank balances at a subsidiary in the China segment and in interest income from finance leases at KUKA Toledo Production Operations LLC, Toledo, USA (KTPO).

Interest expenses, on the other hand, rose from €21.9 million in the previous year to €30.5 million in 2023. Interest expenses on existing financing instruments accounted for a significant proportion of this total (for further details, please refer to the notes). Interest expenses in connection with leases increased slightly from €5.4 million in the previous year to €6.4 million in fiscal 2023. The net interest expense from pension provisions and other non-current liabilities to employees increased from €0.8 million in 2022 to €2.4 million in 2023. Expenditure for sureties and guarantees remained at the prior-year level (2023: €1.5 million; 2022: €1.4 million).

The net amount of foreign currency gains of €81.2 million (2022: €80.0 million) and foreign currency losses of €73.5 million (2022: €77.3 million) resulted in a foreign currency gain of €7.7 million in the year under review (2022: gain: €2.7 million).

Net income from changes in the fair value of financial instruments decreased from €2.5 million in the previous year to €0.1 million in the current year under review. The ongoing changes in the fair value of an interest rate swap amounted to -€0.4 million (2022: -€2.9 million). In addition, dividends were received from the investment in CarepathRx Holding, Washington, USA (2023: €1.5 million; 2022: €0.0 million). Other changes in the value of financial instruments amounted to -€1.1 million in the year under review (2022: -€0.4 million).

EBT (earnings before taxes) rose to €152.8 million, up considerably on the previous year (2022: €126.4 million). The tax expenditure of -€25.0 million (2022: -€25.9 million) corresponds to a tax ratio of 27.2% (2022: 19.7%). The change in the tax rate compared with the previous year was mainly due to the valuation of deferred tax assets and the lower tax subsidies in North America and China.

Earnings after taxes amounted to €111.2 million, up €9.8 million on the previous year's figure (2022: €101.4 million).

The loss of €25.6 million (2022: €0.0 million) resulting from the loss of control over certain subsidiaries was presented separately from the result from continuing operations.

At €85.6 million, earnings after taxes and after losses from discontinued activities were thus €15.8 million lower than in the previous year (2022: €101.4 million). The resulting earnings per share amounted to €1.76 in 2023 (2022: €2.21).

Despite the one-off effects described above, as well as the economic and political uncertainties, KUKA Group's business continued to benefit from the overall high demand for automation solutions in the 2023 fiscal year, which had a positive impact on the Group's key performance indicators.

Group income statement (condensed)

in € millions	2019	2020	2021	2022	2023
Sales revenues	3,192.6	2,573.5	3,286.2	3,897.0	4,053.7
EBIT	47.8	-113.2	61.8	118.4	158.2
EBITDA	176.5	33.2	202.0	251.2	294.0
Financial result	6.6	3.0	13.5	8.0	-5.4
Taxes on income	-36.6	15.6	-25.9	-25.0	-41.6
Earnings after taxes	17.8	-94.6	49.4	101.4	111.2
Earnings after taxes and after losses from discontinued activities	17.8	-94.6	49.4	101.4	85.6

Financial position

For information on the financial management principles and objectives, or on the financing structure and liquidity position of the Group, please refer to note 29.

Assessment by rating agencies

KUKA has had an investment grade rating of BBB+ from Standard & Poor's since May 2022. The rating has also had a positive outlook since this date.

Condensed Group cash flow statement

in € millions	2019	2020	2021	2022	2023
Cash earnings	167.1	40.9	223.3	255.6	322.1
Cash flow from operating activities	214.5	77.4	208.0	-198.2	316.6
Cash flow from investment activities	-193.8	-40.4	-107.6	9.9	-161.6
Free cash flow	20.7	37.0	100.4	-188.3	155.0

The positive development of the income situation was also reflected in the cash earnings. Cash earnings are an indicator derived from the earnings after taxes and after losses from discontinued activities, adjusted for income taxes (excluding deferred taxes), net interest and cash-neutral depreciation, together with other non-cash income and expenses (including deferred taxes). In fiscal 2023, cash earnings once again increased year-on-year to €322.1 million (2022: €255.6 million).

Cash flow from operating activities of KUKA Group improved significantly, increasing from -€198.2 million in 2022 to €316.6 million in 2023.

Trade working capital was reduced by €82.5 million from €754.0 million in fiscal 2022 to €671.5 million in the current year under review. The increase in receivables and contract assets was more moderate than the disproportionate reduction in inventories and liabilities.

At €539.0 million, inventories in 2023 were significantly lower than the previous year's figure of €719.8 million. This was primarily attributable to the easing of bottlenecks in the supply of materials due to supply chain difficulties in the China and Robotics segments. Trade receivables and contract assets increased from €1,219.6 million in 2022 to €1,275.4 million in 2023, mainly due to the increased business volume. Trade payables and contract liabilities decreased from €1,185.4 million in 2022 to €1,142.9 million. Overall, trade working capital developed as follows:

Trade working capital

in € millions	2019	2020	2021	2022	2023
Inventories	344.5	307.9	445.6	719.8	539.0
Trade receivables and contract assets	905.0	756.3	1,072.1	1,219.6	1,275.4
Trade payables and contract liabilities	739.4	669.6	1,119.0	1,185.4	1,142.9
Trade working capital	**510.1**	**394.6**	**398.7**	**754.0**	**671.5**

Capital expenditure in KUKA Group

The investment volume in intangible assets, property, plant and equipment, and investment property amounted to €127.1 million in the 2023 fiscal year (2022: €129.5 million).

Investments in intangible assets, property, plant and equipment, and investment property

in € millions	2019	2020	2021	2022	2023
Group	151.14	80.7	101.4	129.5	127.1

Investments in intangible assets in fiscal 2023 totaled €44.6 million (2022: €38.3 million), including €13.4 million (2022: €4.7 million) for licenses and other rights, €29.3 million (2022: €31.6 million) for internally generated software and development costs, and €1.9 million (2022: €2.0 million) for advance payments.

The carrying amount of the company's own development work and internally generated intangible assets totaled €124.9 million (2022: €114.4 million). For more detailed information on the main areas of development, please refer to the publications of KUKA Group.

The investments in investment property related to the subletting of a production building in Shunde, China. In the year under review, no payments were made for investments in investment property, which, unlike other investments, are allocated to cash flow from operating activities (2022: €8.3 million). However, investments continued to be made in owner-occupied production buildings in Shunde, China. In order to make the best and most sensible use of the newly created space, additional subletting options are being examined.

For information on investment property, please refer also to note 8.

At €82.5 million, investments in property, plant and equipment were at the prior-year level (2022: €82.9 million). Investments in land, leasehold rights and construction (including buildings on third-party land), remained virtually unchanged at €6.8 million (2022: €6.9 million). 19.6 million was invested in technical equipment and machinery (2022: € 14.4 million), € 24 million in other equipment/operating and office equipment ,€ 2 million (2022: € 18.6 million) and € 31.5 million in advance payments and assets under construction (2022: € 43.0 million). Investments in property, plant and equipment mainly related to site expansions and modernizations, particularly at locations in Germany, Hungary, the USA and China.

Payments for the acquisition of consolidated companies and groups of assets affected payments for the acquisition of a consolidated company in the amount of €12.5 million in the previous year and an associated company in the amount of €0.8 million in the reporting year in the Robotics segment and are broken down as follows:

Acquisitions

in € millions	2022	2023
Delfoi Robotics OY Tampere, Finland	-12.5	–
ME Industrial Simulation Software Corporation, Nagoya, Japan	–	-0.8
Total payments	**-12.5**	**-0.8**

Proceeds from investments in financial investments and investments accounted for using the equity method originate exclusively from the Swisslog Healthcare segment and are as follows:

in € millions	2022	2023
Otsaw Swisslog Healthcare Robotics Pte. Ltd., Singapore, Singapore	–	0.5
Synergies-Tech Sarl, Saint-Priest, France	–	0.3
Pharmony SA, Luxembourg, Luxembourg	–	0.5
Total cash inflows	**–**	**1.3**

The payments from the disposal of consolidated companies and other business units related to the sale of Group companies.

Proceeds from the disposal of Property, plant and equipment amounted to €3.0 million in the year under review after €3.3 million in the previous year. In addition, the cash flow from investment activities included payments amounting to -€42.5 million due to financial assets related to short-term financial management (2022: proceeds amounting to €115.6 million) as well as interest received amounting to €17.0 million (2022: €24.7 million).

Positive free cash flow – a new record in the last 15 years

Cash flow from operating activities (2023: €316.6 million; 2022: -€198.2 million) and cash flow from investment activities (2023: -€161.6 million; 2022: €9.9 million) together resulted in a positive free cash flow of €155.0 million (2022: -€188.3 million). The improvement in trade working capital, in particular the reduction in inventories, and the successful business development had a positive effect on KUKA Group's financial position.

Negative cash flow from financing activities

The cash flow from financing activities decreased to -€77.5 million in 2023 after €22.1 million in 2022. This includes the raising of current financial liabilities as part of the syndicated loan, the repayment of the USD promissory note loan and the inter-company loans as well as other changes in current liabilities to banks (2023: -€33.3 million; 2022: €49.3 million). Furthermore, cash flow from financing activities included both the repayment component of lease payments (2023: -€40.8 million; 2022: -€34.2 million) and also interest payments, including the interest component of the leases (2023: -€28.4 million; 2022: -€21.0 million), as well as payments from grants received (2023: €25.0 million; 2022: €32.4 million). In addition to the interest rate increases, the rise in the leasing area is primarily due to the new leases in the USA and China.

Group net liquidity

in € millions	2022	2023
Cash and cash equivalents	494.5	531.4
Current financial liabilities incl. accounts payable to affiliated companies	-374.9	-344.1
Non-current financial liabilities incl. accounts payable to affiliated companies	-197.0	-198.4
Group net debt	**-77.4**	**-11.1**
Cash and guarantee facilities from syndicated senior facilities agreement	520.0	520.0
Guarantee facility from banks and surety companies	170.4	213.0

At the end of fiscal year 2023, net debt fell from -€77.4 million in the previous year to -€11.1 million in the year under review. Cash and cash equivalents increased from €494.5 million in 2022 to €531.4 million in 2023.

In December 2019, KUKA AG had concluded an inter-company loan agreement covering a loan volume of €150.0 million with Midea International Corporation Company Limited, Hong Kong, a wholly-owned subsidiary of Midea Group. The inter-company loan was increased by a further €50.0 million to the current level of €200.0 million in May 2022. It is due on June 20 and April 25, 2025. The carrying amount at December 31, 2023, taking into account the interest payments thereon, was €198.0 million (December 31, 2022: €196.6 million).

Furthermore, in September 2022, KUKA AG borrowed further €100.0 million with a term of 12 months from Midea Group. Of this amount, €10.0 million was repaid on schedule and €90.0 million was extended until September 15, 2024. A further €60 million was transferred to KUKA on September 15, 2023, which was repaid on December 27, 2023.

In addition, the third tranche of the USD promissory note loan with KUKA Toledo Productions Operations LLC, Toledo, Ohio, USA (KTPO), with a volume of USD 50.0 million and a term until August 2023, was repaid as scheduled.

The remaining changes within current financial liabilities were related to drawings within KUKA AG's syndicated loan agreement.

Net assets and financial position

Non-current assets increased by €44.7 million from €1,332.6 million as at December 31, 2022 to €1,377.3 million as at December 31, 2023. Deferred taxes increased by a further €55.3 million to €205.0 million (2022: €149.7 million). The increase in deferred tax assets is mainly due to the research and development expenditure to be capitalized compared to the previous year in the USA, which must be claimed for tax purposes over a period of five years. Loss carryforwards accounted for €43.0 million (2022: €43.7 million). Furthermore, both property, plant and equipment (December 31, 2023: €412.1 million; December 31, 2022: €398.0 million) and intangible assets

(December 31, 2023: €565.5 million; December 31, 2022: €553.7 million) increased. The goodwill reported under intangible assets increased from €340.8 million in 2022 to €351.2 million in 2023 due to foreign exchange effects. Right-of-use assets from leases also increased by €16.0 million to €127.9 million as at December 31, 2023 (December 31, 2022: €111.9 million).

In contrast, non-current receivables from finance leases decreased by €46.9 million to €19.5 million as at December 31, 2023 (December 31, 2022: €66.4 million). This decline is partly due to the increase in the impairment loss as a result of the significant increase in the default probability. Investments accounted for at equity fell from €32.9 million as at December 31, 2022 to €28.9 million as at December 31, 2023. In the course of the sale of KUKA Industries GmbH & Co. KG, Obernburg, Germany, the shareholdings in Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd, Yangzhou City, China and Chang'an Reis (Chongqing) Robotic Intelligent Equipment Co. Ltd, Chongqing, China were also sold. Conversely, KUKA AG recognized the other current receivable as a prepayment made for the transfer of the shares in Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., Yangzhou City, China, which has not yet been completed. In addition, the shares in Otsaw Swisslog Healthcare Robotics Pte. Ltd., Singapore, Singapore, were reduced by one third as a result of the put option exercised as planned at the beginning of fiscal 2023.

Investment property with a carrying amount of €8.4 million as at December 31, 2023 is held to generate rental income in the China segment (2022: €9.4 million). For further details, please refer to the information on investments in the section on the financial position.

Other financial investments decreased to €3.6 million (December 31, 2022: €4.8 million). First of all, the investment in Roboception GmbH, Munich, Germany, was written down due to the company's strained financial situation. Additionally, the shares in Pharmony SA, Luxembourg, Luxembourg, were sold to a new investor. Other non-current receivables increased slightly from €5.8 million as at December 31, 2022 to €6.4 million as at December 31, 2023.

At €2,594.4 million, current assets in the year under review were €28.9 million lower than in the previous year (December 31, 2022: €2,623.3 million).

As explained under "Financial position", there was a decline in active trade working capital. Inventories alone decreased by €180.8 million (December 31, 2023: €539.0 million; December 31, 2022: €719.8 million). Trade receivables increased from €713.4 million as at December 31, 2022 to €843.5 million at December 31, 2023. By contrast, contract assets decreased from €506.3 million as at December 31, 2022 to €431.9 million as at December 31, 2023. This trend is due not only to the increased volume of business and sales, but above all to the easing of restrictions following the disruption to supply and transportation chains and the shortage of semiconductors, other intermediate products and raw materials in the previous year.

The increase in other current receivables and other assets resulted primarily from the purchase of securities with a maturity of significantly less than one year.

The current portion of the finance lease receivables fell to €38.4 million as at December 31, 2023, compared with €41.5 million as at December 31, 2022. Income tax receivables increased slightly (December 31, 2023: €25.2 million; December 31, 2022: €21.6 million)

Due to the positive cash flow, cash and cash equivalents were up from €494.5 million as at December 31, 2022 to €531.4 million as at December 31, 2023.

Group net assets

in € millions	2019	2020	2021	2022	2023
Balance sheet total	3,426.6	3,116.5	3,709.1	3,955.9	3,971.7
Equity	1,348.6	1,203.7	1,354.6	1,500.4	1,516.4
in % of balance sheet total	39.4	38.6	36.5	37.9	38.2
Net liquidity/debt	50.2	30.0	148.1	-77.4	-11.1

Overall, the balance sheet total of KUKA Group increased by €15.8 million from €3,955.9 million as at December 31, 2022 to €3,971.7 million as at December 31, 2023.

Equity ratio of 38.2%

As a result of the increase in both equity and the balance sheet total, the equity ratio also rose year-on-year from 37.9% to 38.2%. At €1,516.4 million, equity increased by €16.0 million as at the 2023 balance sheet date (December 31, 2022: €1,500.4 million). The subscribed capital of €103.4 million and the capital reserve of €306.6 million remained unchanged in the year under review as in the previous year.

The positive result of €85.6 million was offset by a reduction in equity of €60.2 million due to foreign exchange effect on the one hand and the increase in actuarial losses from pension valuation (including the related deferred taxes) of -€9.8 million recognized in equity on the other. The largest negative foreign exchange effect was attributable to the US dollar and Chinese renminbi. Equity attributable to minority interests decreased slightly from €332.2 million as at December 31, 2022 to €327.4 million as at December 31, 2023.

Financial liabilities decreased. The current portion of financial liabilities decreased from €277.2 million as at December 31, 2022 to €253.9 million as at December 31, 2023 and included the drawings on the syndicated loan, the repayment of the third tranche of the USD promissory note loan due in August 2023 and the repayment of Midea Group's short-term credit line in the amount of €60 million. Non-current financial liabilities remained unchanged at €0.4 million in both of the periods compared.

Non-current liabilities to affiliated companies increased slightly from €196.6 million as at December 31, 2022 to €198.0 million as at December 31, 2023. Current liabilities fell from €97.7 million as at December 31, 2022 to €90.3 million as at December 31, 2023. Further details can be found in the section on KUKA Group's net liquidity.

Lease liabilities increased to €139.0 million as at December 31, 2023 (December 31, 2022: €123.7 million). Of this amount, €41.4 million (December 31, 2022: €33.0 million) was accounted for by current lease liabilities and €97.6 million (December 31, 2022: €90.7 million) by non-current lease liabilities. Provisions for pensions and similar obligations also increased from €59.6 million in the previous year to €66.9 million as at December 31, 2023. Overall, non-current liabilities totaled €405.5 million as at the 2023 balance sheet date (December 31, 2022: €389.1 million).

Current liabilities, on the other hand, decreased and amounted to €2,049.8 million as at December 31, 2023 (December 31, 2022: €2,065.3 million). Trade payables fell by €60.4 million to €594.9 million (December 31, 2022: €655.3 million). Contract liabilities, by contrast, increased by €17.9 million from €530.1 million in the previous year to €548.0 million as at December 31, 2023.

The increase in other current liabilities from €302.9 million as at December 31, 2022 to €345.9 million as at December 31, 2023 is essentially attributable to the rise in personnel liabilities and government grants in the China segment.

The increase of €6.0 million in income tax provisions from €38.7 million as at December 31, 2022 to €44.7 million as at December 31, 2023 was related to higher taxable income in the USA.

Other provisions remained almost unchanged (December 31, 2023: €130.7 million; December 31, 2022: €130.3 million).

The decrease in provisions for guarantee obligations and risks from pending transactions compensated for the increase in litigation risks and provisions for restructuring.

Liabilities in connection with assets held for sale in the amount of €1.1 million were derecognized following the completed sale of a subsidiary based in Russia.

Group assets and financial structure

in € millions	2022	2023
Current assets	2,623.3	2,594.4
Non-current assets	1,332.6	1,377.3
Assets	**3,955.9**	**3,971.7**
Current liabilities incl. liabilities directly associated with assets classified as held for sale	2,066.4	2,049.8
Non-current liabilities	389.1	405.5
Equity	1,500.4	1,516.4
Liabilities	**3,955.9**	**3,971.7**

Development of working capital

Working capital decreased from €384.1 million in the previous year to €307.1 million in fiscal 2023. The decline was particularly evident in the Robotics and China segments.

Events after the balance sheet date

The shares held by Swisslog Healthcare Holding AG in Otsaw Swisslog Healthcare Robotics Pte. Ltd., Singapore, Singapore, amounting to 13.34% were reduced by a further third as planned following the renewed exercise of a put option. The sale of the shares was completed in January 2024 with the cash payment to Swisslog Healthcare Holding AG.

Notes to the annual financial statements of KUKA Aktiengesellschaft

KUKA Aktiengesellschaft acts as the management holding company within the Group with central management responsibilities such as accounting and controlling, finance, human resources, legal, IT and financial communications. The financial position is determined primarily by the activities of its subsidiaries. This is reflected in the direct allocation of the main companies of the Robotics, Systems, Swisslog, Swisslog Healthcare and China divisions. In the consolidated financial statements, KUKA Aktiengesellschaft is allocated to the Corporate Functions segment.

The annual financial statements of KUKA Aktiengesellschaft are prepared in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG). The financial statements of KUKA Aktiengesellschaft are published in the company register.

Income statement of KUKA Aktiengesellschaft (HGB)

in € millions	2022	2023
Sales revenues	112.6	117.3
Other company-produced and capitalized assets	0.3	0.1
Other operating income	74.6	85.2
Cost of materials	-61.5	-68.7
Personnel expenses	-56.9	-63.1
Depreciation and amortization of tangible and intangible assets	-8.2	-5.7
Other operating expenses	-189.6	-129.6
Income/expenses from equity investments	-17.8	26.3
Income from other securities	0.0	0.1
Other interest and similar income	15.4	30.2
Depreciation of financial assets	0.0	-17.4
Interest and similar expenses	-12.8	-32.6
Taxes on income	-1.2	-3.8
Net loss for the year	**-145.1**	**-61.7**
Profit carryforward from the previous year	2.9	0.0
Withdrawal from retained earnings	142.2	61.7
Balance sheet profit	**0.0**	**0.0**

Balance sheet of KUKA Aktiengesellschaft (HGB)

Assets in € millions	Dec. 31, 2022	Dec. 31, 2023
Fixed assets		
Intangible assets	7.9	9.8
Property, plant and equipment	6.1	7.3
Financial assets	789.8	818.6
	803.8	**835.7**
Current assets		
Receivables from affiliated companies	640.7	543.5
Other receivables and assets	4.3	6.0
Securities	0.0	42.1
	645.0	**591.6**
Cash and cash equivalents	**13.6**	**18.4**
	658.5	**610.0**
Prepaid expenses	**4.9**	**6.8**
	1,467.3	**1,452.5**

Liabilities in € millions	Dec. 31, 2022	Dec. 31, 2023
Equity		
Subscribed capital	103.4	103.4
Capital reserve	305.8	305.8
Other revenue reserves	95.7	34.1
	504.9	**443.3**
Provisions		
Pension provisions	11.3	11.2
Provisions for taxes	14.0	15.3
Other provisions	25.0	45.3
	50.4	**71.8**
Liabilities		
Liabilities due to banks	229.1	253.9
Trade payables	9.5	7.4
Accounts payable to affiliated companies	669.7	672.0
Liabilities to provident funds	2.6	2.6
Other liabilities	1.1	1.0
	912.0	**936.9**
Prepaid expenses	**0.0**	**0.5**
	1,467.3	**1,452.5**

Results of operations of KUKA Aktiengesellschaft

The income situation of KUKA Aktiengesellschaft significantly depends on the results of the (direct) subsidiaries, the financing activities and the expenditure and income relating to the holding function.

Sales revenues increased from €112.6 million in 2022 to €117.3 million in 2023. KUKA Aktiengesellschaft mainly generates its sales revenues from cost allocations and cost transfers to subsidiaries. These increased in the past fiscal year, primarily as a result of higher cost transfers from information technology.

The expenses associated with sales revenues are reported as cost of materials. These amounted to €68.7 million during the fiscal year (2022: €61.5 million).

Other operating income of €85.2 million (2022: €74.6 million) mainly includes foreign exchange gains primarily from the US dollar, Swiss franc, Norwegian krone and Swedish krona.

Other operating expenses fell from €189.6 million to €129.6 million. The decrease is mainly due to lower value adjustments made on receivables from affiliated companies compared to 2022. Currency translation losses were down by 5%.

Personnel expenditure increased by 11% year on year to €63.1 million (2022: €56.9 million). The collective wage agreement concluded by IG Metall and expenses for personnel measures had a cost-increasing effect here. The average number of employees increased from 543 in the previous year to 549 in fiscal 2023.

Income from participations amounted to €26.3 million (2022: -€17.8 million) and was thus above the previous year's value. This includes the earnings contributions of the German companies that have a profit and loss transfer agreement with KUKA Aktiengesellschaft as well as dividend income from foreign subsidiaries.

Write-downs on financial assets amounted to €17.4 million in fiscal 2023 and resulted from the disposal of affiliated companies (2022: €0.0 million).

Net interest decreased by €5.0 million to -€2.4 million (2022: €2.6 million). The decline is due on the one hand to lower net interest income from affiliated companies and on the other hand to higher expenses for bank loans and interest expenses to banks. Interest expenses to the parent company Midea also increased.

The reported taxes on income and earnings amounting to €3.8 million (2022: €1.2 million) mainly include tax expenses due to foreign withholding taxes.

KUKA Aktiengesellschaft's net loss for fiscal 2023 was -€61.7 million (2022: -€145.1 million) and was considerably above the prior-year level due to lower other operating expenses and higher earnings contributions from subsidiaries. Taking into account the withdrawal from retained earnings of €61.7 million, the balance sheet profit amounts to €0.0 million.

Financial position of KUKA Aktiengesellschaft

One task of KUKA Aktiengesellschaft is to provide funds and guarantees for its subsidiaries' current operations. The resources used for finance, such as the syndicated loan agreement and the loan from Midea Group, are described in detail in the section on the financial position of KUKA Group.

KUKA Aktiengesellschaft's financing role is reflected in its receivables from and liabilities to affiliated companies, which are predominantly the result of cash pooling accounts with subsidiaries and loans provided. In addition, a loan from Midea International Corporation Company Limited, Hong Kong in the amount of €200.0 million (2022: €200.0 million) and a credit line in the amount of €90.0 million (2022: €100.00 million) were drawn.

The balance of these receivables and liabilities was a net liability figure of €128.5 million (2022: €29.0 million). Liabilities to affiliated companies have essentially remained constant. Receivables from affiliated companies are lower than in the previous year.

The liquid assets of KUKA Aktiengesellschaft rose from €13.6 million to €18.4 million. Financial liabilities increased year on year by €24.8 million to €253.9 million (2022: €229.1 million). This includes liabilities from the drawdown of the working capital facility under the syndicated loan agreement.

Net assets of KUKA Aktiengesellschaft

The net assets of KUKA Aktiengesellschaft are impacted by the management of its equity investments as well as the way in which it executes its management function for the companies in KUKA Group. The receivables from affiliated companies fell from €640.7 million in the previous year to €543.5 million. For further details of the receivables from and liabilities to affiliated companies and financial items, please refer to the information on KUKA Aktiengesellschaft's financial position.

Depreciation and amortization of intangible and tangible fixed assets decreased from €8.2 million in 2022 to €5.7 million in 2023. Investments totaling €55.0 million (2022: €33.7 million) were made in fiscal 2023. The investments in intangible assets relate primarily to IT infrastructure. KUKA Aktiengesellschaft's direct equity investments in its subsidiaries are reported under financial assets. The increase to €818.6 million (2022: €789.8 million) is due to investments in the Swisslog Group.

Other assets increased to €6.0 million in 2023 (2022: €4.3 million) due to increased other receivables. In 2023, short-term securities amounted to €42.1 million (2022: €0.0 million).

Equity was down €61.7 million on the previous year and thus reflects the negative result for the fiscal year. The equity ratio of KUKA Aktiengesellschaft amounts to 30.5% as at the balance sheet date December 31, 2023 (2022: 34.4%).

As at December 31, 2023, other provisions totaled €45.3 million (2022: €25.0 million) and were thus considerably above the previous year's figure. In addition to significantly higher provisions for impending losses on foreign currency derivatives, this was due to higher personnel-related liabilities and provisions for outstanding invoices.

Other liabilities decreased from €1.1 million to €1.0 million due to lower tax liabilities.

The net impact on the balance sheet total of KUKA Aktiengesellschaft resulting from the effects described was a decrease of €14.8 million to €1,452.5 million (December 31, 2022: €1,467.3 million).

Dependency report

Since there is no control agreement between KUKA Aktiengesellschaft and the majority shareholder, the Management Board prepares a report on the company's relationships with affiliated companies during the reporting period pursuant to section 312 of the German Stock Corporation Act (AktG). The report was concluded with the following declaration:

"We declare that for each legal transaction in relation to the legal transactions and measures listed in the report on relationships with affiliated companies, the company received appropriate compensation according to the circumstances known to us at the time the legal transaction was performed or the measure was taken and was not put at a disadvantage as a result of the measures being taken. There were no omitted measures."

Sustainability at KUKA

Ecological responsibility

At KUKA, sustainability is embedded in the corporate culture and stands for responsible business practices aimed at protecting the environment, our employees, customers, investors and our social environment. The responsible use of natural resources for the sake of an intact environment and the continuous improvement of measures to achieve this are important prerequisites for economic success. As an industrial company, KUKA makes a measurable contribution to the reduction of environmental pollution. The aim here is to reduce the consumption of energy and other resources and to cut emissions and waste.

Resource-saving production and environmental protection

KUKA products and systems stand for innovation and quality. KUKA is committed to efficient production processes that protect the environment and reduce pollutants. Environmental issues are therefore continuously taken into account and evaluated by the environmental management team together with the employees responsible. Most of KUKA's production locations work according to internationally recognized management system standards in the areas of environment (ISO 14001), energy (ISO 50001), quality (ISO 9001) and other industry-specific regulations. With our Guidelines for Quality, Health, Safety and Environmental and Energy Management we have established specific procedural instructions relating to all management standards. For many years, KUKA has had a cross-location environmental management system lying within the responsibility of the Group's Management Board.

Employees

Employees in KUKA Group

KUKA shapes many different sectors with its technologies. The employees are the pillars of KUKA's success in doing so. In order to further improve its attractiveness as an employer, KUKA offers, for example, an ambitious training and further education program, measures to help employees reconcile work and family life, and promotes diversity and equal opportunities.

As at December 31, 2023, KUKA Group employed 14,726 people. The number of employees was thus 2.2% lower than in the previous year (2022: 15,064).

High standard of training and further education

When it comes to the professional training of young people, KUKA has for decades been offering apprentices not only specialist know-how, but also an opportunity to learn in an intercultural setting and to think and act globally on a Group-wide scale. The company trains in line with requirements and maintains a high standard in the quality of apprentice training and the level of performance. Vocational education is offered at the German sites in Augsburg and Bremen. The Group offers apprenticeships ranging from technical professions – such as industrial mechanic, lathe/milling machine operator, mechatronics technician, electronics technician for automation technology, warehouse logistics specialist and vehicle paint technician – to the commercial sector, with occupations such as industrial clerk, specialist for forwarding and logistics services and IT specialist.

In addition to the traditional apprenticeships, KUKA offers a dual, training-integrated degree course at the Augsburg University of Applied Sciences with the aim of attaining a Bachelor's degree. In addition to the dual integrated study course for mechanical engineering, mechatronics and electrical engineering, the disciplines of business administration, information technology, technical information systems and business information systems are also available to choose from.

As part of our continuing education programs at KUKA Academy, we accompany and support our employees in their personal and professional development. At KUKA Academy, we offer all our employees an extensive and varied range of technical/methodical and personal further education courses. These include standard courses such as IT training and language courses, as well as specialist training for a wide range of business areas. Seminars to promote personal and social skills, in particular communication and intercultural training, as well as global leadership circles complement our continuing education measures which we offer internationally, taking decentralized requirements into account.

Forecast, opportunity and risk report

Opportunity and risk report

Basic principles

KUKA Group is a global enterprise with international operations. Any entrepreneurial activity provides new business opportunities, but also involves many potential risks. The Management Board of KUKA Aktiengesellschaft aims to systematically and sustainably improve the value of the company for all stakeholders by seizing potential opportunities and minimizing said risks.

To achieve this objective, the Management Board has implemented a comprehensive corporate risk management system to systematically and consistently identify, evaluate, manage, monitor and report the internal and external risks to which its business segments and subsidiaries are exposed. The risk management system meets the criteria described in the internationally recognized ISO 31000 standard.

