KUKA AKTIENGESELLSCHAFT

SUPERVISORY BOARD REPORT

CONSOLIDATED FINANCIAL REPORT und

ANNUAL FINANCIAL STATEMENTS 2021

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CONSOLIDATED FINANCIAL REPORT OF KUKA AKTIENGESELLSCHAFT

ANNUAL FINANCIAL STATEMENTS OF KUKA AKTIENGESELLSCHAFT

Supervisory Board report

Dear Shareholders,

After an economically difficult year in 2020, we can look back on a very successful year in fiscal 2021. Despite the ongoing coronavirus pandemic and other challenges, such as global supply shortages of commodities and components, the speed of KUKA's turnaround within one year is remarkable. Once again, it became clear that Automation & Robotics are key topics for the future and that the demand for KUKA products and solutions is unbroken and will continue to grow.

Fiscal 2021 was a busy year for the Supervisory Board and its committees. Due to the large number of topics, the Supervisory Board and its committees held significantly more meetings than in a normal year. The topics were and are of great importance to KUKA, with the result that intensive support and involvement by the Supervisory Board and its committees were appropriate and necessary. Of particular note in this respect are, for example, discussion of a growth strategy for the coming years (Winning 2025), analysis of the ongoing coronavirus pandemic and its impact on KUKA, discussion and evaluation of the squeeze-out proposal announced by Midea Group in November 2021, and the personnel decisions concerning the Management Board of KUKA Aktiengesellschaft.

The outstanding performance and commitment of KUKA Group employees deserve special mention. As a result of the coronavirus pandemic, working conditions and work procedures in fiscal 2021 again differed from those in normal years. With great dedication and a high degree of flexibility, they ensured that customer orders were processed even under difficult circumstances, that supply chains were maintained and that important development projects were continued.

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, telephone and video conferences, and by means of circular resolutions. Due to the coronavirus pandemic and the associated travel restrictions, the meetings of the Supervisory Board and its committees in the reporting period were held exclusively in virtual form by means of video conferencing.

Changes to the Management Board and Supervisory Board

The Management Board of KUKA Aktiengesellschaft currently consists of its Chairman Peter Mohnen (CEO) and Alexander Tan (CFO). Andreas Pabst was a member of the company's Management Board until June 30, 2021. Alexander Tan was appointed as the company's new CFO with effect from July 1, 2021.

During the reporting period, there was no cause to alter the quota for female Management Board members, which is currently set at 0 percent.

The Supervisory Board members representing the shareholders were elected by the Annual General Meeting on June 6, 2018. The employee representatives on the Supervisory Board were elected on April 10, 2018, in accordance with the provisions of the German Co-Determination Act (MitbestG), and with effect from the conclusion of the Annual General Meeting on June 6, 2018. The following changes have been made to the Supervisory Board since the last Supervisory Board report:

- Dr. Chengmao Xu resigned from his office with effect from January 17, 2021.
- Lin (Avant) Bai was elected as a member of the Supervisory Board by the Annual General Meeting on May 21, 2021; he had previously been appointed to the Supervisory Board by court order on February 23, 2021.

At the time the report of the Supervisory Board was submitted, the Board was thus composed of the following members:

Shareholder side:	Dr. Yanmin (Andy) Gu (Chairman) Lin (Avant) Bai Prof. Dr. Henning Kagermann Min (Francoise) Liu Dr. Myriam Meyer Helmut Zodl
Employee side:	Michael Leppek (Deputy Chairman) Wilfried Eberhardt Manfred Hüttenhofer Armin Kolb Carola Leitmeir Tanja Smolenski

With four females out of a total of twelve acting members, the proportion of women on the Supervisory Board amounted to 30 percent at the end of the year under review.

Supervisory Board meetings

In 2021, the year under review, five ordinary and six extraordinary Supervisory Board meetings were held. Furthermore, one resolution was passed by written circulatory procedure.

The first extraordinary meeting of the Supervisory Board was held on March 3, 2021; it dealt with the new compensation system for the Management Board and the reappointment of the Management Board members.

The first ordinary meeting of the Supervisory Board took place on March 24, 2021. First, the nomination of Mr. Lin (Avant) Bai as a member of the Supervisory Board was resolved by the 2021 Annual General Meeting as well as his appointment to the Strategy and Technology Committee. The Management Board then reported on the situation of the company and the Group. The Supervisory Board meeting was centered on the 2020 annual financial statements prepared for KUKA Aktiengesellschaft and the Group. In its role as auditor, PricewaterhouseCoopers (PwC) presented a report and the Chairman of the Audit Committee made a statement. Both sets of annual accounts were approved by the Supervisory Board, which meant that the annual financial statements of KUKA Aktiengesellschaft were thereby adopted. The Supervisory Board also had to reach a decision on the proposal regarding appropriation of the 2020 balance sheet profit. Additionally, it adopted the Supervisory Board report for 2020. The Supervisory Board also dealt with the sustainability report pursuant to sections 315b, 315c, 289c of the German Commercial Code (HGB). The Supervisory Board reviewed this report – as the Audit Committee had done in advance – and raised no objections to it. Furthermore, the Supervisory Board addressed the KUKA/Midea dependency report for 2020. The Supervisory Board dealt with other operational issues such as the convening of the 2021 Annual General Meeting with proposed resolutions to the Annual General Meeting, the scheduling of the 2022 Annual General Meeting, the new compensation system for Management Board members, and the compensation of the Supervisory Board.

On April 30, 2021, another extraordinary meeting was held to discuss the reappointment of the Management Board members.

A further extraordinary Supervisory Board meeting was held on May 19, 2021. At this meeting, it was resolved to reappoint Mr. Mohnen as Chairman of the Management Board ahead of schedule, to terminate the appointment of Andreas Pabst, and to look for a new CFO. Furthermore, it was decided to initiate the search for a CTO.

On the day of the Annual General Meeting held on May 21, 2021, the Supervisory Board convened for ordinary meetings before and after the Annual General Meeting. At the meeting prior to the Annual General Meeting, the Management Board again reported on the situation of the company and the Group. The Supervisory Board then prepared itself for the Annual General Meeting. In the meeting following the Annual General Meeting, the composition of the Strategy and Technology Committee was discussed and approved. In addition, a report on the internal control

systems (ICS report 2020) was presented. The Supervisory Board also addressed the medium-term strategy for KUKA. As part of the regular training program, attorney Dr. Christian Vogel spoke on the self-evaluation of the Supervisory Board.

An extraordinary Supervisory Board meeting was held on June 19, 2021. At this meeting, the new employment contract with Mr. Peter Mohnen and the termination agreement with Mr. Andreas Pabst were concluded. Furthermore, the appointment of Mr. Alexander Tan as a member of the Management Board was resolved.

A further extraordinary meeting of the Supervisory Board was held on July 30, 2021. At this meeting, in addition to a report by the Management Board on the economic situation, the medium-term strategy of the Group was addressed once again and a decision was taken on the investment in the KUKA Guangdong Park.

A regular Supervisory Board meeting was then held again on September 22, 2021. The Management Board also reported on the situation of the company and the Group at this meeting. Other topics included the strategic focus of the Group as well as contractual arrangements concerning the members of the Management Board and the adoption of Alexander Tan's personal targets.

The last ordinary meeting of the Supervisory Board in fiscal 2021 was held on November 10, 2021. The Management Board once again reported to the Supervisory Board on the situation of the company and the Group. Another key focus of this meeting was the budget for 2022 and the medium-term planning up to 2024. The chairs of the Supervisory Board committees then presented a summarized report on the work of the Personnel Committee, the Audit Committee and the Strategy and Technology Committee. The Supervisory Board was also informed about the status of the KUKA Vision 2025 strategy. Furthermore, the Supervisory Board received an update on a special project in the Swisslog Healthcare segment (TheraPick). Finally, a preliminary discussion of the Declaration of Compliance and the Corporate Governance Statement took place.

The last extraordinary Supervisory Board meeting in 2021 was held on November 23, 2021. This meeting mainly addressed the squeeze-out, the delisting of KUKA and its effects. Furthermore, a long-term growth plan was discussed.

Meetings of the Supervisory Board committees

The Supervisory Board has a total of five committees. The duties and members of the committees are listed in the Corporate Governance Statement and are available on the company's website at www.kuka.com.

The Personnel Committee convened a total of 12 times in the 2021 reporting year. It dealt with all topics relating to Management Board matters, including the early reappointment of Mr. Peter Mohnen, the departure of Mr. Andreas Pabst, the appointment of Mr. Alexander Tan, and Management Board compensation in accordance with the new compensation model for the Management Board with effect from 2021. In conjunction with the reappointment or replacement of Management Board members, the Mediation Committee was called upon. This met a total of twice and assisted the Personnel Committee and the full Supervisory Board in deciding on the appointment of Management Board members.

The Audit Committee held four meetings in fiscal 2021. At the meetings, the quarterly reports of KUKA Aktiengesellschaft and KUKA Group were discussed. Other recurring topics were the current earnings forecast, risk reporting including critical projects, the report of the Chief Compliance Officer and the report of the Head of Internal Audit. Additionally, other specific topics were addressed in depth at the various meetings of the Audit Committee. For example, the sustainability report was discussed and reviewed by the Audit Committee and recommended to the full Supervisory Board for its own review. In preparation for the Supervisory Board's financial statements meeting on March 24, 2021, a regular meeting of the Audit Committee was held on March 11, 2021. At this meeting, the Audit Committee focused on the 2020 annual financial statements of KUKA Aktiengesellschaft and KUKA Group and received a report on the results of the audit by the auditors.

The Strategy and Technology Committee convened four times in fiscal 2021. The strategy for the Group as a whole and for the individual segments was discussed.

The Nomination Committee convened on March 18, 2021. At this meeting, the Nomination Committee prepared the Supervisory Board's proposal to the Annual General Meeting on May 21, 2021 for the election to the Supervisory Board of Lin (Avant) Bai as a shareholder representative.

The Mediation Committee held two meetings in fiscal 2021. The reappointment of Management Board members was discussed at the meeting on May 6, 2021, and the reappointment of Peter Mohnen and the departure of Andreas Pabst at the meeting on May 16, 2021.

The members of the Supervisory Board attended the following meetings of the Supervisory Board and the committees in the 2021 reporting year:

	Supervisory Board (full)		Nomination Committee		Mediation Committee		Personnel Committee		Audit Committee		Strategy and Technology Committee	
	Number	in %	Number	in %	Number	in %	Number	in %	Number	in %	Number	in %
Dr. Andy Gu Chairman	11/11	100	1/1	100	2/2	100	12/12	100	4/4	100	4/4	100
Michael Leppek Deputy Chairman	11/11	100	-	-	2/2	100	12/12	100	4/4	100	4/4	100
Avant Bai*	9/11	81	-	-	-	-	-	-	-	-	2/4	50
Wilfried Eberhardt	11/11	100	-	-	-	-	-	-	-	-	-	-
Manfred Hüttenhofer	11/11	100	-	-	-	-	-	-	-	-	4/4	100
Prof. Dr. Henning Kagermann	11/11	100	-	-	-	-	-	-	-	-	4/4	100
Armin Kolb	11/11	100	-	-	-	-	12/12	100	-	-	4/4	100
Carola Leitmeir	11/11	100	-	-	2/2	100	-	-	4/4	100	4/4	100
Francoise Liu	11/11	100	1/1	100	2/2	100	12/12	100	-	-	4/4	100
Dr. Myriam Meyer	11/11	100	-	-	-	-	-	-	4/4	100	4/4	100
Tanja Smolenski	10/11	90	-	-	-	-	-	-	4/4	100	-	-
Helmut Zodl	8/11	72	-	-	-	-	-	-	4/4	100	-	-
		95.25		**100**		**100**		**100**		**100**		**94.44**

*Avant Bai was appointed to the Strategy and Technology Committee after the Annual General Meeting on May 21, 2021. He attended all meetings of the Strategy and Technology Committee held after the Annual General Meeting on May 21, 2021. Dr. Chengmao Xu resigned from office as of January 17, 2021.

Independence and conflicts of interest, Declaration of Compliance

Supervisory Board members Dr. Yanmin (Andy) Gu and Lin (Avant) Bai are employed by Midea Group, which holds 95.31 percent of the shares in KUKA Aktiengesellschaft according to information provided to the company. Dr. Yanmin (Andy) Gu also holds an executive position within this group. Ms. Min (Francoise) Liu was employed by Midea Group until May 31, 2021, but took up a new post with Qiantang Education Foundation with effect from June 1, 2021. For this reason, Ms. Liu has been considered independent since June 1, 2021.

The Supervisory Board and the Management Board submitted identically worded declarations in accordance with section 161 of the German Stock Corporation Act (AktG). The resolutions were adopted by the Management Board and the Supervisory Board on February 9, 2021. The Declarations of Compliance were made permanently available to shareholders on the company's website.

Work with the auditors

The annual financial statements of KUKA Aktiengesellschaft as at December 31, 2021 and the Group financial statements as at December 31, 2021, 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 10, 2021.

The auditors also reviewed the monitoring system as per section 91 para. 2 of the German Stock Corporation Act (AktG), the purpose of which is the early detection of developments that could threaten the company's existence. KUKA Aktiengesellschaft's consolidated financial statements were prepared in accordance with section 315e para. 1 of the German Commercial Code (HGB) based on the International Accounting Standards (IFRS) as adopted by the European Union.

The Supervisory Board's Audit Committee appointed the external auditors, PricewaterhouseCoopers, as per the resolution at the Annual General Meeting of May 21, 2021. 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. Furthermore, the auditors were instructed to inform the Supervisory Board, or note in the audit report, if information was encountered during the audit that was contrary to the declarations released by the Management Board and Supervisory Board as per section 161 para. 1 sentence 1 of the German Stock Corporation Act (AktG).

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

As in previous years – with the focus on different topics each year – focal points were agreed for the audit of the annual financial statements in fiscal 2021. These were: recognition of revenue in accordance with IFRS 15, internal risk reporting and valuation of loss projects, valuation of goodwill, valuation of investments and receivables at KUKA AG, Group tax rate and valuation of deferred taxes.

In a joint meeting with the auditors on March 21, 2022, the Audit Committee reviewed the annual financial statements of KUKA Aktiengesellschaft and the consolidated financial statements for fiscal 2021, 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 28, 2022 and recommended that the Board approve KUKA Aktiengesellschaft's annual financial statements and KUKA Group's consolidated annual financial statements for 2021.

The full Supervisory Board reviewed the draft annual financial statements and the Management Board's recommendation on appropriation of net income on March 28, 2022. 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.

PricewaterhouseCoopers explained in detail the assets, liabilities, financial position and profit or loss of the company and the Group and also reported that there were no material weaknesses in the internal control system relating to the accounting process and the risk early detection system. 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 2021 were thus fully comprehensible.

Furthermore, in the meeting on March 28, 2022, a sustainability report for 2021 prepared for KUKA Group pursuant to sections 315b, 315c, 289c of the German Commercial Code (HGB) was reviewed by the plenum following discussion by the Audit Committee. There were no objections.

Dependency report 2021

On March 28, 2022, 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 2021. This report was reviewed by PricewaterhouseCoopers in its role as auditor for fiscal 2021. 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 2021 fiscal year, appropriate compensation was received and KUKA companies did not suffer any disadvantages therefrom. The audit opinion on the dependency report for fiscal 2021 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 2021 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 payment made by the company for the legal transactions listed in the report was not unreasonably high,
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 21, 2022

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Adoption of 2021 financial statements

After completing its own review of the financial statements for 2021 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 28, 2022. 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 28, 2022, the Supervisory Board therefore approved KUKA Aktiengesellschaft's financial statements for fiscal 2021 as prepared by the Management Board. The annual financial statements are thereby adopted. The Supervisory Board also approved KUKA Aktiengesellschaft's consolidated financial statements for the 2021 fiscal year as prepared by the Management Board.

The Management Board recommended payment of a dividend of €0.11 per no-par-value share with dividend entitlement from the balance sheet profit. The Supervisory Board reviewed this recommendation at its meeting on March 28, 2022 and endorsed it.

Thanks to the staff

The Supervisory Board would like to thank all employees of the KUKA companies for their great dedication and hard work, especially during the coronavirus pandemic. 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 28, 2022
The Supervisory Board

Dr. Yanmin (Andy) Gu
Chairman

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 in the non-automotive sector: 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 supplied by the Robotics division: industrial, collaborative and mobile robots – together with robot controllers, software and digital services for the Industrial Internet of Things. The broad product portfolio – ranging from traditional 6-axis robots to DELTA and SCARA robots – covers payload ranges from three to 1,300 kilograms. In addition, the Robotics portfolio includes robot-based, modular manufacturing cells for a wide range of applications. This enables KUKA to meet the various requirements of its customers optimally. Robotics also offers comprehensive support services. Customers can attend technical training and professional development courses in KUKA Colleges at more than 30 sites worldwide. Most robot models are developed, assembled, tested and shipped in Augsburg. The control cabinets are produced in two Hungarian plants, in Taksony and Füzesgyarmat.

KUKA Robotics is continuously expanding the range of products so as to offer customers from all kinds of sectors the solutions that are appropriate for them and to allow even small and medium enterprises to use robots economically. Research & development activities have an important role to play here. The trend is also towards robots that are simple to program, flexible to deploy and easily integrated and networked.

Enhanced with mobility and autonomous navigation, robots are being transformed into flexible production assistants that are becoming more and more intelligent.

KUKA's new products and technologies open up additional markets and create new applications for robot-based automation. Robots will play a key role in the factory of the future. By taking these measures, industrial nations will be able to expand their competitiveness and, at the same time, mitigate the effects of demographic change on the labor market.

Swisslog division

With its Swisslog division, KUKA is tapping the growth markets of e-commerce/retail andconsumer 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 locations in Shanghai and Shunde 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. In the medium term, these developments will continue to intensify, especially as a result of the experience gained from the coronavirus crisis. This demonstrates the importance of new approaches and business models that enable customers to adapt their processes flexibly to rapidly changing market requirements.

New ground rules in the automation market

Automation in the worlds of production and intralogistics is continuously advancing. Many production and material flow processes are no longer conceivable without it. The role of the robot in production shops has undergone great change. In the past, isolated robots were used to automate individual tasks and process steps behind safety fences. Automation has traditionally been a complex task, from programming through to commissioning. 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.

Already today, 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 (automotive industry, intralogistics automation), North America (systems) and China (automotive industry). 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. Robot models for the Chinese market are manufactured at the KUKA production locations in Shanghai and Shunde.

In 2020, the global economy experienced an unprecedented slump. The difficult political and economic situation was compounded by the coronavirus pandemic, and customers were reluctant to invest. The International Federation of Robotics (IFR) forecast a recovery for the automation market in 2021 but does not expect the pre-crisis level to be reached again until 2022/2023.
In the medium term, KUKA expects robotic and automation solutions in particular to be in greater demand as a result of the experience gained from the coronavirus crisis, in order to compensate for personnel bottlenecks, reduce workforce costs and promote efficiency and flexible adaptation to changing market requirements and dynamics. Furthermore, the increased reshoring trend with the goal of improving the resilience of supply chain systems is also expected to boost demand, especially in high-wage countries.

Group 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 gearing ourselves towards global trends while pursuing a clear goal, our vision: to become the first choice for intelligent automation. In the long term, KUKA is focusing on three strategic directions:

1. Focus on leadership in innovation and technology

KUKA sets technological standards and stands for innovations in data- and robot-based automation

In order to benefit from global trends and exploit our own expertise to the full, KUKA will continue to focus on leadership in innovation and technology in the coming years. Increasing complexity, growing numbers of variants with fluctuating production volumes, new technologies and continually intensifying global competition (in terms of prices) are presenting customers with new challenges. They require flexible automation solutions in order to adapt quickly to a changing environment and continuously improve efficiency. This also applies to mobile automation solutions, which are becoming increasingly attractive in terms of functionality and pricing. Together with customers and partners, KUKA is developing smart products and solutions for the digitalized smart factory of the future, in which robots will be a central, crisis-proof component.

The trend is towards robots and automated systems that are simple to program, flexible to deploy and easily integrated and networked. Automation will become easier and more intuitive in the future. With its future operating system and ecosystem, iiQKA, KUKA is taking an important step in this direction and setting the course for Mission 2030: to make automation available to all.

In the automotive industry, electromobility is a key driver of change. Over the next decade, as electric cars become more widespread, the entire new energy vehicle ecosystem will undergo a major transformation. KUKA will continuously expand its expertise here in order to play an important role in supporting the mobility of the future.

In the field of intralogistics, KUKA concentrates on data-driven and robot-controlled automated logistics solutions. Here, Swisslog sets new standards in warehouse automation based on future-proof products. Standardized automation solutions for core industries enhance material flow capabilities, maximize throughput and optimize life-cycle costs while being just as important as Swisslog's SynQ warehouse management software for streamlining material flow processes.

Drawing on decades of experience, Swisslog Healthcare supports hospitals and healthcare systems in optimizing their processes. In so doing, Swisslog Healthcare distinguishes itself by combining the areas of material handling and pharmaceutical automation and strengthens its position as one of the world's leading providers of medication management. By networking these two specialist fields with software and analytics solutions, transparency is increased and cross-disciplinary efficiency is enhanced. Swisslog Healthcare focuses on developing holistic, industry-specific products and services for customers worldwide to shape the future of care by implementing flexible, effective and scalable solutions.

2. 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 and in the Chinese market:

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 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.

KUKA is laying another important foundation for the future by investing in SynQ warehouse management software from Swisslog and the KUKA AIVI master control system, which enables customers to respond flexibly and reliably to constantly changing production requirements.

3. Efficiency in practice

Anchoring sustainable, efficient (cost) structures in day-to-day business

After a general economic downturn in 2020, driven by the coronavirus pandemic, the order situation improved in 2021. Nevertheless, our focus for the coming financial year still remains on enhancing efficiency in all divisions. Digitalization initiatives, process efficiency and improvement, increasing the efficiency of the portfolio, and transparent performance management are important levers here.

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 key performance indicators (KPIs) that track the enterprise value of the company.

The most significant KPIs for KUKA Group are orders received, revenues, EBIT margin and free cash flow. For the segments subject to reporting requirements, orders received, revenues and EBIT margin are among the most important KPIs. 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 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	2017	2018	2019	2020	2021
Orders received	3,614.3	3,305.3	3,190.7	2,792.2	3,565.3
Sales revenues	3,479.1	3,242.1	3,192.6	2,573.5	3,286.2
EBIT margin	3.0%	1.1%	1.5%	-4.4%	1.9%
Free cash flow	-135.7	-214.7	20.7	37.0	100.4

Achievement of targets

In March 2021, KUKA published its targets for the full year 2021. KUKA expected orders received to be higher than the prior-year level, in other words more than 10 percent, and sales to be slightly above the prior-year level, in other words less than 10 percent compared to the prior-year figure. An increased EBIT margin was forecast. The margin was expected to be in the positive low single-digit range. Furthermore, positive earnings after taxes were anticipated to exceed the prior-year level. A positive free cash flow was also forecast for 2021, although it was expected to be below the prior-year level due to the economic recovery and the resumption of investment activity. KUKA pointed to potential fluctuations due to the uncertain general conditions, particularly in connection with the fight against the pandemic, as well as ongoing geopolitical tensions.

For 2021 as a whole, KUKA Group anticipated a slight increase in demand. From a sector perspective, KUKA expected the sales markets outside the automotive industry to recover moderately and show increasing demand. In the automotive industry too, demand was forecast to improve slightly compared with 2020. KUKA expected the market environment to remain difficult amid ongoing uncertainties, as it was difficult to predict how countries would handle the fight against the pandemic, how long government support programs would last and how this would affect the labor market and society.

On November 23, 2021, the forecast for sales was increased in an ad hoc announcement. At around €3.1 billion, sales were expected to be more than 10 percent higher than the prior-year level.

2021 target values

in € millions	**ACTUAL 2020**	**Target 2021 (March 2021 forecast)**	**Target 2021 (1st quarter forecast)**	**Target 2021 (2nd quarter forecast)**	**Target 2021 (3rd quarter forecast)**	**Ad hoc announcement Nov. 23, 2021[3]**
Orders received	2,792.2	Above prior-year level[1]	Above prior-year level[1]	Above prior-year level[1]	Above prior-year level[1]	
Sales revenues	2,573.5	Slightly above prior-year level[1]	Slightly above prior-year level[1]	Slightly above prior-year level[1]	Slightly above prior-year level[1]	Around €3.1 billion (above prior-year level)
EBIT margin	-4.4%	Positive / increasing [1]	Positive / increasing [1]	Positive / increasing [1]	Positive / increasing [1]	
Earnings after taxes	-94.6	Positive / above prior-year level[1]	Positive / above prior-year level[1]	Positive / above prior-year level[1]	Positive / above prior-year level[1]	
Free cash flow	37.0	Positive / below prior-year level [1]	Positive / below prior-year level [1]	Positive / below prior-year level [1]	Positive / below prior-year level [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%

The target figures published in March 2021, including the forecast increase in sales in the ad hoc announcement, were achieved. The Group generated orders received totaling €3,565.3 million (2020: €2,792.2 million), up 27.7 percent on the previous year. The sales revenues of €3,286.2 million (2020: €2,573.5 million) were 27.7 percent higher than in the previous year. The EBIT margin rose to 1.9 percent after -4.4 percent in the previous year. The margin was thus in the positive low single-digit range. For detailed information on the development of the segments, please refer to “Business performance”.

Earnings after taxes amounted to €49.4 million and thus significantly exceeded the previous year’s level (2020: -€94.6 million).

At the end of fiscal 2021, free cash flow amounted to €100.4 million. Contrary to the forecast, free cash flow was therefore above and not below the prior-year level (2020: €37.0 million). The positive trend in the automotive sector, particularly in the USA, has led to a high level of projects with automotive manufacturers in our Systems segment. During the processing of these projects, interim invoices are typically issued to customers when defined milestones are reached. At the end of the year, some of our customers, in the management of their own year-end positions, settled invoices for which we had not expected the corresponding payment to be received until 2022. This resulted in a free cash flow for 2021 that was significantly above what we had planned. For detailed information, please refer to the chapter "Financial position and performance".

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 €159.6 million in 2021, lower than the value for the previous year (2020: €178.0 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 41 patent and utility model applications and 314 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.

The research and development activities have led to the following results:

Automation for all: KUKA showcases new operating system iiQKA.OS at the digital Hannover Messe 2021*

Easy access to robotics – KUKA is pursuing this ambitious goal and presented a preview with the first elements of a new operating system in April. The iiQKA.OS operating system will be the basis of an entire iiQKA ecosystem, provide access to programs, apps, services or accessories, and be easy to install, operate and expand. The sensitive LBR iisy cobot will be the first robot to run exclusively with the new operating system – supported by the iiQKA ecosystem and in combination with the KR C5 micro robot controller and the new smartPAD pro as the operator control unit.