Group management regularly assesses the likelihood that identified risks will occur and their potential impact on expected earnings (EBIT). Worst, medium and best case scenarios are considered and serve as the basis for determining a weighted expected risk value. Accruals and write-downs associated with these risks are recognized in the annual financial statements in accordance with applicable accounting principles. The unsecured residual risks, in other words risks subsequent to risk mitigation measures (net assessment), are therefore depicted as risks.

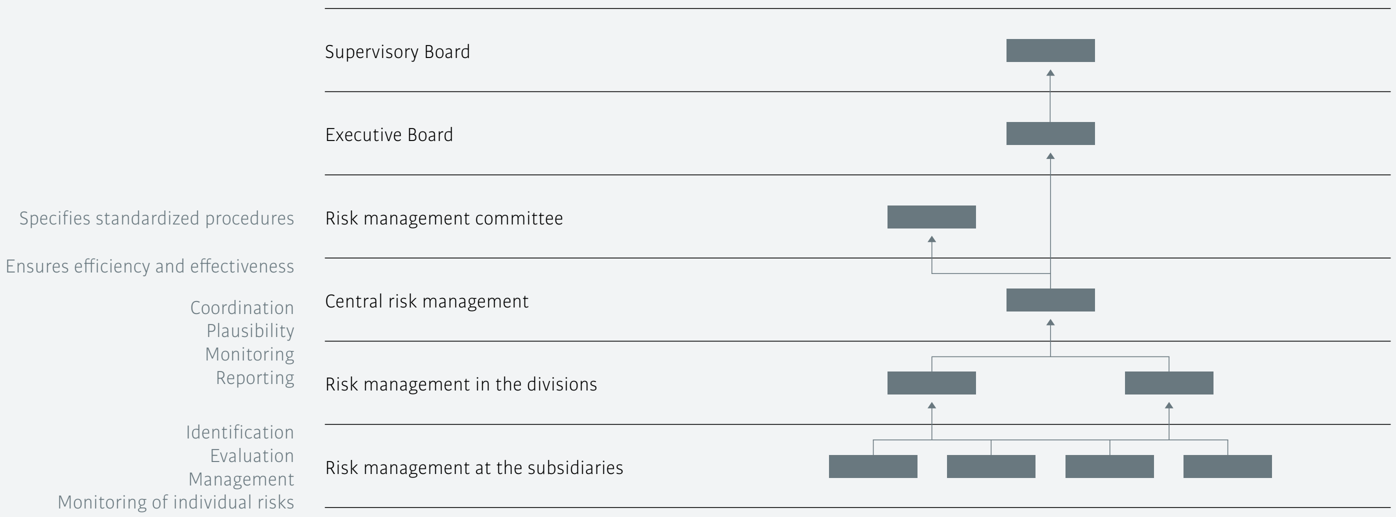
The risk management system is subject to a monthly reporting process (risk inventory) which involves identifying new risks and carrying out a follow-up assessment of existing risks. These risks are reported if they exceed the threshold defined in the Group's risk management policy. Risks that remain below the threshold are left at segment level and evaluated at "0" in the Group, as the sum of these risks is immaterial for the Group even on a cumulative basis. The information collected in this way is summarized in a risk report that is also prepared each month and addressed to the Management Board of KUKA Group. This report contains a top 10 risk assessment and a risk exposure assessment (overall risk situation) for the business segments, KUKA Aktiengesellschaft as the holding company and KUKA Group. The top 10 risks are also a fixed part of the internal monthly management report and are discussed at monthly results discussions between the Management Board of KUKA Group and the management of the business segments and KUKA AG. The identified risks are additionally presented and explained in more detail to the Management Board each quarter by the Risk Management Committee. The committee also determines whether any measures already implemented to minimize risk are adequate or whether further steps need to be initiated. It assesses the plausibility of the reported risks and determines how to avoid similar risks in the future. The risk report is also reviewed during Management Board and Supervisory Board meetings, especially by the Audit Committee.

Direct responsibility for the early identification, control and communication of risks lies with the management of the business segments and the individual subsidiaries, as well as with those responsible for the respective holding functions. Risk managers in the central and decentralized business units ensure that the reporting process is uniform with clearly defined reporting channels and reporting thresholds that are adapted to the business segments and KUKA AG. Internal ad hoc announcements are mandatory whenever risks exceed the Group's defined reporting thresholds. Standard procedures applied throughout the Group ensure that risk management is efficient and effective. Corporate Risk Management coordinates the risk management system. Here, the individual risks identified are compiled into the aforementioned top 10 risk overviews or risk exposure overviews, communicated and monitored. This role is based within KUKA Aktiengesellschaft's Corporate Controlling department, which reports directly to the CFO of KUKA Aktiengesellschaft. This ensures that risk management is an integral component of KUKA Group's overall planning, control and reporting process.

In principle, the Group's risk management system enables the Management Board to identify material risks at an early stage, initiate appropriate steps to counter these risks and monitor implementation of the steps. The internal audit department regularly monitors compliance with the risk management policy of KUKA Group and therefore whether existing procedures and tools are effective. It also audits those responsible for the risks if this is relevant. The internal audit department also regularly audits the risk management process to ensure efficiency and continuous improvement.

In addition to the risk management system, KUKA Group has an internal controlling system above and beyond the risk management system, which it uses to continuously monitor the appropriateness of the corporation's business and accounting processes and identify potential improvements.

Risk management organization



Internal and external auditors check the risk management system and the risk early detection system (RFS)

Risks and opportunities in KUKA Group

KUKA Group's opportunity and risk-related controlling process ensures that the company's managers take both opportunities and risks into consideration. The Group's risk exposure, based upon evaluating operating risks according to the procedure outlined in the "Basic principles" section, is described below. The report includes the aggregated expected risk value, which is calculated on the basis of the various weighted scenarios and their respective likelihood of occurrence. The aggregated expected risk values of all risks managed and quantified in the Group are reported. The following is an aggregated quantification of the risks managed at Group level and in the divisions.

No aggregation is carried out for the opportunities at Group level. For this reason, the opportunities are dealt with in greater detail in the following sections on the divisions.

Group risk exposure as at 31 Dec.

in € millions	2022	2023
Legal risks	16.0	15.6
Economic risks	83.9	60.6
Financial risks	17.5	16.7
Political risks	1.3	0.0
Other risks	12.3	47.5
Total for the Group	**131.0**	**140.4**

Top risks in the Group

Name	Probability of occurrence	Effect	Explanations	Development of the expected risk value compared to the previous year
Market risks	Likely	Very high	Risk of a slump in orders and sales due to geopolitical and economic uncertainties	↗
Project risks	Possible	High	Settlement risk in the project portfolio	↘
Global tax risk	Possible	High	Risk of changes in global tax law	↘
Global currency fluctuations	Unlikely	High	Risk of unhedged currency fluctuations	↘
Location risks	Possible	Very high	Risk of location restrictions due to fire, natural hazards and disruptions in media supply	↗
Cyber	Possible	High	Risk of operational disruptions due to cyber attacks	↗
Supply chain disruption	Possible	Medium	Risk of global supply chain disruptions, material shortages and price increases	↘
Political risks	Likely	Medium	Risk of additional costs and operational disruptions due to global conflicts (Russia, Middle East)	↗

Detailed explanations of the risk categories listed can be found in the following sections.

Notes		
Probability of occurrence	Highly likely	> 50%
	Likely	25% – 50%
	Possible	10% – 25%
	Unlikely	1% – 10%

Notes		
Effect	Very high	> 10 million
	High	5 – 10 million
	Medium	1 – 5 million
	Low	< 1 million

Operating risks and opportunities of the business segments and KUKA AG

KUKA is exposed to the cyclic investment behavior of its customers in the various market subsectors. A major portion of the divisions' business volume is in the automotive sector where oligopolistic structures and constant price pressure are ongoing concerns. Fluctuations in the industry's capital spending plans are also considered in the respective strategic and operational plans by analyzing public announcements and disclosures. The company continuously strives to be as flexible as possible with its own capacities and cost structure to address the cyclic nature of the business.

Although KUKA Group was still affected by the global supply chain disruptions and the Russian war of aggression in Ukraine in fiscal 2023, it was largely able to mitigate the risks. In the first half of the year in particular, KUKA benefited from customers' willingness to invest, both in the automotive industry and in general industry. The slight global economic recovery initially had a very positive impact on the company's business performance. Challenges posed by complex systems engineering projects and weak demand in the second half of the year created additional risks that could still have an impact in 2024.

The economic uncertainties caused by the ongoing geopolitical crises mean that market risks have increased considerably. Furthermore, the geopolitical situation could also lead to an increase in cyberattacks, which could cause disruption to production and supply chains. In the course of the risk management process, these risks have been investigated, evaluated and corresponding mitigation measures provided. Regulatory changes such as the German Supply Chain Due Diligence Act were also anchored in the risk management process.

The trend towards automation generally remains intact, offering opportunities especially in logistics/e-commerce, healthcare, alternative drive systems, but also in non-industrial sectors. KUKA has further improved its supply chain risk management, and works with suppliers that focus on quality, innovative strength, continuous improvement and reliability so that it can supply its own customers with products of the highest possible quality and ensure timely delivery. In general, KUKA purchases product components from multiple suppliers in order to minimize the risk of supply disruptions and price increases for important components and raw materials. In a few exceptional cases, however, there is still a lack of supply alternatives due to individual, dominant suppliers that come from a single source. Continuous monitoring of supplier risks is conducted as part of the risk management process.

Legal risks and insurance

Since KUKA conducts business around the world, it is obliged to comply with many international and country-specific laws and regulations issued, for example, by tax authorities. The company employs specialists familiar with the respective countries' laws on a case-by-case basis. Opportunities and risks arise as a result of changes to legal frameworks. For example, tax audits discovering non-compliance issues could negatively impact the Group in the form of payment of interest charges, penalties and back taxes. These changes and the resultant risks are continuously monitored; at the present time, however, there are no foreseeable tax or legal issues that could have a significant negative impact on KUKA Group. Appropriate provisions have been recognized for tax risks based on experience.

Standard general contracts are used whenever possible to cap risks from contractual relationships. The Group's legal department supports the operating companies to help limit risks associated with in-house contracts, warranty obligations and guarantees as well as country-specific risks such as a lack of patent and brand protection. KUKA has developed an independent strategy to safeguard its intellectual property, which is primarily secured by patents and trademark rights. In addition, product compliance processes have been established and are closely monitored.

In the context of insurance/risk management, sufficient property insurance, loss-of-profits insurance, public, product and environmental liability insurance and transportation insurance are maintained centrally for the Group amongst other policies. D&O insurance (directors and officers liability insurance) is also in place. Existing insurance policies are reviewed regularly in order to ensure sufficient cover and to weigh the relationship between the insurance protection and deductibles against the risk premium.

Economic risks

The majority of operating risks in the risk exposure are economic risks. The greatest risk is considered to be market risks, which could lead to a slump in sales and revenues due to global economic uncertainty. Additionally, risks from the project portfolios, such as delays in project progress due to disruptions in the supply chain, technical problems or the threat of contractual penalties in the event of late project handover, must be taken into account. Product risks, such as possible quality defects or delayed delivery, are also mainly due to risks in the supply chain. The risk of an increase in cyberattacks affects both the project and product business and is a significant item in the risk exposure of economic risks.

Individual mitigation measures are defined for each operating risk, such as increased diversification in the supply chain or price adjustment clauses.

Financial risks

KUKA Group is under the financial control of KUKA AG. The primary objective of financial management is to safeguard the liquidity and creditworthiness of the Group, thereby ensuring its financial capacity to act at all times. Effective management of foreign exchange, interest rate and default risk also serves to reduce earnings volatility.

The liquidity situation is continuously monitored and is recorded and managed by means of Group-wide planning of financial requirements and the procurement of funds. For this, a Group-wide standard treasury management and reporting system is employed. KUKA AG normally procures finance centrally and distributes the funds among the Group companies. In addition, liquidity risk is reduced for KUKA Group by closely monitoring the Group's companies and their management of payment flows.

KUKA pursues a conservative financing policy with a balanced funding portfolio. This is essentially based on an inter-company loan concluded with Midea in December 2019 and increased in May 2022 with a term until 2025, a variable credit line concluded with Midea in 2018, which also has a term until 2025, and a syndicated loan refinanced for the last time in 2018 with a term until 2025, which provides both cash credit lines and guarantee lines. A standard financial covenant (leverage) has been agreed for the syndicated loan. Beyond these financing agreements, additional financing options are available to KUKA within the terms of factoring framework agreements. Comprehensive details of the financing instruments and the extent to which the agreed credit lines have been utilized can be found in the notes to the annual financial statements, in the section "Financial liabilities/Financing".

KUKA hedges the interest rate and exchange rate risks from operations and financial transactions with financial derivatives. Transactions in financial derivatives are exclusively entered into for hedging purposes, in other words always with reference to and for hedging underlying transactions. Whenever possible, KUKA AG is the central hedging partner of the Group companies, and it in turn hedges the Group's risks by concluding appropriate hedging transactions with banks. Internal policies govern the use of derivatives, which are subject to continuous internal risk monitoring. For a more precise description of our risk management objectives and the methods employed please refer to the notes on financial risk management and financial derivatives.

Currency translation risks, i. e. measurement risks associated with balance sheet and income statement items in foreign currencies, are not hedged, but are continuously monitored. The risk associated with the volatility of leading currencies and the resulting economic exchange risk (competitive risk) is mitigated by having production facilities in several countries (natural hedging).

Political risks

Political conditions such as trade tensions between the USA and China, new sanctions against Russia, the conflicts in the Middle East and the associated economic uncertainties regarding demand and security of supply are also having an impact on KUKA's business success. The resulting increased uncertainties were identified and recorded as abstract risks, but not reported in operationally quantified terms.

IT risks and opportunities

IT risks are a particular focus of the risk management process because of the importance of IT for business processes. This is due, in particular, to the frequency of virus attacks or hacking and the damage they could potentially cause. These risks, also referred to as cyber risks, are included and assessed in the current risk inventory. The existing IT security and business continuity management systems as well as policies and organizational structures are regularly optimized and reviewed in an effort to predict and minimize possible IT-related risks such as failure of computer centers or other IT systems. One way this is addressed is by continuously upgrading hardware and software. Furthermore, KUKA has launched several transformation projects which are currently running with the objective of harmonizing processes and the supporting IT application system architecture throughout the Group. This will generate long-term cost reduction potential and lead to continuous quality improvements. By systematically monitoring the processes concerned, the company reduces the risks associated with external threats as well as dependence on the ever-expanding digitalization of business processes. The geopolitical situation also has a significant impact on the assessed cyber risk. Global data flows could also be affected by sanctions or attacks.

As information security requirements are increasing, risks in the areas of information security and data protection are analyzed and evaluated very intensively, as they can also result in considerable risks for the Group due to changes in the legal framework.

Compliance risks

Compliance violations can have far-reaching consequences, resulting in long-term damage to the company and restricting its economic success. In addition to high fines and compensation payments, exclusion from tenders, disgorgement of profits and criminal law repercussions are possible. KUKA's image as a business partner of integrity could also be tarnished. This can have a negative effect not only on customer relationships, but also on business relationships of all kinds. Consequently, strategic projects, transactions and capital market measures could suffer as a result.

In order to counter these risks in a transparent and appropriate manner, the Group-wide Corporate Compliance Program was set up in 2008. Details can be found in the Corporate Compliance Report.

The Compliance Committee established through this program holds regular ordinary meetings as well as extraordinary meetings as required. The members have a wide-ranging and in-depth wealth of experience in both the company and the industry. This enables them to assess risks carefully and adequately.

The committee is chaired by the Chief Compliance Officer, who reports to KUKA Aktiengesellschaft's CEO, who in turn reports to the Supervisory Board's Audit Committee.

The CEO is ultimately responsible for the Corporate Compliance Program, which is updated as required and subject to strict internal controls. The Corporate Compliance Program is integrated into daily work by means of the comprehensive processes and measures of the Compliance Management System.

No substantial compliance risks were identified in 2023 due to the active countermeasures taken by KUKA to mitigate risk at an early stage and to eliminate risk sources, for example, by realigning processes and adapting training to specific target groups.

Personnel risks and opportunities

The success of KUKA Group, a high-tech enterprise, depends to a great degree on having qualified technical and management staff. Personnel risks arise mainly from employee turnover in key positions within the Group. Due to the current general conditions, there is a risk of higher fluctuation, which could lead to shifts in competencies. KUKA is countering this risk, not least by means of in-house continuing education programs such as those offered by KUKA Academy and through modern, flexible working conditions, in order to boost the satisfaction, motivation and qualification of the workforce. This also opens up opportunities for the recruiting of new employees.

Other risks

KUKA Group continuously monitors other risks and mitigates these to the greatest extent possible. Possible risks to the environment due to operational activities are predominantly attributable to the use of hazardous substances. Waters and soils can also be adversely affected by the legal disposal of waste, or even by unforeseeable accidents. Such events cannot be completely ruled out despite all precautionary measures taken. KUKA therefore takes wide-ranging preventive measures to ensure continual minimization of the potential environmental impact. Most of our production locations work according to internationally recognized management system standards in the areas of environment (ISO 14001), energy (ISO 50001), quality (ISO 9001) and other industry-specific regulations, for example, VDA 6 Part 4. For many years, KUKA has had a cross-location environmental management system. Risks resulting from climate change are also analyzed and assessed on an ongoing basis, such as extreme weather events like storms, hail or floods. In addition, we regularly monitor changes in the legal framework for environmental and climate protection in order to identify potential risks at an early stage. The expansion of production capacity at the location in Shunde, China, was included in the risk assessment of the aforementioned location risks, in particular exposure to fire and natural hazards. The Group owns some of the buildings and properties that it uses for its business operations. As a result, the company is exposed to risks associated with any residual pollution, soil contamination or other damaging substances that may be discovered on its properties. There is currently no evidence of any situations that would have a negative impact on the measurement of balance sheet items. However, it cannot be ruled out that any such situations, which could, for example, require costly clean-up operations to be undertaken, will occur in the future. At the locations, risks relating to fire protection, water and media supply, static and construction defects are regularly investigated. These are assessed by experts and measures are taken to minimize the risk.

Strategic risks and opportunities

KUKA's business segments aim to be among the market and technology leaders in their target markets. The key to achieving this is to consistently enhance their core technologies on the basis of coordinated innovation programs. One important task is to identify opportunities and risks associated with innovations early and to evaluate the innovations' manufacturability. The company mitigates the impact of faulty market assessments by conducting regular market and competitor analyses, some of which are decentralized. Application-related developments, system partnerships and cooperative ventures reduce the risk of development work not conforming to market requirements. Strategic risks and opportunities are not quantified (strategic risks are not included in the quantified overall risk position (Group risk exposure)).

Summary

In the overall assessment of risks, KUKA Group is primarily exposed to performance-related risks from the divisions and to legal and financial risks controlled at Group level. Despite the continued high risk potential, such as market and location risks, which have been identified and evaluated in the risk management system, the Management Board is not aware of any individual or aggregated risks that could threaten the company's existence. Strategically and financially, the company is positioned to be able to take advantage of business opportunities.

Forecast

General economic environment

As expected, the increasingly restrictive monetary policy of international central banks has significantly slowed global economic growth in 2023. According to the OECD, this monetary policy will also become increasingly visible in 2024 and lead to further increases in real interest rates in many economies. Fiscal policy will also remain restrictive in 2024, for example due to expiring energy support measures in many countries. According to the OECD, the global economy is primarily supported by a stable labor market with low unemployment across the OECD. Many companies are still unable to pass on rising costs directly to their customers. According to OECD experts, falling corporate profit margins in combination with falling inflation rates will therefore also lead to a recovery in real wages in the coming year.

In its November 2023 outlook, the OECD expects global economic output to grow by 2.7% overall in 2024. That is the lowest growth rate since the financial crisis, with the exception of the first year of the pandemic. As in the previous year, growth is essentially being driven by the developing economies. China's economy is expected to expand by 4.7% in 2024. For the eurozone, the OECD expects growth of only 0.9%. At 1.5%, growth in the USA is also expected to be well below average.

The OECD expects inflation to continue to fall in 2024. Economists are forecasting a rate of 2.9% for the eurozone. Inflation of 2.7% is forecast in Germany, while consumer prices in the USA are expected to rise by 2.8% in the current year. Inflation rates are expected to fall further in 2025. Inflation is thus once again approaching the inflation targets of the central banks.

Automation & digitalization

The market for industrial robots proved resilient and stable last year, despite a slowdown in global economic growth. The COVID-related catch-up effects are diminishing. Bottlenecks in electronic components in 2022 led to a significant backlog of orders in the first half of 2023. This development demonstrates the need for robust supply chains and will keep demand for robots high. Localization of production facilities in order to achieve economic and technological independence in the face of political tensions and trade conflicts is also boosting demand. In the long term, trends such as energy efficiency, the use of new materials and the need for a carbon-neutral economy will also require constant retooling and thus long-term demand for robot installations. Robots remain an essential component of cost-efficient production, particularly in the automotive and electronics industries.

In the World Robotics Report from September 2023, the IFR forecasts a compound annual growth rate (CAGR) of 7% for global robot installations for the years 2023 to 2026. New installations are expected to increase by almost 5% in 2024. The long-term growth trend is continuing. Compared to 593,000 units in 2023, approx. 718,000 robots are expected to be installed worldwide in 2026.

For the North American market, the IFR expects a growth rate of 7% until 2026. The market is also expected to grow by 5% in 2024. Expectations for the European market are much less dynamic, with a growth rate of 3% until 2026. The number of new installations in Europe is expected almost to stagnate in 2024. The main reasons for this are the slowdown in overall economic growth within Europe and the more difficult investment conditions due to tighter monetary policy. Furthermore, the war in Ukraine and the resulting EU sanctions are also restricting trade with Russia. According to the IFR, the relative weakness of the automotive industry compared to Chinese competitors is also having an impact on robot installations in Europe. However, average annual growth of 7% is expected for Central and Eastern Europe. The Asian market, and the Chinese market in particular, remains the growth driver for the robot market. Almost 52% of all robot installations in 2022 were carried out in China. A CAGR of 8% is forecast until 2026.

Automotive

According to the German Association of the Automotive Industry (VDA), the automotive industry is facing major challenges due to geopolitical and macroeconomic uncertainties. Since the start of Russia's war of aggression against Ukraine, the global economy has been confronted with high inflation and a sharp rise in energy prices, particularly in European economies. The automotive industry, which is heavily influenced by the economy, has been significantly affected by this development, with the result that the recovery since the coronavirus crisis in 2020 has been sluggish.

The automotive industry in Europe is currently still 20% behind the sales volume of 2019 and therefore potentially has significantly higher capacities than currently required. Nevertheless, the automotive industry still faces a huge need for investment in order to manage the transformation from fossil-fueled combustion engines to new sustainable drive technologies. The automotive sector has one of the most important roles to play in the transition to a CO_2-neutral economy. According to the German Federal Statistical Office, 740 million tons of carbon dioxide were emitted in the European Union in 2021 due to the combustion of fuels in road traffic. Cars and motorcycles accounted for 64% of emissions. According to the VDA, car manufacturers who have committed to the Paris Climate Agreement will be investing around 150 billion euros in electromobility, new drive systems and digitalization by 2025.

The gap between supply and demand for public charging points in Germany narrowed slightly in 2023 according to the VDA. However, there is still a great need for action to expand the charging infrastructure. In order to achieve the target of one million charging points by 2030, as set out in the German government's coalition agreement and the national industrial strategy, the pace of expansion must triple.

Non-automotive

In the mechanical and systems engineering sector, customers expect the manufacture of customized products to be not only efficient in terms of production and logistics, but also competitive in terms of price. The use of automated technologies can play a key role in adapting and accelerating these processes, making them both faster and more effective.

The automotive industry further increased its share of robots installed worldwide in 2022. However, the non-automotive industry has also grown steadily in recent years. The comparatively low level of automation in the non-automotive industry, which can be explained in terms of the robot density (number of robots per 10,000 workers), continues to offer great potential for growth. In Germany, the non-automotive robot density in 2022 was equivalent to 256 robots per 10,000 workers according to the November 2023 IFR report (2021: 237). By comparison, the automotive industry had a robot density of 1,513 robots (2021: 1,501). In the USA, the robot density rose to 181 in general industry (2021: 176) and 1,493 in the automotive industry (2021: 1,451). In China, the robot density in the non-automotive sector increased significantly to 329 robots per 10,000 workers (2021: 2666). In the automotive industry, the density rose from 739 robots in 2021 to 894 robots in 2022.

In 2022, the electronics industry was once again the largest customer group for robot-based automation for the third year running, with around 157,000 robots installed worldwide, corresponding to an increase of 10% on the previous year. Since 2017, annual sales figures to this customer group have grown by an average of 5%. Since 2020, the strong growth in the sector has been due in particular to the strong upturn in the semiconductor industry. For 2023, a 10% decline in the sales volume of the semiconductor market is expected due to cyclical factors. This is set to be made up for in 2024 with growth of almost 12%. In the long term, however, it is particularly investments in infrastructure, such as 5G technology, that will drive demand for electronic products and components. Particularly encouraged by the shortages of electronic components following the COVID-19 pandemic, manufacturers significantly expanded their capacities from 2020 to 2022. According to the IFR, the short-term expansion in capacity had an impact on demand for robots in 2023, while demand is expected to be above average in the longer term. The use of robots in the electronics industry is especially characterized by high precision, efficiency and quality around the clock. The geopolitical risks in connection with bottlenecks, for example in the semiconductor industry, are also driving demand for robots due to a trend towards the localization of production capacities in order to reduce dependencies.

China

Compared to many developed economies, the Chinese economy continues to grow much more dynamically. In contrast to the past growth rates of the world's second largest economy, however, an economic slowdown is currently spreading. According to the VDMA, this is partly due to domestic factors and partly the result of the changed geopolitical situation. Experts do not currently expect an upturn in the non-state sector, particularly in the near future. Companies have reduced their investments in response to reticent private consumption. China's real estate sector also remains fragile. One exception is the automotive industry, which is experiencing sustained growth due to the strong demand for electromobility. According to the VDMA, China's mechanical engineering industry is hardly benefiting on the export side due to the weakening global economy. However, an increase is expected for domestic demand for electromobility equipment, automation and efficiency enhancement.

290,000 robots were installed in China in 2022 according to the IFR. This corresponds to 52% of all robots installed worldwide. Around 36% of these were produced by Chinese manufacturers. The installed base increased from 1.23 million units to 1.50 million, up 22% on the previous year. With its high growth rates, the Chinese market remains the largest robotics market in the world. The Chinese government would also like to reduce its import dependency in the future. This is expected to lead to greater localization, including by international and European mechanical engineering companies in China. Due to its high growth potential, the Chinese robot and automation market is a core element of KUKA's growth strategy. KUKA plans further expansion of its market share in China. For 2024, the IFR expects an increase in installed robots in China in the high single-digit percentage range.

Summary *

KUKA anticipates that customers will be reluctant to invest due to the ongoing global uncertainties and risks. Fears of a global recession, the energy crisis and labor shortages, as well as the war of aggression against Ukraine and the conflict in the Middle East, continue to have a detrimental effect on the outlook, resulting in a prolonged period of uncertainty. Despite these difficult conditions, KUKA is looking ahead into 2024 with confidence. Continued high demand for automation solutions is expected.

KUKA Group is active in various currency areas around the world. Its key financial indicators are therefore exposed to the influence of changes in exchange rates (transaction and translation risks). The currencies of importance to KUKA are presented in detail in the notes. The handling of interest rate and currency risks in KUKA Group is described in the opportunity and risk report and in the notes.

Anticipated business development in KUKA Group

in € millions	2023	expectations 2024
Orders received	4,026.2	slightly above prior-year level [1]
Revenues	4,053.7	above prior-year level [1]
EBIT margin	3.9	rising
Earnings after taxes and after loss from discontinued activities	85.6	above prior-year level [1]
Free cash flow	155.0	positive [1]

[1] Definitions:

slightly above/below prior-year level: absolute change compared to prior year < ±10%

above/below prior-year level: absolute change compared to prior year ≥ ±10%

at prior-year level: absolute change compared to prior year: ≤ ±3%

Orders received, sales revenues and EBIT margin

Orders received are expected to increase to and a figure slightly above that of the previous year. Following the record result in revenues, a further increase is expected for 2024 as a whole. The sales volume is forecast to be above the prior-year level, i.e. around 10%. The EBIT margin is also expected to increase, remaining in the single-digit range.

Earnings after taxes

In the 2023 financial year, earnings after taxes and after losses from discontinued activities in KUKA Group amounted to €85.6 million. For 2024, KUKA expects earnings at Group level to be above the prior-year level.

Free cash flow

KUKA Group's free cash flow is primarily generated from operating profits and the development of working capital. For 2024, free cash flow is expected to be positive, but below the prior-year level.

KUKA AG

KUKA G's result in the separate financial statements depends mainly on the profit transfers of the German subsidiaries and on dividends from subsidiaries. Net income for the year is the most important performance indicator. KUKA Aktiengesellschaft expects a significant improvement in net income compared to the previous year.

* The forward-looking statements are based on the information, expectations and estimates of the company available at the time the forecast report was prepared.

Corporate Governance Statement

For the corporate governance statement (quota for women) pursuant to section 289f of the German Commercial Code (HGB), reference is made to information published on the website www.kuka.com.