In this way, KUKA aims not only to facilitate access to robotics for newcomers, but also to further develop its existing customer base. The goal of this "Mission 2030": simple operator control and intuitive handling of automation solutions. In the long term, every KUKA product is to be equipped with the new operating system. The aim is to make automation feasible in industries and applications where there have so far been few robots.

KUKA iiQoT*

The KUKA iiQoT software platform is designed to facilitate data-based automation for companies. In the platform name, ii stands for industrial intelligence, iQ for intelligent capability and IIoT for Industrial Internet of Things. For this purpose, the software leverages the advantages of the Industrial Internet of Things (IIoT): it bundles the condition data of a complete robot fleet transparently and clearly in one platform – from the hardware to the software and on to the controller. Instead of simply visualizing raw data, KUKA iiQoT delivers supplementary orientation parameters, enabling messages to be easily interpreted and faults efficiently rectified.

The IIoT platform is intended to pave the way for the Smart Factory. Important functions include systems management, maintenance, fault detection as well as condition monitoring. If required, KUKA iiQoT users can log in to an individual robot in the selected line and cell from any location and view all parameters in real time – even accessing historical data. Several function modules work together optimally to achieve this.

KUKA iiQoT is suitable for small and large robot fleets. As software as a service, the cloud solution developed by KUKA IoT subsidiary Device Insight offers maximum flexibility and scalability. Robots can be added to or removed from the fleet as desired. Access to the latest version at all times without any hardware costs. In the future, it is planned for KUKA iiQoT to support further infrastructures, enabling it to be seamlessly integrated into the customer environment.

KUKA.Sim 4.0 simulation software*

The new version KUKA.Sim 4.0 offers greater functionality and is thus less time-consuming for users. Besides importing CAD data, the new version enables easy offline programming of the robot and fast cycle time analysis. In addition, safety spaces can be configured graphically in 3D and the stopping behavior of the robots can be simulated.

KUKA.Sim 4.0 simplifies the planning of robot applications in many industries. The new KUKA Robot Language (KRL) editor provides expert and beginner user views for programming the robot. A visual program tree makes programming possible even without KRL knowledge, for example. One hundred percent data consistency also ensures that the virtual controller and the real controller work with the same data. The software now also supports the new KR SCARA and KR DELTA robots from KUKA.

The KR CYBERTECH nano ARC*

The KR CYBERTECH nano ARC product family is outstandingly agile, extremely fast and even more precise than its predecessors in continuous-path applications. The upgraded 50-millimeter KUKA hollow wrist reduces main axis motion, allowing short cycle times combined with utmost precision in motion. This makes the KR CYBERTECH nano ARC hollow-wrist robots predestined experts for applications where maximum precision and path accuracy are required. The series is characterized by its long service life and the lowest maintenance requirements in the low payload category. For users, the total cost of ownership (TCO) is reduced to a minimum. Spare parts are available for up to 25 years.

Thanks to the small footprint and diverse installation options, the hollow-wrist robots are also suitable for compact cells, complex tasks and challenging process chains. The innovative K-PIPE-ES energy supply concept provides additional flexibility. Additional axes and the new generation of positioners can be added to the configuration more easily. The KR CYBERTECH nano series of the latest generation includes not only the hollow-wrist robots of the KR CYBERTECH nano ARC family (ARC focus), but also in-line wrist variants (handling focus, also suitable for CP applications). The digital KUKA.Motion Modes allow the performance of the robots to be adapted to different tasks via the controller. The product series also features – as standard – protection against dust and water in accordance with IP 54 for the hollow-wrist robots and even IP 65/67 (main axes/wrist axes) for the in-line wrist robots.

The new KR DELTA robot*

Since April 2021, the new KR DELTA robot, a robot type in the low payload class, has rounded out the KUKA product family. With its parallel kinematic system and small footprint, the KR DELTA robot is particularly suitable for precise pick-and-place tasks. Thanks to its stainless steel body, it is suited to operation in hygienically sensitive areas, such as in direct contact with food or medicines. Furthermore, the KR DELTA robot is designed to require minimal maintenance: the gear unit is encapsulated and the ball joints are made of a self-lubricating material.

The parallel arm robot can be installed on the ceiling and stands out with a high degree of accuracy and a cycle time of 0.5 seconds (in the small Adept cycle) with a payload of 1 kilogram. With a reach of 1200 millimeters and a payload capacity of up to 6 kilograms, the KR DELTA robot is suitable for sorting and packaging tasks.

The KR DELTA hygiene robot is temperature- and corrosion-resistant and is easy to clean and disinfect. The simplified processes help companies to reduce downtimes that are otherwise necessary for cleaning and maintenance. Furthermore, right from its market launch, the KR DELTA hygiene robot will be TÜV-certified for compliance with the requirements of the US Food and Drug Administration and the German Food and Feed Code.

The small robot is controlled by the KR C5 micro – the latest control technology from KUKA. To enable it to perform its tasks even more efficiently in terms of resources, the KR DELTA can switch between different production scenarios, such as seasonal packaging variants. It is thus suitable for the consumer goods industry, especially for fast-moving consumer goods. For this, the hygiene robot uses the KUKA.PickControl software package with conveyor tracking and integrated image processing. In combination with a camera and the KUKA.VisionTech software, which recognizes objects even in unstructured environments, even more flexible applications can be defined for the KR DELTA robot. These range from sorting to loading of different objects.

Hand-guiding with KUKA ready2_pilot*

One of the main obstacles preventing robots from becoming more widespread is frequently the aspect of operator control. Potential users believe that they would have to invest heavily in training and personnel and thus frequently reject robotic solutions for this reason. The solution to this challenge is called ready2_pilot from KUKA. In line with the easy programming principle, the solution is aimed primarily at companies without particular experience in robot programming.

The employee guides the robot manually along a workpiece using the Commander, a type of 6D mouse, and “shows” it what it is supposed to do. The motions are converted to commands via the wireless connection to the teach pendant; these commands can then be freely modified or added to as required. In this way, tasks can be recorded very quickly by simply moving your hand.

The tool used for this is the Commander, a control head that is similar to the 6D mouse on the KUKA smartPAD, that can be moved in all directions and also recognizes forward and backward commands. The Commander can be attached directly to the robot in just a few steps and responds very sensitively. This allows work steps to be performed directly on the workpiece. The major advantage: even people with little experience quickly get used to the robot in this way and use it for simple tasks without the need for in-depth training or certification. Furthermore, the Commander is multifunctional. It can be used equally with all robot types, so the investment pays for itself very quickly.

KUKA.ProcessScreen*

For the first time, the KUKA.ProcessScreen software makes it possible to record the entire processing operation in production in real time. All information about the process that is available to the robot controller via the usual interfaces can – combined with the relevant robot data – be configured and thus visualized, monitored and documented.

The documentation is seamless and, thanks to web-based technology, visualization is possible on almost any end device. Through comparison with individually configurable limit values, the software provides early detection of deviations, thus enabling rapid intervention that can be automated.

A single software package is required, with a consistent operating concept and the same data content for all processes and process equipment – including important robot parameters. The standardized configuration enables simple operation and monitoring, making processes much more transparent. Production is stable – with consistently high quality. The flexible configuration of monitoring functions, tolerance ranges and error strategies allows customers to tailor KUKA.ProcessScreen to their individual processes and continuously optimize their workflows.

KMP 600-S diffDrive*

The KMP 600-S diffDrive expands KUKA's portfolio of mobile platforms. At up to two meters per second, the KMP 600-S diffDrive is fast and, thanks to laser scanners and 3D object detection, safe in equal measure.

The requirements for mobile solutions in industry are extremely high. Thanks to the KUKA KMP 600-S diffDrive mobile platform, there is now a new automated guided vehicle system that provides high-speed support for production intralogistics with a payload of up to 600 kilograms. At the same time, the KMP 600-S diffDrive is ideally equipped for the tough everyday environment of industrial production: its IP 54 design enables it to always work reliably even under adverse conditions – such as where water spray and dust are present.

All KUKA mobile platforms guarantee employees maximum freedom of movement without the need for safety fencing. The KMP 600-S diffDrive is no exception. The KMP 600-S diffDrive can link a wide variety of workstations, thus providing precisely the load handling options the customer requires.

3D virtual showroom from KUKA*

Look over the robot's shoulder as it provides support as a component of a medical device during the treatment of a patient – this is possible immediately in the new 3D virtual showroom from KUKA. Everything is modeled after an operating room in which three animated robots are located. With just a few clicks – or using an Android smartphone – it is possible to move through the virtual environment and get acquainted with various applications. For example, an animated LBR Med during a biopsy or how an imaging system equipped with a KR QUANTEC captures images of a patient. In addition to the animated applications, further information and videos about possible applications, USPs and references from KUKA partners are available on the robots. The 3D virtual showroom shows an impressive selection of the possible application areas in which the KUKA team can provide support. In addition to robots for holding heavy medical equipment or carrying patients, the Medical Robotics division also offers a collaborative, sensitive robot: the LBR Med. It is specially certified for use in medical devices. Once KUKA customers have integrated the robot into their medical devices, the robotic system is used by medical professionals, for example, as an assistant in diagnostics, surgery and therapy. With more than 20 years of experience in medical technology and automation expertise, KUKA Medical Robotics supports the integration and use of robotic components in your medical device.

New cell for friction stir welding*

In addition to robots, software and systems, KUKA also offers contract manufacturing for special welding processes and components in any batch size. This is why the automation specialist has now expanded its own machine pool with an innovative welding cell for friction stir welding: the cell4_FSW (Friction Stir Welding). Friction stir welding primarily opens up new possibilities for joining materials that were previously only considered weldable to a limited extent: for example, high-strength aluminum and copper alloys. The cell4_FSW offers maximum flexibility for contract manufacturing and can also be individually configured for companies investing in a cell of their own.

The cell4_FSW expands the KUKA portfolio in the area of welding, which already encompassed an extensive machine pool for Magnetarc welding and rotational friction welding – for use in prototype and series production in any batch size.

Friction stir welding is an ideal joining process for aluminum and copper materials: it can be used to weld a butt joint or a lap joint. A rotating tool (pin) is guided along the contact surfaces of the workpieces to be joined. The heat required for welding is generated by friction. Here, the material along the weld seam is only plasticized and not liquefied. An enormous advantage when used with aluminum materials: the seams are free of pores and cracks and are thus pressure-tight and vacuum-tight.

Artificial Intelligence Challenge: Belgian research team wins KUKA Innovation Award*

An international jury selected the winner of the KUKA Innovation Award at Hannover Messe 2021. This year, the KUKA Innovation Award focused on artificial intelligence.

After the preliminary round, five international teams reached the final of the competition, which was broadcast entirely digitally due to the coronavirus pandemic. To help them implement their ideas, the finalists were equipped with KUKA robots free of charge and accompanied by experienced KUKA experts throughout the competition. The teams presented their applications digitally at the virtual Hannover Messe. The prize was awarded to the winners in a virtual ceremony.

Artificial intelligence for the automation of challenging bimanual tasks – with this idea, a team of researchers from Leuven, Belgium, won the €20,000 Innovation Award.

The goal of the Chorrobot team from Belgium's Katholieke Universiteit Leuven and Flanders Make@KU Leuven is to leverage artificial intelligence in order to enhance the productivity of car manufacturers as well as small and medium-sized enterprises by facilitating and expediting the deployment of bimanual robot manipulation tasks.

The concept enables users without extensive expertise in robotics to demonstrate some aspects of the task and to intuitively specify other aspects via a graphical user interface. This approach facilitates the commissioning of challenging bimanual tasks, such as assembly operations that involve non-rigid and non-fixed elements, as well as bimanual inspection operations in unstructured environments.

* Not verified by auditors

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, while maintaining close coordination of the specialist departments.

The expansion of our suppliers' process integration carries the close relationships down into the supply network. Stable and reliably functioning customer-supplier relationships combined with great flexibility are of great importance to us. This has become even more pronounced in recent months as a result of drastic changes on the procurement market, triggered on the one hand by the outbreak of the coronavirus pandemic and meanwhile intensified by developments on the commodity markets, for instance.

The ongoing global supply bottlenecks, making it difficult in some cases to calculate delivery times for intermediate products and materials, have presented procurement departments around the world with major challenges. In the Robotics segment, for example, supplies were not interrupted thanks to the flexibilization of ordering and delivery concepts, our in-house manufacturing capabilities in Hungary and Augsburg, and an extensive second or multiple sourcing strategy. This enabled continuous robot production in Augsburg and the processing of most customer orders within the standard delivery times.

A further challenge was the sharp rise in commodity prices. Steel prices have almost tripled from their low point in 2020. At Swisslog, it was a challenge, particularly in the project business, to take the continual increases into account accordingly in cost estimations for quotations and in the drafting of contracts with end customers and suppliers.

The global increase in transport volumes has led to a shortage of available freight capacity. This has resulted in price increases, some considerable, and longer transport times, making on-time delivery both by suppliers to our production plants, and of our products to our customers, more difficult.

At KUKA, the continuous monitoring of delivery reliability and delivery availability is a cross-departmental focus. The regular communication and close cooperation between the segments enable a high degree of flexibility throughout the company due to the ability to take decisions quickly in extreme situations. In the area of project business, optimizations with regard to structure, system and processes were investigated, evaluated and prepared for further implementation. The identified improvements will ensure that processes are even faster and more efficient in the future, which will have a positive impact on internal throughput times and external interfaces.

Economic report

Macroeconomic and industry conditions

Global upswing held back by global supply bottlenecks, high infection rates and high inflation rates

Since the start of the year, the global economy has recovered from the sharp decline caused by the coronavirus pandemic. This recovery has seen regional differences, however, as countries face varying challenges. According to its December 2021 forecast, the Organization for Economic Cooperation and Development (OECD) expects global growth of 5.6% in 2021. Positive factors included government support programs, vaccination progress and the resumption of numerous economic activities. In countries with low infection rates or countries that were able to ease their restrictions due to lower numbers of cases, growth rose sharply in the second half of the year. Nevertheless, production and employment shortfalls remained in many countries, particularly in emerging and developing economies with low vaccination rates. The main concerns for future growth prospects are rising rates of coronavirus infections, higher inflation and global supply difficulties.

In the euro zone as a whole, the economy continued to lose momentum over the course of the year, mainly due to the shortage of intermediate products in the industrial sector and the rise in inflation. Driven by higher prices for raw materials and energy, supply bottlenecks and stronger consumer demand, inflation has increased worldwide in recent months. In the euro zone, the inflation rate in September 2021 was 3.4%. For 2021, the European Commission expected a price increase of 2.4%. By comparison, the US inflation rate was 6.2% in October, thus even reaching a 30-year high. There were several reasons for the high inflation rates. Part of the increase in inflation was due to base effects. The difference was comparatively high as a result of the lower prices in the previous year. At just 0.5%, inflation in Germany in 2020 was as low as it had last been in 2009. In addition, the reduction in value-added tax in 2020 was also responsible for stimulating consumption, which had collapsed during the pandemic.

In its December outlook, the OECD expected growth of 5.6% in the USA for 2021 and a growth rate of 8.1% in China. This puts both countries above the forecast global average. For the German economy, the OECD revised its forecast and lowered the growth outlook from 3.3% previously (OECD Economic Outlook May 2021) to 2.9%. This was due primarily to ongoing supply difficulties in industry. The automotive industry, for example, an important customer group for KUKA, was hit particularly hard by the supply bottlenecks and logistics difficulties. Capacity utilization also fell in other industries, however, as a result of these difficulties. As a result, the mood in the German economy dampened and the ifo Business Climate Index of the Institute for Economic Research (ifo) declined further in the second half of the year. This is regarded as an early indicator of economic development in Germany. In October 2021, the index fell for the fourth time in succession to just 97.7 points. As recently as June 2021, the index stood at 101.8 points.

In order to ensure a recovery that is sustainable and as comprehensive as possible, however, the OECD considers various measures to be necessary. Increased international efforts will be required, for example, to provide low-income countries with the resources they need to vaccinate their populations for their own benefit and that of the world in general.

Worldwide supply bottlenecks impacted growth of automotive markets

Developments on the international automotive markets in 2021 were once again determined by the course of the coronavirus pandemic. While all major markets achieved double-digit year-on-year growth in the first half of 2021, this increase was due primarily to low prior-year figures as a result of the declines in sales during the lockdown in the spring of 2020. In the European market, new registrations increased by 27% in the first half of 2021, but sales were around 25% below 2019 levels. Closed car showrooms, incentive programs expiring at the turn of the year, ongoing lockdowns and also the supply bottlenecks for semiconductors prevented stronger growth. In China, passenger car sales increased by 27% in the first half of 2021. In the USA, light vehicle sales grew by 29% in the first half of 2021. Supply bottlenecks for semiconductors impacted automotive production worldwide and prevented a rapid market recovery. The supply bottlenecks were also the reason why German manufacturers were unable to produce more. This resulted in production shortfalls at the same time as high demand. In the first ten months, the number of passenger cars produced in Germany decreased by 8%. In China, automotive sales declined for the fifth consecutive month in September 2021 due to the shortage of semiconductor components. In several countries in Southeast Asia, factories have had to stop production on account of the increase in coronavirus cases. Additionally, global supply chains were impacted due to a shortage of shipping containers. According to the Automotive Performance Report of October 26, 2021 from the Center of Automotive Management (CAM), manufacturers could have sold about 10 million more vehicles worldwide. The report forecasts global vehicle sales to be around 12% lower than in 2019. Taking the pre-crisis level as the benchmark, the cumulative values from Europe, the USA, China, Japan, India, Brazil and Russia are 8% below the first half of 2019.

High demand in mechanical and systems engineering

According to the VDMA's November 2021 report "Maschinenbau Konjunktur International", companies have stepped up their investments again as the economic environment improved, reactivating postponed investment plans. In the first half of the year, the machinery industry recovered, in some cases with double-digit growth rates. Compared with the three-month period before the pandemic from December 2019 to February 2020, machinery production had already exceeded pre-pandemic levels in many countries. However, the materials shortage and supply bottlenecks posed challenges for companies in the mechanical and systems engineering sector. Since the beginning of the year, industrial production in Germany has been constrained by supply bottlenecks for key intermediate goods and raw materials. In a VDMA flash survey conducted between August 31, 2021 and September 2, 2021, 81% of the approximately 600 companies responding reported noticeable or even severe disruptions to their supply chain. This mainly affected electrical and electronic components. As a result, more and more companies are planning to transform their procurement and distribution, for example by means of increased inventories, alternative supply routes, and looking for additional suppliers.

Companies saw the shortage of skilled workers as a further serious problem with regard to ramping up production. The transformation resulting from increasing digitalization, the development of climate-friendly technologies and the mobility revolution requires well-trained personnel. On account of demographic change, many companies will be looking for skilled workers in particular over the next few years. According to the VDMA, the majority of mechanical engineering companies are planning to increase their workforce and create additional jobs. New jobs will be created as a result of technological change in the coming years, and, at the same time, personnel reaching retirement age will need to be replaced. The looming shortage of personnel calls for flexible solutions that, above all, must not hold up progress.

According to the Oxford Economics baseline forecasts of September 2021, mechanical engineering sales in Germany are expected to grow by 7% year on year in 2021. An increase of 14% is predicted for China and 10% for the USA.

Furthermore, the VDMA estimates that companies will produce around 10% more in 2021 than in the previous year. While high demand could allow the export-oriented industry to grow even faster, material shortages and supply bottlenecks are preventing a rapid recovery. They also represent the greatest obstacle to the business activities of mechanical and systems engineering companies in the important foreign markets.

European machinery manufacturers are hoping for a boost in investment from the EU's 750 billion euro development fund. The fund supports investment projects that have been postponed due to the pandemic. The priorities of the funding are digitalization, environmentally compatible mobility, green energy and industrial clusters.

Flexible production and logistics solutions are gaining in importance

In September 2021, the International Federation of Robotics (IFR) published the full-year figures for global robot sales in 2020. These figures indicated that around 384,000 robots were installed worldwide in 2020. This corresponds to slight growth of 0.5% year on year. The automotive industry was up 21% on the previous year. The main growth driver in 2020 was the electronics industry. It grew by 29% year on year, overtaking the automotive industry as the largest customer group worldwide. Robot sales to the metalworking and mechanical engineering industries increased by 11%.

Demand for robots has risen continuously since 2010. The number of robots installed worldwide tripled within ten years. Technological innovations and the global trend toward automation caused the number of robots installed worldwide to increase from around 121,585 robots in 2010 to 383,545 robots in 2020. The compound annual growth rate (CAGR) was thus 12%.

However, the coronavirus pandemic poses challenges for many companies. Previous production methods and supply chains have been put to the test, and manufacturers have had to adjust their production volumes quickly due to high fluctuations in demand. The pandemic forced manufacturing companies to introduce new shift models to protect their employees from infection by, for example, requiring minimum distances to be observed. All of this created numerous challenges in the production environment. In order to meet the heightened requirements, some companies opted to integrate robots in their production. Many of them were using robots in their production operations for the first time. Demand for robot-based automation has thus risen again since the start of 2021 after a difficult year in 2020. The growth of so-called cobots – robots that are allowed to collaborate with humans in the same workspace without safeguards – also developed positively. With cobots, conventional safety precautions are no longer required. This means that less space is required than for industrial robots that work behind safety fences. They can be installed directly in an existing production environment and their special properties open up new market fields. Companies use cobots not only to improve their product quality and boost efficiency, but also, due to their sensitive characteristics, to enable them to meet the requirements to maintain minimum distancing in production.

Business performance

KUKA Group

The recovery of the global economy had a positive impact on the business development of KUKA Group's segments. Customers once again invested more in automation solutions and caught up with postponed investments. In KUKA Group, the volume of orders received rose by 27.7% from €2,792.2 million to €3,565.3 million in the year under review. It was the second-highest order volume in KUKA's corporate history. KUKA also achieved the second-highest sales revenues. The sales volume increased by 27.7% to €3,286.2 million (2020: €2,573.5 million). The book-to-bill ratio of 1.08 in fiscal 2021 was on a par with the previous year (2020: 1.08). The order backlog grew by 16.0% from €1,992.6 million as at December 31, 2020 to €2,311.9 million as at December 31, 2021. However, global supply difficulties slowed down the positive developments, particularly from the second half of the year onwards. The consequences were increased material and logistics costs due to availability restrictions. Despite these challenges, EBIT rose to €61.8 million (2020: -€113.2 million). The EBIT margin increased to 1.9% (2020: -4.4%).

Systems

The Systems business segment saw its volume of orders received rise by 37.3% from €715.3 million in 2020 to €981.8 million in the year under review. Major customer orders were won in the Battery segment and in the North America region, among others. In Europe, the order situation remained difficult. The sales revenues of €978.3 million were significantly up on the previous year's level of €671.6 million. The strong growth of sales by 45.7% was achieved despite the global supply chain difficulties and resulted predominantly from increased demand in North America. At 1.00, the book-to-bill ratio was at a comparable level to the prior-year period (2020: 1.07). The order backlog of €597.4 million as at December 31, 2021 was up slightly year on year (December 31, 2020: €591.0 million). EBIT rose from -€37.4 million in 2020 to €31.1 million in the year under review. This significant improvement was mainly due to higher volumes, increased capacity utilization and improved project management. The EBIT margin rose from -5.6% to 3.2% in the current fiscal year.

Robotics

Orders received in the Robotics segment increased sharply in fiscal 2021 to €1,081.3 million and were thus 20.0% higher than the previous year's level (2020: €901.3 million). With the economic recovery, customers from both the automotive and non-automotive sectors once again invested more heavily in robotic automation. The higher volume of orders received led to an increase in sales revenues. At €1,020.7 million, the figure was up 13.5% on the previous year (2020: €899.2 million). The book-to-bill ratio rose to 1.06 (2020: 1.00). The order backlog totaled €323.3 million as at December 31, 2021 (December 31, 2020: €266.3 million). EBIT increased sharply to €61.8 million after -€3.9 million in the previous year. One factor that had a positive effect was the improved project management. On the other hand, higher material and logistics costs weighed on earnings. The EBIT margin of 6.1% was well above the previous year's figure of -0.4%.

Swisslog

The Swisslog segment achieved a significant increase in orders received. After €643.9 million in fiscal 2020, the order volume increased by 16.5% to €749.8 million. The trend towards automated logistics solutions had a positive impact. This led to increased demand, particularly in the e-commerce sector. Automation solutions can offer approaches particularly for counteracting challenges such as the increasing shortage of skilled workers. The development in order levels led to a 23.4% increase in sales revenues to €650.9 million, compared with €527.7 million in the previous year. The book-to-bill ratio stood at 1.15 (2020: 1.22). The order backlog increased to €842.1 million as at December 31, 2021 after €726.6 million as at December 31, 2020. The high sales volume and improved cost management led to a significant growth of EBIT to €19.0 million, after €0.8 million in the previous year. The EBIT margin increased to 2.9% from 0.1% in 2020.

Swisslog Healthcare

The volume of orders received at Swisslog Healthcare was significantly above the previous year's level, increasing by 27.0% to €238.8 million in 2021 (2020: €188.0 million). Swisslog Healthcare benefited from increased customer demand. Following the slump caused by the coronavirus crisis, demand in the healthcare sector picked up again strongly, particularly in the first half of 2021. This also included catch-up effects from postponements of projects due to coronavirus. While access to hospitals was restricted at the beginning of the coronavirus crisis, access restrictions were relaxed again in the year under review. Sales revenues developed at a stable level of €205.0 million (2020: €204.2 million). The book-to-bill ratio rose to 1.16 (2020: 0.92). The order backlog of €218.3 million as at December 31, 2021 was up considerably year on year

(December 31, 2020: €176.9 million). EBIT rose to €3.8 million, after €3.0 million in the previous year. This corresponds to an EBIT margin of 1.8% (2020: 1.5%). The improvement is attributable to the optimizations in process and project management.

China

The China segment achieved a significant increase of 39.0% in orders received in 2021. The order volume rose to €681.4 million after €490.4 million in the previous year. The recovery of the Chinese robotics market improved business development and led to increased demand, particularly in the electronics and 3C markets. However, the automotive market, too, developed positively due to the greater demand for electric vehicles. All this was also reflected in sales. The sales volume increased by 48.4% to €589.1 million in the year under review (2020: €397.1 million). The book-to-bill ratio fell to 1.16 in 2021 (2020: 1.23). The order backlog grew from €270.6 million as at December 31, 2020 to €381.8 million as at December 31, 2021. Despite the supply difficulties, especially in the second half of the year, EBIT increased to €10.2 million in the past fiscal year (2020: -€4.7 million). The high demand for automation solutions had a positive effect, as did investment grants. Furthermore, higher value adjustments on receivables were included compared with the previous year. Overall, the EBIT margin was 1.7% (2020: -1.2%).