Group financial statements

Group financial statements

Group income statement

of KUKA Aktiengesellschaft for the period January 1 to December 31, 2023

in € millions	Notes	2022	2023
Sales revenues	**1**	**3,897.0**	**4,053.7**
Cost of sales	2	-3,087.0	-3,107.0
Gross earnings from sales		**810.0**	**946.7**
Selling expenses	2	-312.6	-349.0
(of which, impairment losses including reversal of impairment losses on trade receivables, lease receivables and contract assets)		(6.7)	(-19.0)
Research and development expenses	2	-171.2	-194.9
General and administrative expenses	2	-215.0	-249.1
Other operating income	3	17.5	17.6
Other operating expenses	3	-12.0	-13.5
Loss from companies consolidated at equity		1.7	0.4
Earnings before interest and taxes (EBIT)		**118.4**	**158.2**
Depreciation and amortization		132.8	135.8
Earnings before interest, taxes, depreciation and amortization (EBITDA)		**251.2**	**294.0**
Result from changes in the fair value of financial instruments	4	2.5	0.1
Interest income	4	24.7	17.3
Interest expense	4	-21.9	-30.5
Foreign currency gain	4	2.7	7.7
Financial result		**8.0**	**-5.4**

in € millions	Notes	2022	2023
Earnings before taxes		**126.4**	**152.8**
Taxes on income	5	-25.0	-41.6
Earnings after taxes		**101.4**	**111.2**
Loss from discontinued activities		–	-25.6
Earnings after taxes and after loss from discontinued activities		**101.4**	**85.6**
(of which, attributable to minority interests)		(13.3)	(15.8)
(of which, attributable to KUKA AG)	6	(88.1)	(69.8)
Earnings per share after taxes and after loss from discontinued activities attributable to KUKA AG (undiluted/diluted) in €		**2.21**	**1.76**
Earnings per share after taxes attributable to KUKA AG (undiluted/diluted) in €		**2.21**	**2.40**

Group statement of comprehensive income

of KUKA Aktiengesellschaft for the period January 1 to December 31, 2023

in € millions	Notes	2022	2023
Earnings after taxes and after loss from discontinued activities		**101.4**	**85.6**
Items that may potentially be reclassified to profit or loss			
Differences from currency translation attributable to KUKA AG		20.0	-38.3
Differences from currency translation attributable to minority interests		-7.9	-21.9
Items that are not reclassified to profit or loss			
Change in fair value of equity instruments		–	–
Changes of actuarial gains and losses	23	37.1	-11.7
Deferred taxes on changes of actuarial gains and losses		-8.2	1.9
Changes in value recognized directly in equity (other comprehensive income)		**41.0**	**-70.0**
Total comprehensive income		**142.4**	**15.6**
(of which, attributable to minority interests)		(5.4)	(-6.1)
(of which, attributable to KUKA AG)		(137.0)	(21.7)

Group cash flow statement[1]

of KUKA Aktiengesellschaft for the financial year 2023

in € millions	2022	2023
Earnings after taxes and after loss from discontinued activities	**101.4**	**85.6**
Income taxes	91.4	99.6
Net interest	-2.8	13.3
Amortization of intangible assets	49.6	46.4
Depreciation of tangible assets	46.9	48.4
Depreciation of financial investments	0.7	0.5
Depreciation of right-of-use assets	35.6	40.5
Other non-payment-related income	-88.7	-63.5
Other non-payment-related expenses	21.5	51.3
Cash earnings	**255.6**	**322.1**
Result on the disposal of assets	-1.2	1.6
Changes in provisions	-21.1	5.3
Changes in current assets and liabilities		
Changes in inventories	-286.4	136.3
Changes in receivables and deferred charges	-203.5	-98.8
Changes in liabilities and deferred income (excl. financial debt)	178.4	69.5
Cash outflows for investments in investment property	-8.3	–
Income taxes paid	-79.2	-94.2
Investments/financing matters affecting cash flow	-32.5	-25.2
Cash flow from operating activities	**-198.2**	**316.6**
Payments from disposals of tangible assets	3.3	3.0
Payments for capital expenditures on intangible assets	-38.3	-44.6

in € millions	2022	2023
Payments for capital expenditures on tangible assets	-82.9	-82.5
Payments for/proceeds from financial assets related to short-term financial management	115.6	-42.5
Payments for the acquisition of consolidated companies and groups of assets	-12.5	-0.8
Proceeds from investment in financial investments and at-equity investments	–	1.3
Payments from the disposal of consolidated companies and other business units	–	-12.5
Interest received	24.7	17.0
Cash flow from investment activities	**9.9**	**-161.6**
Free cash flow	**-188.3**	**155.0**
Dividend payments	-4.4	–
Proceeds from/payments for the acceptance/repayment of bank loans, promissory note loans and inter-company loans as well as changes in current liabilities to banks	49.3	-33.3
Payments from grants received	32.4	25.0
Interest paid	-21.0	-28.4
Repayment of lease liabilities	-34.2	-40.8
Cash flow from financing activities	**22.1**	**-77.5**
Payment-related changes in cash and cash equivalents	**-166.2**	**77.5**
Exchange-rate-related and other changes in cash and cash equivalents	-12.5	-40.6
Changes in cash and cash equivalents	**-178.7**	**36.9**
Cash and cash equivalents at the beginning of the period	673.2	494.5
Cash and cash equivalents at the end of the period	**494.5**	**531.4**

[1] See the notes for further information on the Group cash flow statement

Group balance sheet

of KUKA Aktiengesellschaft as at December 31, 2023

Assets

in € millions	Notes	Dec. 31, 2022	Dec. 31, 2023
Non-current assets			
Intangible assets	(7)	553.7	565.5
Property, plant and equipment	(8)	398.0	412.1
Investment property	(8)	9.4	8.4
Financial investments	(9)	4.8	3.6
Investments accounted for at equity	(10)	32.9	28.9
Right-of-use assets	(11)	111.9	127.9
Finance lease receivables	(11)	66.4	19.5
Other receivables and other assets	(15)	5.8	6.4
Deferred taxes	(5)	149.7	205.0
		1,332.6	**1,377.3**
Current assets			
Inventories	(12)	719.8	539.0
Trade receivables	(13)	713.4	843.5
Contract assets	(14)	506.3	431.9
Finance lease receivables	(11)	41.5	38.4
Income tax receivables	(5)	21.6	25.3
Other receivables and other assets	(15)	126.2	184.9
		2,128.8	**2,063.0**
Cash and cash equivalents	**(16)**	**494.5**	**531.4**
		2,623.3	**2,594.4**
		3,955.9	**3,971.7**

Equity and liabilities

in € millions	Notes	Dec. 31, 2022	Dec. 31, 2023
Equity	**(17)**		
Subscribed capital	(18)	103.4	103.4
Capital reserve	(19)	306.6	306.6
Revenue reserve	(20)	665.4	734.3
Other reserves	(22)	92.8	44.7
Minority interests	(21)	332.2	327.4
		1,500.4	**1,516.4**
Non-current liabilities			
Financial liabilities	(26)	0.4	0.4
Accounts payable to affiliated companies	(26)	196.6	198.0
Lease liabilities	(25)	90.7	97.6
Other liabilities	(27)	18.6	20.1
Pension provisions and similar obligations	(23)	59.6	66.9
Deferred taxes	(5)	23.2	22.5
		389.1	**405.5**
Current liabilities			
Financial liabilities	(26)	277.2	253.9
Lease liabilities	(25)	33.0	41.4
Trade payables	(25)	655.3	594.9
Contract liabilities	(14)	530.1	548.0
Accounts payable to affiliated companies	(25/26)	97.8	90.3
Income tax provisions	(25)	38.7	44.7
Other liabilities	(27)	302.9	345.9
Other provisions	(24)	130.3	130.7
		2,065.3	**2,049.8**
Liabilities directly associated with assets classified as held for sale	(28)	1.1	–
		3,955.9	**3,971.7**

Development of Group equity

of KUKA Aktiengesellschaft for the financial year 2023

Notes	18	18	19	22			20		21	
				Other reserves						
in € millions	Number of shares outstanding	Subscribed capital	Capital reserve	Translation gains/losses	FVOCI measurement	Actuarial gains and losses	Annual net income and other revenue reserves	Equity attributable to KUKA	Minority interests	Total
Dec. 31, 2021/Jan. 1, 2022	**39,775,470**	**103.4**	**306.6**	**77.0**	**–**	**-33.1**	**575.4**	**1,029.3**	**325.3**	**1,354.6**
Earnings after taxes	–	–	–	–	–	–	88.1	88.1	13.3	101.4
Other income	–	–	–	20.0	–	28.9	–	48.9	-7.9	41.0
Total comprehensive income	**–**	**–**	**–**	**20.0**	**-**	**28.9**	**88.1**	**137.0**	**5.4**	**142.4**
KUKA AG dividend	–	–	–	–	–	–	-4.4	-4.4	–	-4.4
Employee share program	–	–	–	–	–	–	1.5	1.5	1.3	2.8
Change in scope of consolidation/ Other changes	–	–	–	–	–	–	4.8	4.8	0.2	5.0
Dec. 31, 2022/Jan. 1, 2023	**39,775,470**	**103.4**	**306.6**	**97.0**	**–**	**-4.2**	**665.4**	**1,168.2**	**332.2**	**1,500.4**
Earnings after taxes	–	–	–	–	–	–	69.8	69.8	15.8	85.6
Other income	–	–	–	-38.3	–	-9.8	–	-48.1	-21.9	-70.0
Total comprehensive income	**–**	**–**	**–**	**-38.3**	**-**	**-9.8**	**69.8**	**21.7**	**-6.1**	**15.6**
KUKA AG dividend	–	–	–	–	–	–	–	–	–	–
Employee share program	–	–	–	–	–	–	1.4	1.4	1.2	2.6
Change in scope of consolidation/ Other changes	–	–	–	–	–	–	-2.3	-2.3	–	-2.3
Dec. 31, 2023	**39,775,470**	**103.4**	**306.6**	**58.7**	**–**	**-14.0**	**734.3**	**1,189.0**	**327.4**	**1,516.4**

Group notes

General comments

Accounting principles

KUKA Aktiengesellschaft, registered at the district court of Augsburg under HRB 22709 and headquartered in Augsburg (Zugspitzstrasse 140, 86165 Augsburg, Germany), has prepared its consolidated financial statements for the period ending December 31, 2023 according to the International Financial Reporting Standards (IFRS) of the International Accounting Standards Board (IASB) adopted for use in the European Union as at the balance sheet date. The term IFRS also includes all valid international accounting standards (IAS). The interpretations of the Standing Interpretations Committee (SIC) and the International Financial Reporting Standards Interpretations Committee (IFRS IC) – supplemented by the guidelines stipulated in section 315e para. 1 of the German Commercial Code (HGB) – are also taken into consideration.

The accounting policies used conform to the methods applied in the previous year. Exceptions from this are the standards and interpretations for which application is mandatory for the first time in the 2023 fiscal year. The currency reported in the consolidated financial statements is the euro. Unless otherwise noted, all amounts in the notes to the accounts are stated in millions of euros (€ million). The key performance indicators in the entire annual report have been rounded in accordance with standard commercial practice. In individual cases, it is therefore possible that figures in this report do not add up exactly to the total stated and that percentages do not precisely correspond to the values indicated.

With the exception of specific financial instruments and plan assets reported at fair value, the Group's consolidated financial statements are prepared based on historical costs. In this case, fair value is defined under IFRS 13 as the price that would be paid by independent market participants in an arm's length transaction on the measurement date if an asset were sold or a liability transferred.

KUKA Group does not carry any assets with an indefinite useful life with the exception of goodwill and specific brand names.

The Group's consolidated income statement is prepared using the cost of sales method. The classification regulations of IAS 1 are applied in the consolidated financial statements. The presentation in the Group's consolidated balance sheet distinguishes between current and non-current assets and liabilities.

Midea Group Co.,Ltd. holds 100% of the shares in KUKA Aktiengesellschaft. KUKA Aktiengesellschaft is thus an indirect subsidiary of Midea Group Co. Ltd., Foshan City, Guangdong Province, China and is included in its consolidated financial statements. These statements are available on the website www.cninfo.com.cn or directly on the website of Midea Group Co. Ltd. at https://www.midea-group.com/Investors/financial-reports. Mr. Xiangjian He can exercise significant influence over Midea Group Co. Ltd., Foshan City, Guangdong Province, China, which means that from the perspective of KUKA Group, Mr. He is to be regarded as the ultimate controlling party, represented in this case by a natural person.

Scope of consolidation

KUKA Group's scope of consolidation changed in the course of the fiscal year due to newly established companies, mergers and other changes.

The following table shows the development of the scope of consolidation of KUKA AG by region for the 2023 fiscal year:

The Systems segment comprises 13 fully consolidated entities (2022: 15 entities). The reduction in entities is due to two liquidations.

In the Robotics division, three entities were sold, one entity was merged, one entity was liquidated and six new entities were established. In addition, one entity was reclassified to the China segment, meaning that 38 fully consolidated entities (2022: 38 entities) were included in the Robotics segment as at the balance sheet date. In the Robotics segment, two entities consolidated at equity were sold and one entity was purchased in fiscal 2023.

The Swisslog segment comprises 21 fully consolidated entities (2022: 19 entities). The change is due to three newly established companies and one liquidation.

In Swisslog Healthcare, one entity was liquidated, so the segment reported twelve fully consolidated entities as at December 31, 2023 (2022: 13 entities) and one at-equity entity (2022: one entity).

Following the reclassification from the Robotics segment, the China business segment reported nine fully consolidated entities (2022: eight entities). Two at-equity entities are presented in the China segment (2022: two entities).

Four fully consolidated entities are reported in Corporate Functions as at the balance sheet date (2022: four entities). Overall, the number of fully consolidated companies as at December 31, 2023 remained the same as in the previous year at 97. The number of entities accounted for at equity decreased from five entities in the previous year to four now.

Country	EMEA		Americas		APAC		Total	
	Consolidated companies	At equity companies	Consolidated companies	At equity companies	Consolidated companies	At equity companies	Consolidated companies	At equity companies
Jan. 1, 2023	**53**	**–**	**18**	**–**	**26**	**5**	**97**	**5**
Start-up/purchase	9	–	–	–	–	1	9	1
Mergers	-1	–	–	–	–	–	-1	–
Deconsolidations	-6	–	-2	–	–	-2	-8	-2
Total changes	2	–	-2	–	–	-1	0	-1
Dec. 31, 2023	**55**	**–**	**16**	**–**	**26**	**4**	**97**	**4**

Newly established companies

In fiscal year 2023, KUKA Group established KUKA Polska sp. z o.o., Tychy, Poland, KUKA Robotics Czech s.r.o., Zdiby, Czech Republic; KUKA Robotics Slovakia s.r.o., Bratislava, Slovakia; KUKA Robotics Hungary Kft., Taksony, Hungary; KUKA ROBOTICS ROMANIA S.R.L., Dumbrăvița, Romania; and KUKA Robotics d.o.o. Beograd, Belgrade, Serbia, which were included in the consolidated financial statements for the first time in fiscal 2023 and allocated to the Robotics segment.

In the Swisslog segment, Swisslog A/S, Herlev, Denmark; Swisslog Oy, Jyväskylä, Finland; and Swisslog France SAS, Lyon, France, were newly established and also included in the consolidated financial statements for the first time in fiscal 2023.

Investments in associates

Visual Components Oy, Espoo, Finland, together with Mitsubishi Electric Corporation, Tokyo, Japan, established an associated company, ME Industrial Simulation Software Corporation, Nagoya, Japan, with the aim of expanding the long-term cooperation in the 3D simulator business. €0.8 million, corresponding to 30% of shares, was paid into the company as a cash contribution. Furthermore, a contractual special payment in the mid single-digit million euro range was received.

Liquidations

Five companies were liquidated during fiscal 2023. These were Swisslog Technology Center Netherlands B.V., Valkenswaard, Netherlands, Swisslog Healthcare Netherlands B.V., Apeldoorn, Netherlands, KUKA S-Base s.r.o. i.L., Roznov p.R., Czech Republic, Reis Robotics USA Inc., Elgin, Illinois, USA and KUKA Aerospace Holdings LLC., Sterling Heights, Michigan, USA.

Sales

Reis Holding GmbH, Obernburg, Germany, KUKA Industries GmbH & Co. KG, Obernburg, Germany, including the shares in Chang'an Reis (Chongqing) Robotic Intelligent Equipment Co. Ltd., Chongqing, China, which were included in the scope of consolidation using the equity method, were sold in fiscal 2023. The transfer of the shares previously held by KUKA Industries GmbH & Co., Obernburg, Germany, in the joint venture Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., Yangzhou City, China, to KUKA AG had not yet been completed as at December 31, 2023. Another sale in the year under review related to KUKA Robotics OOO, Moscow, Russia.

The effects of the disposals on the Group's balance sheet items in accordance with IAS 7.40 were as follows:

in € millions	Total
Property, plant and equipment	12.1
Inventories	18.4
Trade receivables and other receivables	15.3
Cash and cash equivalents	10.7
Trade payables and other liabilities	-33.8
Net assets and liabilities	**22.7**
Payment received in cash	–
Cash and cash equivalents sold	10.7
Net inflow or outflow of cash and cash equivalents	**-10.7**

Mergers/reclassifications

Delfoi Robotics OY, Tampere, Finland, which was acquired in the previous year, was merged with Visual Components Oy, Espoo, Finland.

KUKA Automation Taiwan Ltd., Taipei, Taiwan, has been allocated to the China segment and no longer to Robotics since the beginning of fiscal 2023.

Consolidation principles

If subsidiaries are directly or indirectly controlled pursuant to the control concept under IFRS 10, they are included in KUKA's consolidated financial statements in accordance with the rules of full consolidation. Control can be assumed if KUKA Group has a right to the variable returns. Through its control, KUKA Group is also in a position to influence the returns from the company. The date on which control is gained or lost is decisive for inclusion of a company in consolidation or deconsolidation.

The consolidated financial statements are based on the financial statements of KUKA Aktiengesellschaft and those of the consolidated subsidiaries and were prepared according to the uniform accounting policies for the Group. Capital consolidation takes place by offsetting the carrying amounts of the investment against the pro rata newly measured equity capital of the subsidiaries at the time of acquisition. In line with IFRS 3, any positive differences are capitalized as goodwill under intangible assets. Any negative differences are recognized in the income statement.

Intra-Group sales, expenses and income as well as receivables and liabilities are offset and any inter-company profits and losses are eliminated. The necessary deferred taxes are recognized for consolidation transactions.

Guarantees or warranties that KUKA AG issues on behalf of consolidated subsidiaries are eliminated if there is no external effect.

Currency translation

Receivables and payables denominated in foreign currency are initially recognized at the transaction rate and translated at the applicable middle rate on the balance sheet date. Any resulting translation gains or losses are recognized in the income statement in the functional area in which they arose. If, for example, a translation gain or loss arises from a foreign currency transaction in respect of supplies and services, it is reported under the cost of sales. In the case of translation effects due to loan transactions, these are reported within the financial result.

The annual financial statements of foreign companies included in the consolidated financial statements are translated from their functional currency into euro in accordance with IAS 21.

Unrealized price differences from the translation of equity-replacing loans to foreign subsidiaries in foreign currency are reported directly in the aggregate income/loss and so recognized directly in equity. On loss of control of a foreign business operation, these effects are released through profit or loss. For derivative goodwill recognized prior to January 1, 2005, the translation rate into euro has been fixed at the respective historical rates.

Equity is translated at historical rates. Expenses and income are translated at the average monthly rates. Both differences arising from the translation of assets and liabilities compared to the prior year and translation differences between the income statement and the balance sheet are recognized directly in equity within the other reserves. If exchange rate differences exist when a foreign business operation leaves the Group, they are released to income.

Within KUKA Group, there are leases in accordance with IFRS 16 that were concluded in currencies other than the functional currency of the respective entity. These leases are first translated into the functional currency of the subsidiary and then into euro as the Group currency.

The most important exchange rates used for the year under review and the previous year are shown in the following table:

Country	Currency	Rate – balance sheet date	
		Dec. 31, 2022	Dec. 31, 2023
China	CNY	7.3582	7.8509
Switzerland	CHF	0.9847	0.9260
USA	USD	1.0666	1.1050

Accounting and valuation principles

Orders received

An order is recognized under orders received once a binding purchase order has been received. The volume of orders received is a non-cumulative value that relates to a fiscal year. Framework agreements per se or even memoranda of understanding do not yet result in orders received. Only when there is a legally binding order release under this framework agreement is an incoming order recognized.

Order backlog

The order backlog represents a stock variable and contains orders as long as a binding customer order has not yet been invoiced. In the case of long-term contract manufacturing, revenue is taken as the reference value. In the event of an order cancelation, the orders received and correspondingly the order backlog are reduced.

Revenue recognition

KUKA Group's revenues result from the sale of robots and automation solutions for a wide range of industrial and healthcare sectors. Revenues are recognized upon fulfillment of the performance obligation, for example, when control is transferred to the customer. When the contractual performance obligation is fulfilled, this portion is recognized as revenue over time or at a point in time. In order to determine a percentage of completion for over-time accounting, for example, it must be possible to determine the costs associated with the sale sufficiently reliably. In the case of point-in-time performance, the invoice is usually issued after the performance obligation has been fulfilled. In the case of performance over time, invoicing is linked to the achievement of milestones. Performance obligations with regard to returns, refunds, obligations exceeding statutory guarantees and similar obligations are of secondary importance for KUKA Group.

Orders meeting the criteria of IFRS 15.35 are accounted for over time. Revenue is recognized on the basis of the percentage of completion of an order, which is determined for each project using the cost-to-cost method. The cost-to-cost method involves placing the costs already incurred for the project, based on an assessment of the progress already achieved, in relation to the anticipated total costs. If an order is accounted for over time, the profit from it is recognized on the basis of the calculated percentage of completion. If the advance payments received exceed the services already provided, the resulting negative balance will be disclosed under contract liabilities. A contract asset is recognized if the services rendered exceed the advance payments received. If the right to consideration is unconditional, a contract asset becomes a trade receivable. This is the case if the due date of the consideration is only dependent on the passage of time. Impairment of contract assets is measured, recognized and disclosed on the same basis as for financial assets within the scope of IFRS 9. Further information on this can be found in the section “Financial instruments”. KUKA Group applies industry-standard payment terms when invoicing. For impending project losses, please refer to the “Provisions” section within this chapter.

Cost of sales

The cost of production of the goods sold as well as the acquisition cost of any merchandise sold are recognized under the cost of sales. In addition to the cost of attributable direct materials and labor, indirect costs, including the depreciation and amortization of production plants and intangible assets, as well as write-downs of inventories are also reported in the cost of sales.

If provisions for product warranties have to be taken into account, the expense incurred is recorded as part of the cost of sales at the time of revenue recognition. If the currently estimated total costs exceed the sales revenues of an order, the resulting impending losses are taken into account in the reporting period in which they are first exceeded.

Business combinations

Business combinations are accounted for using the purchase method, whereby the cost of acquisition is determined by reference to the fair values of the assets and liabilities involved at the date of acquisition. The agreed contingent consideration is recognized at fair value at the acquisition date. Irrespective of the extent of non-controlling interests, the identifiable assets acquired and liabilities (including contingent liabilities) assumed in a business combination are recognized at fair value at the acquisition date. Gains and losses arising are subsequently recognized in proportion to the interest held without limitation.

Investments in associates and joint ventures

Investments in associates and joint ventures are initially recognized at cost. For subsequent measurement, which is carried out in accordance with the equity method, IAS 28 is applicable. The results of associates are recognized in a separate item of the income statement.

Goodwill

Goodwill is tested for impairment in the fourth quarter of each fiscal year or whenever there are indications of impairment. For this, the carrying amount of the respective cash generating units (CGUs) is compared with the recoverable amount. As soon as the carrying amount of a CGU exceeds the recoverable amount, an impairment loss must be recognized for the goodwill allocated to the CGU. The recoverable amount is defined as the higher of the CGU's fair value less potential costs to sell and its value in use. KUKA Group normally uses a CGU's value in use to determine its recoverable amount. The data for the detailed planning phase from the business plan for the next three years are used for this purpose, supplemented by the strategic planning for the following two years. An impairment loss recognized for goodwill may not be reversed.

For the segment-specific discount rates as well as the further parameters and their derivation, and also for the identification of the principal items of goodwill, please refer to the explanations under note 7.

Self-developed software and other development costs

When all the requirements of IAS 38 have been cumulatively met, the direct and indirect costs directly attributable to the development process are capitalized.

From the beginning of the economic use of the asset, it is depreciated on a straight-line basis over a period of generally three to five years according to the consumption of its value. Development projects that have not yet been completed but have already been capitalized are tested for impairment as part of the impairment test for goodwill.

Research and development costs that are not eligible for capitalization are recognized as expenses.

Other intangible assets

In KUKA Group, the purchased intangible assets essentially comprise software and patents. They are recognized at their acquisition cost and are amortized over their expected useful economic life of usually one to five years using the straight-line method.

Property, plant and equipment

The balance sheet item of property, plant and equipment comprises the respective acquisition or production cost less accumulated depreciation and impairment losses. The straight-line depreciation method that is generally applied is subject to ongoing evaluation.

The following table shows the useful economic lives on which scheduled depreciation is generally based: The actual useful lives may vary due to contractual, regional or time-related circumstances:

	Years
Land and buildings	20 – 33
Technical plant and equipment	2 – 21
Factory and office equipment	2 – 25

If the carrying amount of an asset in the balance sheet exceeds its recoverable amount, an impairment loss is recognized in accordance with IAS 36. This is done in the context of an impairment test, which is performed as soon as impairment indicators are identified (a so-called triggering event). Whether this is the case is subject to an ongoing review within KUKA Group. If there is a change in parameters relevant to the calculation, such as a significant increase in market yields, or if there are changes with adverse consequences in the technological, market-related, economic or even legal environment, this indicates a triggering event. The recoverable amount is determined for each asset concerned. This is the higher of the fair value less costs to sell and the value in use. If the reasons for a previous impairment no longer apply, the value is recovered.

Investment property

Investment property is property held for the purpose of earning rentals and/or for capital appreciation and is not owner-occupied or held for sale in the ordinary course of business. Investment property includes undeveloped land, buildings and/or parts of buildings. Right-of-use assets from leased developed and undeveloped land, as well as from leased residential and commercial real estate (interim leases) as defined by IFRS 16, may also meet the definition of an investment property.

Investment property is measured at cost on acquisition or construction. Subsequent measurement in KUKA Group is at amortized cost. The useful economic life on which scheduled straight-line depreciation is based is 20 years for investment property.

Borrowing costs and qualifying assets

In accordance with IAS 23, financing costs must be recognized for so-called qualifying assets. The borrowing costs relating to these qualifying assets are capitalized if material. In KUKA Group, a qualifying asset is defined as an asset for which a period longer than twelve months is required to make it ready for its intended use or sale (please refer to IAS 23.5). Examples here within KUKA Group in particular are manufacturing plants and internally-generated intangible assets.

Government grants

If there is sufficient certainty in accordance with IAS 20.7 that the company fulfills the conditions for the grants and that they will actually be received, government grants are recognized. In the balance sheet, government grants related to assets are disclosed as deferred income and amortized systematically in the income statement over the useful life of the asset. Grants related to income are recognized immediately in the income statement.

Leases

As a lessee, KUKA Group generally recognizes all leases in the balance sheet in accordance with IFRS 16, with the exception of the existing relief regarding short-term leases (maximum term twelve months) and leases of assets with a low original price (maximum €5,000). The regular payments for leases subject to relief are recognized as an expense in the income statement. The right of use that is granted under the lease is recognized by the lessee at the present value of the future lease payments and an associated lease liability. Discounting is carried out using the interest rate on which the lease is based, insofar as this can be determined. If this is not possible, the incremental borrowing rate is applied. The incremental borrowing rate is calculated dependent on the lease term and the currency in which the lease is concluded, among other things.

In subsequent measurement, the right-of-use asset is amortized on a straight-line basis over the shorter of the lease term and the economic benefit. The lease liability is reduced by the repayment component.

If KUKA Group acts as lessor and the contract is classified as a finance lease, it is accounted for as a sale or financing transaction. A receivable is valued at the amount of the net investment in the lease and the resulting interest income is recognized as income. Impairment of lease receivables is measured, recognized and disclosed on the same basis as for financial assets within the scope of IFRS 9. Further information on this can be found in the section “Financial instruments”.

The classification of a contract as an operating lease with KUKA Group acting as the lessor means that the asset remains on KUKA Group’s balance sheet. The income from it is recognized in the income statement over the term of the lease. The asset is amortized in accordance with the applicable standard, if necessary.

Financial instruments

A financial instrument is any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another entity.

(i) Recognition and initial measurement

Financial instruments are recognized as soon as KUKA Group becomes a party to the contractual provisions of the financial instrument. In the case of standard market purchases or sales, the settlement date is relevant for initial recognition and derecognition.

A financial asset (other than a trade receivable without a significant financing component) or financial liability is measured initially at fair value. For an item that is not measured at fair value through profit or loss, transaction costs that are directly attributable to its acquisition or issue are added or deducted. Trade receivables without a significant financing component are initially measured at the transaction price.

(ii) Classification and subsequent measurement

Financial assets

Depending on the business model and the structure of contractual cash flows, financial assets are classified in the categories “at amortized cost”, “at fair value through other comprehensive income” or “at fair value through profit or loss”.

Thus, a financial asset in KUKA Group is classified and measured upon initial recognition as follows:

- Debt instruments measured at amortized cost (AC)
- Equity instruments measured at fair value through other comprehensive income (FVOCI)
- Equity instruments and derivatives measured at fair value through profit and loss (FVtPL)

Financial assets are not reclassified after initial recognition unless KUKA Group changes its business model for managing financial assets. In this case, all affected financial assets are reclassified on the first day of the reporting period following the change of business model.

KUKA Group recognizes a financial asset measured at amortized cost if both of the following conditions are met:

- The financial asset is held as part of a business model whose objective is to hold financial assets for the collection of contractual cash flows
- and the contractual terms of the financial asset give rise to cash flows at specified times that are solely repayments and interest payments on the outstanding principal.

On initial recognition of an equity investment that is not held for trading purposes, the Group may irrevocably elect to disclose subsequent changes in the fair value of the investment under other comprehensive income. This choice is made on a case-by-case basis for each investment.

All financial assets that are not measured at amortized cost or FVOCI are measured at FVtPL. This includes all derivative financial assets. On initial recognition, the Group may irrevocably elect to designate financial assets that otherwise meet the requirements for measurement at amortized cost or as debt instruments in the FVOCI category as FVtPL if doing so results in the elimination or significant reduction of accounting mismatches that would otherwise arise. KUKA Group does not make use of the fair value option.

Transfers of financial assets to third parties that do not result in derecognition are consistent with the Group continuing to account for the assets and, accordingly, holding them under the “sell” business model and classifying them in the FvtPL category. This concerns specific trade receivables that are subject to factoring agreements. Financial assets in the FVtPL category are subsequently measured at fair value. Changes in value, including any interest or dividend income, are recognized in profit or loss.

Financial assets in the AC category are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income and/or expenses, exchange rate effects, impairments and effects from derecognition are recognized in profit or loss. This mainly includes trade receivables held under the “hold” business model, rental deposits and current securities.

Equity instruments in the FVOCI category are subsequently measured at fair value. Dividends are recognized as income in profit or loss. Other changes in value are recognized in other comprehensive income and never reclassified to profit or loss, where appropriate within other comprehensive income.

To determine the impairment losses, KUKA Group applies a fixed percentage depending on the overdue period. In the event of default, a receivable is always derecognized. However, if there are initial indications that receivables cannot be collected in full, an immediate impairment loss is recognized. For the value adjustments of financial assets (excluding lease receivables, trade receivables and contract assets), KUKA Group in principle applies the general approach described in IFRS 9. The amount of the value adjustment is measured at initial recognition based on the expected 12-month credit loss, which corresponds to level 1. If there are indications as at the balance sheet date that the default risk has increased significantly since initial recognition, the value adjustment is calculated in the amount of the expected credit losses over the term of the loan (level 2). An indicator that a default risk has increased significantly is that the debtor no longer meets its short-term payment obligations or there are signs of a deterioration in the debtor's business performance.

For the aforementioned exceptions, the simplified approach according to IFRS 9 is applied. The amount of the value adjustment for lease receivables, trade receivables and contract assets is based on the expected credit losses over the entire term. It is irrelevant for allocation to level 2 whether the credit risk has increased since initial recognition.

Level 3 comprises financial assets that are credit-impaired at the balance sheet date due to the existence of objective indications, but which were not yet credit-impaired when they were initially recognized. The value adjustment is then recognized in the amount of the credit losses expected to be incurred over the term. KUKA Group views customer insolvencies as objective indications of value adjustment. Payments that are more than 90 days past due are also included in the analysis.

Among other things, current data relating to rating classes or historical default rates (provision matrix) are used for determining the risk provision. Forward-looking, publicly available information on macroeconomic factors and insolvency forecasts are also taken into account here. The default risk is reviewed and the default rates are updated once each year.

Default risks are taken into account using historical default rates in the area of trade receivables and contract assets. At the portfolio level, particularly in the case of business with major customers in the automotive sector, value adjustments are subject to separate credit rating monitoring. This credit rating monitoring is ensured by means of regular updates of credit default swaps. The same applies to value adjustment in the area of receivables from finance leases.

Financial liabilities

Financial liabilities are classified and measured at amortized cost or fair value through profit or loss (FVtPL). A financial liability is allocated to FVtPL if it is classified as held for trading purposes, is a derivative, or is designated as FVtPL upon initial recognition. KUKA Group does not make use of the fair value option.

Financial liabilities at FVtPL are measured at fair value, and changes in value, including interest expenses, are recognized in profit or loss. This includes derivative financial instruments with negative fair values.

Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expenses and foreign currency translation differences are recognized in profit or loss. Gains or losses on derecognition are also recognized in profit or loss. KUKA Group subsumes, for example, financial liabilities or liabilities to affiliated companies within this category.

(iii) Derecognition

Financial assets
KUKA Group derecognizes a financial asset when

- its contractual rights to cash flows from the financial asset expire, or
- it transfers its right to receive contractual cash flows to a transaction in which either:
  - essentially all the risks and rewards of ownership of the financial asset are transferred, or
  - if the Group neither transfers nor retains essentially all the risks and rewards of ownership and does not retain control of the transferred asset.

Financial liabilities
A financial liability is derecognized when the contractual obligations are fulfilled, canceled or have expired. Furthermore, a financial liability is also derecognized if its contractual terms are modified and the cash flows of the adjusted liability are significantly different. In this case, a new financial liability is recognized at fair value based on the adjusted terms. On derecognition of a financial liability, the difference between the carrying amount of the liability extinguished and the amount paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

(iv) Balancing

KUKA Group only offsets financial assets and financial liabilities if there is a legally enforceable right to offset the recognized amounts at the present time. Moreover, it must be intended that the adjustment be made on the basis of the net amount. If offsetting is excluded, the financial assets and liabilities are presented in the balance sheet at their gross amount.

(v) Derivatives

Derivative financial instruments constitute financial contracts whose value is derived from the price of an underlying asset (such as stocks, bonds, money market instruments or commodities) or a reference rate (such as currencies, indices or interest rates). Little or no initial investment is required and their settlement takes place at a future date. Examples of derivative financial instruments include options, forward contracts and interest rate swap transactions. KUKA Group uses derivative financial instruments to hedge cash flow risks. Derivative financial instruments are used in particular to hedge currency fluctuations.

In KUKA Group, all derivative financial instruments are recognized at fair value as at the trading date. Subsequent measurement is also at fair value. The fair values are determined with the aid of standard financial mathematical techniques, using current market parameters such as exchange rates and counterparty credit ratings (mark-to-market method).

If the derivative financial instruments have a positive fair value, they are recognized under other assets. A negative fair value, on the other hand, results in disclosure under other liabilities.

Cash and cash equivalents

Cash and cash equivalents comprise liquid funds, namely cash on hand, checks and cash balances with financial institutions, and are measured at amortized cost. Cash and cash equivalents are short-term, highly liquid financial instruments that are subject to an insignificant risk of changes in value. Cash equivalents serve the purpose of meeting payment obligations. For this reason, a financial asset can generally only be considered a cash equivalent if it has a maturity of three months or less from the date of acquisition. The relevant date for the remaining time to maturity is the date of acquisition.

If cash or cash equivalents cannot be defined as current (maturity of more than three months from the acquisition date) and are not highly liquid due to certain restrictions (so-called restricted cash), the accounting treatment is based on various special rules. For example, seized or frozen bank accounts or funds deposited in escrow accounts are considered restricted.

Financial investments

In KUKA Group, investments in continuing business units that are not material to the net assets, financial position and performance of the Group are classified in the FVtPL category and measured at fair value if this can be reliably determined. Under certain circumstances, however, the acquisition cost is a reasonable estimate of the fair value. If the indicators in accordance with IFRS 9 B5.2.4 are not met, cost is the best estimate of fair value.

Investments measured at equity

Investments measured at equity are accounted for in KUKA Group using the equity method. The starting point is the cost of the shares at the time of acquisition. Subsequently, the carrying amount of the investment is increased or reduced by the pro rata earnings and other changes in equity.

Inventories

In accordance with IAS 2, KUKA Group capitalizes and measures existing inventories at the lower of cost and current purchase price or net realizable value. The average cost method is used as the measurement standard for acquisition and production costs. The production costs include not only the direct unit costs but also an appropriate share of material and production overheads. Where necessary, discounts to lower net realizable values were also applied. In addition to valuation allowing disposal at no net loss, these discounts also take all other inventory risks into account. An impairment loss is reversed if the reasons for a write-down of inventories in the past no longer exist.

Current and deferred taxes

The actual income taxes are calculated based on the respective national taxable income and regulations for the year. In addition, the actual taxes reported in the financial year also include adjustment amounts for any tax payments or refunds for years not yet finally assessed, but excluding interest payments or interest refunds and penalties for back taxes. Tax liabilities are recognized for any amounts reported in the tax returns that will probably not be realized (uncertain tax positions). The amount is determined from the best possible estimate of the expected tax payment (expected value or most probable value of the tax uncertainty). Tax receivables from uncertain tax positions are recognized in the balance sheet if it is probable that they can be realized. Only if a tax loss carryforward or an unused tax credit exists will no tax liability or tax receivable be recognized for these uncertain tax positions, but instead the deferred tax asset will be adjusted for the tax loss carryforwards and tax credits not yet utilized.

Deferred tax assets and liabilities are recorded according to IAS 12 for all temporary differences between the carrying amounts of assets and liabilities on the Group balance sheet and their recognized value for tax purposes (liability method) as well as for tax loss carryforwards. Deferred tax assets for accounting and valuation differences as well as for tax loss carryforwards are only recognized to the extent that there is a sufficiently probable expectation that the corresponding benefit will be realized in the future. Deferred tax assets and liabilities are not discounted. Deferred tax assets are netted against deferred tax liabilities if the tax creditor is the same.

Pension provisions and similar obligations

The measurement of pension provisions and similar obligations is performed in accordance with IAS 19 and includes pension liabilities of KUKA Group from performance-based pension systems. Company obligations from defined benefit plans are determined separately for each defined benefit plan according to actuarial principles. The first step involves the retirement benefits being estimated that employees have acquired in return for their service in the current period and prior periods. The next step involves these retirement benefits being discounted using the project unit credit method. Not only the pensions and vested benefits known at the balance sheet date are taken into account with this method, but also expected future increases in salaries and pensions. The calculation is based on actuarial reports prepared annually under consideration of biometric accounting principles. If actuarial gains or losses arise in a period, they are recognized in other comprehensive income.

The company determines the net interest expense (net interest income) by multiplying the net liability (net asset value) at the beginning of the period with the underlying interest rate of the discount of the gross defined benefit pension obligation at the beginning of the period. If a past service cost is incurred due to changes in the plan, this is recognized directly in profit or loss in the period. The standard return on plan assets is recognized in the amount of the discount rate applied to pension obligations. Administrative expenses that are incurred for plan assets are recognized as part of the revaluation component in other comprehensive income, while other administrative costs are allocated to operating profit at the time the costs occur. Reinsurance policies with insurance companies are in place for obligation surpluses from pre-retirement schemes according to the block model, which are taken into account using a separate interest rate in the same way as the corresponding obligation. The amount added for obligations from pre-retirement schemes is proportional to the amounts in the applicable collective bargaining agreements. For the defined contribution plans, KUKA pays contributions to a public or private pension insurance carrier. Upon payment of the contributions, KUKA has no further obligations.

Other provisions

Other provisions are recognized if there is an equivalent obligation to third parties arising from a past event, the amount of the provision can be reliably estimated and the outflow of resources is deemed to be more likely than not.

A provision for restructuring measures is only recognized if the general requirements and those of IAS 37.72 are cumulatively met beforehand. According to IAS 37.72, a detailed, formal restructuring plan must additionally be drawn up and communicated to the persons affected. It is highly probable that the company can no longer withdraw from the resulting obligation.

As neither the time of occurrence nor the amount of the obligation is subject to uncertainty, liabilities in the personnel area such as vacation pay, and pre-retirement schemes are recognized under other liabilities.

If a provision is likely to occur within an ordinary business cycle, it is shown as current in the balance sheet. This period may also extend for longer than a year in individual cases. Non-current provisions with a term of more than one year are discounted to the balance sheet date on the basis of appropriate interest rates provided that the interest effect is classified as material.

Assets held for sale and liabilities directly associated with assets classified as held for sale

Non-current assets (or a disposal group) are classified as held for sale according to IFRS 5.6 – 9 if the associated carrying amount is mainly realized by a sales transaction or a distribution to shareholders and not by continued use. For this to be the case, the asset (or disposal group) in its current state under conditions that are established practice and common for the sale of such assets (or disposal groups) must be immediately available for sale and such sale must be highly probable. A sale is regarded as highly probable if the responsible management level has adopted a plan for the sale of the asset (or disposal group) and has actively started searching for a buyer and executing the plan. In addition, the asset (or disposal group) must actually be offered for sale at a price that adequately reflects its current fair value. The disposal must be expected to qualify for recognition as a completed sale within one year from the date of classification. Non-current assets and disposal groups held for sale are measured at the lower of carrying amount and fair value, less disposal costs. This does not apply to items that are presented within the disposal group but do not fall within the scope of IFRS 5.

Share-based compensation

A small number of people participate in the employee share program of Midea Group. Settlement is effected by means of equity instruments of Midea Group. The fair value at the date share-based payment arrangements are granted to employees is recognized as an expense with a corresponding increase in equity over the period in which the employees become unconditionally entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the relevant service conditions and non-market performance conditions are expected to be met, so that the final amount recognized as an expense is based on the number of awards that meet the relevant service conditions and non-market performance conditions at the end of the vesting period. For share-based compensation awards with non-vesting conditions, the grant-date fair value is determined by reference to those conditions and no adjustment is made for differences between expected and actual outcomes. Detailed effects on the Group are presented under other notes.

The fair value of the amount payable to employees in respect of stock appreciation rights that are settled in cash is recognized as an expense with a corresponding increase in liabilities over the period in which the employees become unconditionally entitled to those payments. The liability is remeasured at each reporting date and at the settlement date based on the fair value of the stock appreciation rights. Any changes in the liability are recognized in profit or loss.

Assumptions and estimates

KUKA Group's consolidated financial statements are prepared in compliance with the IFRS standards mandatory in the EU. In some cases, the structure of the rules and regulations means that estimates and assumptions have to be made which may subsequently change and deviate from the actual values. The assumptions and estimates could also have been made differently by the company management in the same reporting period for equally justifiable reasons. In the application of accounting policies, the company has made the following discretionary decisions, which in some cases have a significant effect on the amounts in the annual financial statements. Assumptions and estimates were used within KUKA Group for the following matters:

- Definition of the scope of consolidation
- Development costs
- Goodwill impairments
- Impairments of brand names with an indefinite useful life
- Deferred tax assets on loss carryforwards
- Impairment losses on trade receivables, lease receivables and contract assets
- Contract assets and contract liabilities
- Pensions and other post-employment benefits
- Provisions

Definition of the scope of consolidation

If KUKA Group has existing rights to direct the significant operations of a company, the latter is referred to as a subsidiary. Significant operations are those which have a material impact on the profitability of the company. Control is deemed to exist if KUKA Group is exposed to variable returns from its relationship with a company and can exert influence on the returns through its power to direct the significant operations. As a rule, the possibility of exercising control is based on KUKA Group having direct or indirect majority voting rights. Often, additional parameters are necessary for the assumption of control over a subsidiary. These include additional contractual agreements, which must be included in the assessment of the overall construct. A final assessment of the type of consolidation can only be made after all the relevant factors have been evaluated. Joint ventures are based on joint agreements, which exist if KUKA Group shares the management of activities conducted with a third party on the basis of a contractual agreement. Joint management is only present if decisions on significant activities require unanimous agreement from the parties involved. In the case of joint ventures the parties exercising the joint management hold rights to the net assets of the agreement. They are accounted for using the equity method, which is also applied to associated companies. Here, KUKA Group generally exercises a significant influence based on a shareholding of between 20% and 50%. Ultimately, the assessment of all parameters of the respective relationship is decisive for determining the type of consolidation.

Midea Group acquired a direct 50% stake in each of three Chinese companies of KUKA Group. The originally fully consolidated Shanghai Swisslog Technology Co, Ltd, Shanghai, China, and Guangdong Swisslog Technology Co, Ltd, Shunde, China, are accounted for as 50% at-equity investments due to the legal form of the control structure, while Swisslog Healthcare Shanghai Co, Ltd, Shanghai, China, is fully consolidated with a 50% minority interest due to its control structure.

Development costs

The requirements for capitalization have already been described in the accounting and valuation methods. However, the recoverability of the capitalized amounts must also be determined on the basis of estimates. For this purpose, management must make assumptions concerning the expected future cash flows from assets, the applicable discount rates and the timing of the inflow of expected future cash flows. If projects are still in the development stage, assumptions must additionally be made regarding costs yet to be incurred and the time of completion.

Goodwill

Goodwill existing within KUKA Group must be tested for impairment at least once a year. For each cash generating unit (CGU) to which goodwill is allocated, an estimate of the respective value in use must be made. To determine the value in use, management must estimate the future cash flows of the respective CGUs. Additionally, an appropriate discount rate must be selected to determine the present value of the cash flows. The selected discount rate is influenced by volatility in capital markets and interest rate trends. Exchange rate fluctuations and expected economic developments also affect the expected cash flows. Furthermore, continuous review is necessary to determine whether there is any indication of impairment. In addition to changes in individual parameters that affect computation such as a significant increase in market yields, a particular focus is placed on changes with an adverse effect on the company in the technological, market, economic or legal environment in which it operates. By means of these indicators KUKA regularly observes whether a triggering event is present that would necessitate an impairment test in accordance with IAS 36 for goodwill, but also for other non-current assets. For details about the carrying amounts of the assets recognized as goodwill and the performance of the impairment tests please refer to the discussion under note 7.

Brand names with an indefinite useful life

KUKA Group assesses the intrinsic value of brand names with an indefinite useful life at least once a year. This involves estimating the future cash flows based on a potentially fictitious licensing income and selecting an appropriate discount rate for calculating the present value of these cash flows for each brand name. In this case too, the selected discount rate, for example, is influenced by volatility in capital markets and interest rate trends. The expected cash flows are also influenced by exchange rate fluctuations and the expected economic developments.

Deferred tax assets on loss carryforwards

Deferred tax assets for loss carryforwards are recognized to the extent that it is probable that taxable income will be available such that the loss carryforwards can actually be used. The determination of the amount of deferred tax assets requires an estimate on the part of management regarding the expected timing and amount of anticipated future taxable earnings as well as future tax planning strategies. In the event of a series of losses in the recent past, deferred tax assets are only recognized to the extent that there is convincing evidence that sufficient taxable earnings will be available in excess of taxable temporary differences. In assessing the probability that taxable earnings will be available, identifiable causes are also ascertained which in all probability will not recur. For details please refer to the explanations under note 5.

Valuation allowances on trade receivables, lease receivables and contract assets

The valuation allowance on receivables or contract assets includes, to a significant extent, estimates and assessments of individual receivables or and contract assets based on the creditworthiness of the respective customer, current economic developments and the analysis of historical defaults on a portfolio basis. As far as the company derives the impairment on a portfolio basis using historical default rates, a decrease in the volume of receivables reduces such provisions accordingly and vice versa.

Contract assets and contract liabilities

In the Systems, Swisslog and Swisslog Healthcare segments in particular, there is a significant share of business from long-term projects which are accounted for over time in accordance with the provisions of IFRS 15.35. Revenue from the project is recognized depending on the percentage of completion. Particular emphasis is placed on the careful estimate of the progress of the work performed. Depending on the method used to determine the percentage of completion, the most important estimates include the total order costs, the costs yet to be incurred until completion, the total project revenues and risks as well as other assessments. The management team responsible for the respective project continuously monitors all estimates on a monthly basis and adjusts these as needed. Depending on the project progress and the consideration received, there is a contractual asset or a contractual liability for each project.

Pensions and other post-employment benefits

Expenditures under defined-benefit plans and other post-employment benefits are determined on the basis of actuarial calculations. The actuarial calculations are prepared on the basis of assumptions with respect to discount rates, future increases in wages and salaries, mortality rates and future pension increases. In line with the long-term orientation of these plans, such estimates are subject to significant uncertainties. Please see note 23 for further details.

Provisions

To a considerable degree, the designation and measurement of provisions for impending losses from contracts, of provisions for warranty obligations and of litigation provisions are subject to estimates being made.

KUKA Group recognizes a provision for impending losses when the current estimated total costs arising from the respective contract exceed the expected total revenue. These estimates may change due to new knowledge as the project progresses because long-term construction contracts in particular are awarded based on invitations to tender. Deficit orders are identified based on continuous project costing. This makes it necessary for the performance requirements and warranty costs to be assessed.

KUKA Group is also confronted with various legal disputes, the proceedings of which may result in penal or civil sanctions or fines. A provision is always recognized when it is likely an obligation will result that will lead to future cash outflows and the amount of which can be reliably assessed. The underlying issues are often complex and associated with great uncertainties. Judgment whether a present obligation arising from a past event is to be recognized on the balance sheet date, whether future cash outflows are probable and the obligation can be reliably assessed is therefore largely at the discretion of management. The company, with the assistance of external legal professionals, regularly assesses the respective stage of the proceeding. New findings can change the assessment and it may be necessary to adjust the provision accordingly. For further details please refer to note 24.

Changes in accounting and valuation methods

In fiscal 2023, KUKA Group took the following revised standards into account in the consolidated financial statements for the first time:

- Amendments to IAS 1, IFRS Practice Statement 2
- IAS 8: Accounting Policies, Changes in Accounting Estimates and Errors
- IFRS 17 – Insurance Contracts
- Amendment to IAS 12: Deferred Taxes Relating to Assets and Liabilities Arising from a Single Transaction

Amendments to IAS 1, IFRS Practice Statement 2

The amendments to IAS 1 and IFRS Practice Statement 2 relate to the disclosures on accounting policies. The previously stated “significant” accounting policies are replaced by “material” accounting policies in order to provide users of the financial statements with more relevant information. In principle, information is considered material if it is required in order to understand other material information in the financial statements. This applies, for example, to accounting policies that relate to material transactions. The concept of materiality here refers to qualitative and quantitative information.

IAS 8: Accounting Policies, Changes in Accounting Estimates and Errors

The definition of accounting estimates has been added to IAS 8. This serves to distinguish accounting estimates from changes in accounting policies or corrections of errors. The definition of terms is important, as changes in accounting policies are recognized retrospectively and changes in accounting estimates are recognized prospectively. It is now also clarified that changes in accounting estimates do not result in the correction of errors. Additionally, it is now stipulated that accounting estimates are present if, for example, accounting policies require the measurement of items. The amendments to IAS 8 apply to changes in accounting policies and changes in estimates made on or after the effective date.

IFRS 17 – Insurance Contracts

IFRS 17 “Insurance Contracts” applies as a replacement for IFRS 4 “Insurance Contracts”. The measurement model for insurance contracts introduced in IFRS 17 is based on the determination of current settlement values. As a result, the carrying amounts must be adjusted in each reporting period due to changes in estimates. The IFRS 17 standard regulates three measurement models.

The value of insurance contracts is generally measured using the “building block approach”. In addition to the discounted probability-weighted expected cash flows, an explicit risk adjustment and a contractual service margin are also taken into account. The contractual service margin represents the unearned profit from the contract and is recognized as income over the period in which the company provides the insurance cover. The changes in discount rates can be recognized either in the income statement or directly in other comprehensive income. Depending on how the option is exercised, this is likely to reflect the accounting treatment of financial assets in accordance with IFRS 9.

In addition to the “building block approach”, a simplified method for determining the provision for future insurance cover can also be applied (“premium allocation approach”). However, this only applies to certain insurance contracts with a short term.

Another value measurement model is the “variable fee approach”, which is used for contracts in which policyholders participate in the returns on the underlying assets. In this value measurement model, the company’s share of the changes in fair value is included in the contractual service margin.

As at December 31, 2023, KUKA Group had no insurance contracts or investment contracts with discretionary participation features.

Amendment to IAS 12: Deferred Taxes Relating to Assets and Liabilities Arising from a Single Transaction

The amendment to IAS 12 relates to the recognition of deferred taxes on transactions if the transaction gives rise to taxable and deductible temporary differences of the same amount on initial recognition. This relates in particular to leases with the lessee and restoration obligations, which lead to additional deferred tax assets and liabilities.

As IAS 12 previously contained no explicit regulations on the recognition of tax effects of leases by the lessee, different approaches were considered permissible in practice. KUKA's accounting policy in the past complies with the new regulations, with the result that the amendment to IAS 12 had no impact.

Effects of new accounting standards to be applied as of the 2024 fiscal year

KUKA does not plan to apply at an early stage the new or amended standards and interpretations whose application is not mandatory until later fiscal years. The effects of these new standards are being continuously evaluated. Standards whose application is mandatory as of January 1, 2024 are not expected to have any material impact on the consolidated financial statements.

Standard/Interpretation	Effective date	Planned application by KUKA AG
Amendments to IAS 1: Classification of liabilities	Jan. 1, 2024	Fiscal 2024
Amendments to IAS 12: Global minimum tax (pillar 2)	Jan. 1, 2024	Fiscal 2024
Amendments to IAS 7 and IFRS 7: Supplier Finance Arrangements	Jan. 1, 2024	Fiscal 2024 [1]
Amendments to IFRS 16: Lease Liability in a Sale and Leaseback	Jan. 1, 2024	Fiscal 2024
Amendment to IAS 21: Lack of Exchangeability	Jan. 1, 2025	Fiscal 2025 [1]
IFRS 18: Primary Financial Statements	Jan. 1, 2027	Fiscal 2027 [1]
IFRS 19: Subsidiaries without Public Accountability	Jan. 1, 2027	Fiscal 2027 [1]

[1] Pending adoption (endorsement) by the European Union

Global minimum tax (pillar 2)

In December 2021, the OECD published draft guidelines for the introduction of global minimum tax to ensure that the profits of multinational corporations with a total annual sales volume of at least €750 million are taxed at a minimum rate of 15% per country. The EU unanimously agreed in December 2022 to implement the regulations in the form of a directive. The EU directive had to be transposed into the national law of the member states by December 31, 2023, so that it applies to fiscal years beginning after that date. Some countries have already published draft legislation on the framework and passed the law accordingly. In Germany, the Minimum Tax Act was passed in December 2023 and thus comes into force on January 1, 2024.

For KUKA, the new legal framework applies from the 2024 fiscal year, as in principle the conditions for application have been met. Together with tax experts, KUKA AG is currently assessing the potential future impact of the regulations on the Group, including the impact on current taxes and tax payments. Due to the complexity of applying the legislation and calculating GloBE income, the quantitative impact of the legislation cannot yet be reliably estimated. In an initial indicative analysis, the jurisdiction for which the CbCR Safe Harbor regulations are relevant was examined. The Group closely monitors the progress of the legislative process in each country in which it operates.

KUKA applies the exception regarding the recognition of deferred taxes resulting from the introduction of global minimum taxation.

Amendments to IAS 7 and IFRS 7: Supplier Finance Arrangements

In May 2023, the IASB published the amendments and additions to the standards IAS 7 and IFRS 7. These relate to the disclosures in the notes in relation to finance arrangements with suppliers (reverse factoring agreements), as the information required by IAS 7 and IFRS 7 was considered insufficient. The new disclosure requirements are intended to increase the transparency of supplier finance arrangements.

The amendments relate to disclosures on the terms and conditions of supplier finance arrangements, ranges of maturity dates and information on liquidity risk. With regard to the disclosure of ranges of maturity dates, both the maturity dates for liabilities that are subject to reverse factoring and comparable trade payables that are not subject to finance arrangements must be disclosed. Furthermore, the amounts of liabilities subject to such an arrangement must be disclosed and broken down by amounts for which the suppliers have already received payments from the financial service providers. Moreover, the point at which the liabilities concerned are recognized in the balance sheet must also be disclosed.

Application of the new provisions of IAS 7 and IFRS 7 is mandatory for financial years beginning on or after January 1, 2024. The disclosure of a comparative period is not mandatory in the year of initial application. Endorsement by the European Union is still pending.

KUKA is currently investigating the possible future impact of the regulations on the Group and the associated additional disclosures in the notes.

Amendments to IFRS 16: Lease Liability in a Sale and Leaseback

The amendments made by the IASB to IFRS 16 and published in September 2022 relate to the subsequent accounting of sale and leaseback transactions. The amendments prevent the seller or lessee from recognizing a gain or loss on the retained right-of-use asset in the subsequent measurement of the lease liability. There may be an impact on sale and leaseback transactions that include variable lease payments that are not dependent on an index or interest rate.

The amendments were endorsed by the European Union in November 2023. Application of the new provisions is mandatory for fiscal years beginning on or after January 1, 2024. KUKA is currently investigating the impact of the regulations on the Group.

Explanation of items in the financial statements

Notes to the Group income statement

1. Sales revenues

KUKA Group recognizes sales revenues when a performance obligation has been fulfilled, for example, through the transfer of promised goods to the customer or a service rendered. With the sale of products such as industrial robots, the performance obligation is fulfilled at a specific point in time. KUKA Group also provides services over time, for example in the context of construction contracts. In these, the performance obligations are fulfilled over a specific period of time. In the case of predominantly downstream services, performance takes place both over a period of time and at a specific point in time.

The breakdown of revenues by region, based on the regional allocation of the subsidiaries, and also by segment is presented below.

	EMEA		Americas		APAC		Group	
in € millions	2022	2023	2022	2023	2022	2023	2022	2023
Services provided over a period of time	793.4	787.2	1,080.5	1,038.0	358.2	382.8	2,232.1	2,208.0
Services provided at a specific point in time	764.8	934.9	226.5	290.4	673.6	620.4	1,664.9	1,845.7
Total	**1,558.2**	**1,722.1**	**1,307.0**	**1,328.4**	**1,031.8**	**1,003.2**	**3,897.0**	**4,053.7**

	Systems		Robotics		Swisslog		Swisslog Healthcare		China		Corporate Functions/ Consolidation		Group	
in € millions	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Services provided over a period of time	996.1	917.4	56.0	44.6	698.9	752.4	224.3	235.0	276.5	275.9	-19.7	-17.3	2,232.1	2,208.0
Services provided at a specific point in time	92.0	89.1	1,051.2	1,207.7	72.1	86.0	15.9	20.7	605.1	557.1	-171.4	-114.9	1,664.9	1,845.7
Total	**1,088.1**	**1,006.5**	**1,107.2**	**1,252.3**	**771.0**	**838.4**	**240.2**	**255.7**	**881.6**	**833.0**	**-191.1**	**-132.2**	**3,897.0**	**4,053.7**

In the year under review, use was made for the first time of the exemption provided for in IFRS 15.121. The anticipated sales revenues from the existing order backlog of projects with an original expected term of more than one year in the amount of €1,435.4 million are expected to be realized in the following periods:

in € millions	2022	2023
Anticipated sales revenues from the existing order backlog[1]	2,912.4	1,435.4
(of which, not later than one year)[1]	(2,301.6)	(804.9)
(of which, later than one year)	(610.8)	(630.5)

[1] The previous year's figures include sales revenues from all current and non-current projects (no use yet of the exemption under IFRS 15.121)
Estimated amounts of variable consideration, which may only be recognized under certain conditions, are not included in the expected sales revenues.

2. Cost of sales, selling expenses, research & development expenses and general and administrative expenses

The breakdown of the cost of sales, selling expenses, research & development expenses and general and administrative expenses is shown below:

	Cost of sales		Selling expenses		Research and development expenses		General and administrative expenses		Total	
in € millions	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Cost of materials	2,198.3	2,170.7	6.3	4.2	19.8	22.1	7.1	7.6	2,231.5	2,204.6
Personnel expenses	712.0	740.1	180.5	189.0	144.2	139.5	177.3	188.8	1,214.0	1,257.4
Depreciation and amortization	53.7	54.4	14.9	15.5	33.4	33.8	30.7	32.1	132.7	135.8
Other expenses and income	123.0	141.8	110.9	140.3	-26.2	-0.5	-0.1	20.6	207.6	302.2
Total	**3,087.0**	**3,107.0**	**312.6**	**349.0**	**171.2**	**194.9**	**215.0**	**249.1**	**3,785.8**	**3,900.0**

Across all functional areas, there was a moderate increase of 3.0% in fiscal 2023 (2022: 17.2% increase). The cost of sales increased from €3,087.0 million in 2022 to €3,107.0 million in 2023. On the one hand, the use of materials was reduced despite higher sales volumes, while on the other hand personnel expenses rose by a similar amount. Within the cost of sales, foreign currency gains of €52.6 million (2022: €47.0 million) and losses of -€59.2 million (2022: -€51.7 million) from operational foreign currency transactions are recognized under other expenses and income. This also includes effects from derivatives used to hedge operational foreign currency risks.

Selling expenses rose by €36.4 million year on year. The higher personnel expenditure, depreciation and other expenses had an increasing effect. The increase in other expenses is attributable to the higher risk provision for expected default risks from trade receivables, lease receivables and contract assets (2023: impairment losses in the amount of €19.0 million; 2022: reversals of impairment losses in the amount of €6.7 million)

Research and development costs rose by 13.8% in 2023 (2022: increase of 7.3%). In the current fiscal year, impairment losses of €5.2 million were recognized in the area of research and development (2022: €6.8 million). Amortization of interest on borrowings capitalized in prior years remained virtually unchanged (2023: €0.5 million; 2022: €0.4 million). Other income includes subsidies received mainly in the China segment.

Administrative expenses increased compared to the previous year, mainly due to higher personnel and other costs. Among other things, KUKA continued to invest in various projects launched in previous years to optimize internal processes. Impairment losses in the administrative area amounted to €0.4 million and related to IT licenses that are no longer in use (2022: €0.0 million).

Personnel expenses are directly allocated to the functional areas. The following figures result:

in € millions	2022	2023
Wages and salaries	973.4	1,022.0
Social security payments and contributions for retirement benefits and provident funds	240.6	235.4
Personnel expenses	**1,214.0**	**1,257.4**

The table below shows the annual average number of employees in KUKA Group at the balance sheet date:

Employees by functional areas	Annual average		Balance sheet date			
	2022	2023	Total 2022	Total 2023	of which, Germany	of which, abroad
Manufacturing	9,647	9,743	10,004	9,415	2,531	6,884
Sales	1,578	1,693	1,651	1,682	504	1,178
Research and development	1,437	1,567	1,422	1,613	560	1,053
Administration	1,554	1,622	1,611	1,662	536	1,126
	14,216	**14,625**	**14,688**	**14,372**	**4,131**	**10,241**
Apprentices	267	266	303	288	206	82
Student trainees	61	72	73	66	36	30
Total	**14,544**	**14,963**	**15,064**	**14,726**	**4,373**	**10,353**

3. Other operating income and expenses

The other operating income and expenses include income and expenses that are not allocated to any of the functional areas (cost of sales, selling expenses, research & development, general and administrative expenses) or reported in another, separate item. Other operating income amounted to €17.6 million in fiscal 2023 and thus remained at roughly the prior-year level (2022: €17.5 million). Other operating income includes grants, special discounts and income from settlement agreements. In the reporting year, income in connection with the newly founded associated company ME Industrial Simulation Software Corporation in Japan was reported here. Other operating expenses increased slightly by €1.5 million from €12.0 million in 2022 to €13.5 million in 2023. These mainly included losses in connection with the subsidiary to be sold in Russia in the category “held for sale” (see note 28) and other taxes (2023: €5.3 million; 2022: €5.8 million). In addition, costs for organizational restructuring and the associated legal disputes as well as other taxes are reported in this area.