The key figures for the individual business segments are shown below:

Key figures – Systems

in € millions	2020	2021
Orders received	715.3	981.8
Order backlog	591.0	597.4
Sales revenues	671.6	978.3
EBIT	-37.4	31.1
in % of revenues	-5.6	3.2
in % of capital employed (ROCE)	-13.2	9.8
EBITDA	-18.1	48.2
in % of revenues	-2.7	4.9
Capital employed	284.3	318.5
Employees (Dec. 31)	3,033	3,032

Key figures – Robotics

in € millions	2020	2021
Orders received	901.3	1,081.3
Order backlog	266.3	323.3
Sales revenues	899.2	1,020.7
EBIT	-3.9	61.8
in % of revenues	-0.4	6.1
in % of capital employed (ROCE)	-1.0	16.6
EBITDA	46.4	105.4
in % of revenues	5.2	10.3
Capital employed	407.7	372.5

Employees (Dec. 31)	5,197	5,290

Key figures – Swisslog

in € millions	2020	2021
Orders received	643.9	749.8
Order backlog	726.6	842.1
Sales revenues	527.7	650.9
EBIT	0.8	19.0
in % of revenues	0.1	2.9
in % of capital employed (ROCE)	0.6	15.3
EBITDA	19.1	36.5
in % of revenues	3.6	5.6
Capital employed	136.0	124.2
Employees (Dec. 31)	2,215	2,367

Key figures – Swisslog Healthcare

in € millions	2020	2021
Orders received	188.0	238.8
Order backlog	176.9	218.3
Sales revenues	204.2	205.0
EBIT	3.0	3.8
in % of revenues	1.5	1.8
in % of capital employed (ROCE)	1.9	2.4
EBITDA	16.6	16.5
in % of revenues	8.1	8.1
Capital employed	163.6	157.8
Employees (Dec. 31)	1,068	1,053

Key figures – China

in € millions	2020	2021
Orders received	490.4	681.4
Order backlog	270.6	381.8
Sales revenues	397.1	589.1
EBIT	-4.7	10.2
in % of revenues	-1.2	1.7
in % of capital employed (ROCE)	-3.1	8.3

EBITDA	7.8	24.0
in % of revenues	2.0	4.1
Capital employed	151.4	123.2
Employees (Dec. 31)	1,516	1,713

Financial position and performance

Summary

The recovery of the global economy had a positive impact on the business development of KUKA Group. Customers once again invested more in automation solutions and caught up with postponed investments. Moreover, the introduction of appropriate safety concepts and hygiene regulations at customers' premises enabled the pandemic-related access restrictions for suppliers to be eased again. This meant that KUKA was once again able to process orders at customers' premises. In the second half of the year, business performance was impacted by global supply difficulties and higher commodity prices. Despite these challenges, KUKA closed the fiscal year successfully. KUKA achieved double-digit growth rates year on year in both orders received and sales revenues. At €100.4 million, free cash flow even reached a new record level in KUKA's history.

Earnings

KUKA Group posted orders received amounting to €3,565.3 million in the year under review – a significant increase of 27.7% over the previous year's level (2020: €2,792.2 million). The recovery of the overall economic situation after more than a year of the coronavirus pandemic also had a positive impact on sales revenues in the past fiscal year. At €3,286.2 million, these were up 27.7% on the previous year (2020: €2,573.5 million) and were thus not only at pre-crisis levels but also above the target of €3.1 billion. KUKA thus achieved the second-highest figures in the company's history for both sales revenues and orders received. The order backlog rose by 16.0% from €1,992.6 million as at December 31, 2020 to €2,311.9 million as at December 31, 2021. The high order backlog also promises good capacity utilization in subsequent periods.

In KUKA Group, earnings before interest and taxes (EBIT) rose to €61.8 million in the year under review (2020: -€113.2 million). This corresponds to an EBIT margin of 1.9% after -4.4% in the previous year. For further details please refer to "Business performance".

Above all, the improved economic situation, but also internal improvements through, for example, efficiency enhancements, had a positive impact on business development, enabling KUKA to close fiscal 2021 successfully.

in € millions	2017	2018	2019	2020	2021
Orders received	3,614.3	3,305.3	3,190.7	2,792.2	3,565.3
Order backlog	2,157.9	2,055.7	1,967.4	1,992.6	2,311.9
Sales revenues	3,479.1	3,242.1	3,192.6	2,573.5	3,286.2
EBIT	102.7	34.3	47.8	-113.2	61.8
in % of revenues	3.0	1.1	1.5	-4.4	1.9
in % of capital employed (ROCE)	10.9	2.9	3.5	-8.6	5.0
EBITDA	180.2	121.2	176.5	33.2	202.0
in % of revenues	5.2	3.7	5.5	1.3	6.1
(Average) capital employed	950.4	1,185.0	1,374.3	1,321.1	1,245.5
Employees (Dec. 31) [1]	14,256	14,235	14,014	13,700	14,128

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

The KUKA Business Organization (KBO) segment structure was further optimized at the beginning of fiscal 2021. Certain Chinese companies were previously reported both in the China segment and in the Swisslog or Swisslog Healthcare segment. As of the current fiscal year, this double reporting no longer applies and the business activities of the Chinese companies are presented exclusively in the China segment. In addition, a Swisslog holding company is no longer reported in the Corporate Functions segment but in the Swisslog segment. This results in changes to

some key figures in the individual segments and in the reconciliation to the Group, but has no effect on the Group's key performance indicators. The comparative figures for fiscal 2020 have been adjusted accordingly.

For explanatory comments on the individual segments, please refer to the section on business performance.

The gross earnings generated increased by 38.2% or €192.6 million to €696.7 million (2020: €504.1 million). This corresponds to a gross margin of 21.2% after 19.6% in fiscal 2020. The significantly higher volume of business had a positive impact on gross earnings and is also reflected in the business segments. Thus, gross margins increased in the business segments Systems (2021: 9.2%; 2020: 2.9%), Robotics (2021: 33.1%; 2020: 31.7%), China (2021: 14.9%; 2020: 11.7%) and Swisslog Healthcare (2021: 36.0%; 2020: 34.8%), while a slight decline was recorded in the Swisslog business segment (2021: 17.3%; 2020: 17.8%).

KUKA Group's functional costs, comprising the costs for administration, sales and research & development, rose by €29.8 million to €641.2 million in fiscal 2021 (2020: €611.4 million). As a result of the higher sales volume on the one hand and the optimized cost structure on the other, the ratio of structural costs to sales fell to 19.5% in 2021 from 23.8% in 2020.

Selling expenses increased by €28.0 million, or 10.9%, from €256.9 million in fiscal 2020 to €284.9 million in fiscal 2021. As at the 2021 balance sheet date, KUKA had 1,529 sales employees worldwide – a slight increase of 11 employees on the previous year (2020: 1,518 employees). Customer orientation always remains in focus and is continuously reviewed, optimized and expanded. Furthermore, the increase in selling expenses is attributable to the higher risk provision for expected bad debts in accordance with IFRS 9 as a result of the economic crisis. The selling expenses ratio fell from 10.0% in 2020 to 8.7% in 2021.

Administrative expenses increased by €20.2 million from €176.5 million in fiscal 2020 to €196.7 million in the year under review. Although the number of employees declined, the measures taken during the course of the coronavirus pandemic, such as short-time working, were utilized to a much lesser extent. Additionally, impairment losses were recognized on assets as certain projects are no longer being pursued. The ratio of administrative expenses to sales revenues fell from 6.9% in 2020 to 6.0% in 2021.

Research and development costs decreased from €178.0 million in fiscal 2020 to €159.6 million in the reporting period. Savings were achieved by relocating research and development activities from Austin (USA) to Germany and subsequently closing the American location. Personnel expenditure nevertheless increased slightly. KUKA places high priority on research and development activities. As at December 31, 2021, 1,305 people were employed in research and development (December 31, 2020: 1,257 employees) – equivalent to 9.2% of the workforce in both fiscal years.

The costs of €31.3 million (2020: €30.1 million) incurred for new developments in the year under review were capitalized and will be reported as scheduled amortization in subsequent financial statements. Amortization of R&D expenses capitalized in previous years amounted to €28.4 million, after €27.9 million in 2020. The capitalization ratio rose from 16.7% in 2020 to 19.2% in 2021. Please refer to the research and development chapter of the management report for further information and details.

Other operating income increased from €10.0 million in fiscal 2020 to €14.9 million and included, among other things, income from the sale of real estate no longer required and from the sale of individual assets at Swisslog Healthcare. By contrast, other operating expenses fell from €14.5 million in fiscal 2020 to €9.3 million in fiscal 2021, which included expenses for other taxes (2021: €5.6 million; 2020: €4.7 million).

EBIT in KUKA Group

in € millions	2017	2018	2019	2020	2021
Group	102.7	34.3	47.8	-113.2	61.8

in € millions	2017	2018	2019	2020	2021
in % of sales revenues	3.0	1.1	1.5	-4.4	1.9

Depreciation and amortization decreased by €6.2 million in fiscal 2021 to €140.2 million (2020: €146.4 million). Amortization of capitalized leases in accordance with IFRS 16 decreased slightly from €37.2 million to €35.9 million. In the year under review, impairment losses of €10.6 million (2020: €16.1 million) were recognized for projects no longer being pursued. The depreciation and amortization breaks down into €17.1 million (2020: €19.3 million) for the Systems business segment, €43.6 million (2020: €50.3 million) for Robotics, €17.5 million (2020: €18.3 million) for Swisslog, €12.8 million (2020: €13.6 million) for Swisslog Healthcare, and €13.8 million (2020: €12.5 million) for the China segment.

This resulted in earnings before interest, taxes, depreciation and amortization (EBITDA) of €202.0 million. The strong increase of €168.8 million (2020: €33.2 million) is attributable in particular to the significantly improved positive EBIT.

EBITDA in KUKA Group

in € millions	2017	2018	2019	2020	2021
Group	180.2	121.2	176.5	33.2	202.0
in % of sales revenues	5.2	3.7	5.5	1.3	6.1

Financial result remains positive

The net expenses and income in the financial result equated to an income of €13.5 million for fiscal 2021. Compared with the previous year, this represents an increase of €10.5 million (2020: income of €3.0 million).

Interest income of €27.1 million in fiscal 2021 was up slightly by €0.2 million (2020: €26.9 million). Interest income on bank balances at a subsidiary in the China segment was up year on year. By contrast, there was a slight year-on-year decline in income from the finance lease at KUKA Toledo Production Operations LLC, Toledo, USA (KTPO).

The foreign currency gains of €45.6 million (2020: €41.7 million) together with the foreign currency losses of €43.8 million (2020: €42.7 million) resulted in a net foreign currency gain of €1.8 million in the year under review (2020: loss of -€1.0 million). The financial result was also positively influenced by the income from the sale of the shares in Servotronix Motion Control Ltd. in the year under review. The ongoing changes in the fair value of an interest rate swap had a further positive effect.

Interest expense decreased slightly from €20.0 million in the previous year to €19.2 million in the year under review. At €5.2 million (2020: €5.5 million), interest expenses in connection with leases accounted for a significant proportion of this figure. Interest expenses of €6.6 million were incurred for the promissory note and assignable loans placed by KUKA AG and KTPO and for the inter-company loan (2020: €7.6 million). Net interest expense for pensions decreased from €1.0 million in 2020 to €0.6 million in 2021. Expenditure for sureties and guarantees amounted to €1.4 million in both fiscal years.

EBT (earnings before taxes) rose to €75.3 million, up considerably on the previous year (2020: -€110.2 million). The tax expenditure of -€25.9 million (2020: tax income of €15.6 million) corresponds to a tax rate of 34.4% (2020: 14.2%). The tax rate was mainly due to the revaluation of deferred tax assets and the offsetting effects of tax subsidies in North America and China. Furthermore, a high tax income from previous years, which resulted from a completed tax audit, had a positive effect on the tax rate.

Proposed dividend of €0.11 per share

KUKA Group's earnings after taxes amounted to €49.4 million and were thus significantly higher than the figure for fiscal 2020 (2020: -€94.6 million). The economic development after more than a year of the coronavirus pandemic had a positive impact on KUKA Group. The resulting earnings per share stood at €0.98 in 2021 (2020: -€2.59).

€95.5 million will be withdrawn from the existing other revenue reserves. The Management Board will propose to the Annual General Meeting that a dividend of €0.11 per share be paid for fiscal 2021.

Group income statement (condensed)

in € millions	2017	2018	2019	2020	2021
Sales revenues	3,479.1	3,242.1	3,192.6	2,573.5	3,286.2
EBIT	102.7	34.3	47.8	-113.2	61.8
EBITDA	180.2	121.2	176.5	33.2	202.0
Financial result	-9.2	0.6	6.6	3.0	13.5
Taxes on income	-5.3	-18.3	-36.6	15.6	-25.9
Earnings after taxes	88.2	16.6	17.8	-94.6	49.4

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

Due to the adverse effects of the coronavirus crisis – especially in the core automotive business segment – KUKA was unable to meet the earnings expectations formulated by S & P Global Ratings for maintaining an investment grade rating for fiscal 2020. As a result, the rating agency lowered KUKA AG's rating by one notch from BBB- to BB+ on February 1, 2021. In view of the expected stabilization of the market environment and the resulting earnings opportunities for KUKA, S & P considers the outlook for KUKA AG's rating as "stable". KUKA's liquidity position continues to be rated as "strong".