4. Financial result

The financial result, comprising financial expenses and financial income, showed a loss of €5.4 million in the year under review. This corresponds to a decrease of €13.4 million on the previous year (December 31, 2022: €8.0 million).

in € millions	2022	2023
Gains from changes in the fair value of financial investments	**3.2**	**1.5**
Losses from changes in the fair value of financial instruments	**-0.7**	**-1.4**
Interest income from finance leases	10.0	7.6
Remaining interest and similar income	14.7	9.7
Interest and similar income	**24.7**	**17.3**
Net interest component from pension provisions and other non-current liabilities to employees	-0.8	-2.4
Guarantee commissions	-1.4	-1.5
Interest expense for promissory note loans	-4.0	-1.5
Interest expense for inter-company loans	-3.9	-8.8
Capitalized financing costs	0.3	0.4
Interest expenses IFRS 16	-5.4	-6.4
Other interest and similar expenses	-6.7	-10.3
Interest and similar expenses	**-21.9**	**-30.5**
Foreign currency gains	**80.0**	**81.2**
Foreign currency losses	**-77.3**	**-73.5**
Financial result	**8.0**	**-5.4**

The result from changes in the fair value of financial instruments decreased to €0.1 million in fiscal 2023 from €2.5 million in the previous year. The ongoing changes in the fair value of interest rate swaps amounted to -€0.4 million in fiscal 2023 (2022: €2.9 million). In addition, dividends were received from the investment in CarepathRx Holding, Washington, USA (2023: €1.5 million; 2022: €0.0 million). By contrast, the investment in Roboception GmbH, Munich, was written down due to the company's strained financial situation. Additionally, the loan to Roboception GmbH, Munich, reported under other receivables and assets also had to be written down.

Interest income in the year under review fell from €24.7 million in the previous year to €17.3 million and mainly comprised interest income from finance leases (2023: €7.6 million; 2022: €10.0 million), primarily at KUKA Toledo Production Operations LLC., Toledo, USA, as well as interest income on bank balances.

Interest expenses rose from -€21.9 million in 2022 to -€30.5 million in 2023. The net interest component from pension provisions and other non-current liabilities to employees as well as the interest expenses for IFRS 16 increased year on year. Guarantee commissions increased slightly. Due to the repayment of the third tranche of the USD promissory note loan, interest expenses declined (2023: -€1.5 million; 2022: -€4.0 million). Both interest expenses for the inter-company loan and the credit lines from Midea Group and other interest and similar expenses increased year on year. Please refer to note 26 for more detailed information on the promissory note loan, the guarantees and the inter-company loan.

The foreign currency gains rose from €80.0 million in the previous year to €81.2 million. Gains from derivatives accounted for €38.0 million (2022: €42.6 million). The foreign currency losses fell from -€77.3 million in the previous year to -€73.5 million. Foreign currency losses from derivatives amounted to -€49.6 million (2022: -€47.7 million).

5. Taxes on income

Tax expense

Income tax expense breaks down by origin as follows:

in € millions	2022	2023
Current taxes	-91.4	-99.6
(of which, relating to other periods)	(-4.7)	(8.0)
Deferred taxes	66.5	58.0
(of which, from temporary differences)	(55.0)	(35.2)
(of which, from loss carry-forwards)	(11.5)	(22.8)
Tax expense	**-24.9**	**-41.6**

Of the current expenses for tax on earnings, -€7.8 million is attributable to domestic expenditure (2022: -€5.1 million) and -€91.8 million to foreign expenditure (2022: -€86.3 million). Current tax expense relating to other accounting periods totaling -€8.0 million (2022: expense of -€4.7 million) was incurred in German and foreign operations.

Deferred tax income relates to Germany in the amount of €0.6 million (2022: expense of -€13.2 million) and to other countries in the amount of €57.4 million (2022: income of €79.7 million). Deferred tax income results primarily from temporary valuation differences.

The expected tax expense based on earnings before taxes and the applicable tax rate for the KUKA companies in Germany remained unchanged at 32.0% and leads to the following actual tax expense:

in € millions	2022	2023
Earnings before tax expense	**126.3**	**152.8**
Expected tax expense	**-40.4**	**-48.9**
Tax rate-related differences	22.6	24.2
Tax reductions due to tax-exempt income	39.7	25.9
Tax increases due to non-deductible expenses	-9.0	-9.4
Tax expenses (–)/tax income (+) for prior years	-0.8	7.2
Change in allowance on deferred taxes	-37.9	-37.0
First-time recognition of previously unrecognized deferred tax assets on tax loss carryforward	8.8	5.1
Change in permanent differences	-3.0	-1.4
Tax impact of investments accounted for by the equity method	0.5	0.1
Effects resulting from tax rate changes	0.3	-1.1
Tax effect due to non-creditable withholding taxes	-5.9	-6.1
Other differences	0.2	-0.2
Taxes on income (actual tax expense)	**-24.9**	**-41.6**

The applicable tax rate in Germany still comprises corporate income tax of 15.0% as well as a solidarity surcharge of 5.5% and trade tax of 16.2% based on a uniform assessment rate, as was the case in the previous year.

In principle, deferred taxes were recognized on the basis of the applicable tax rate for each company in question.

There are no tax credits for which deferred taxes would need to be accounted.

In Germany, the Minimum Tax Act (“MinStG”) came into force with effect from December 28, 2023. The MinStG applies for the first time for fiscal years beginning after December 30, 2023. As the new statutory regulation did not enter into force in any of the countries in which a subsidiary is domiciled before January 1, 2024, there is no impact on the actual tax expense for fiscal 2023. KUKA applies the exception regarding the recognition of deferred taxes resulting from the introduction of global minimum taxation.

As a multinational group, KUKA must generally apply the Minimum Tax Act if the application requirements are met. Together with tax specialists, KUKA is currently assessing the potential future impact of the regulations on the Group, including the impact on current taxes and expected tax payments. Due to the complexity of applying the legislation and calculating GloBE income, the quantitative impact of the legislation cannot yet be reliably estimated. In an initial indicative analysis, the jurisdiction for which the CbCR Safe Harbor regulations are relevant was examined. As KUKA is not the ultimate parent company, an additional supplementary tax for 2024 should be incurred at shareholder level. For Germany, it is assumed that the transitional regulations are applicable and that no additional tax burden will therefore arise. The Group closely monitors the progress of the legislative process in each country in which it operates.

Deferred taxes

The value of deferred tax assets and liabilities due to temporary differences and tax loss carryforwards in the Group is associated with the following items:

	Deferred tax assets		Deferred tax liabilities	
in € millions	Dec. 31, 2022	Dec. 31, 2023	Dec. 31, 2022	Dec. 31, 2023
Non-current assets	143.2	188.3	97.5	86.1
Current assets	74.1	62.3	65.5	54.6
Provisions	24.2	41.2	17.6	20.6
Liabilities	62.0	39.9	40.1	30.9
Subtotal	**303.5**	**331.7**	**220.7**	**192.2**
Balancing item	-197.5	-169.7	-197.5	-169.7
Deferred taxes on temporary differences	**106.0**	**162.0**	**23.2**	**22.5**
Deferred taxes on tax loss carryforwards	43.7	43.0	–	–
Total	**149.7**	**205.0**	**23.2**	**22.5**
(of which, from items recognized in equity)	(1.9)	(4.0)	(2.3)	(2.3)

Valuation allowances to the carrying amount of deferred tax assets are recognized if the realization of the expected benefit of the deferred taxes in the planning period is not sufficiently probable. The estimates made are subject to change over time, which may result in the reversal of the valuation allowance in subsequent periods.

The recognized values on the balance sheet are written off in the event that the tax benefits that they represent are no longer expected to be realized. No deferred taxes were recognized on temporary differences amounting to €134.7 million (2022: €196.7 million).

In the loss carryforwards of €989.7 million (2022: €881.1 million), loss carryforwards amounting to €844.8 million (2022: €729.1 million) are not considered in the accounting of deferred taxes, which can for the most part be utilized indefinitely. An amount of €146.1 million from unrecognized loss carryforwards (2022: €147.0 million) will expire by 2029 if it is not utilized.

The loss carryforwards for which deferred taxes were capitalized relate to the total loss carryforwards as follows:

	Loss carryforwards for which deferred taxes were capitalized		Total existing loss carryforwards	
in € millions	Dec. 31, 2022	Dec. 31, 2023	Dec. 31, 2022	Dec. 31, 2023
Germany	118.4	122.2	489.6	523.2
China	4.1	2.4	79.6	88.8
Switzerland	19.7	10.2	176.9	238.0
Other	9.8	10.1	135.0	139.7
Total	**152.0**	**144.9**	**881.1**	**989.7**

Deferred tax income in the amount of €5.1 million (2022: €8.8 million) results from the recognition of deferred tax receivables on loss carryforwards from earlier periods which until now had not been included in or written down from the tax accrual/deferral. In the fiscal year, the valuation adjustment of deferred tax assets on loss carryforwards and on temporary differences totaling -€37.0 million (2022: -€37.9 million) had an effect on profit or loss.

Where deferred tax assets have not been impaired, it is generally expected, on the basis of a risk-adjusted and at the same time reliable planning horizon, that this tax-reducing potential will be utilized via taxable income, which is likely based on the expectations of Group companies. Planning uncertainty is accounted for by risk discounts on the tax planning calculations that increase over time.

As at the balance sheet date, the Group companies which had generated a tax loss in the current or prior period reported a net surplus of deferred tax assets totaling €53.7 million (2022: €57.6 million), mainly resulting from the German tax group of KUKA AG.

The Group companies of the German tax group generated tax losses in previous years, which led to a partial non-recognition of deferred tax assets in the past year. To the extent that the planned profits are probable within the meaning of IAS 12, deferred tax assets are recognized in the balance sheet.

For companies with a history of losses, deferred tax asset surpluses are not recognized unless there is convincing evidence of future taxable profits.

In accordance with IAS 12, deferred tax items must be recognized for the difference between the proportionate equity of a subsidiary recognized on the Group balance sheet and the investment carrying amount of this subsidiary on the tax balance sheet of the parent company (so-called outside basis differences) if it is likely that this difference will be realized. Since both KUKA Aktiengesellschaft and the subsidiaries in question are corporations, these differences are predominantly tax-exempt under section 8b of the Corporation Tax Law (KStG) upon realization and thus are permanent in nature. According to IAS 12.39, no deferred tax liability should be recognized even for temporary differences (e. g. those resulting from the 5% flat-rate allocation under section 8b KStG) if it is not likely, given control by the parent company, that these differences will reverse in the foreseeable future. Since no such reversal is expected, no deferred tax items had to be recognized on the balance sheet for this purpose. There are outside basis differences in the amount of €47.2 million (2022: €45.8 million).

Overall, the change in the balance of deferred tax assets and liabilities of €56.0 million (2022: €52.1 million) comprises amounts affecting net income totaling €58.0 million (2022: €66.5 million) and changes in deferred taxes not affecting net income, primarily relating to pension obligations, amounting to €2.0 million (2022: -€10.1 million). There is an effect from deconsolidation amounting to -€0.2 million (2022: €0.0 million), but there is no effect from the initial accounting for newly acquired fully consolidated companies (2022: -€1.4 million). There were also relevant foreign exchange effects amounting to -€3.8 million (2022: -€2.9 million).

6. Earnings per share

Undiluted/diluted earnings per share are as follows:

	2022	2023
Earnings after taxes and after loss from discontinued activities attributable to KUKA AG (in € million)	88.1	69.8
Weighted average number of shares outstanding (no. of shares)	39,775,470	39,775,470
Diluted/undiluted earnings per share after taxes and after loss from discontinued activities (in €)	**2.21**	**1.76**
Loss from discontinued activities (in € million)	–	-25.6
Earnings after taxes attributable to KUKA AG (in € million)	88.1	95.4
Diluted/undiluted earnings per share after taxes (in €)	**2.21**	**2.40**

In accordance with IAS 33, undiluted earnings per share are calculated from the earnings due to KUKA Aktiengesellschaft and the weighted average number of shares outstanding for the year.

The weighted average number of shares in circulation remained unchanged at 39.8 million as at the balance sheet date (December 31, 2022: 39.8 million shares).

Notes to the Group balance sheet: Assets

7. Intangible assets

The breakdown of the intangible fixed asset items and their development in the year under review and the previous year are shown in the following two tables.

Schedule of changes in intangible fixed assets in 2023

in € millions	Acquisition/manufacturing costs							Accumulated depreciation and impairment losses						Net carrying amount
	Status as of Jan. 1, 2023	Exchange rate differences	Additions	Disposals	Change in scope of consolida-tion/other	Reclassifica-tions	Status as of Dec. 31, 2023	Status as of Jan. 1, 2023	Exchange rate differences	Additions	Disposals	Change in scope of consolida-tion/other	Status as of Dec. 31, 2023	Status as of Dec. 31, 2023
1. Licenses and other rights	335.8	6.0	13.4	-4.7	-4.7	1.2	347.0	239.3	5.0	20.4	-2.3	-2.4	260.0	87.0
2. Self-developed software and other development costs	220.0	7.8	29.3	-47.5	2.9	0.2	212.7	105.6	3.6	26.0	-47.4	–	87.8	124.9
3. Goodwill	349.4	10.4	–	–	–	–	359.8	8.6	–	–	–	–	8.6	351.2
4. Advances paid and construction in progress	2.0	-0.1	1.9	–	–	-1.4	2.4	–	–	–	–	–	–	2.4
	907.2	**24.1**	**44.6**	**-52.2**	**-1.8**	**–**	**921.9**	**353.5**	**8.6**	**46.4**	**-49.7**	**-2.4**	**356.4**	**565.5**

Schedule of changes in intangible fixed assets in 2022

in € millions	Acquisition/manufacturing costs							Accumulated depreciation and impairment losses					Net carrying amount
	Status as of Jan. 1, 2022	Exchange rate differences	Additions	Disposals	Change in scope of consolida-tion/other	Reclassifica-tions	Status as of Dec. 31, 2022	Status as of Jan. 1, 2022	Exchange rate differences	Additions	Disposals	Status as of Dec. 31, 2022	Status as of Dec. 31, 2022
1. Licenses and other rights	328.1	6.7	4.7	-15.6	6.4	5.5	335.8	226.7	4.7	23.5	-15.6	239.3	96.5
2. Self-developed software and other development costs	190.0	6.1	31.6	-3.1	–	-4.6	220.0	79.2	3.4	26.1	-3.1	105.6	114.4
3. Goodwill	331.8	10.5	–	–	7.1	–	349.4	8.6	–	–	–	8.6	340.8
4. Advances paid and construction in progress	0.9	–	2.0	–	–	-0.9	2.0	–	–	–	–	–	2.0
	850.8	**23.3**	**38.3**	**-18.7**	**13.5**	**–**	**907.2**	**314.5**	**8.1**	**49.6**	**-18.7**	**353.5**	**553.7**

KUKA Group recognized brands in the amount of €27.5 million (2022: €26.2 million), which are subject to both scheduled depreciation and also always to an impairment test when a triggering event occurs, but at least once a year. The calculation is based on the value in use. The result of the impairment test for the 2023 fiscal year did not indicate any need for impairment, thus confirming the recoverability of the residual carrying amount. The carrying amounts of the brand names allocated to the cash-generating units (CGUs) Swisslog and Healthcare amounted to €16.6 million (2022: €15.4 million) and €9.5 million (2022: €8.8 million) respectively. The year-on-year changes in the carrying amount relate to scheduled depreciation and currency effects.

Goodwill

Goodwill amounted to €351.2 million in the year under review (2022: €340.8 million). The increase in goodwill in the current fiscal year is due to currency effects. The allocation of goodwill to the cash generating units (CGUs) listed below corresponded to the current segment structure. The pre-tax discount rate (weighted average cost of capital (WACC)) used at CGU level is also presented below.

	Dec. 31, 2022		Dec. 31, 2023	
in € millions	Goodwill	WACC (%)	Goodwill	WACC (%)
Systems	28.0	10.6	27.8	14.8
Robotics	76.4	13.9	76.3	16.5
Swisslog	138.5	10.8	145.4	16.5
Swisslog Healthcare	62.1	7.2	65.2	9.5
China	35.8	12.9	36.5	15.0
Total	**340.8**		**351.2**	

The impairment test carried out in the current year under review, which was again performed as at September 30, was based on a three-year detailed planning period and a further period of two years in which strategic planning was applied. Together with the market-specific growth rate of 2.0%, these five years formed the basis for calculating the perpetuity.

In the context of determining the pre-tax discount rate (weighted average cost of capital (WACC)), the cost of equity capital and borrowing costs were determined on the basis of segment-specific peer groups. These companies have similar activity and product portfolios to KUKA Group and thus comprise the most important national and international competitors. The ratios for the cost of equity capital and the cost of borrowed capital were determined by CGU based on the average leverage ratios of the respective peer group for the last two years.

The tax rates used per segment were between 19.2% and 29.6% (Systems CGU: 25.3% (2022: 20.9%); Robotics CGU: 29.6% (2022: 23.8%); Swisslog CGU: 20.1% (2022: 21.1%); Swisslog Healthcare CGU: 26.8% (2022: 24.9%); China CGU: 19.2% (2022: 25.0%)).

The market risk premium for the respective CGUs was one of the most important components in the WACC calculation. A market risk premium of 7.00% was applied in all business segments, as in the previous year. The beta factor determined as a two-year average of the respective peer group amounted to 1.138 (2022: 1.081) for the Systems CGU, 1.149 (2022: 1.199) for the Robotics CGU, 1.367 (2022: 1.142) for the Swisslog CGU, 0.659 (2022: 0.678) for the Swisslog Healthcare CGU and 1.152 (2022: 1.217) for the China CGU. While observing the possible ranges of the market risk premium, a 1% higher WACC would only marginally influence the goodwill – as marginally as a reduction in sales revenues over the entire planning period by 10% with a correspondingly lower cash flow.

Self-developed software and other product development costs

Research and development expenses increased from €171.2 million in 2022 to €194.9 million in 2023. IAS 38 stipulates that costs for self-developed software and other product developments must be capitalized if relevant criteria are met. KUKA Group recognizes these expenses at production cost, which includes directly attributable costs and appropriate allocations for overheads and depreciation.

Borrowing costs for qualifying assets are taken into account in the production costs based on the Group capitalization rate of 1.74% (2022: 1.26%).

The business segments are working – depending on their focus – on various projects relating to mechanical systems as well as power and control software for robots. In addition, applications for medical technology and automation solutions are being developed or improved. Borrowing costs of €0.4 million were recognized for the 2023 fiscal year (2022: €0.3 million).

As at December 31, 2023, development costs of €124.9 million (2022: €114.4 million) had been capitalized. This corresponds to an increase of €10.6 million compared with the end of fiscal 2022.

At €29.3 million, additions in the year under review were slightly below the prior-year level (2022: €31.6 million).

In the year under review, €5.6 million was recognized as impairment losses on intangible assets (2022: €6.8 million) for projects no longer being pursued.

8. Tangible assets

The breakdown of the tangible asset items and their development in the year under review and the previous year are shown in the following tables. Please refer to the management report for details of the investment focuses.

Schedule of changes in KUKA Group's tangible assets 2023

	Acquisition/manufacturing costs							Accumulated depreciation and impairment losses							Net carrying amount
in € millions	As at Jan. 1, 2023	Currency difference	Additions	Disposals	Change in scope of consolidation/other	Reclassifications	As at Dec. 31, 2023	As at Jan. 1, 2023	Currency difference	Additions	Disposals	Change in scope of consolidation/other	Reclassifications	As at Dec. 31, 2023	As at Dec. 31, 2023
1. Land, similar rights and buildings including buildings on land owned by third parties	364.8	-7.1	6.8	-4.6	-10.3	41.5	391.1	124.1	-1.5	14.7	-3.4	-5.8	-1.3	126.8	264.3
2. Technical plant and equipment	201.1	-1.6	19.6	-6.3	-3.8	4.4	213.4	133.9	-1.0	14.7	-4.3	-2.2	0.3	141.4	72.0
3. Other equipment, factory and office equipment	198.2	-1.6	24.6	-4.5	-5.7	1.4	212.4	149.3	-1.3	19.0	-4.1	-4.5	-0.3	158.1	54.3
4. Advances paid and construction in progress	45.8	-2.1	31.5	-0.5	–	-47.3	27.4	4.6	–	–	–	–	1.3	5.9	21.5
	809.9	**-12.4**	**82.5**	**-15.9**	**-19.8**	**–**	**844.3**	**411.9**	**-3.8**	**48.4**	**-11.8**	**-12.5**	**–**	**432.2**	**412.1**

Schedule of changes in KUKA Group's tangible assets 2022

	Acquisition/manufacturing costs						Accumulated depreciation and impairment losses						Net carrying amount
in € millions	Status as of Jan. 1, 2022	Exchange rate differences	Additions	Disposals	Reclassifications[1]	Status as of Dec. 31, 2022	Status as of Jan. 1, 2022	Exchange rate differences	Additions	Disposals	Reclassifications	Status as of Dec. 31, 2022	Status as of Dec. 31, 2022
1. Land, similar rights and buildings including buildings on land owned by third parties	349.5	0.3	6.9	-6.8	14.9	364.8	116.6	–	13.4	-5.9	–	124.1	240.7
2. Technical plant and equipment	190.7	1.0	14.4	-9.7	4.7	201.1	127.1	0.7	14.6	-8.5	–	133.9	67.2
3. Other equipment, factory and office equipment	189.3	0.7	18.6	-11.9	1.5	198.2	141.6	0.6	19.0	-11.9	–	149.3	48.9
4. Advances paid and construction in progress	28.9	-1.8	43.0	-2.1	-22.2	45.8	4.6	–	–	–	–	4.6	41.2
	758.4	**0.2**	**82.9**	**-30.5**	**-1.1**	**809.9**	**389.9**	**1.3**	**47.0**	**-26.3**	**–**	**411.9**	**398.0**

[1] The amount of €1.1 million reported in the previous year as a reclassification relates to a reclassification to the item "Investment property".

Investment property

in € millions	2022	2023
As at Jan. 1	–	9.4
Additions	8.3	–
Reclassifications from property, plant and equipment (advances paid and construction in progress)	1.1	–
Depreciation and amortization	–	-0.4
Exchange rate differences	–	-0.6
As at Dec. 31	**9.4**	**8.4**

The property was completed at the end of December 2022. There were no further additions to this item in the 2023 reporting year.

As at December 31, 2023, the fair value of the investment property was €10.5 million, corresponding to an increase in value of 20% compared to the carrying amount. A valuation by an independent expert, who has a recognized, appropriate professional qualification and current experience with the location and type of property being appraised had taken place as at December 31, 2023. In the fair value hierarchy of IFRS 13, this investment property is classified as level 3.

The commercial property was leased to third parties under operating leases. Each of the leases initially consists of a non-cancelable period of three years. Subsequent extensions will be negotiated with the lessee. In 2023, rental income of €1.2 million was generated (2022: €0.0 million). In the future, lease income from operating leases where the Group is the lessor will be recognized in profit or loss on a straight-line basis over the lease term. Receivables in the amount of the minimum lease payments under the leases are as follows:

in € millions	2022	2023
Up to one year	1.1	2.6
1 – 5 years	3.3	2.7

Government grants

Within KUKA Group, only the gross presentation of government grants in accordance with IAS 20.26 was applied. This means that grant-related payments for an asset may not be deducted from the carrying amount of the asset. Instead of reducing the carrying amount of the asset, the payment is recognized under other liabilities, which is recognized systematically in the income statement over the useful life of the asset. Government grants totaling €25.0 million (2022: €32.4 million) were received and directly released to income. There were no contingently repayable grants as of the balance sheet date. Investment-related grants, which are reported under other liabilities, amounted to €8.6 million in the past fiscal year (2022: €11.2 million).

9. Financial investments

No new financial investments were made in the year under review. The following table shows the changes in financial investments for the reporting periods ending December 31, 2023 and 2022:

in € millions	FVtPL
Opening balance Jan. 1, 2022	**5.0**
Additions	0.1
Disposals/sales proceeds	-0.6
Reclassifications/foreign currency effects/dividend	0.3
Balance as at Dec. 31, 2022/Jan. 1, 2023	**4.8**
Additions	2.1
Disposals/sales proceeds	-2.8
Reclassifications/foreign currency effects/dividend	-1.3
Amounts recognized in profit or loss	0.8
Closing balance Dec. 31, 2023	**3.6**

At the beginning of fiscal 2023, the shares in Otsaw Technology Solutions Pte. Ltd., Singapore, Singapore were swapped with with shares in Otsaw Digital Pte.Ltd. on an equal footing. In addition, the shares in Pharmony SA, Luxembourg, Luxembourg, were sold during fiscal 2023. Dividends amounting to €1.5 million were received from the investment in Carepath RX Holding, Washington, USA. Another investment in the Robotics segment was impaired due to the financial situation.

10. Investments accounted for at equity

The number of investments accounted for using the equity method fell by one company. Further information can be found under “Investments in associates” and “Disposals” in the section on changes in the scope of consolidation. The Group does not apply the disclosures in the notes pursuant to IFRS 12.B12 and B13, as the investments are in themselves of minor importance for KUKA Group. The profit recognized in fiscal 2023 was €0.4 million (2022: €1.7 million).

A further reduction in the carrying amount was related to the put option exercised as planned at the beginning of fiscal 2023, whereby the shares in Otsaw Swisslog Healthcare Robotics Pte. Ltd., Singapore, Singapore, were reduced by one third. The remaining changes related to currency effects, among other things.

11. Leases

KUKA as a lessor

KUKA Toledo Production Operations LLC., Toledo, USA (KTPO)

KUKA Toledo Production Operations LLC, Toledo, USA (KTPO) manufactures Jeep Gladiator bodies under the terms of a pay-on-production contract with Chrysler. The contract is a finance lease and runs until March 2025.

A non-current lease receivable of €14.8 million (2022: €65.2 million) and a current lease receivable of €36.2 million (2022: €39.7 million) existed as at the balance sheet date of December 31, 2023. Revenues generated from sales of vehicle bodies are reduced by the fictitious lease payment. The interest component included in the fictitious leasing rate is booked under interest result, while the repayment component of this payment reduces the receivables as per schedule.

In fiscal 2023, the default risk of the lease receivable increased significantly based on the currently planned purchase volume. The value adjustment was therefore adjusted accordingly and led to a reduction in the net value of the long-term lease receivable.

A total of €7.8 million was spent on modernization and conversion work at the production facility in the year under review, which will be capitalized as construction in progress until put into operation. Production of the new Jeep Gladiator model is scheduled to start in 2024. With the start of series production, a finance lease receivable from the customer will be capitalized and the fixed assets derecognized.

Swisslog Australia Pty.Ltd., Sydney, Australia

Swisslog Australia Pty Ltd. is manufacturing the warehouse automation and robot system, including the software required for operation, for a customer in Australia. A financing partner is also involved, who is financing production during the construction phase and then becoming the legal owner of the system once it is ready for use by the customer. However, only the customer has control over the use of the system. Consequently, despite the fact that the financing partner is becoming the legal owner of the system, it has no control over the production plant or decisions regarding its use. This transaction is therefore purely a financing agreement. All amounts received or paid in connection with this are recognized as other liabilities.

By contrast, the contract with the customer, to whom the right to control the use of the system for five years is transferred in return for a consideration, constitutes a finance lease. The expenses for the construction of the system are capitalized until it is put into operation and are not recognized until the customer starts production. The minimum payments stipulated in the contract are recognized as a finance lease receivable. All payments in excess of this are recognized directly in sales.

The scope of the project was expanded considerably by extending the contract in 2023. A non-current lease receivable of €4.5 million (2022: €1.0 million) and a current lease receivable of €1.5 million (2022: €0.3 million) existed as at the balance sheet date of December 31, 2023. The interest component included in the leasing rate is booked under interest result, while the repayment component of payments reduces the receivables as per schedule.

The other lease was of minor significance for KUKA Group as at the balance sheet date.

At the end of the fiscal year, non-current lease receivables totaled €19.5 million (2022: €66.4 million) and current lease receivables totaled €38.4 million (2022: €41.5 million). Impairment losses on lease receivables in accordance with IFRS 9 were up €13.3 million to €14.5 million as at the balance sheet date (2022: €1.2 million). Accordingly, the gross value of non-current lease receivables amounted to €32.9 million (2022: €66.5 million) and current lease receivables to €39.5 million (2022: €42.5 million). For the reconciliation of the impairment losses, please refer to note 29 d).

The fair value of long-term lease receivables in accordance with IFRS 7, which was determined by discounting the long-term cash flows using the Group's incremental borrowing rate, amounted to €21.6 million in fiscal 2023 (2022: €58.4 million).

There was no capital gain or loss in either the year under review or the previous year. Financial income on the net investment in the leases amounted to €7.6 million in fiscal 2023 after €10.0 million in the previous year.

The reconciliation to the total present value of the outstanding total minimum lease payments for the existing leases is shown below:

in € millions	2022	2023
Finance lease gross investments	110.3	63.3
(of which, not later than one year)	(48.7)	(42.6)
(of which, later than one year and not later than five years)	(61.6)	(20.7)
Unrealized financial income	2.4	5.4
Present value of outstanding minimum lease payments	**107.9**	**57.9**
(of which, not later than one year)	(41.5)	(38.4)
(of which, later than one year and not later than five years)	(66.4)	(19.5)

KUKA as a lessee

As a lessee, KUKA Group reports buildings, technical equipment, cars and IT hardware, among other items, in its balance sheet. At the balance sheet date, €127.9 million (2022: €111.9 million) in right-of-use assets were capitalized and reported separately in the balance sheet. Additions to right-of-use assets amounted to €63.3 million in the year under review (2022: €33.4 million). The increase is primarily due to the new rental agreements for land and buildings in Germany and the USA. The right-of-use assets per existing asset class are shown below:

in € millions	2022	2023
Right-of-use assets for land and buildings	99.6	110.7
Right-of-use assets for technical equipment	11.1	15.9
Right-of-use assets for other factory and office equipment	0.7	0.4
Other right-of-use assets	0.5	0.9
Total	**111.9**	**127.9**

The right-of-use assets are depreciated over the shorter of the lease term and the useful economic life. The prevailing period within KUKA Group is between one and 23 years, with an average of around four years. The depreciation recognized in the respective functional areas totaled €40.5 million in the 2023 fiscal year (2022: €35.6 million). The depreciation amount per asset class is shown below.

in € millions	2022	2023
Depreciation of land and buildings	27.0	30.7
Depreciation of technical equipment	7.7	8.8
Depreciation of other factory and office equipment	0.5	0.5
Other depreciation	0.4	0.5
Total	**35.6**	**40.5**

Total cash outflows from leases recognized in the balance sheet amounted to €47.2 million in fiscal 2023 (2022: €39.5 million). Expenses for short-term leases with a term of less than one year totaled €1.7 million in fiscal 2023 (2022: €1.9 million). The amount incurred for leases for assets with an original price of less than €5,000 each amounted to €0.7 million (2022: €0.2 million).

Expenses for variable lease payments amounting to €23.7 million (2022: €21.0 million) were not included in the valuation of lease liabilities. The previous year's amount has been adjusted for better comparability and only includes expenses incurred outside the Group.

There were no sale-and-leaseback agreements in the Group.

KUKA Group expects a future cash outflow of €0.8 million (2022: €5.1 million) from contracts that have already been concluded but have not yet started, of which €0.7 million will fall due within one year and the remaining €0.1 million in 2025. For further details on lease liabilities, please refer to note 25.

The Group has several lease agreements that contain renewal and termination options. These options are negotiated by management in order to manage the portfolio of leased assets flexibly and in line with the Group's respective business requirements.

12. Inventories

in € millions	Dec. 31, 2022	Dec. 31, 2023
Raw materials and supplies	334.9	241.0
Work in process	152.2	94.3
Finished goods	168.7	150.8
Advances paid	64.0	52.9
Inventories	**719.8**	**539.0**

Write-downs relative to gross value increased by €17.3 million to €101.3 million (2022: €84.0 million). Total reversals of impairment losses amounted to €6.0 million in the year under review (2022: €6.8 million).

13. Trade receivables

Trade receivables increased from €713.4 million in 2022 to €843.5 million. These receivables have a residual term of less than one year.

The trade receivables subject to IFRS 9 are shown below:

in € millions	Not overdue	Less than 31 days	31 to 60 days	61 to 90 days	91 to 180 days	More than 180 days	Gross carrying amount of the receivables	Value adjustments for credit-impaired receivables	Value adjustments for non-credit-impaired receivables	Net carrying amount of the receivables
As at Dec. 31, 2022	614.0	72.8	17.6	6.7	11.7	8.5	**731.3**	-13.2	-4.7	**712**
As at Dec. 31, 2023	777.0	47.2	21.1	6.3	6.9	3.2	**861.7**	-13.6	-4.6	**843.5**

An expected default rate per segment was determined depending on the overdue period. Each company in the Group has the option of making additional write-downs based on empirical values.

The development of the impairment losses on credit-impaired receivables and non-credit-impaired receivables is shown separately and can be found in note 29 d).

Trade receivables in the amount of €136.0 million were transferred to several banks against liquid funds in fiscal 2023 (2022: €34.1 million). The KUKA Group receivables in question are assigned to the “sell” business model and are therefore measured at fair value through profit or loss. The costs incurred by the sale to the banks, including the interest incurred in the amount of €0.5 million (2022: €0.6 million), were recognized in profit or loss.

14. Contract assets and contract liabilities

At the end of fiscal 2023, contract assets of €431.9 million were capitalized (December 31, 2022: €506.3 million), representing a decline of €74.4 million. Contract liabilities rose by €17.9 million in the reporting period, from €530.1 million in 2022 to €548.0 million in the year under review. Depending on whether KUKA Group has performed the service or whether it has been rendered by the customer, the contract is recognized in the balance sheet as either an asset or a contract liability. The services provided by KUKA Group and the payments made by the customer during the contract term may differ. Accordingly, the change in contractual assets and liabilities is mainly attributable to the fulfillment of performance obligations.

Due to the close link in terms of content as well as the clearer form of presentation, this chapter deals with both the asset and liability items. The significant changes to the contract assets and contract liabilities for the year under review and the previous year are shown below:

in € millions	Dec. 31, 2022 Contract assets	Dec. 31, 2022 Contract liabilities	Dec. 31, 2023 Contract assets	Dec. 31, 2023 Contract liabilities
Sales revenues included in contractual liabilities at the beginning of the period	–	53.7	–	33.1
Increase due to customer payments received	–	494.3	–	506.5
Reclassification from contractual assets to trade receivables	-810.1		-999.5	
Changes due to adjustment of the progress	382.1	61.0	397.9	32.2
Impairments	-8.8		-1.9	

Contract costs totaling €3.1 million (2022: €1.0 million) were capitalized in fiscal 2023. In accordance with IFRS 9, an impairment loss of -€13.7 million (2022: -€9.6 million) was recognized for contract assets. As a result, the gross carrying amount of contract assets was €445.6 million (2022: €515.9 million). For the reconciliation of the risk provision for expected default risks on contractual assets, please refer to note 29 d). Contract assets fall into the same risk category as receivables that are not overdue.

15. Other receivables and other assets

in € millions	2022	2023
Residual term over 1 year		
Other financial receivables	0.9	0.9
Other non-financial receivables	0.3	0.9
Assets from overfunded pension plans	4.6	4.6
Total	**5.8**	**6.4**
Residual term up to 1 year		
Receivables from tax authorities	53.3	57.6
Other financial receivables	25.5	76.6
Other non-financial receivables	47.4	50.7
Total	**126.2**	**184.9**
Other receivables and other assets	**132.0**	**191.3**

Current other assets increased from €126.2 million in 2022 to €184.9 million in the year under review. Receivables from tax authorities were up by €4.3 million to €57.6 million in 2023 (2022: €53.3 million) and mainly included sales tax receivables.

Investments in current securities with an overall term of significantly less than one year are reported under other current financial receivables. These are classified as amortized cost (AC) and impaired using the credit default swap of the respective bank and the historical default rate of the respective segment. The impairment loss for this amounted to €0.1 million (2022: €0.0 million). The gross carrying amount amounted to €45.0 million (2022: €0.0 million). Based on the external rating, KUKA Group has categorized the issuers of these short-term securities in internal default risk rating class 1.

Other current financial receivables include advance payments amounting to €4.4 million for the transfer of the shares in Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., Yangzhou City, China, which has not yet been completed, in conjunction with the sale of KUKA Industries GmbH & Co. KG, Obernburg, Germany.

Furthermore, other current financial receivables include derivatives with a positive fair value, rental deposits and other lendings. Additionally, the category “other non-financial receivables” includes other assets as deferred income in the amount of €34.4 million (2022: €24.8 million).

16. Cash and cash equivalents

KUKA Group maintains bank balances exclusively at financial institutions with an excellent credit rating. Furthermore, funds to be invested are distributed across several financial institutions and the parent company in order to diversify risk.

For further details please refer to note 26.

The impairment loss on cash and cash equivalents was calculated on the basis of expected losses. As in the previous year, no default risk was recognized in the year under review.

in € millions	Dec. 31, 2022	Dec. 31, 2023
Cash on hand	0.2	0.4
Cash and bank balances	494.3	531.0
Total	**494.5**	**531.4**

Regulatory requirements or local company law provisions in certain countries may restrict the Group’s ability to transfer assets to or from other companies within the Group. Cash and cash equivalents are subject to local exchange restrictions in certain countries (for example, China). There, the export of capital from the respective country is generally only possible in compliance with applicable foreign exchange controls. Beyond that, there are no significant restrictions. Bank balances in China totaled €411.2 million in fiscal 2023 (2022: €380.7 million).

Notes to the Group balance sheet: Equity and liabilities

17. Equity

The consolidated statement of changes in equity and the statement of comprehensive income show the changes in equity including those not affecting net income.

18. Subscribed capital

As in the previous year, the company's share capital amounts to €103,416,222.00 (December 31, 2022: €103,416,222.00) and is subdivided into 39,775,470 outstanding no-par-value registered shares (December 31, 2022: 39,775,470 no-par-value bearer shares). Each share is entitled to one vote. The no-par-value registered shares have a theoretical portion of the share capital amounting to €2.60.

19. Capital reserve

The capital reserve applies to KUKA Aktiengesellschaft.

20. Revenue reserves

The revenue reserves include the accumulated retained earnings of KUKA Aktiengesellschaft and its consolidated subsidiaries.

As per the resolution of the Annual General Meeting, no dividends were distributed in the year under review for fiscal 2022. In addition, the share-based compensation under the employee share program of Midea Group is included in the revenue reserves. The other changes related to the currency effects from the liquidation of Swisslog Healthcare Netherlands B.V., which do not have to be recycled in accordance with IAS 21.48.

21. Minority interests

Minority interests relate to Swisslog Healthcare Trading MEA LLC, Dubai (United Arab Emirates), Swisslog Middle East LLC, Dubai (United Arab Emirates), Swisslog Healthcare Shanghai Co., Ltd., Shanghai (China), KUKA Robotics China Co., Ltd., Shanghai (China), KUKA Robotics Guangdong Co., Ltd, Foshan (China) as well as KUKA Robotics Manufacturing China Co., Ltd., Shanghai (China). The adjustment item for minority interests in equity, which also includes foreign currency effects and the pro rata minority earnings, decreased by €4.8 million from €332.2 million in 2022 to €327.4 million in 2023.

The table below shows information on non-controlling interests in total assets and total comprehensive income. The amounts are before intra-Group eliminations.

in € millions	2022	2023
Percentage of non-controlling interests (%)	**50.0**	**50.0**
Non-current assets	534.4	544.6
Current assets	1,158.0	1,034.8
Non-current liabilities	-3.0	-1.3
Current liabilities	-618.6	-511.6
Net assets	**1,079.9**	**1,066.5**
Net assets of non-controlling interests	540.1	533.4
Sales revenues	1,328.3	1,068.4
Net income	36.6	29.3
Other income	-15.7	2.2
Total comprehensive income	**20.8**	**31.6**
Profit attributable to non-controlling interests	13.3	15.8
Other comprehensive income attributable to non-controlling interests	-7.9	-21.9
Cash flow from operating activities	-121.3	43.4
Cash flow from investment activities	-26.6	-17.9
Cash flow from financing activities	25.4	18.1
Foreign currency effects	1.0	-20.7
Net increase in cash and cash equivalents	**-121.5**	**22.9**

22. Other reserves

Other reserves decreased by -€48.1 million to €44.7 million as at the balance sheet date (2022: €92.8 million). On the one hand, exchange rate effects of -€38.3 million had a positive impact on equity (2022: €20.0 million). On the other hand, there was an increase in actuarial losses on pension provisions amounting to -€11.7 million and in the deferred taxes on these provisions amounting to €1.9 million.

23. Pension provisions and similar obligations

Appropriate pension provisions were established for liabilities from vested benefits and current benefits paid to vested and former employees of KUKA Group as well as their surviving dependents. Depending on the legal, economic and tax situation in each of the countries concerned, various retirement benefit systems are in place that are as a rule based on employees' length of service and compensation.

Company retirement benefit coverage in the Group is provided through both defined contribution and defined benefit plans.

Defined benefit plans

Defined benefit plans in KUKA Group primarily concern plans in Germany, the United States, Switzerland, the United Kingdom and Sweden. The country-specific characteristics and legal regulations relating to defined benefit plans are presented in the following. Under defined benefit plans, the company incurs an obligation to provide the benefits promised by the plan to current and former employees.

Germany

Obligations in Germany arise from agreements on company pension schemes concluded with various insurance institutions. The prerequisites regarding the type and amount of the entitlement depend on the employee's age and number of years with the company. The benefits include the components old-age pension, disability pension, widow's/widower's pension, death benefits and emergency assistance. New biometric actuarial assumptions (RT 2018G) were published in the 2018 fiscal year, which remain valid for the 2023 fiscal year. The average life expectancy continued to rise in Germany in the last few years, but not by as much as recently. It has not yet been possible to derive any long-term decline in the trend, but this circumstance has been taken into account in the new tables. Research results relating to observed mortality were also taken into account for the first time with a flat-rate discount. These indicate that employees with a higher income also have a greater life expectancy. Finally, the long-term decline in the probability of invalidity in the age range from 58 years onwards was taken into account in the new tables.

USA

The Systems division makes pension payments to its former employees during their retirement. Employees who entered the worker's union before September 14, 2004 are eligible to participate in the pension plan. The benefits are calculated on the basis of the rate applicable on the date they retire. This rate is composed of the years of service credited to the employee. Eligible employees are also provided with medical care. Owing to their benefit character, the obligations for post-employment medical benefits are also disclosed in this item according to IAS 19. These post-employment benefit provisions represent €0.4 million (2022: €0.4 million) of the total provisions and accruals. The Employee Retirement Income Security Act (ERISA) in the United States provides the legal and regulatory framework for these plans.

The defined benefit plan of the Swisslog division exists for both salaried and wage-earning employees. Both plans are managed by an insurance company and are legally independent. Both are closed to new participants and are financed entirely by the employer. Swisslog Group is able to determine the distribution of the assets. The plans are designed to avoid the necessity to provision for the expenses of additional benefits. However, each individual savings basket bears a fixed percentage of interest (guaranteed minimum return).

Switzerland
The plan is affiliated to a foundation (established in 2019), which is legally independent and exceeds the statutory minimum requirements in Switzerland (Occupational Old Age, Survivors' and Invalidity Pension Provision, BVG). All employees in this are insured for the financial consequences of age, invalidity and death. Contributions are made by the employer and employees. Responsibility for investing the assets is borne by the respective foundation board, which also sets the interest rate on the individual age tranches – subject to the statutory rules. In the event of a deficit for the Swisslog pension fund, various measures can be taken such as a reduced interest rate or additional pension contributions. The level of cover pursuant to BVG exceeds 100% as at the balance sheet date, as was the case at the balance sheet date of the previous year. The Swiss pension plans were valued using the projected unit credit method (PUC) and BVG 2020 generation tables (without risk sharing).

UK
The British defined benefit plan is also independent and has been closed to new participants since 2001. The assets are invested in an insurance fund. The plan is financed by the employer with the employees. Based on the statutory requirements a valuation is undertaken by an actuary every three years. In the event a deficit is calculated, it is necessary to establish a restructuring plan which also sets the future amortization payments to make good the deficit.

Sweden
The Swedish defined benefit plan is legally mandatory and is based on a collective agreement (agreement between the trade union and the Swedish employers). The plan cannot be changed by the company. The plan is available to all employees born before 1979. It covers the financial consequences of age, invalidity and illness. There is a defined contribution plan for those employees born after 1979. The defined benefit plan is financed by the employer. The liability is covered by plan assets in a pension institution administered by an external insurance company. As of 2021, this plan was closed.

Defined contribution plans
For the defined contribution plans, the company pays contributions to a public or private pension insurance carrier. Upon payment of the contributions, the company has no further obligations. Total payments for pensions under defined contribution plans in the amount of €61.5 million (2022: €58.4 million) is recognized as an expense in the respective year.

Deferred compensation
Pension provisions of €2.5 million (2022: €2.6 million) were recognized for fiscal 2022 for salary components converted into pension commitments by employees under the deferred compensation model. These provisions were netted against the asset values from the surrender values of the reinsurance. This resulted in a balance sheet amount after netting of €0.0 million (2022: €0.0 million).

Disclosures on actuarial assumptions
The amount of pension obligations (defined benefit obligation) was calculated by actuarial methods for which estimates are unavoidable. In addition to assumptions related to life expectancy, this involves assumptions detailed below, which are dependent on the economic environment for each country in question:

Dec. 31, 2023	Germany	Switzerland	UK	Sweden	USA	Other
Demographic assumptions	RT 2018G	BVG 2020 GT	S3PxA CMI 2022	DUS14 White Collar	PRI 2012 with MP 2021	Diverse
Discount factor in %	3.15/3.80	1.50	4.35	3.70	4.65/4.76	2.80 – 10.00
Wage dynamics in %	n/a	2.00	3.25	2.20	n/a	2.00 – 6.00
Pension dynamics in %	1.1/2.0/2.5	n/a	1.70	1.70	n/a	n/a
Changes in cost of medical services in %	n/a	n/a	n/a	n/a	8.25	n/a

Dec. 31, 2022	Germany	Switzerland	UK	Sweden	USA	Other
Demographic assumptions	RT 2018G	BVG 2020 GT	S3PxA CMI 2021	DUS14 White Collar	PRI 2012 with MP 2021	Diverse
Discount factor in %	3.30/3.70	2.30	4.75	3.50	4.85/5.07	2.80 – 9.25
Wage dynamics in %	n/a	2.00	3.10	2.40	n/a	2.00 – 6.00
Pension dynamics in %	1.1/1.75/2.50	n/a	3.55	1.90	n/a	n/a
Changes in cost of medical services in %	n/a	n/a	n/a	n/a	7.50	n/a

The discount factor is determined based on the returns from high-quality, fixed-rate corporate bonds.

Wage dynamics encompass future increases in wages and salaries that are estimated annually by reference to factors such as inflation and economic conditions, among others.

The expected returns are derived from consensus forecasts for the respective asset classes. The forecasts are based on empirical values, economic data, interest forecasts and stock market expectations.

For funded plans, the pension obligations are reduced by an amount equal to the fund assets. If the fund assets exceed the defined benefit obligation, an asset is recognized according to IAS 19 and disclosed under other assets. If the fund assets do not cover the commitment, the net obligation is recognized as a liability under pension provisions.

Increases or decreases in either the present value of the defined benefit obligation or the fair value of the plan assets may give rise to actuarial gains or losses. This may be caused by factors such as changes in actuarial parameters, changes to estimates for the risk profile of the pension obligations and differences between the actual and expected returns on the fund assets.

The sensitivity analysis illustrates the extent to which changes in actuarial assumptions would impact defined benefit obligations recognized as at December 31, 2013:

Sensitivity analysis

Nature and degree of change in actuarial assumptions in € millions		Present value of defined benefit obligations after the change in 2022	Change 2022[1]	Present value of defined benefit obligations after the change in 2023	Change 2023[1]
Increase in the discount rate	by +0.25%	203.2	-6.4	225.6	-7.2
Decrease in the discount rate	by –0.25%	216.4	6.8	240.4	7.6
Pension increase	by +0.25%	210.2	0.6	233.5	0.7
Pension reduction	by –0.25%	209.0	-0.6	232.1	-0.7
Increase in life expectancy	by +1 year	213.3	3.7	237.1	4.3
Decrease in life expectancy	by –1 year	208.0	-1.6	231.1	-1.7
Increase in wages and salaries	by +0.25%	213.4	3.8	236.9	4.1
Decrease in wages and salaries	by –0.25%	205.9	-3.7	229.0	-3.8

[1] The changes in the actuarial assumptions have no linear impact on the calculation of the present value of the defined benefit obligation due to specific effects such as compound interest. Changing multiple assumptions simultaneously does not always correspond to the cumulative effect because there are interdependencies between factors. New calculations of the defined benefit obligation must be made for each case.

Funding status of defined benefit pension obligations

in € millions	Germany 2022	Germany 2023	Switzerland 2022	Switzerland 2023	UK 2022	UK 2023	Sweden 2022	Sweden 2023	USA 2022	USA 2023	Other 2022	Other 2023	Total 2022	Total 2023
Present value of pension benefits covered by provisions	49.9	50.4	–	–	–	–	–	–	0.5	0.4	4.8	5.0	55.2	55.8
Present value of pension benefits based on plan assets	2.6	2.5	93.7	116.6	15.9	16.4	15.5	15.2	23.8	23.1	2.9	3.2	154.4	177.0
Defined benefit obligation	**52.5**	**52.9**	**93.7**	**116.6**	**15.9**	**16.4**	**15.5**	**15.2**	**24.3**	**23.5**	**7.7**	**8.2**	**209.6**	**232.8**
Fair value of plan assets	2.6	2.5	93.0	108.1	18.2	18.3	12.7	13.4	25.9	25.8	2.2	2.5	154.6	170.6
Net obligation/assets as at Dec. 31	**49.9**	**50.4**	**0.7**	**8.5**	**-2.3**	**-1.9**	**2.8**	**1.8**	**-1.6**	**-2.3**	**5.5**	**5.7**	**55.0**	**62.2**

in € millions	Germany 2022	Germany 2023	Switzerland 2022	Switzerland 2023	UK 2022	UK 2023	Sweden 2022	Sweden 2023	USA 2022	USA 2023	Other 2022	Other 2023	Total 2022	Total 2023
Other receivables and other assets; plan assets (note 15)	–	–	–	–	-2.3	-2.3	–	–	-2.3	-2.3	–	–	-4.6	-4.6
Pension provisions and similar obligations (note 23)	49.9	50.4	0.7	8.5	–	0.4	2.8	1.8	0.7	–	5.5	5.7	59.6	66.8
Net obligation/assets as at Dec. 31	**49.9**	**50.4**	**0.7**	**8.5**	**-2.3**	**-1.9**	**2.8**	**1.8**	**-1.6**	**-2.3**	**5.5**	**5.7**	**55.0**	**62.2**

Reconciliation/Development of the defined benefit obligation

The reconciliation of the obligation for key items from the beginning to the end of the fiscal year breaks down as follows:

	Germany		Switzerland		UK		Sweden		USA		Other		Total	
in € millions	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Jan. 1	**71.7**	**52.5**	**112.4**	**93.7**	**26.4**	**15.9**	**22.9**	**15.5**	**30.5**	**24.3**	**8.6**	**7.7**	**272.5**	**209.6**
Other changes	–	-0.5	–	–	–	–	–	–	–	–	–	–	–	-0.5
Current service costs	0.4	0.2	4.5	3.1	0.1	0.1	–	–	–	–	0.7	0.6	5.7	4.0
Interest expense (+)/interest income (–)	0.6	1.8	0.2	2.2	0.5	0.8	0.2	0.5	0.9	1.1	0.1	0.3	2.5	6.7
Actuarial gains (–)/losses (+)	-16.0	3.3	-25.6	12.1	-9.3	0.2	-5.9	-0.3	-7.6	0.8	-1.0	-0.1	-65.4	16.0
(of which, changes from experience)	(0.1)	(1.8)	(-0.6)	(0.3)	(0.3)	(-0.4)	(1.3)	(0.6)	–	(0.2)	(0.3)	(-0.2)	(1.4)	(2.3)
(of which, changes in financial assumptions)	(-16.1)	(1.5)	(-25.0)	(11.7)	(-9.6)	(1.0)	(-7.2)	(-0.9)	(-7.6)	(0.6)	(-1.3)	(0.1)	(-66.8)	(14.0)
(of which, changes in demographic assumptions)	–	–	–	(0.1)	–	(-0.4)	–	–	–	–	–	–	–	(-0.3)
Past service cost	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Payments made	-4.2	-4.4	-3.0	-1.2	-0.8	-0.8	-0.5	-0.5	-1.5	-1.8	-0.7	-0.4	-10.7	-9.1
(of which, employee contributions)	(0.1)	(0.1)	(2.8)	(3.1)	–	–	–	–	–	–	–	–	(2.9)	(3.2)
(of which, benefits paid)	(-4.3)	(-4.5)	(-5.8)	(-4.3)	(-0.8)	(-0.8)	(-0.5)	(-0.5)	(-1.5)	(-1.8)	(-0.7)	(-0.4)	(-13.6)	(-12.3)
Currency translation	–	–	5.2	6.7	-1.0	0.2	-1.2	–	2.0	-0.9	–	0.1	5.0	6.1
Dec. 31	**52.5**	**52.9**	**93.7**	**116.6**	**15.9**	**16.4**	**15.5**	**15.2**	**24.3**	**23.5**	**7.7**	**8.2**	**209.6**	**232.8**
(of which, funded by provisions)	(49.9)	(50.4)	(–)	(–)	(–)	(–)	(–)	(–)	(0.5)	(0.4)	(4.8)	(5.0)	(55.2)	(55.8)
(of which, based on plan assets)	(2.6)	(2.5)	(93.7)	(116.6)	(15.9)	16.4	(15.5)	(15.2)	(23.8)	(23.1)	(2.9)	(3.2)	(154.4)	(177.0)

Current service costs and interest expenses totaling €10.7 million (2022: €8.2 million) compared to benefit payments of €9.1 million during the fiscal year (2022: €10.7 million). The exchange rate effects, mainly relating to the Swiss franc, the US dollar and the British pound, led to an increase in the defined benefit obligation of €6.1 million (2022: €5.0 million). Overall, the defined benefit obligation increased by €23.2 million year on year (2023: €232.8 million; 2022: €209.6 million).

Reconciliation/Development of plan assets

The reconciliation of plan assets and asset classes for the 2022 and 2023 fiscal years broke down as follows:

in € millions	2022	2023
Jan. 1	**176.7**	**154.6**
Interest income (+)	1.7	4.9
Other changes	-0.3	-0.3
Actuarial gains (+)/losses (–)	-28.3	4.3
Employer contributions	8.9	9.0
Payments	-8.6	-7.7
Currency translation	4.5	5.8
Fair value of plan assets as of Dec. 31	**154.6**	**170.6**

in € millions	2022	2023
Cash and cash equivalents	8.3	10.3
Shares	42.1	48.9
Bonds	34.0	74.2
Fixed-interest securities	36.9	–
Other (real estate, insurance, other)	33.3	37.2
Total [1]	**154.6**	**170.6**
(of which, active market)	(113.6)	(128.7)
(of which, non-active market)	(41.0)	(41.9)

[1] Breakdown of the data of the active/non-active market:

	2022		2023	
in € millions	Of which, active market	Of which, non-active market	Of which, active market	Of which, non-active market
Cash and cash equivalents	3.6	4.7	5.6	4.7
Shares	39.1	3.0	48.9	
Bonds	34.0	–	74.2	–
Fixed-interest securities	36.9	–	–	–
Other (real estate, insurance, other)		33.3		37.2
Total	**113.6**	**41.0**	**128.7**	**41.9**

Investment and risk strategy

The allocation of plan assets to the various asset classes is determined taking potential returns and risks into account. Ratings and forecasts are used as the basis for selecting high-quality stocks and bonds. An optimal portfolio is achieved by ensuring a good balance of risky and risk-free investments. The company has identified the deterioration of the funded status due to the unfavorable development of plan assets and/or defined benefit obligations as a risk. KUKA monitors its financial assets and defined benefit obligations to identify this risk. In the case of the Swisslog Group pension plans, the plan assets are managed by an independent entity as a rule. It provides a regular report so that by this means risk management is possible.

Maturity profile of the defined benefit pension plans

An overview of the expected benefit payments over the next ten years is presented below:

in € millions	2022	2023
Not later than one year	12.4	12.8
Later than one year and not later than five years	52.7	56.1
Later than five years and not later than ten years	66.6	69.6

24. Other provisions

in € millions	As at Jan. 1, 2023	Exchange rate differences	Change Scope of consolida-tion	Consump-tion	Reversals	Additions	As at Dec. 31, 2023
Warranty commitments and risks from pending transactions	78.6	-0.9	-0.9	-41.3	-8.0	47.9	75.4
Provisions for restructuring obligations	0.4	0.1	-0.1	-0.1	-0.1	1.5	1.7
Miscellaneous provisions	51.3	-0.3	-7.5	-25.2	-2.3	37.6	53.6
Total	**130.3**	**-1.1**	**-8.5**	**-66.6**	**-10.4**	**87.0**	**130.7**

Provisions for warranty risks increased slightly in 2023 to €57.6 million (2022: €57.0 million). Risks from pending transactions decreased from €21.6 million in the previous year to €17.8 million in the year under review. Both are reported within provisions for warranty commitments and risks from pending transactions.

As at the end of the fiscal year, provisions for restructuring obligations had increased from €0.4 million in the previous year to €1.7 million in 2023.

Other provisions include provisions for costs still to be incurred for orders already invoiced (2023: €11.3 million; 2022: €13.0 million) and litigation risks (2023: €4.8 million; 2022: €2.7 million). The increase in litigation risks is due to an increase in pending legal disputes.

The expected remaining term of the other provisions is generally up to one year.

25. Liabilities

Please refer to note 14 for the detailed development of contract liabilities for the year under review and the previous year. Further information on financial liabilities can be found in note 26 and details on other liabilities in note 27.

Trade payables

Trade payables include liabilities to suppliers arising from deliveries received or services used. Supplier invoices that have not yet been received at the time of the financial statements are also reported here. Liabilities decreased by €60.4 million from €655.3 million as at December 31, 2022 to €594.9 million as at December 31, 2023.

Reverse factoring agreements are concluded to assist certain KUKA Group suppliers with their liquidity management. Under such an agreement, a bank acquires the rights to selected trade receivables of the supplier. Following this acquisition, however, the terms of the trade payables remain substantially unchanged. It is therefore appropriate to continue to recognize the corresponding amounts under trade payables in the balance sheet. For the purposes of the cash flow statement, the figures are also reported under operating activities as previously.

Income tax provisions

Provisions for current taxes are divided into income tax provisions and other tax provisions. They include provisions for all types of taxes for the current year and previous years for which the company itself is liable for tax. The increase of €6.0 million in income tax provisions from €38.7 million as at December 31, 2022 to €44.7 million as at December 31, 2023 was related to the increased income.

Lease liabilities

Lease liabilities are recognized at the present value of the expected lease payments. This takes into account fixed and variable payments, residual value guarantees, call option strike prices and prepayment penalties (if early termination is expected). Lease liabilities are measured in subsequent periods using the effective interest method. In this context, interest and redemption payments are treated as separate items. Interest is recognized periodically over the term, irrespective of the actual incidence of payments. Further details on interest payments can be found in note 4. Adjustments due to reassessments of the present value of lease payments or contract modifications are reviewed and made on an ongoing basis, unless the modification must be treated as a separate lease. Such changes to a lease liability also result in an adjustment to the carrying amount of the corresponding right-of-use asset. For further details on right-of-use assets, please refer to note 11.

Lease liabilities amounted to €139.0 million as at December 31, 2023 (December 31, 2022: €123.7 million). Of this amount, €41.4 million (December 31, 2022: €33.0 million) was accounted for by current lease liabilities and €97.6 million (December 31, 2022: €90.7 million) by non-current lease liabilities.

26. Financial liabilities incl. inter-company loan

The existing financial liabilities are mainly inter-company loans and short-term drawings on the working capital line of the syndicated loan agreement.

The current and non-current financial liabilities as at December 31, 2023 and December 31, 2022 are presented below:

in € millions	Dec. 31, 2022	Change	Dec. 31, 2023
Non-current financial liabilities including financial liabilities to affiliated companies	**197.0**	**1.4**	**198.4**
Inter-company loan	196.6	1.4	198.0
Other	0.4	–	0.4
Current financial liabilities including financial liabilities to affiliated companies	**374.9**	**-30.8**	**344.1**
USD assignable loan	46.8	-46.8	–
Inter-company loan	97.7	-7.5	90.2
Liabilities due to banks	230.4	23.5	253.9
Total financial liabilities	**571.9**	**-29.4**	**542.5**

Inter-company loan

In December 2019, KUKA AG had concluded an inter-company loan agreement covering a loan volume of €150.0 million with Midea International Corporation Company Limited, Hong Kong, a wholly-owned subsidiary of Midea Group. The inter-company loan was increased by €50.0 million to the current level of €200.0 million in May 2022. The two tranches bear interest at an average rate of 0.8875% p. a. They are due in April and June 2025, respectively.

For this inter-company loan, Midea International Corporation Company Limited declared in a subordination agreement with the banks of KUKA AG's syndicated loan agreement that its receivables arising from this loan agreement are deeply subordinated.