Condensed Group cash flow statement

in € millions	2017	2018	2019	2020	2021
Cash earnings	184.6	129.0	167.1	40.9	223.3
Cash flow from operating activities	92.0	-48.2	214.5	77.4	208.0
Cash flow from investment activities	-227.7	-165.5	-193.8	-40.4	-107.6
Free cash flow	-135.7	-213.7	20.7	37.0	100.4

Cash earnings are an indicator derived from the earnings after taxes, adjusted for income taxes (excluding deferred taxes), net interest, cash-neutral depreciation on tangible assets, intangible assets, investments in financial assets, and right-of-use assets pursuant to IFRS 16, together with other non-cash income and expenses (including deferred taxes). Due to the positive result, cash earnings of €223.3 million (2020: €40.9 million) represented the good economic situation of the company.

Cash flow from operating activities of KUKA Group rose by €130.6 million from €77.4 million in 2020 to €208.0 million in 2021, thereby reaching the pre-crisis level. The increase is primarily attributable to the positive cash earnings as compared to the previous year. Furthermore, the ongoing measures to monitor and optimize trade working capital meant that it was slightly above the prior-year level mainly due to the increase in business volume. At the end of the 2021 fiscal year, it increased by €4.1 million from €394.6 million to €398.7 million. There was a year-on-year increase in all areas of trade working capital. Thus, inventories increased from €307.9 million in 2020 to €445.6 million in 2021 while trade receivables and contract assets rose from €756.3 million in 2020 to €1,072.1 million in 2021. At €1,119.0 million, trade payables and contract liabilities were also significantly higher than the prior-year figure of €669.6 million. Overall, trade working capital developed as follows:

Trade working capital

in € millions	2017	2018	2019	2020	2021
Inventories [1]	387.4	466.8	344.5	307.9	445.6
Trade receivables and contract assets	923.8	909.0	905.0	756.3	1,072.1
Trade payables and contract liabilities [1]	857.3	809.5	739.4	669.6	1,119.0
Trade working capital	**453.9**	**566.3**	**510.1**	**394.6**	**398.7**

1 For reasons of better comparability, the trade working capital KPI has been adjusted for fiscal 2017 and the advance payments received are shown under contract liabilities.

Capital expenditure in KUKA Group

The volume of investments in intangible and tangible assets totaled €101.4 million in fiscal 2021 (2020: €80.7 million). In the year under review, for example, investments were made in production buildings in Shunde, China. Additionally, further expansion and optimization work was carried out at production locations.

The carrying amount of the company's own development work and internally generated intangible assets totaled €110.8 million (2020: €104.6 million). For more detailed information on the development priorities, please refer to the section "Research and development".

Investments in intangible assets and property, plant and equipment

in € millions	2017	2018	2019	2020	2021
Group	138.8	295.4	151.1	80.7	101.4

Investments in intangible assets in fiscal 2021 totaled €39.9 million (2020: €34.6 million), including €7.7 million (2020: €3.0 million) for licenses and other rights, €31.3 million (2020: €30.1 million) for internally generated software and development costs, and €0.9 million (2020: €1.5 million) for advance payments.

At €61.5 million, investments in property, plant and equipment were up on the previous year (2020: €46.1 million). Investments in land, leasehold rights and construction, including buildings on third-party land, totaled €9.7 million (2020: €11.4 million). Investments amounted to €14.1 million in technical plant and machinery (2020: €13.5 million), €15.6 million in other plant/factory and office equipment (2020: €12.9 million), and €22.1 million in advances paid and construction in progress (2020: €8.3 million). The moderate increase in investments in property, plant and equipment is largely attributable to site expansions and modernizations.

The Systems business segment accounted for €8.5 million (2020: €7.3 million) of overall investment. In the year under review, investments were made in technical plant and machinery, in particular to optimize production, and in the expansion of an office building at a subsidiary in Romania, which was occupied in the previous year. Investments in the Robotics business segment amounted to €29.8 million (2020: €28.2 million), the largest share of which was attributable to capitalized company-produced assets. In the Swisslog segment, investments totaled €12.7 million (2020: €10.9 million). More than half of the investments related to intangible assets. Further investments were also made in equipping the new office building at the German location. At €14.5 million, investments of the Swisslog Healthcare business segment were higher than in the previous year (2020: €12.6 million). The main part of this was accounted for by the further development of existing products for hospitals. In the China segment, €24.7 million was invested (2020: €9.1 million). Among other things, this expenditure related to the expansion of the production location in Shunde, China. In the Corporate Functions segment, investments in fiscal 2021 totaled €11.2 million after €13.3 million in 2020. The majority was attributable to investments in a production building at the location.

The investment volume by segment is presented below:

Investments in intangible assets and property, plant and equipment

in € millions	2020	2021
Systems	7.3	8.5
Robotics	28.2	29.8
Swisslog	10.9	12.7
Swisslog Healthcare	12.6	14.5
China	9.1	24.7

in € millions	2020	2021
Corporate Functions	13.3	11.2

Cash outflows for acquisitions of groups of assets and cash outflows for acquisitions of consolidated companies carried out in previous years totaled €0.7 million in fiscal 2021 (2020: €6.5 million) and are as follows:

Acquisitions

in € millions	2020	2021
UTICA Enterprises, Shelby Township, Michigan,USA	1.9	0.6
Pharmony SA, Luxembourg, Luxembourg	-	0.1
Servotronix Motion Control Ltd., Petah Tikva, Israel	4.5	-
Other	0.1	-
Total payments	**6.5**	**0.7**

In the year under review, cash inflows from investments in financial assets and investments accounted for using the equity method mainly included dividend payments from the Yawei Reis Robot Manufacturing joint venture amounting to €0.7 million and the proceeds from the sale of shares in Servotronix Motion Control Ltd. amounting to €16.1 million.

Payments from disposals of fixed assets mainly include proceeds from the sale of real estate no longer required.

Positive free cash flow for the third year in a row with a new record value of €100.4 million

Cash flow from current business operations (2021: €208.0 million; 2020: €77.4 million) and cash flow from investment activities (2021: -€107.6 million; 2020: -€40.4 million) together resulted in a positive free cash flow of €100.4 million (2020: €37.0 million). The highest free cash flow in the company's history was thus achieved in fiscal 2021.

Negative cash flow from financing activities

The cash flow from financing activities amounted to -€34.8 million in 2021 after -€42.7 million in 2020. This includes, on the one hand, dividend payments of €0.11 per share (2020: €0.15 per share) with a total amount of €4.4 million in 2021 (2020: €6.0 million) and, on the other hand, the raising of current financial liabilities under the syndicated loan and other changes in current liabilities to banks (2021: -€9.0 million; 2020: €2.3 million). Interest paid, including the interest component of leases (2021: -€18.5 million; 2020: -€19.3 million), and the redemption component of lease payments (2021: -€34.6 million; 2020: -€34.1 million) also had a negative impact. Payments from grants received amounting to €31.7 million, compared with €14.4 million in the previous year, had a positive impact on cash flow from financing activities.

Group net liquidity

in € millions	2020	2021
Cash and cash equivalents	554.6	673.2
Current financial liabilities	-154.6	-332.0
Non-current financial liabilities incl. accounts payable to affiliated companies	-370.0	-193.1
Group net liquidity	**30.0**	**148.1**
Cash and guarantee facilities from syndicated senior facilities agreement	520.0	520.0

in € millions	2020	2021
Guarantee facility with banks and surety companies	170.3	170.3

As at the end of fiscal 2021, net liquidity had risen to €148.1 million (2020: €30.0 million). Cash and cash equivalents increased from €554.6 million in 2020 to €673.2 million in 2021. The second tranche of the assignable loan at KUKA Toledo Productions Operations LLC, Toledo, Ohio, USA (KTPO) with a volume of USD 90 million was due in February 2022, resulting in a reclassification between non-current and current financial liabilities. Moreover, the tranche of the EUR promissory note loan maturing in October 2022 with a volume of €107.5 million was also reclassified to the current portion of financial liabilities. The change in the inter-company loan reported under non-current financial liabilities is attributable to the interest payments thereon.

Net worth

Non-current assets decreased by €44.2 million from €1,296.7 million at December 31, 2020 to €1,252.5 million at December 31, 2021, resulting in a €32.0 million decrease in deferred taxes amounting to €95.8 million (2020: €127.8 million). Losses carried forward accounted for €55.9 million (2020: €27.0 million) of deferred taxes. Financial investments totaled €5.0 million as at December 31, 2021, compared with €17.1 million in the previous year. On the one hand, the shares in Servotronix Motion Control Ltd. were sold. On the other hand, KUKA Group received shares in Otsaw Technology Solutions Pte. Ltd. Furthermore, KUKA received shares in Otsaw Swisslog Healthcare Robotics Pte. Ltd. As a result, investments accounted for using the equity method increased to €29.7 million as at December 31, 2021, compared with €26.4 million as at December 31, 2020.

The non-current finance lease receivable at KTPO decreased by €18.9 million to €100.7 million as at December 31, 2021 (December 31, 2020: €119.6 million). Furthermore, non-current other receivables of €1.3 million as at December 31, 2021 (December 31, 2020: €2.9 million), right-of-use assets from leases of €114.7 million as at December 31, 2021 (December 31, 2020: €115.5 million) and income tax receivables of €0.5 million as at December 31, 2021 (December 31, 2020: €1.0 million) decreased slightly.

By contrast, intangible assets increased slightly from €533.3 million as at December 31, 2020 to €536.3 million as at December 31, 2021. This item included goodwill of €323.2 million (December 31, 2020: €313.2 million). The increase in property, plant and equipment from €353.1 million as at December 31, 2020 to €368.5 million as at December 31, 2021 is primarily attributable to the investments in the production buildings in Shunde, China.

As at the balance sheet date of the year under review, current assets amounted to €2,456.6 million and were thus up €636.8 million on the previous year's figure (December 31, 2020: €1,819.8 million).

An upward trend can be observed in all current balance sheet items with the exception of income tax receivables (December 31, 2021: €21.1 million; December 31, 2020: €30.2 million). For example, inventories increased by €137.7 million (December 31, 2021: €445.6 million; December 31, 2020: €307.9 million), trade receivables by €201.5 million (December 31, 2021: €596.9 million; December 31, 2020: €395.4 million) and contract assets by €114.3 million (December 31, 2021: €475.2 million; December 31, 2020: €360.9 million). This is largely due to the increased volume of business and sales.

The current portion of the finance lease receivables increased only slightly to €32.9 million as at December 31, 2021, compared with €28.4 million as at December 31, 2020. As a result of the acquisition of securities with a term of significantly less than one year, an increase of €69.3 million in other current receivables and other assets to €211.7 million as at December 31, 2021 (December 31, 2020: €142.4 million) can be observed.

Cash and cash equivalents were up from €554.6 million as at December 31, 2020 to €673.2 million as at December 31, 2021.

Group net assets

in € millions	2017	2018	2019	2020	2021
Balance sheet total	2,640.1	3,218.5	3,426.6	3,116.5	3,709.1
Equity	866.6	1,339.6	1,348.6	1,203.7	1,354.6
in % of balance sheet total	32.8	41.6	39.4	38.6	36.5
Net liquidity / debt	-45.2	92.9	50.2	30.0	148.1

Overall, the balance sheet total of KUKA Group increased by €592.6 million from €3,116.5 million as at December 31, 2020 to €3,709.1 million as at December 31, 2021.

Equity ratio of 36.5%

Due to the growth of the balance sheet total, the equity ratio fell from 38.6% to 36.5% year on year. Overall, equity increased by €151.0 million to €1,354.6 million as at the 2021 balance sheet date (December 31, 2020: €1,203.7 million). Both the subscribed capital of €103.4 million and the capital reserve of €306.6 million remained unchanged in the year under review. The positive earnings after taxes of €49.4 million, foreign exchange effects of €60.9 million and of €33.0 million attributable to minority interests, and the reduction in actuarial losses from the measurement of pensions not affecting net income, including the deferred taxes of €14.3 million thereon, were partly offset by the dividend distribution of €4.4 million. The main foreign exchange effects were attributable to the Chinese renminbi, the US dollar and the Swiss franc. Minority interests increased from €280.5 million as at December 31, 2020 to €325.3 million as at December 31, 2021.

Financial liabilities remained virtually unchanged from the previous year. The current portion of financial liabilities increased from €154.6 million as at December 31, 2020 to €332.0 million as at December 31, 2021 and showed, on the one hand, the drawings on the syndicated loan and, on the other hand, the second tranche of the USD assignable loan maturing in February 2022 and the second tranche of the EUR promissory note loan maturing in October 2022. Non-current financial liabilities of €44.4 million as at December 31, 2021 were lower than the prior-year figure (December 31, 2020: €221.6 million) due to the reclassification of the assignable and promissory note loans to the current portion. The loan from Midea Group Ltd. in the amount of €148.7 million as at December 31, 2021 is reported under “Non-current accounts payable to affiliated companies”.

Lease liabilities increased slightly and amounted to €124.6 million as at December 31, 2021 (December 31, 2020: €121.6 million). Of this amount, €30.2 million (December 31, 2020: €28.7 million) was accounted for by current lease liabilities and €94.4 million (December 31, 2020: €92.9 million) by non-current lease liabilities. Overall, non-current liabilities totaled €427.0 million as at the 2021 balance sheet date (December 31, 2020: €634.6 million).

Current liabilities increased by €649.3 million and amounted to €1,927.5 million as at December 31, 2021 (December 31, 2020: €1,278.2 million). Trade payables increased by €280.9 million to €634.2 million (December 31, 2020: €353.3 million). Contract liabilities also increased by €168.5 million from €316.3 million as at December 31, 2020 to €484.8 million as at December 31, 2021. Corresponding to the same trend on the asset side of trade working capital, this increase in operating liabilities is attributable to the increased volume of business.

The increase of €63.5 million in other current liabilities, which amounted to €276.6 million as at December 31, 2021 (December 31, 2020: €213.1 million), was primarily attributable to higher liabilities for personnel-related items (December 31, 2021: €140.8 million; December 31, 2020: €109.2 million).

Other provisions decreased by €26.6 million from €168.6 million as at December 31, 2020 to €142.0 million as at December 31, 2021. This was mainly due to the decrease in the restructuring provision recognized in the previous year. There was also an increase in litigation risks and warranty provisions in particular. However, a settlement was reached in a pending legal dispute after the balance sheet date. The reduction of €15.9 million in income tax liabilities from €43.5 million as at December 31, 2020 to €27.6 million as at December 31, 2021 was related to the

assessment of tax matters in the USA. Current liabilities to affiliated companies remained unchanged compared with the previous year (December 31, 2021: €0.1 million; December 31, 2020: €0.1 million).

Group assets and financial structure

in € millions	2020	2021
Current assets	1,819.8	2,456.6
Non-current assets	1,296.7	1,252.5
Assets	**3,116.5**	**3,709.1**
Current liabilities	1,278.2	1,927.5
Non-current liabilities	634.6	427.0
Equity	1,203.7	1,354.6
Liabilities	**3,116.5**	**3,709.1**

Slight increase in working capital due to business performance

As a result of the continuous, systematic monitoring of the individual working capital items and despite the increase in business volume, working capital of €125.6 million in fiscal 2021 remained approximately at the prior-year level (2020: €123.7 million). The working capital of the individual segments developed as follows:

in € millions	2020	2021
Systems	47.9	131.3
Robotics	134.8	136.7
Swisslog	-97.8	-105.9
Swisslog Healthcare	23.6	19.5
China	14.3	-37.9
Corporate Functions	6.7	-9.8
Reconciliation to Group	-5.6	-8.3
Total	**123.7**	**125.6**

Reduced capital employed and return on capital employed (ROCE)

ROCE (return on capital employed) is the ratio of earnings before interest and taxes to net capital employed. To calculate ROCE the capital employed is based on an average value. ROCE illustrates the effectiveness and profitability of the capital employed. Capital employed includes working capital, intangible assets, property, plant and equipment, and right-of-use assets from leases. Capital employed thus represents the difference between operating assets and non-interest-bearing debt capital. The capital employed is calculated as the average of capital employed at the beginning and end of a given fiscal year.

On average, KUKA Group's capital employed in 2021 and 2020 amounted to €1,245.5 million (2020: €1,321.1 million) and €1,245.8 million at the end of fiscal 2021 (2020: €1,245.2 million). The positive EBIT of €61.8 million (2020: -€113.2 million) divided by average capital employed resulted in a ROCE of 5.0% (2020: -8.6%).

Return on capital employed (ROCE)

in % of capital employed	2017	2018	2019	2020	2021
Group	10.9	2.9	3.5	-8.6	5.0

In almost all business segments, average capital employed was down year on year. Due to the year-on-year improvement in EBIT, the resulting ROCE in all segments was higher – in some cases significantly higher – than in the previous year.

In the Systems business segment, the average capital employed of €318.5 million as at December 31, 2021 (2020: €284.3 million) resulted in a ROCE of 9.8% (2020: -13.2%). In the Robotics business segment, capital employed fell from €407.7 million in 2020 to €372.5 million in 2021. This resulted in a ROCE of 16.6% 2021 after -1.0% in the previous year. The Swisslog business segment also reported a decrease in average capital employed to €124.2 million as at December 31, 2021 (2020: €136.0 million). Due to the significantly higher EBIT, ROCE increased from 0.6% in 2020 to 15.3% in the year under review. Capital employed also decreased in the Swisslog Healthcare segment (2021: €157.8 million; 2020: €163.6 million) and the improved EBIT increased the resulting ROCE (2021: 2.4%; 2020: 1.9%). In the China segment, ROCE was up from -3.1% in 2020 to 8.3% in 2021. The average capital employed was €123.2 million, as opposed to €151.4 million in the previous year.

Return on capital employed (ROCE)

in % of capital employed	2020	2021
of which Systems	-13.2	9.8
of which Robotics	-1.0	16.6
of which Swisslog	0.6	15.3
of which Swisslog Healthcare	1.9	2.4
of which China	-3.1	8.3

Events after the balance sheet date

In a pending legal dispute in the USA, a settlement in the low single-digit million range was reached at the beginning of fiscal 2022. The provision recognized essentially corresponded to the settlement amount.

Furthermore, the decision was taken after the reporting date to dispose of certain assets of a subsidiary located in Belgium. Proceeds from the sale are expected to be in the low single-digit million euro range.

In addition, the Russia-Ukraine conflict represents a non-adjusting event that could impact the growth prospects in KUKA Group. Due to the extent of KUKA Group's operating activities in Russia, the Management Board expects only a limited direct impact on assets and sales revenues. The indirect effects of the sanctions against Russia can in principle affect all segments and relate, for example, to global supply and value chains, movements in commodity prices and exchange rates, as well as country-specific and global economic developments. At the time of reporting, these effects are not yet foreseeable, but the corresponding risks are being continuously monitored and assessed.

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 electronic Federal Gazette (Bundesanzeiger) and on the KUKA Group website (www.kuka.com).

Income statement of KUKA Aktiengesellschaft (HGB)

in € millions	2020	2021
Sales revenues	115.6	109.3
Other company-produced and capitalized assets	1.3	1.3
Other operating income	152.5	47.8
Cost of materials	-54.1	-57.4
Personnel expenses	-51.2	-55.3
Depreciation and amortization of tangible and intangible assets	-22.6	-10.0
Other operating expenses	-89.5	-123.3
Income/expenses from equity investments	-9.7	-4.1
Other interest and similar income	12.6	12.0
Depreciation of financial assets	-10.0	-21.9
Interest and similar expenses	-8.5	-7.3
Taxes on income	-10.7	-1.3
Net profit/net loss for the year	**25.6**	**-110.2**
Profit carryforward from the previous year	35.6	22.0
Withdrawal from revenue reserves	-	95.5
Transfer to revenue reserves	-12.8	-
Balance sheet profit	**48.4**	**7.3**

Balance sheet of KUKA Aktiengesellschaft (HGB)

Assets in € millions	**Dec. 31, 2020**	**Dec. 31, 2021**
Fixed assets		
Intangible assets	15.9	11.8
Tangible assets	8.8	10.0
Financial assets	495.7	759.5
	520.5	**781.3**
Current assets		
Receivables from affiliated companies	946.9	561.4
Other receivables and assets	1.0	0.8
Securities	25.0	20.0
	972.9	**582.2**
Cash and cash equivalents	**19.9**	**14.4**
	992.8	**596.6**
Prepaid expenses	**2.5**	**3.6**
	1,515.7	**1,381.5**

Liabilities in € millions	**Dec. 31, 2020**	**Dec. 31, 2021**
Equity		
Subscribed capital	103.4	103.4
Capital reserve	305.8	305.8
Other revenue reserves	311.4	237.9
Balance sheet profit	48.4	7.3
	769.0	**654.4**
Provisions		
Pension provisions	11.7	11.6
Provisions for taxes	15.4	14.2
Other provisions	25.4	37.9

Liabilities in € millions	**Dec. 31, 2020**	**Dec. 31, 2021**
	52.6	**63.8**
Liabilities		
Liabilities due to banks	258.6	252.6
Trade payables	5.7	3.6
Accounts payable to affiliated companies	422.3	402.7
Liabilities to provident funds	2.5	2.5
Other liabilities	5.1	1.9
	694.1	**663.3**
	1,515.7	**1,381.5**

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 decreased from €115.6 million in 2020 to €109.3 million in 2021. KUKA Aktiengesellschaft mainly generates its sales revenues from cost allocations and cost transfers to subsidiaries. These rose by 9.8% to €109.3 million in the past fiscal year (2020: €99.5 million). Due to the establishment of KUKA Real Estate GmbH & Co. KG in the previous year and the associated transfer of business to this company, there have been no revenues from the rental of buildings since fiscal 2021 (2020: €16.1 million).

The expenses associated with sales revenues are reported as cost of materials and services purchased. These amounted to €57.4 million during the financial year (2020: €54.1 million).

Other operating income of €47.8 million (2020: €152.5 million) mainly includes foreign exchange gains primarily from the US dollar, Swiss franc, Swedish krona and Norwegian krone. In fiscal 2021, income from the spin-off and transfer of buildings at the Augsburg location amounting to €1.7 million is also reported under other operating income. In the previous year, there was income of €115.4 million from the contribution of land and buildings to KUKA Real Estate GmbH & Co. KG.

Other operating expenses rose from €89.5 million to €123.3 million. The increase is primarily the result of value adjustments made on receivables from affiliated companies. Furthermore, there are higher currency losses and higher rental expenses.

Personnel expenditure increased by 8.0% year on year to €55.3 million (2020: €51.2 million). This included less relief from short-time working in fiscal 2021. Additionally, the change in the Management Board of KUKA Aktiengesellschaft had the effect of increasing expenses. The average number of employees decreased from 571 in the previous year to 551 in fiscal 2021.

Income from participations amounted to -€4.1 million, compared with -€9.7 million in the previous year. This includes the earnings contributions of the German companies that have a profit and loss transfer agreement with KUKA Aktiengesellschaft.

Write-downs of financial assets in the amount of -€21.9 million (2020: -€10.0 million) relate to shares in a subsidiary that are expected to be permanently impaired.

Net interest increased slightly by €0.6 million to €4.6 million (2020: €4.0 million). Compared with 2020, there were lower expenses for bank loans and interest expenses to banks in particular. Net interest income from consolidated affiliated companies remains unchanged at €11.1 million (2020: €11.1 million).

The reported taxes on income and earnings amounting to €1.3 million (2020: €10.7 million) mainly include tax expenses due to foreign withholding taxes.

KUKA Aktiengesellschaft's net loss for fiscal 2021 was -€110.2 million (net income for 2020: €25.6 million) and was below the previous year's forecast of a slight increase due to higher other operating expenses, write-downs on financial assets and lower earnings contributions from subsidiaries. Taking into account the profit of €22.0 million carried forward from the previous year and the withdrawal of €95.5 million from revenue reserves, this results in a balance sheet profit of €7.3 million.

Financial position of KUKA Aktiengesellschaft

One of KUKA Aktiengesellschaft's most important tasks is to provide funds and guarantees for its subsidiaries' current operations. The resources used for external finance such as the promissory note loan and the syndicated loan agreement 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. They also include a loan from Midea International Corporation Company Limited, Hong Kong, in the amount of €150.0 million to KUKA Aktiengesellschaft. The balance of these receivables and liabilities was a net receivables figure of €158.7 million (2020: €524.6 million). The change in receivables resulted in particular from the contribution of an inter-company loan to the equity of a subsidiary at the Augsburg location and lower receivables from financial resources.

The liquid assets of KUKA Aktiengesellschaft fell from €19.9 million to €14.4 million. Liabilities to banks decreased year on year by €6.0 million to €252.6 million (2020: €258.6 million). This includes liabilities from the promissory note loan and the short-term 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 significantly from €946.9 million in the previous year to €561.4 million. The decrease resulted in particular from the aforementioned contribution of a loan to the equity of a subsidiary. 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 €22.6 million in 2020 to €10.0 million in 2021. The main reason for this is the contribution of land and buildings to KUKA Real Estate GmbH & Co. KG in the previous year and the associated lower depreciation of property, plant and equipment in 2021 at KUKA Aktiengesellschaft.

Investments totaling €293.1 million (2020: €35.1 million) were made in fiscal 2021. The investments in intangible assets relate primarily to IT infrastructure. The aforementioned transfer of buildings at the Augsburg location is reflected in property, plant and equipment. KUKA

Aktiengesellschaft's direct equity investments in its subsidiaries are reported under financial assets. The increase to €759.5 million (2020: €495.7 million) results from the aforementioned contribution of a loan and from investments in Swisslog Group.

Other assets decreased slightly to €0.8 million in 2021 (2020: €1.0 million).

The short-term securities totaling €20.0 million (2020: €25.0 million) have a term of four months and relate to long-term freely available financial resources invested in conjunction with liquidity management.

Equity was down €114.6 million on the previous year, thus reflecting the negative result for the fiscal year. Additionally, a dividend of €4.4 million for fiscal 2020 was paid out in the 2021 fiscal year. The equity ratio of KUKA Aktiengesellschaft amounts to 47.4% as at the balance sheet date December 31, 2021 (2020: 50.7%).

As at December 31, 2021, other provisions totaled €37.9 million (2020: €25.4 million) and were thus up on the corresponding figure for the previous year. In addition to higher provisions for impending losses on foreign currency derivatives, this was due to higher provisions for outstanding invoices and other provisions for risks.

Other liabilities decreased from €5.1 million to €1.9 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 €134.2 million to €1,381.5 million (December 31, 2020: €1,515.7 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.