Furthermore, in June 2018, KUKA AG reached an agreement with Midea Electric Trading (Singapore) Company Pte. Ltd., Singapore, a wholly owned subsidiary of Midea Group, on a financing framework of €150.0 million. Midea International Corporation Company Limited, Hongkong, entered this financing framework in July 2022. The financing facility has a term that is based on the term of the syndicated loan agreement. The conditions for the drawings correspond to the maturity-related reference interest rate plus the applicable margin for credit drawings under the syndicated loan agreement. The drawdown open as at the balance sheet date took place in September 2023 for a term of twelve months and at an interest rate of 4.5% p. a. Midea Electric Trading (Singapore) Company Pte. Ltd. and Midea International Corporation Company Limited, Hong Kong, declared in a subordination agreement with the syndicate banks of KUKA AG's syndicated loan agreement that its receivables arising under this financing facility are deeply subordinated.

Syndicated loan for KUKA Aktiengesellschaft

On February 1, 2018, KUKA AG concluded a syndicated loan agreement with a consortium of banks for a volume of €520.0 million. The agreement includes a surety and guarantee line (guaranteed credit line) in the amount of €260.0 million and a working capital line (cash line), which can also be used for guarantees, likewise in the amount of €260.0 million.

The initial term of the loan agreement was five years and contained two contractually agreed one-year extension options (5+1+1). Following the respective approval of the two extension options by the syndicate banks, the loan agreement now expires in February 2025.

The syndicated loan agreement was concluded on an unsecured basis. The only covenants agreed are the customary equal treatment clauses and negative pledges, as well as a financial covenant relating to a limit on leverage (net financial liabilities / EBIDTA). As at December 31, 2023, KUKA AG had drawn on the guarantee and working capital facilities under the syndicated loan agreement. In the 2023 fiscal year, the covenant in the credit agreement was met at each review date.

As at the balance sheet date the utilization of the guarantee facility and cash credit line from the syndicated loan agreement of KUKA AG amounted to a total of €431.3 million (2022: €364.0million).

USD assignable loan

In 2018, KUKA Toledo Production Operations LLC (KTPO), Toledo, Ohio,USA, issued assignable loans, underwritten by KUKA AG, with a total volume of USD 150.0 million in several maturity tranches: tranche 1 with a volume of USD 10 million was repaid in 2020, tranche 2 with a volume of USD 90 million in February 2022 and tranche 3 with a volume of USD 50 million in August 2023, as contractually agreed in each case.

Guarantee facility lines from banks and surety companies

The guarantee facilities promised by banks and surety companies outside the syndicated loan agreement amount to €213.0 million as at December 31, 2023 (2022: €170.4 million) and can be utilized up to a total volume of €150.0 million in accordance with the provisions of the syndicated loan agreement. At the end of the year under review, the company had utilized €58.5 million (2022: €67.9 million).

27. Other liabilities

The other taxes included in the other current liabilities primarily consist of sales, wage and church tax. Personnel liabilities are reported within the other liabilities and mainly include obligations arising from vacation entitlements (2023: €28.4 million; 2022: €27.2 million), flex-time credits (2023: €21.4 million; 2022: €20.5 million), variable compensation components (2023: €76.3 million; 2022: €66.3 million) and pre-retirement ("Altersteilzeit") (2023: €13.2 million; 2022: €13.4 million).

Pre-retirement obligations were reduced by the fair value of the corresponding fund assets (2023: €11.6 million; 2022: €14.0 million). The present value of entitlements from pre-retirement obligations (DBO) before offsetting was €24.8 million (2022: €27.3 million). This item also includes special payments, inventor's compensation, long-service awards and contributions to the employers' liability insurance association.

Furthermore, other non-current liabilities also include derivative financial instruments with a negative fair value of €0.3 million in the year under review (2022: €1.2 million). The share of derivative financial instruments with negative fair values in current other liabilities amounted to €13.6 million as at December 31, 2023 (2022: €6.4 million).

The carrying amounts of the other liabilities are presented below:

in € millions	Residual term		Dec. 31, 2022 Total	Residual term		Dec. 31, 2023 Total
	Up to one year	More than one year		Up to one year	More than one year	
(of which, for other taxes)	(73.9)	–	(73.9)	(69.9)	–	(69.9)
(of which, for social security payments)	(7.4)	–	(7.4)	(8.3)	–	(8.3)
(of which, liabilities relating to personnel)	(157.9)	(15.4)	(173.3)	(177.6)	(15.2)	(192.8)
(of which, derivatives with a negative fair value)	(6.4)	(1.2)	(7.6)	(13.6)	(0.3)	(13.9)
(of which, other)	(57.3)	(2.0)	(59.3)	(76.5)	(4.6)	(81.1)
Other liabilities	**302.9**	**18.6**	**321.5**	**345.9**	**20.1**	**366.0**

28. Assets held for sale and liabilities directly associated with assets classified as held for sale

As at December 31, 2022, KUKA Group sold a subsidiary located in Russia. Taking into account the total purchase price in accordance with IFRS 10, the net assets of €1.8 million were written down in the previous year and a provision of €1.1 million was subsequently recognized for the outstanding guarantee obligations, which was reported under "Liabilities directly associated with assets classified as held for sale". This was partially utilized and partially reversed upon completion of the transaction in the year under review, which almost completely compensated for the company's negative result in fiscal 2023. The remaining €0.2 million was reported under the loss from discontinued activities.

29. Financial risk management and financial derivatives

a) Principles of risk management

As part of its general business activities, KUKA Group is exposed to various financial risks, in particular from movements in exchange rates and interest rates as well as counterparty risk and liquidity risk. The task of financial risk management is to limit the potentially negative effects of these risks on the financial position.

KUKA uses financial derivatives to hedge currency risks arising from both its operating business and financing transactions. Transactions in financial derivatives are entered into solely with reference to and for hedging underlying transactions. Whenever possible, KUKA AG is the central hedging partner of the Group companies, and it in turn hedges the Group's risks by concluding appropriate hedging transactions with financial institutions with an excellent credit rating. Hedges are used by KUKA Group exclusively in the form of forward exchange transactions and interest rate swaps to secure existing balance sheet items as well as to hedge future payment flows. The ongoing changes in the fair value of the interest rate swap were recognized in the financial result. Effects from derivatives used to hedge operational foreign currency risks are reported under cost of sales, while effects from derivatives used to hedge financing transactions are allocated to the financial result.

For further details, please refer to notes 2 and 4. The Management Board is informed on a regular basis of the current risk positions and safeguards.

For further details please refer to the opportunity and risk report.

For the presentation of market risks, IFRS 7 requires sensitivity analyses that show the effects of hypothetical changes of relevant risk variables, such as exchange rates, on profit or loss and shareholders' equity. The periodic effects are determined by relating the hypothetical changes in the risk variables to the balance of financial instruments at the reporting date. It is assumed that the balance at the reporting date is representative for the year as a whole.

b) Currency risk

Risks from exchange rate fluctuations that could affect the Group's cash flow are hedged at the time they arise or become known by concluding derivative financial instruments with banks. Future planned transactions may also be hedged. These hedging activities ensured that KUKA was not exposed to any significant exchange rate risks from its operating and financing activities as at the balance sheet date. Currency translation risks – measurement risks associated with subsidiaries' financial statements in foreign currencies – are generally not hedged, but are continuously monitored.

Currency risk as defined by IFRS 7 arises on account of financial instruments that are denominated in a currency other than the functional currency and are of a monetary nature.

Currency sensitivity analyses are based on the following assumptions:

- Major non-derivative monetary financial instruments (cash and cash equivalents, receivables, liabilities) are either directly denominated in the functional currency or are transferred as far as possible into the functional currency through the use of derivatives.
- Major interest income and interest expense from financial instruments are also either recorded directly in the functional currency or transferred into the functional currency by using derivatives. For this reason, there can be no material effect on the variables considered in this connection.
- Despite their minor effects, primary and derivative instruments were included in the determination of currency sensitivities.

The currency pairs that are material for KUKA were considered when calculating currency sensitivities. This involved applying a hypothetical upward or downward revaluation of the national currency concerned against the relevant foreign currency and presenting the hypothetical impact on earnings.

The basis for the hypothetical impact on earnings as at the reporting date are the exposures for these major currency pairs. These result from the open items of non-derivative monetary financial instruments that were not converted into the respective functional currencies by derivative financial instruments as at the reporting date. As at the reporting date, the exposure underlying the calculation of currency sensitivities amounted to €226.3 million (2022: €272.7 million).

in € millions	Dec. 31, 2022	Dec. 31, 2023
EUR/USD		
EUR +10%	4.0	4.8
EUR –10%	-4.9	-5.9
EUR/JPY		
EUR +10%	-1.7	-3.7
EUR –10%	2.1	4.6
EUR/CNY		
EUR +10%	-0.3	-0.8
EUR –10%	0.4	0.9
EUR/HUF		
EUR +10%	-0.9	-1.0
EUR –10%	1.1	1.2

in € millions	Dec. 31, 2022	Dec. 31, 2023
EUR/CHF		
EUR +10%	10.1	7.2
EUR –10%	-12.4	-8.8
EUR/SEK		
EUR +10%	-1.1	-1.2
EUR –10%	1.3	1.5
Others: EUR/NOK; CNY/JPY; CHF/SEK; USD/SEK		
Base currency +10%	0.5	-1.4
Base currency –10%	-0.6	1.6

Assumptions concerning the future cannot be derived from this presentation of currency effects.

c) Interest rate risk

Risks from interest rate changes at KUKA are essentially the result of short-term investments/borrowings. These are not hedged at the reporting date.

Interest rate risks are presented by way of sensitivity analyses in accordance with IFRS 7. These show the effects of changes in market interest rates on interest payments, interest income and expense, other income components and shareholders' equity.

Interest rate sensitivity analyses are based on the following assumptions:

- Changes in the market interest rates of non-derivative financial instruments with fixed interest rates only affect income if these are measured at their fair value. As such, all financial instruments with fixed interest rates that are carried at amortized cost are not subject to interest rate risk as defined in IFRS 7.
- Changes in market interest rates affect the interest result of non-derivative variable-interest financial instruments, as hedge accounting is not applied.
- An increase in market interest rates by 100 basis points across all currencies would have a positive effect on results of €2.9 million based on positions at December 31, 2023 (2022: +€2.9 million). A decrease in market interest rates by 100 basis points across all currencies would have a negative effect on earnings of -€2.9 million (2022: -€2.9 million). The hypothetical impact on earnings as at the balance sheet date results exclusively from short-term investments of €540.2 million (2022: €494.5 million) and short-term borrowings of €253.9 million (2022: €230.0 million).

The IBOR transition to so-called risk free rates (RFRs) was completed in KUKA Group in 2021. In the process, the yield curves affected by the IBOR reform were converted to RFRs. The yield curves are imported daily into the treasury management system (ITS) and used for the mark-to-market valuation of forward exchange transactions.

d) Credit risk

KUKA Group is exposed to credit risks from its operating activities and certain financing activities. A default can occur if individual business partners do not meet their contractual obligations and KUKA Group thus suffers a financial loss.

At the level of operations, the outstanding debts are continuously monitored in each area locally. There are regular business relations with major customers at multiple KUKA Group companies. The associated credit risks are subject to separate quarterly credit rating monitoring as part of the risk management system at the Group's Management Board level for early detection of an accumulation of individual risks. Added to these measures are comprehensive routine checks implemented at segment level as early as the order initiation process (submission of offers and acceptance of orders) to verify the credit rating of potential business partners. Where necessary, appropriate allowance is made for default risks relating to potentially credit-impaired receivables.

The maximum exposure to credit risk is represented by the carrying amounts of the financial assets that are carried in the balance sheet (including derivatives with positive market values). No agreements reducing the maximum exposure to credit risk had been concluded as of the reporting date.

The following table shows the impairment losses on trade receivables, contract assets, lease receivables, other assets (including securities and loans) and bank balances:

	Trade receivables			Contract assets	Lease receivables	Other assets
in € millions	Credit-impaired	Not credit-impaired	Total			
Impairment losses as of Jan. 1, 2022	**10.1**	**17.3**	**27.5**	**6.1**	**1.2**	**0.1**
Additions	5.2	3.8	9.0	4.0	0.1	–
Consumption and foreign currency effects	-1.0	-0.2	-1.2	-0.1	–	–
Reversals	-1.1	-16.2	-17.3	-0.4	-0.1	-0.1
Impairment losses as of Dec. 31, 2022/ Jan. 1, 2023	**13.2**	**4.7**	**18.0**	**9.6**	**1.2**	**–**
Additions	5.1	0.2	5.3	5.9	13.5	0.1
Consumption, foreign currency effects and change in scope of consolidation	-2.5	–	-2.5	-1.4	-0.1	–
Reversals	-2.2	-0.3	-2.5	-0.4	-0.1	–
Impairment losses as of Dec. 31, 2023	**13.6**	**4.6**	**18.2**	**13.7**	**14.5**	**0.1**

The increase in impairment losses on lease receivables is mainly due to the recognition of risk provisions for expected losses on receivables in connection with the operator leasing model for Chrysler at KTPO, USA.

e) Liquidity risk

One of KUKA AG's primary tasks is to coordinate and control the Group's financing requirements and to ensure the financial independence of KUKA Group and its ability to pay. With this goal in mind, KUKA AG optimizes and coordinates the Group's financing and limits its liquidity risk. The treasury management system employed throughout the Group is used to identify and illustrate these risks. Close support for the Group companies in managing their cash flows also serves to reduce liquidity risk for the Group as a whole.

In order to ensure the payment capability at all times and the financial flexibility of KUKA Group, KUKA AG keeps a liquidity reserve in the form of credit lines and cash funds. For this purpose, KUKA has, among other measures, taken out an inter-company loan and agreed a credit line with the shareholder, concluded a syndicated loan agreement with a consortium of banks and arranged for surety companies and banks to commit guarantee facility lines. The funding and guarantee requirements for business operations are ensured to a large extent internally by transferring cash funds (inter-company loans) and providing guarantees from the banks and the Group itself.

The following figures show the commitments for undiscounted cash outflows for the financial instruments subsumed under IFRS 7:

Dec. 31, 2023 in € millions	Cash flows 2024	Cash flows 2025	Cash flows 2026 – 2028	Cash flows 2029 ff.
Financial liabilities	253.9	–	–	–
Accounts payable to affiliated companies	97.7	200.8	–	–
FX derivatives (gross settlement)	641.5	26.1	2.4	–
Trade payables	594.9	–	–	–
Liabilities from leases	42.2	33.5	60.0	22.4
Other liabilities	3.6	–	4.7	–

Dec. 31, 2022 in € millions	Cash flows 2023	Cash flows 2024	Cash flows 2025 – 2027	Cash flows 2028 ff.
Financial liabilities	279.0	–	–	–
Accounts payable to affiliated companies	103.1	1.8	200.8	–
FX derivatives (gross settlement)	337.6	26.7	8.7	–
Trade payables	655.3	–	–	–
Liabilities from leases	38.8	31.7	54.1	25.0
Other liabilities [1]	2.3	–	2.1	–

[1] The previous year's figures have been changed.

All financial instruments are included which were held at the balance sheet dates and for which payments have already been contractually agreed. Foreign currency amounts are expressed at the spot rate on the key date. Financial liabilities repayable at any time are always allocated to the earliest period.

30. Other disclosures on financial instruments

KUKA Group classifies its financial instruments at amortized cost, at fair value through profit or loss and at fair value through other comprehensive income.

Carrying amounts and fair values by measurement categories for 2023

The carrying amounts and the fair values according to IFRS 9 are presented in the following table:

Assets

in € millions	Carrying amount as at Dec. 31, 2023	Balance sheet valuation according to IFRS 9		Balance sheet valuation according to IFRS 16	Not within the scope of IFRS 7	Fair value as at Dec. 31, 2023	Assessment hierarchy level
		At amortized cost	At fair value through profit or loss				
Financial investments	3.6	–	3.6	–	–	3.6	
of which, participations	(3.6)	(–)	(3.6)	(–)	(–)	(3.6)	3
Investment property	8.4	–	–	–	8.4	10.5	3
Finance lease receivables – non-current	19.5	–	–	19.5	–	n/a	
Other receivables and other assets – non-current	6.4	0.6	0.3	–	5.5	0.9	
of which, derivatives	(0.3)	(–)	(0.3)	(–)	(–)	(0.3)	2
of which, deposits	(0.6)	(0.6)	(–)	(–)	(–)	(0.6)	
of which, others	(5.5)	(–)	(–)	(–)	(5.5)	n/a	
Trade receivables	843.5	697.7	145.8	–	–	145.8	2
Finance lease receivables – current	38.4	–	–	38.4	–	n/a[1]	
Other receivables and other assets – current	184.9	72.6	4.4	–	108.0	4.4	
of which, derivatives	(4.4)	(–)	(4.4)	(–)	(–)	(4.4)	2
of which, securities	(44.9)	(44.9)	(–)	(–)	(–)	n/a[1]	
of which, deposits	(18.5)	(18.5)	(–)	(–)	(–)	n/a[1]	
of which, loans	(8.8)	(8.8)	(–)	(–)	(–)	n/a[1]	
of which, others	(108.3)	(0.4)	(–)	(–)	(108.0)	n/a	
Cash and cash equivalents	531.4	531.4	(–)	(–)	(–)	n/a	
Total financial instruments (assets)	**1,636.1**	**1,302.3**	**154.1**	**57.9**	**121.9**		

Liabilities

in € millions	Carrying amount as at Dec. 31, 2023	Balance sheet valuation according to IFRS 9		Balance sheet valuation according to IFRS 16	Not within the scope of IFRS 7	Fair value as at Dec. 31, 2023	Assessment hierarchy level
		At amortized cost	At fair value through profit or loss				
Financial liabilities – non-current	0.4	0.4	–	–	–	0.3	3
Accounts payable to affiliated companies – non-current	198.0	198.0	–	–	–	189.9	3
Finance lease liabilities – non-current	97.6	–	–	97.6	–	n/a²	
Other liabilities – non-current	20.1	4.6	0.3	–	15.2	0.3	
of which, derivatives	(0.3)	(–)	(0.3)	(–)	(–)	(0.3)	2
of which, others	(19.8)	(4.6)	(–)	(–)	(15.2)	n/a	
Financial liabilities – current	253.9	253.9	–	–	–	n/a¹	
Accounts payable to affiliated companies – current	90.3	90.3	–	–	–	n/a¹	
Trade payables	594.9	445.0	–	–	149.9	n/a¹	
Finance lease liabilities – current	41.4	–	–	41.4	–	n/a²	
Other liabilities – current	345.9	3.6	13.6	–	328.7	13.6	
of which, derivatives	(13.6)	(–)	(13.6)	(–)	(–)	(13.6)	2
of which, others	(332.3)	(3.6)	(–)	(–)	(328.7)	n/a	
Liabilities directly associated with assets classified as held for sale	–	–	–	–	–	n/a¹	
Total financial instruments (liabilities)	**1,642.5**	**995.8**	**13.9**	**139.0**	**493.8**		

n/a = no disclosure required, as not in scope of IFRS 7/13
n/a¹ = the carrying amount approximates the fair value
n/a² = waiver of fair value disclosure in accordance with IFRS 7.29(d)

Carrying amounts and fair values by measurement categories for 2022

The carrying amounts and the fair values according to IFRS 9 are presented in the following table:

Assets

in € millions	Carrying amount Dec. 31, 2022	Balance sheet valuation according to IFRS 9		Balance sheet valuation according to IFRS 16	Not within the scope of IFRS 7	Fair value as at Dec. 31, 2022	Assessment hierarchy level
		At amortized cost	At fair value through profit or loss				
Financial investments	4.8	–	4.8	–	–	4.8	
of which, participations	(4.8)	(–)	(4.8)	(–)	(–)	(4.8)	3
Investment property[1]	9.4	–	–	–	9.4	9.4	3
Finance lease receivables – non-current[1]	66.4	–	–	66.4	–	n/a	
Other receivables and other assets – non-current	5.8	0.6	0.3	–	4.9	0.3	
of which, derivatives	(0.3)	(–)	(0.3)	(–)	(–)	(0.3)	2
of which, deposits	(0.6)	(0.6)	(–)	(–)	(–)	n/a[1]	
of which, others[1]	(4.9)	(–)	(–)	(–)	(4.9)	n/a	
Trade receivables	713.4	663.9	49.4	–	–	49.4	2
Finance lease receivables – current	41.5	–	–	41.5	–	n/a[1]	
Other receivables and other assets – current[1]	126.2	16.7	8.6	–	100.9	8.6	
of which, derivatives	(8.6)	(–)	(8.6)	(–)	(–)	(8.6)	2
of which, securities	(–)	(–)	(–)	(–)	(–)	n/a[1]	
of which, deposits	(16.1)	(16.1)	(–)	(–)	(–)	n/a[1]	
of which, loans	(0.5)	(0.5)	(–)	(–)	(–)	n/a[1]	
of which, others[1]	(101.0)	(0.1)	(–)	(–)	(100.9)	n/a	
Cash and cash equivalents	494.5	494.5	–	–	–	n/a	
Total financial instruments (assets)	**1,461.9**	**1,175.7**	**63.1**	**107.9**	**115.2**		

Liabilities

in € millions	Carrying amount Dec. 31, 2022	Balance sheet valuation according to IFRS 9		Balance sheet valuation according to IFRS 16	Not within the scope of IFRS 7	Fair value as at Dec. 31, 2022	Assessment hierarchy level
		At amortized cost	At fair value through profit or loss				
Financial liabilities – non-current	0.4	0.4	–	–	–	0.4	3
Accounts payable to affiliated companies – non-current	196.6	196.6	–	–	–	184.9	3
Finance lease liabilities – non-current	90.7	–	–	90.7	–	n/a²	
Other liabilities – non-current	18.6	1.9	1.2	–	15.5	1.2	
of which, derivatives	(1.2)	(–)	(1.2)	(–)	(–)	(1.2)	2
of which, others	(17.4)	(1.9)	(–)	(–)	(15.5)	n/a	
Financial liabilities – current	277.2	277.2	–	–	–	n/a¹	
Accounts payable to affiliated companies – current	97.8	97.8	–	–	–	n/a¹	
Trade payables	655.3	655.3	–	–	–	n/a¹	
Finance lease liabilities – current	33.0	–	–	33.0	–	n/a²	
Other liabilities – current[1]	302.9	2.3	6.4	–	294.2	6.4	
of which, derivatives	(6.4)	(–)	(6.4)	(–)	(–)	(6.4)	2
of which, others	(296.5)	(2.3)	(–)	(–)	(294.2)	n/a	
Liabilities directly associated with assets classified as held for sale	1.1	1.1	–	–	–	n/a¹	
Total financial instruments (liabilities)	**1,673.6**	**1,232.6**	**7.6**	**123.7**	**309.7**		

[1] Previous year's figures were supplemented/adjusted

n/a = no disclosure required, as not in scope of IFRS 7/13

n/a¹ = the carrying amount approximates the fair value

n/a² = waiver of fair value disclosure in accordance with IFRS 7.29(d)

Fair value is defined as the price that would be paid by independent market participants in an arm's length transaction at the evaluation date if an asset were sold or a liability transferred. In accordance with IFRS 13, assets and liabilities are to be attributed to one of the three levels of the fair value hierarchy. The individual levels of the fair value hierarchy are defined as follows on the basis of the input factors:

Level 1
Level 1 inputs are (unadjusted) quoted prices in active markets for identical assets or liabilities that are accessible to the entity at the measurement date.

Level 2
Level 2 inputs are quoted market prices other than those in level 1 that are either directly or indirectly observable for the asset or liability.

Level 3
Level 3 inputs are inputs that are unobservable for the asset or liability.

As a rule, financial assets have short remaining terms to maturity. The carrying amount approximately corresponds to the fair value. Financial investments, long-term derivatives and investment property are an exception. For financial investments measured at fair value through profit or loss (FVtPL), cost is the best estimate of fair value. These are recognized at fair value as at the balance sheet date. All financial investments are allocated to fair value hierarchy level 3. Shares from equity holdings not traded on the market are assigned to level 3. The fair value of investment property is determined by external, independent and qualified valuation experts.

The financial liabilities recognized at amortized cost using the effective interest method are inter-company loans and short-term drawings on the working capital line of the syndicated loan agreement. All non-current financial liabilities are allocated to fair value hierarchy level 3. They are calculated as a present value by discounting future cash flows using term-specific, risk-adjusted market interest rates. No fair value needs to be determined for the lease liabilities.

The derivative financial instruments recognized at the balance sheet date are forward exchange transactions or interest rate derivatives used to hedge exchange rate risks or interest rate risks, respectively. They are recognized in the balance sheet at fair value, which is determined using standardized actuarial methods based on current market parameters such as exchange rates and interest rates (mark-to-market method). They are allocated to fair value hierarchy level 2.

No reclassifications between the levels were made either in the year under review or in the previous year.

Gains and losses from financial instruments
Net results and total interest results, broken down by measurement category, are thus represented as follows:

Net gains/losses and total interest results by IFRS 9 measurement categories for the 2023 fiscal year

in € millions	Net income	Total interest income	Total interest expenses
Financial Assets Measured at Amortized Cost (AC)	-1.4	9.5	–
Financial Assets and Liabilities Measured at Fair Value Through Profit and Loss (FVtPL)	-6.5	n/a	n/a
Financial Liabilities Measured at Amortized Cost (FLAC)	1.8	–	-11.8
Total	**6.1**	**9.5**	**-11.8**

Net gains/losses and total interest results by IFRS 9 measurement categories for the 2022 fiscal year

in € millions	Net income	Total interest income	Total interest expenses
Financial Assets Measured at Amortized Cost (AC)	25.0	14.7	–
Financial Assets and Liabilities Measured at Fair Value Through Profit and Loss (FVtPL)	-22.3	n/a	n/a
Financial Liabilities Measured at Amortized Cost (FLAC)	2.0	–	-10.7
Total	**5.8**	**14.7**	**-10.7**

The net gains and losses in the Amortized Cost (AC) category comprise foreign exchange effects and the results of additions and releases of valuation allowances. Total interest income and expenses include interest income on bank balances, which developed adversely for KUKA Group in fiscal 2023 compared to fiscal 2022.

The result of the Fair Value through Profit and Loss (FVtPL) category is composed of fair value changes. The fair value changes result, among other things, from changes in interest rates and exchange rates.

As in the previous year, the net gains and losses in the Financial Liabilities measured at Amortized Cost (FLAC) category comprise the net profit originating from the release of liabilities.

Across all categories, the net results increased slightly from €5.8 million in fiscal 2022 to €6.1 million in fiscal 2023, while the results per category deteriorated.

Total interest expenses mainly relate to interest expenses for banks, which increased in fiscal 2023 due to the current interest rate trends.

Offsetting of financial instruments

KUKA Group concludes derivative transactions with banks on the basis of framework agreements. These contain legally enforceable netting agreements. These agreements do not meet the criteria for offsetting in the Group balance sheet. The right to offset exists only in the event of future events, such as the default or insolvency of counterparties or the Group.

Offsetting the derivative financial instruments subject to netting agreements would have the following effect on the balance sheet values of the derivatives:

	2022			2023		
in € millions	Balance sheet values	Amounts subject to netting agreements	Net amounts after offsetting	Balance sheet values	Amounts subject to netting agreements	Net amounts after offsetting
Financial assets – derivatives	8.9	-6.2	2.7	4.7	-4.7	–
Financial liabilities – derivatives	7.6	-6.2	1.4	13.9	-4.7	9.2

31. Contingent liabilities and other financial commitments

As at the end of the fiscal year, there were no obligations arising from guarantees (2022: €2.6 million). Obligations from warranty agreements amounted to €3.0 million in the year under review (2022: €0.3 million).

in € millions	2022	2023
Purchase commitments	53.5	84.0
Rent/lease liabilities	5.1	1.8
Other financial commitments	5.8	4.5
Total	**64.4**	**90.3**

Purchase commitments, which are mainly attributable to a customer project at a subsidiary in the Swisslog business segment, rose. In the year under review, obligations arising from rental and lease agreements decreased to €1.8 million (2022: €5.1 million).

32. Management of capital

The primary objectives of KUKA Group's capital management are to increase shareholder value and to support ongoing business operations by providing adequate financial resources.

To achieve the objectives, it is necessary to have appropriate and sufficient equity (equity ratio) and liquidity (net liquidity/debt). These indicators are shown below:

		2022	2023
Equity	€ millions	1,500.4	1,516.4
/Total equity	€ millions	3,955.9	3,971.7
Equity ratio	**%**	**37.9**	**38.2**
EBIT	€ millions	118.4	158.2
Cash and cash equivalents	€ millions	494.5	531.4
Non-current financial liabilities incl. accounts payable to affiliated companies	€ millions	-197.0	-198.4
Current financial liabilities incl. accounts payable to affiliated companies	€ millions	374.9	344.1
Net debt	**€ millions**	**-77.4**	**-11.1**

As a result of the expansion of the balance sheet total and equity, the equity ratio rose from 37.9% at the end of fiscal 2022 to 38.2% at the end of fiscal 2023. The current earnings had a positive impact on equity.

Net debt improved from -€77.4 million in 2022 to -€11.1 million in 2023. Cash and cash equivalents also increased from €494.5 million in the previous year to €531.4 million in the year under review.

Notes to the Group cash flow statement

In accordance with IAS 7, KUKA Group presents the development of cash flows in the cash flow statement separately for incoming and outgoing funds from operating, investing and financing activities. The cash flow from operating activities is determined using the indirect method.

Cash and cash equivalents in the cash flow statement include all cash and cash equivalents disclosed in the balance sheet, namely cash on hand, checks and cash with banks provided they are available within three months.

The starting point for determining the cash flow from operating activities is earnings after taxes and after losses from discontinued operations. The changes to the balance sheet items associated with operating activities are adjusted for currency translation effects and changes to the scope of consolidation.

Income taxes include current tax expenses. The change in deferred taxes is included in other non-cash expenses or income.

Detailed information can be found in the management report under “Financial position” and in the Group cash flow statement.

Presented below is the reconciliation of the liabilities from financing activities for fiscal years 2023 and 2022:

in € millions	Financial liabilities	Accounts payable to affiliated companies	Lease liabilities	Total
Status as of Jan. 1, 2022	**376.4**	**148.7**	**124.6**	**649.7**
Changes affecting payments	-102.9	151.7	-34.2	14.6
New leases	–	–	33.4	33.4
Exchange rate changes	4.1	–	–	4.1
Other changes	–	-6.1	-0.1	-6.2
Status as of Dec. 31, 2022/Jan. 1, 2023	**277.6**	**294.3**	**123.7**	**695.6**
Changes affecting payments	-23.3	-12.4	-35.3	-71.0
New leases	–	–	55.9	55.9
Exchange rate changes	–	–	–	–
Other changes	–	6.3	-5.3	1.0
As of Dec. 31, 2023	**254.3**	**288.2**	**139.0**	**681.5**

The discrepancy between changes affecting payments and cash flow from financing activities is mainly due to interest payments, payments from grants received and dividend payments. The interest payments reported in the cash flow statement also include payments that do not relate to liabilities from financing activities.

Other notes

Related party disclosures

In accordance with IAS 24, persons or companies that may be influenced by or have influence on the reporting company must be disclosed separately, provided they have not already been included as consolidated companies in the financial statements.

Parties related to KUKA Group include mainly members of the Management and Supervisory Boards, including their close family members, as well as non-consolidated KUKA Group companies in which KUKA Aktiengesellschaft directly or indirectly holds a significant proportion of the voting rights or companies that hold a significant proportion of the voting rights in KUKA Aktiengesellschaft.

Controlled related parties that are not consolidated include:

» IWK Unterstützungseinrichtung GmbH, Karlsruhe
» KUKA Unterstützungskasse GmbH, Augsburg

Related parties that are associates include:

» Shanghai Swisslog Technology Co., Ltd., Shanghai, China
» Guangdong Swisslog Technology Co., Ltd., Shunde, China
» Otsaw Swisslog Healthcare Robotics Pte. Ltd., Singapore, Singapore
» ME Industrial Simulation Software Corporation, Nagoya, Japan

Related parties over which significant influence is exercised and which are accounted for as other investments include:

» RoboCeption GmbH, Munich, Germany

Direct shareholders in KUKA Aktiengesellschaft – Midea Electrics Netherlands (I) B.V. with a shareholding of 85.7240% and Midea Electrics Netherlands (II) B.V. with a shareholding of 14.2760%, which are wholly owned subsidiaries of Guangdong Midea Electric Company Limited, which in turn is wholly owned by Midea Group Co., Ltd. – are also related parties, as are Mr. Xiangjian He as the ultimate controlling party and his close family members.

The following table shows the receivables from and liabilities to related parties for the 2023 and 2022 fiscal years:

in € millions	Shares of KUKA AG in %	Group receivables from related parties		Group liabilities to related parties	
		Dec. 31, 2022	Dec. 31, 2023	Dec. 31, 2022	Dec. 31, 2023
Midea Group	–	18.5	14.9	308.6	311.3
Other		2.8	0.5	0.7	0.1
Total		**21.3**	**15.4**	**309.3**	**311.4**

The following table shows the goods and services provided to and received from related parties:

in € millions	Shares of KUKA AG in %	Goods and services provided by the Group to related parties		Goods and services provided to the Group by related parties	
		Dec. 31, 2022	Dec. 31, 2023	Dec. 31, 2022	Dec. 31, 2023
Midea Group	–	64.1	59.0	39.0	43.4
Other		0.5	0.7	0.4	0.1
Total		**64.6**	**59.7**	**39.4**	**43.5**

Deliveries and services provided and received break down into the following transaction types:

in € millions	Goods and services provided by the Group to related parties		Goods and services provided to the Group by related parties	
	Dec. 31, 2022	Dec. 31, 2023	Dec. 31, 2022	Dec. 31, 2023
Purchases or sales of (finished/unfinished) goods	24.4	47.7	22.6	33.3
Services rendered or received	35.0	0.7	10.7	3.0
Service transfers in research and development	4.9	9.7	–	0.5
Transfers under financing agreements	0.2	0.1	4.1	8.3
Other	0.1	1.5	2.0	-1.6
Total	**64.6**	**59.7**	**39.4**	**43.5**

The supply and service relationships with all related parties are conducted under the “dealing at arm’s length” principle in accordance with usual market practice.

Share-based compensation

A small number of people participate in the employee share program of Midea Group. The share-based payment transactions of KUKA Group, which are settled by equity instruments of Midea Group, comprise the so-called Share Option Incentive Plan and the so-called Restricted Share Plan. These plans are measured at the fair value of the equity instruments at the grant date. The equity instruments are tradable or exercisable if the specified services are rendered in the vesting period or certain performance conditions are met.

Share Option Incentive Plan

The following table shows the development of share options during the year:

	Number of share options in million		Weighted average of exercise prices in €	
	Dec. 31, 2022	Dec. 31, 2023	Dec. 31, 2022	Dec. 31, 2023
Options outstanding at the beginning of the reporting period	3.3	4.6	8.83	7.87
Options granted in the reporting period	1.9	–	7.42	–
Options exercised in the reporting period	-0.6	-0.8	6.48	5.74
Options that expired in the reporting period	-0.2	-0.7	8.10	9.39
Changes in the reporting period due to job rotation	0.2	-0.7	8.14	7.42
Options outstanding at the end of the reporting period	**4.6**	**2.4**	**8.40**	**7.65**

The share options outstanding at the end of the year have the following expiration dates and exercise prices:

	Expiration date	Exercise price in €	Number of shares in € million	
			Dec. 31, 2022	Dec. 31, 2023
Fifth Share Option Incentive Plan	May 6, 2024	6.08	0.1	–
Sixth Share Option Incentive Plan	May 29, 2025	5.80	0.3	0.1
Seventh Share Option Incentive Plan	June 4, 2024	5.69	0.7	–
Eighth Share Option Incentive Plan	June 3, 2026	9.84	1.6	0.8
Ninth Share Option Incentive Plan	June 7, 2027	6.64	1.9	1.5

The total expense recognized in 2023 from the Share Option Incentive Plan amounted to €1.5 million (2022: €1.9 million).

Restricted Share Incentive Plan

The following table shows the development of restricted share options during the year:

	Number of share options in million		Weighted average of exercise prices in €	
	Dec. 31, 2022	Dec. 31, 2023	Dec. 31, 2022	Dec. 31, 2023
Options outstanding at the beginning of the reporting period	1.2	1.4	4.07	3.63
Options granted in the reporting period	0.5	–	3.60	–
Options enabled in the reporting period	-0.3	-0.3	2.85	2.38
Options that expired in the reporting period	-0.2	-0.4	4.22	3.79
Changes in the reporting period due to job rotation	0.2	–	3.63	–
Options outstanding at the end of the reporting period	**1.4**	**0.7**	**3.87**	**3.50**

The share options outstanding at the end of the year have the following expiration dates and exercise prices:

	Expiration date	Exercise price in €	Number of shares in million	
			Dec. 31, 2022	Dec. 31, 2023
2019 Restricted Share Incentive Plan	May 29, 2025	2.35	0.2	0.1
2020 Restricted Share Incentive Plan	June 4, 2024	2.38	0.2	–
2021 Restricted Share Incentive Plan	June 3, 2026	4.55	0.4	0.3
2022 Restricted Share Incentive Plan	June 7, 2027	3.05	0.5	0.4

The total expense recognized in 2023 from the Restricted Share Plan amounted to €1.1 million (2022: €1.4 million).

Compensation of the active Management Board and Supervisory Board

The total compensation of active members of the Management Board pursuant to section 314 para. 1 no. 6a of the German Commercial Code (HGB) for fiscal 2023 amounted to €5.9 million (2022: €5.6 million). Of this, €4.1 million was attributable to short-term benefits (2022: €3.0 million) and €1.8 million to long-term variable remuneration components (2022: €2.6 million). Up until fiscal 2022, the long-term variable compensation was granted annually in the form of the Long-Term Performance Plan (LTPP) with a performance period of four years. At the beginning of each fiscal year, the Management Board members were assigned a target amount determined in their individual contracts for the respective tranche of the LTPP. At the end of the performance period, this target amount is multiplied by the target achievement for the financial performance target "relative earnings per share" (relative EPS). The EPS performance achieved by KUKA is compared with the EPS performance of relevant competitors. Relative EPS performance is measured by means of an annual comparison of KUKA's percentage EPS development with the percentage EPS development of relevant competitors. The payout amount determined is capped at 200% of the target amount. Payment is made in cash at the end of the performance period.

In 2023, the company may, at its discretion, allow the members of the Management Board to participate in a profit share plan (in 2023: €1.8 million). In this case, a so-called profit pool is formed for the members of the Management Board, into which 10% of the amount by which the actual EBIT for the fiscal year in question exceeds the planned EBIT is deposited. The prerequisite for a payout from the profit pool is that at least 90% of the free cash flow target is achieved; if the target is achieved by less than 90%, no payout is made from the profit pool.

As at December 31, 2023, liabilities of €1.8 million were recognized in respect of short-term compensation components (2022: €1.3 million). The entitlement for this was fully earned in the year under review, but the actual payment is measured on the basis of the target achievement determined by the Supervisory Board on the basis of the currently valid compensation system and will be made in 2024.

The compensation of key management personnel of KUKA Group to be disclosed in accordance with IAS 24 includes the compensation of the active Management Board and the Supervisory Board.

The active members of the Management Board were compensated as follows:

in € millions	2022	2023
Short-term benefits (excluding share-based compensation)	3.0	4.1
Long-term benefits	4.6	1.5
Total	**7.6**	**5.6**

There are no post-employment benefits. The disclosure of share-based compensation relates to the expense recognized in the respective fiscal year.

No loans or advances were granted to members of the Management Board in the year under review or in the previous year; moreover, no contingent liabilities were entered into in favor of Management Board members.

The active members of the Supervisory Board were compensated as follows:

in € millions	2022	2023
Total compensation (including attendance fees)	1.1	1.1

The compensation of members of the Supervisory Board comprises an annual fixed compensation. In addition, there is compensation for committee work and an attendance fee. Employee representatives on the Supervisory Board also receive a regular salary from the respective employment relationship, with the amount corresponding to appropriate compensation for the work performed in the Group.

As at the end of the year under review, as in the previous year, no loans or advances were granted to members of the Supervisory Board; no contingent liabilities were entered into in favor of Supervisory Board members.

Compensation of former Management Board members

Apart from a few exceptions, former Management Board members whose terms of office ended no later than 2008 were granted company pension benefits that included old age, professional and employment disability, widows'/widowers' and orphans' pensions. The amount of accruals included for this group of persons in 2023 for current pensions and vested pension benefits totals €9.5 million (2022: €9.7 million). Pensions and surviving dependents' benefits for this group of persons amounted to €0.9 million (2022: €0.9 million).

Events after the balance sheet date

The shares held by Swisslog Healthcare Holding AG in Otsaw Swisslog Healthcare Robotics Pte. Ltd., Singapore, Singapore, amounting to 13.34% were reduced by a further third as planned following the renewed exercise of a put option. The sale of the shares was completed in January 2024 with the cash payment to Swisslog Healthcare Holding AG, Buchs AG, Switzerland.

Audit fees

The fee for the auditors, PricewaterhouseCoopers GmbH, Wirtschaftsprüfungsgesellschaft, Munich, recognized as an expense in fiscal 2023 totaled €1.1 million (2022: €1.5 million) for services provided in Germany. €1.0 million (2022: €1.5 million) was recognized for financial statement auditing services. No expenses were incurred for tax advisory services in the fiscal year (2022: €0.0 million) and €0.1 million (2022: € 0.0 million) was incurred for other services provided by the auditors. €1.1 million (2022: €1.1 million) was recognized as an expense for financial statement auditing services performed for foreign subsidiaries. Expenses of €0.1 million (2022: €0.1 million) were recognized for tax advisory services and €0.1 million (2022: €0.3 million) for other services performed by the auditors.

Information on preparation and release

The Management Board prepared the consolidated financial statements on March 12, 2024 and released them for submission to the Supervisory Board. The Supervisory Board is responsible for examining and approving the consolidated financial statements.

Augsburg, March 12, 2024

KUKA Aktiengesellschaft

The Management Board

Peter Mohnen Alexander Tan

Corporate bodies

Management Board

Name	Year of birth	First appointed	Appointed until	Memberships in statutory supervisory boards and in comparable German and foreign controlling bodies of commercial enterprises As of Dec. 31, 2023
Peter Mohnen CEO	1968	Aug. 1, 2012	Dec. 31, 2025	
Alexander Tan Chief Financial Officer	1970	Jul. 1, 2021	Dec. 31, 2025	

Supervisory Board

Name	Current occupation	Year of birth	First appointed [2]	Appointed until	Membership in statutory supervisory boards and in comparable German and foreign controlling bodies of commercial enterprises As of: Dec. 31, 2023
Dr. Yanmin (Andy) Gu Chairman of the Supervisory Board	Director Vice President Midea Group	1963	Feb. 10, 2017	AGM 2028	**International mandates:** › Beautiland B.V., Amsterdam, Netherlands › Frylands B.V., Amsterdam, Netherlands › South American Holdco III, Amsterdam, Netherlands › South American Holdco II B.V., Amsterdam, Netherlands › Midea Electric Netherlands (I) B.V., Amsterdam, Netherlands › Midea Investment (Asia) Co. Ltd., Hong Kong, China › Guangdong Midea Intelligent Robotics Co. Ltd., Guangdong, China
Armin Kolb [1] Deputy Chairman of the Supervisory Board	Chairman of the Group Works Council of KUKA Aktiengesellschaft Chairman of the Works Council of the KUKA Plants at Augsburg	1963	Jun. 5, 2013	AGM 2028	
Larissa Brandis	2nd Deputy Chair of the Works Council of the KUKA Plants at Augsburg Member of the Group Works Council of KUKA Aktiengesellschaft	1985	May 3, 2023	AGM 2028	
Wilfried Eberhardt [1]	Chief Marketing Officer KUKA Aktiengesellschaft	1959	May 15, 2008	AGM 2028	

Name	Current occupation	Year of birth	First appointed [2]	Appointed until	Membership in statutory supervisory boards and in comparable German and foreign controlling bodies of commercial enterprises As of: Dec. 31, 2023
Prof. Dr. Henning Kagermann	Chairman of the acatech Board of Trustees	1947	May 31, 2017	Resigned after AGM 2023	**International mandate:** › SUSE SA, Luxembourg, Luxembourg
Peter Kippes	Head of Company Policy Department Executive Board of IG Metall	1962	May 3, 2023	AGM 2028	**German mandate:** › ZF Friedrichshafen AG
Carola Leitmeir [1]	Deputy Chair of the Works Council of the KUKA Plants at Augsburg	1968	Jul. 1, 2009	AGM 2028	
Manfred Hüttenhofer [1]	Kinematics & Dynamics Team Leader at KUKA Deutschland GmbH	1964	Jun. 6, 2018	Resigned after AGM 2023	
Dr. Myriam Meyer	Managing Director of mmtec	1962	Jun. 6, 2018	AGM 2028	**German mandate:** › Lufthansa Technik AG, Hamburg **International mandate:** › Wienerberger AG, Vienna, Austria
Christoph Schell	Chief Commercial Officer Intel Corp.	1971	Jan. 1, 2023	AGM 2028	
Tanja Smolenski [1]	Union Secretary to the Executive Committee of the IG Metall trade union, Fundamental Issues and Social Policy department, Berlin office	1973	Dec. 15, 2017	Resigned after AGM 2023	
Angela Steinecker [1] Deputy Chair of the Supervisory Board	Second Authorized Representative of IG Metall Augsburg and lawyer	1970	June 24, 2022	Resigned as of October 15, 2023	**German mandates:** › RENK GmbH (until Aug. 15, 2023) › BSH Hausgeräte GmbH (until Sept. 15, 2023)
Carina Veit	Union Secretary of IG Metall – Regional Management Bavaria	1979	Oct. 18, 2023	AGM 2024 Appointed by court order in 2023	**German mandate:** › Conti Temic microelectronic GmbH
Dr. Chang Wei	Chief Technology Officer of Midea Group Co., Ltd	1963	May 3, 2023	AGM 2028	
Wenxin (Marianna) Zhao	Chief People Officer Midea Group	1982	Jan. 1, 2023	AGM 2028	
Helmut Zodl	CFO Clarios LLC (since Sept. 1, 2023) CFO GE Healthcare (until Aug. 31, 2023)	1972	Jan. 24, 2020	AGM 2028	**International mandates:** › Wipro GE Healthcare Pvt. Ltd. Bangalore, India (until August 2023) › STO, Society for Translational Oncology, Durham, USA

[1] Employee representative

[2] The specification of first appointment is the date of initial membership of the Supervisory Board, whether by election at an Annual General Meeting, election pursuant to the German Co-Determination Act (MitbestG) or by court appointment.

Schedule of shareholdings of KUKA Aktiengesellschaft

As at Dec. 31, 2023

	Name and registered office of the company	Currency	Method of consolidation	Share of equity in %
	Germany			
1	Bopp & Reuther Anlagen-Verwaltungsgesellschaft mbH, Augsburg, Germany	EUR	k	100
2	Device Insight GmbH, Munich, Germany [1]	EUR	k	100
3	KUKA Assembly & Test GmbH, Bremen, Germany [1]	EUR	k	100
4	KUKA Deutschland GmbH, Augsburg, Germany [1]	EUR	k	100
5	KUKA Real Estate GmbH & Co. KG, Augsburg, Germany [1]	EUR	k	100
6	KUKA Real Estate Management GmbH, Augsburg, Germany	EUR	k	100
7	KUKA Systems GmbH, Augsburg, Germany [1]	EUR	k	100
8	Swisslog (Deutschland) GmbH, Dortmund, Germany	EUR	k	100
9	Swisslog Augsburg GmbH, Westerstede, Germany	EUR	k	100
10	Swisslog GmbH, Dortmund, Germany [1]	EUR	k	100
11	Swisslog Healthcare GmbH, Westerstede, Germany	EUR	k	100
12	Visual Components GmbH, Munich, Germany	EUR	k	100
13	WR Vermögensverwaltungs GmbH, Augsburg, Germany	EUR	k	100
14	Roboception GmbH, Munich, Germany	EUR	b	26.74
15	IWK Unterstützungseinrichtung GmbH, Karlsruhe, Germany	EUR	nk	100
16	KUKA Unterstützungskasse GmbH, Augsburg, Germany	EUR	nk	100

	Name and registered office of the company	Currency	Method of consolidation	Share of equity in %
Other Europe				
17	KUKA Automation ČR s.r.o. i.L., Chomutov, Czech Republic	CZK	k	100
18	KUKA Automatisering + Robots N.V., Houthalen, Belgium	EUR	k	100
19	KUKA AUTOMATISME + ROBOTIQUE S.A.S., Villebon-sur-Yvette, France	EUR	k	100
20	KUKA Automatizare Romania S.r.l., Sibiu, Romania	RON	k	100
21	KUKA CEE GmbH, Steyregg, Austria	EUR	k	100
22	KUKA Hungaria Kft., Taksony, Hungary	EUR	k	100
23	KUKA Iberia, S.A.U., Vilanova i la Geltrú, Spain	EUR	k	100
24	KUKA Nordic AB, Västra Frölunda, Sweden	SEK	k	100
25	KUKA Polska sp. z o.o., Tychy, Poland	EUR	k	100
26	KUKA Roboter Italia S.p.A., Grugliasco, Italy	EUR	k	100
27	KUKA Robotics Czech s.r.o., Zdiby, Czech Republic	EUR	k	100
28	KUKA Robotics d.o.o. Beograd, Belgrade, Serbia	EUR	k	100
29	KUKA Robotics Hungary Kft., Taksony, Hungary	EUR	k	100
30	KUKA Robotics Ireland Ltd, Dundalk, Ireland	GBP	k	100
31	KUKA Robotics Romania S.R.L., Dumbrăvița, Romania	EUR	k	100
32	KUKA Robotics Slovakia s.r.o., Bratislava, Slovakia	EUR	k	100
33	KUKA Robotics UK Limited, Wednesbury, UK	GBP	k	100
34	KUKA Slovakia s.r.o., Dubnica nad Váhom, Slovakia	EUR	k	100
35	KUKA Systems Aerospace SAS, Le Haillan, France	EUR	k	100
36	KUKA Systems France S.A., Montigny, France	EUR	k	99.996
37	KUKA Systems UK Limited, Halesowen, UK	GBP	k	100
38	KUKA TR Robot Teknolojileri Sanayi Ticaret A. Ş., Istanbul, Turkey	EUR	k	100
39	Reis Espana S.L. i.L., Esplugues de Llobregat (Barcelona), Spain	EUR	k	100
40	Swisslog (UK) Ltd., Redditch, UK	GBP	k	100

Name and registered office of the company		Currency	Method of consolidation	Share of equity in %
41	Swisslog A/S, Herlev, Denmark	DKK	k	100
42	Swisslog AB, Partille, Sweden	SEK	k	100
43	Swisslog AG, Buchs AG, Switzerland	CHF	k	100
44	Swisslog AS, Oslo, Norway	NOK	k	100
45	Swisslog B.V., Culemborg, Netherlands	EUR	k	100
46	Swisslog France SAS, Suresnes, France	EUR	k	100
47	Swisslog France SAS, Lyon, France[3]	EUR	k	100
48	Swisslog Healthcare AG, Buchs AG, Switzerland	CHF	k	100
49	Swisslog Healthcare Holding AG, Buchs AG, Switzerland	CHF	k	100
50	Swisslog Healthcare Italy SpA, Cuneo, Italy	EUR	k	100
51	Swisslog Holding AG, Buchs AG, Switzerland	CHF	k	100
52	Swisslog Italia S.r.l., Milan, Maranello, Italy	EUR	k	100
53	Swisslog N.V., Edegem, Belgium	EUR	k	100
54	Swisslog Oy, Jyväskylä, Finland	EUR	k	100
55	Swisslog Technology Center Austria GmbH, Eberstallzell, Austria	EUR	k	100
56	Swisslog Technology Center Sweden AB, Boxholm, Sweden	SEK	k	100
57	Visual Components Oy, Espoo, Finland	EUR	k	100
North America				
58	KUKA Assembly and Test Corporation, Saginaw, Michigan, USA	USD	k	100
59	KUKA de Mexico S. de R.L.de C.V., Mexico City, Mexico	MXN	k	100
60	KUKA Manufactura S. de R.L.de C.V., Toluca, Mexico	MXN	k	100
61	KUKA Robotics Canada Ltd., Mississauga, Canada	CAD	k	100
62	KUKA Robotics Corp., Shelby Township, Michigan, USA	USD	k	100
63	KUKA Systems de Mexico S. de R.L. de C.V., Toluca, Mexico	MXN	k	100
64	KUKA Systems North America LLC, Sterling Heights, Michigan, USA	USD	k	100

	Name and registered office of the company	Currency	Method of consolidation	Share of equity in %
65	KUKA Toledo Production Operations, LLC, Toledo, Ohio[2], USA	USD	k	100
66	KUKA U.S. Holdings Company LLC, Sterling Heights, Michigan, USA	USD	k	100
67	Swisslog Logistics, Inc., Newport News, USA	USD	k	100
68	Swisslog USA Inc., Dover, Delaware, USA	USD	k	100
69	Translogic Corp., Dover, Delaware, USA	USD	k	100
70	Translogic Ltd. (Canada), Mississauga, Ontario, Canada	CAD	k	100
71	Visual Components North America Corporation, Lake Orion, Michigan, USA	USD	k	100
Latin America				
72	KUKA Roboter do Brasil Ltda., São Bernardo do Campo, São Paulo, Brazil	BRL	k	100
73	KUKA Systems do Brasil Ltda., Diadema, Brazil	BRL	k	100
Asia/Australia				
74	KUKA (Thailand) Co., Ltd., Bangkok, Thailand	THB	k	100
75	KUKA Automation Equipment (Shanghai) Co., Ltd., Shanghai, China	CNY	k	100
76	KUKA Automation Taiwan Ltd., Taipei, Taiwan	TWD	k	99.998
77	KUKA India Pvt. Ltd., Haryana, India	INR	k	100
78	KUKA Industries Automation (ChIna) Co., Ltd., Kunshan, China	CNY	k	100
79	KUKA Industries Singapore Pte. Ltd., Singapore, Singapore	SGD	k	100
80	KUKA Japan K.K., Yokohama, Japan	JPY	k	100
81	KUKA Robot Automation Malaysia Sdn BhD, Puchong, Selangor, Malaysia	MYR	k	100
82	KUKA Robotics Australia Pty. Ltd., Port Melbourne, Australia	AUD	k	100
83	KUKA Robotics China Co. Ltd., Shanghai, China	CNY	k	50
84	KUKA Robotics Guangdong Co., Ltd., Foshan, Shunde, China	CNY	k	50
85	KUKA Robotics Korea Co. Ltd., Ansan, South Korea	KRW	k	100
86	KUKA Robotics Manufacturing China Co. Ltd., Shanghai, China	CNY	k	50
87	KUKA Systems (China) Co. Ltd., Shanghai, China	CNY	k	100

Name and registered office of the company		Currency	Method of consolidation	Share of equity in %
88	KUKA Systems (India) Pvt. Ltd., Maharashtra, Pune, India	INR	k	100
89	KUKA Vietnam Co., Ltd., Hanoi, Vietnam	VND	k	100
90	PT Swisslog Logistics Automation, Karet / Setiabudi / DKI Jakarta, Indonesia	IDR	k	100
91	Swisslog Asia Ltd., Hong Kong, China	HKD	k	100
92	Swisslog Australia Pty Ltd., Sydney, Australia	AUD	k	100
93	Swisslog Healthcare Asia Pacific Pte. Ltd., Singapore, Singapore	SGD	k	100
94	Swisslog Healthcare Korea Co., Ltd., Bucheon si, Gyeonggi-do, South Korea	KRW	k	100
95	Swisslog Healthcare Shanghai Co., Ltd., Shanghai, China	CNY	k	50
96	Swisslog Healthcare Trading MEA LLC., Emirate of Dubai, United Arab Emirates	AED	k	50
97	Swisslog Malaysia Sdn Bhd, Selangor, Malaysia	MYR	k	100
98	Swisslog Middle East LLC, Dubai, United Arab Emirates	AED	k	49
99	Swisslog Singapore Pte Ltd., Singapore, Singapore	SGD	k	100
100	Guangdong Swisslog Technology Co., Ltd., Shunde, China	CNY	at	50
101	ME Industrial Simulation Software Corporation, Nagoya, Japan	JPY	at	30
102	Otsaw Swisslog Healthcare Robotics Pte. Ltd., Singapore, Singapore	SGD	at	13.34
103	Shanghai Swisslog Technology Co., Ltd., Shanghai, China	CNY	at	50

[1] Companies that have made use of the exemption pursuant to section 264 para. 3 or section 264b of the German Commercial Code (HGB)
[2] Principal place of business
[3] Company in pre-formation status

Method of consolidation

k Fully consolidated companies
nk Non-consolidated companies
at Financial asset accounted for by the equity method
b Participating interest

Responsibility statement

“To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the management report of the Group includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.”

Augsburg, March 12, 2024

KUKA Aktiengesellschaft

The Management Board

Peter Mohnen Alexander Tan

Independent auditor's report

To KUKA Aktiengesellschaft, Augsburg

Audit Opinions

We have audited the consolidated financial statements of KUKA Aktiengesellschaft, Augsburg, and its subsidiaries (the Group), which comprise the group balance sheet as at 31 December 2023, and the group statement of comprehensive income, group income statement, development of group equity and group cash flow statement for the financial year from 1 January to 31 December 2023, and group notes, including material accounting policy information. In addition, we have audited the group management report of KUKA Aktiengesellschaft, which is combined with the Company's management report, for the financial year from 1 January to 31 December 2023.

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

» the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2023, and of its financial performance for the financial year from 1 January to 31 December 2023, and

» the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions

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

Other Information

The executive directors are responsible for the other information.

The other information comprises

- the statement on corporate governance pursuant to § 289f Abs. 4 HGB (disclosures on the quota for women on executive boards)
- the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information mentioned above and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report disclosures audited in terms of content or with our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i. e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) and supplementary compliance with the ISAs will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

» Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.

» Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

» Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

» Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

» Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Munich, March 12, 2024

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Jürgen Schumann	ppa. Stefan Postenrieder
German Public Auditor	German Public Auditor
(Wirtschaftsprüfer)	(Wirtschaftsprüfer)

Glossar

ABS
Asset-backed securities. Asset-backed securities are bonds or notes that are collateralized with assets (usually receivables). Receivables are purchased within the framework of an ABS program.

AC (At Amortized Cost)
Measurement at amortized cost

AGV
Automated guided vehicle

At equity
Method of accounting for investments in and business relationships with associated companies or joint ventures in the financial statements

CAGR
CAGR is the acronym for Compound Annual Growth Rate, i.e. the average annual growth rate of a key performance indicator over a specified period.

Cash earnings
Cash earnings are a measurement for the inflow or outflow of cash from the operating profits (EBIT). They are the resulting balance from operating profits, interest, taxes, depreciation as well as other non-payment-related expenses and income.

CbCR
Country-by-country reporting contains certain key figures such as tax payments, current tax expense, income and number of employees. It is prepared annually in aggregated form per country and sent to the tax authorities of the country in which the ultimate parent company is domiciled.

Employees
All figures for employees in the annual report are based on the full-time equivalent.

Derivatives
Financial instruments whose value is largely derived from a specified price and the price fluctuations/expectations of an underlying base value, e.g. exchange rates.

Exposure
A key figure used to assess risk. This key figure includes all incoming payments in a 90-day period prior to the record date of the down payments, payments based on percentage of completion or compensation after acceptance of the work carried out. In addition, the key figure also comprises all customer payments made within 90 days and which have not yet been supplied with deliveries/services including the sum of unpaid invoices following delivery or service supplied to the customer, the POC receivables and any purchase commitments.

FLAC (Financial Liabilities Measured at Amortized Cost)
Financial liabilities measured at amortized cost

FVtPL (Fair Value through Profit and Loss)
Financial instruments measured at fair value through profit or loss

FVOCI (Fair Value through Other Comprehensive Income)
Financial instruments measured at fair value through other comprehensive income

GloBE income
Global Anti-Base Erosion income (minimum annual tax surplus). The minimum tax profit or minimum tax loss is the basis for determining the effective tax rate and the adjusted total minimum tax profit for a tax jurisdiction. It is calculated from the net profit for the year in accordance with international accounting standards, modified by additions and deductions.

General industry
General industrial markets not including the automotive industry

IBOR
Interbank offered rates (IBORs) are average interest rates at which banks can raise loans on the interbank market.

IIoT
Industrial Internet of Things: Networking of machines and technologies in industrial and manufacturing environments. Through connection of the IT world to physical systems, industrial processes and sequences can be made more efficient and flexible, and new business models can be developed.

Net liquidity/Net debt
Net liquidity/net debt is a financial control parameter consisting of cash, cash equivalents and securities minus current and non-current financial liabilities

Purchase commitments
Payment obligation from purchases

Rating
Assessment of a company's creditworthiness (solvency) determined by a rating agency based on analyses of the company. The individual rating agencies use different assessment levels.

SCARA
Selective Compliance Articulated Robot Arm

Trade working capital
Trade working capital is defined as current assets minus current liabilities directly associated with everyday business operations; that is, inventories (minus advance payments) plus trade receivables, contract assets and receivables for manufacturing orders minus liabilities for trade receivables, contract liabilities and manufacturing orders.

Working capital
Working capital consists of the inventories, trade receivables, other receivables and assets, and the balance of receivables from and payables to affiliated companies, as far as these are not allocated to financial transactions, minus other provisions, trade payables, other payables with the exception of liabilities similar to bonds and deferred income.

This Annual Report was published on April 11, 2024 and is available in German and English on KUKA Aktiengesellschaft's website. The German version is legally binding in cases of doubt. The report contains forward-looking statements on expected developments. These statements are based on current expectations and assessments and are naturally subject to risks and uncertainties. Actual results may differ from these statements. The key performance indicators contained in the annual report have been rounded in accordance with standard commercial practice. In individual cases, it is therefore possible that figures in this report do not add up exactly to the total stated and that percentages do not precisely correspond to the values indicated.

Contact and imprint

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