Focus on emissions and water consumption*

By using certified environmental management systems, KUKA can ensure that the impact of energy consumption and production processes on the environment is as low as possible. KUKA also considers the development of emissions and the volume of waste and effluents to be integral parts of the environmental management system, even if they are less significant than energy consumption. Production waste is separated and disposed of or recycled expertly by trained personnel.

At KUKA, water is only used to a limited extent in the paint shop and in cooling processes. At our largest production locations, the total water consumption in 2021 amounted to 96,150 m^3 (2020: 93,354 m^3).

CO_2 emissions at our largest production locations totaled 28,368 tonnes in 2021 (2020: 27,569 tonnes).

At an increasing number of locations, we are using environmentally-friendly green sources to cover a share of electricity requirements.

Group-wide energy-saving measures*

With the building refurbishment at the Augsburg site in 2021, KUKA expects to achieve annual thermal energy savings of up to 100,000 kWh. Measures designed to achieve these savings include insulating the roof, replacing outdated air heaters with ceiling-mounted radiant heating panels, and using advanced measurement and control technology. Additionally, an older decentralized refrigeration system has been decommissioned and connected to the KUKA refrigeration network. Finally, implementation of the New Office concept has resulted in improved utilization of office space, enabling the removal of two less efficient office containers.

For further details please refer to KUKA's sustainability report at www.kuka.com

** Not verified by auditors*

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.

The protective measures relating to the coronavirus pandemic continued to have the utmost priority in the current fiscal year. Hygiene and safety concepts were regularly adapted to the ongoing situation. Where their jobs allowed, employees were encouraged to continue working from home. In addition, short-time working was used at German sites and in various areas in the first two quarters. Similar models were also adopted in other countries. As at December 31, 2021, KUKA Group employed 14,128 people. The number of employees was thus 3.1% higher than in the previous year (2020: 13,700). The Systems division employed 3,032 staff as at December 31, 2021. The number was thus on a par with the previous year (2020: 3,033). In the Robotics division, the workforce increased by 1.8% to 5,290 employees (2020: 5,197). The number of employees at Swisslog rose by 6.9% to 2,367 (2020: 2,215). At Swisslog Healthcare, the number of employees fell slightly by 1.4% to 1,053 from 1,068 in the previous year. The workforce in China comprised 1,713 employees at the end of the year under review, 13.0% above the headcount of 1,516 in the previous year. The Chinese market is one of KUKA's focus markets. For this reason, KUKA further expanded its presence in this strategically important growth market.

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. This is why KUKA apprentice graduates finish best in class in their respective training occupation time and again and are then qualified specialists immediately ready for their jobs. Professional training is offered at the German sites in Augsburg, Obernburg 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 specialist for forwarding and logistics services to occupations such as industrial clerk, IT specialist and technical product designer.

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.

For further details please refer to KUKA's sustainability report at www.kuka.com

Diversity and tolerance are the order of the day*

At KUKA, diversity involves promoting and leveraging the diversity of our employees as a source of creativity, innovation and business success. KUKA benefits from various experiences and talents, because living and promoting diversity is part of the corporate culture. At many locations, the company offers employees flexible working times in order to better combine work and private life. Accepting and encouraging diversity to

benefit from different experiences and talents is part of the corporate culture at KUKA. As a signatory to the Diversity Charter, KUKA has also anchored the topic within the structure of the company.

Promoting networks*

KUKA supports the internal women's network orangeWIN, which helps to identify and promote female talent. Due to coronavirus, only a few events could be held in the year under review. In addition, KUKA has been participating in the Augsburg cross-mentoring program since 2011. This program supports young managers with their professional and personal development and is designed as a company-wide program. KUKA is also involved in the mentoring partnership MigraNet, which is committed to the professional integration of people with a migrant background.

Social engagement*

Orange Care e.V., a non-profit association in Augsburg founded by KUKA employees, is primarily committed to promoting youth and family welfare and supporting people in need. Orange Care has also sponsored a children's daycare center since 2013 with the goal of improving the work-life balance. Due to the coronavirus pandemic, maintaining regular services at the daycare center in 2021 was a challenge, but one that was met. Investments were made in the maintenance of the outdoor facilities in the reporting year. This included, for example, the replacement of play sand and play equipment as well as the creation and planting of a herb bed. Beyond this, Orange Care is committed to helping people who have fallen on hard times through no fault of their own, people with disabilities and socially disadvantaged young people. One of the social initiatives supported is Kinderweihnachtswunsch e. V. (Christmas wish association for children). The association provides support for children and young people who live in and are cared for by social institutions in the Augsburg area. Thanks to donations through the association, Orange Care was able to fulfill group wishes.

In Germany, KUKA has been a sponsor of the Herrenberg-Gäu Aerospace Lab e. V. youth research center for many years now. The aim of this non-profit association is to familiarize children – and especially girls – with applied robotics and programming at an early age. They are introduced to technical topics and research not through isolated activities, but via long-term and individual support in group work addressing STEM subjects.

Bringing robotics and automation closer to the public*

In November 2021, KUKA once again took part in European Robotics Week – initiated by the European robotics association euRobotics. During this week of events, KUKA employees have the opportunity to get involved in raising awareness of robotics and automation in the general public. Despite the pandemic-related restrictions, KUKA offered a varied program, including a painting competition for children and a robotics lecture for children at the Augsburg Planetarium on the topic of "Humans and Machines on Mars – What Robotics can do in Space". Young people were also able to take a look at production at KUKA during a digital tour of the plant. A digital presentation by a KUKA employee addressed automation in the semiconductor industry, highlighting ways in which robotics and automation can provide a solution to the current global chip shortage. Once again in 2021, some KUKA employees were able to visit schools and childcare facilities despite the restrictions imposed by the pandemic. In this way, they were able to introduce the children to the topic of robotics in an age-appropriate presentation.

** Not verified by auditors*

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 and shareholders 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.

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 internal monthly management reporting 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. Furthermore, external auditors check that the early risk identification system is suitable for early identification of risks that could threaten the existence of the company as a going concern.

In addition to the risk management system, KUKA Group has an internal controlling system (see management report, "Internal control and risk management system" section) 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.

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 section quantifies the risks managed at Group level as well as the operating risks of 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

in € millions	2020	2021
Legal risks	11.2	13.5
Economic risks	43.1	103.5
Financial risks	24.4	14.5
Other risks	7.0	9.3
Total for the Group	**85.6**	**140.8**

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

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.

In fiscal 2021, KUKA Group was affected by the global effects of the coronavirus pandemic, but was able to profit from the catch-up effects from customers' willingness to invest, both in the automotive industry and in general industry. The slight global economic recovery had a positive impact on the company's business development.

The damage limitation measures taken at KUKA Group in connection with the coronavirus pandemic were able to keep all essential business processes up and running. As the pandemic is ongoing, regulatory intervention to contain the pandemic could mean that the measures taken by KUKA Group are not sufficient. The operating business would be adversely affected, for example, by temporary site closures, supply chain disruptions or even production stoppages. One of the main uncertainties of the coronavirus pandemic is the fact that it is still not possible to estimate the duration (for example, due to mutations or new waves of infection) and the economic impact of post-COVID effects.

KUKA largely succeeded in preventing and mitigating disruptions to the supply chain through proactive risk management. This ensured that customer orders could be executed in their entirety. Nevertheless, there are inherent risks due to insolvencies of suppliers and/or customers, global supply bottlenecks, as well as production disruptions caused by coronavirus cases. The pandemic has also shown, however, that the trend

towards automation remains intact, offering opportunities especially in logistics/e-commerce, healthcare, alternative drive systems, but also in non-industrial sectors. KUKA 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. Generally, KUKA sources product components from several suppliers in order to minimize the risk of sharp price increases for key raw materials, but in a few cases, due to a lack of alternative sources, is dependent on single suppliers that dominate their markets. Continuous monitoring of supplier risks is conducted as part of the risk management process. This also includes effects on international supply chains, such as those caused by the escalation in the Russia-Ukraine conflict.

Projects within the framework of the digitalization strategy were further advanced, with the coronavirus pandemic even accelerating their implementation.

KUKA Systems

This division's revenues and profits are subject to general business risks due to the length in time it takes to process project orders, the revisions to the specifications that are often necessary during processing, the infrequency of the orders received, and the price and competitive pressures. Other risks associated with these projects include inaccurate prediction of the actual costs as well as penalties for late deliveries. The division therefore uses appropriate risk checklists for individual orders in order to assess the associated legal, economic and technological risks prior to preparing a quotation or accepting a contract. One of the components of project execution, for example, is to monitor and track solvency risks and mitigate them using a strict project and receivables management process. Other risks are continuously monitored and if necessary accounted for by way of accruals or write-downs. Opportunities exist, for example, if unplanned customer change requests have to be implemented during the term of the project or if KUKA can benefit from lower purchase prices for outsourced parts compared to the cost estimate. In 2021, several projects in Europe and the USA were subject to significant additional costs as a result of coronavirus-related and post-COVID supply bottlenecks and delays, but also due to the high complexity of these projects. These effects were taken into account in the amended project calculation and are already included in earnings for 2021 through provisions for impending losses.

Automation requirements in the expansion of global production capacities of the major automobile manufacturers, particularly in the field of electromobility, are currently highly dynamic. KUKA is increasingly working together with internal partners, with several of the division's regional subsidiaries collaborating on a customer project. In these situations, there are risks involved in information exchange, the value-added process and project management across various IT systems. There are also organizational risks associated with extraordinarily rapid and strong growth in business volume, particularly in emerging markets. KUKA mitigates these risks by deploying experienced internal and contract employees when establishing and expanding the local organizations.

The increasing variety of models offered by the automotive industry tends to have a positive impact on the potential market volume, since this generates increasing demand for flexible manufacturing systems, which in turn spurs demand for new or revamped assembly lines. This creates new business opportunities for system providers and subsuppliers. Scarce resources are driving demand for smaller and more fuel-efficient vehicles that will use alternative energy sources. This means automakers, especially American manufacturers, will have to invest in new production lines or upgrade their existing assembly lines in the future.

Pay-on-production contracts such as KTPO's (KUKA Toledo Production Operations) offer additional opportunities, but also risks. The Jeep brand still promises good growth prospects compared to other American car models. KUKA will continue to participate in this growth.

Thorough market analyses have shown that KUKA Systems also has long-term business opportunities outside the automotive industry; namely, in general industry. The main risks here when tapping into new market potential relate to technical requirements, since customers in these sectors often have no experience with automated systems. The aforementioned checklists to review the technical risks associated with applying new automation techniques are therefore an especially important tool for identifying and mitigating risks. Whether or not the targets for 2022 are achieved depends largely on the further course of the coronavirus pandemic and the associated impact on the economy, for example with regard to possible bottlenecks in supply chains. These factors have therefore been included in the risk assessment, and scenarios have been identified to evaluate the risk of delivery delays or material price increases, for example.

Systems risk exposure

in € millions	2020	2021
Legal risks	0.2	0.1
Economic risks	9.9	15.0
Financial risks	0.0	0.0
Other risks	0.0	0.0
Total for Systems	**10.1**	**15.1**

KUKA Robotics

Demands for continuous product innovation from international customers and unrelenting cost awareness are the key challenges for this division's product portfolio; especially when it comes to the automotive industry and its suppliers. The result is permanent price pressure and potentially longer life cycles for the robotic applications combined with demands for ever-improving quality and longer warranties.

KUKA Robotics responds to such trends by continually developing new products and applications that offer customers in existing markets quantifiable financial benefits driven by quick paybacks. Launching new products goes hand in hand with product performance risks and quality guarantees, which could generate additional costs if rework is required. KUKA employs a comprehensive quality management system that includes extensive validation and test processes to detect, avoid and manage such risks.

Rising material prices and supply chain disruptions are likely to pose the greatest risks in 2022, particularly due to the global supply crisis affecting electronic components and semiconductors. The coronavirus crisis will still lead to uncertainties in the robotics business in 2022, but at a significantly lower level than in the previous year. Potential temporary closures of customer locations are included in the risk assessment. In some of the market segments described, however, there are opportunities for faster growth in demand for automation – for example in the consumer logistics industry.

Project postponements and the trimming of model ranges, particularly in the automotive industry, but also structural changes at customers, are creating additional uncertainties. The further diversification of business activities and the focus on high-growth, profitable market segments present an opportunity. One of the company's key strategic thrusts is to penetrate new, non-automotive markets. Increasing diversification across various industries and regions reduces dependencies on individual sectors and can offset existing cyclicalities.

The cell business has come under pressure in recent years due to high project risks and falling market prices. The structure has been adapted to the changed framework conditions. This involved realigning the business model both organizationally and thematically. In addition to projects based on customer-specific solution requests, this includes continued focusing of the project business on modular and standardized cells.

Robotics risk exposure

in € millions	2020	2021
Legal risks	1.7	0.1
Economic risks	23.7	46.1
Financial risks	1.2	0.7
Other risks	0.0	0.0
Total for Robotics	**26.6**	**46.9**

Swisslog

The Swisslog segment broadens KUKA's range of products and services and contributes to independence from the automotive industry. In some cases, projects for the automation of warehouse and distribution centers are subject to long lead times which can give rise to financial risks resulting from miscalculations, failure to meet acceptance specifications or late deliveries. To counter this, regular project risk assessments are carried out at different stages of the projects by those responsible for project implementation in the relevant countries. Potential risks are regularly reviewed, new ones are added or existing ones eliminated, and measures for risk reduction are introduced and their progress documented. Projects requiring particular management attention are classified as "top attention projects" and their status is communicated monthly to the higher management levels.

Supply chain disruptions and other post-COVID effects are seen as the main risks for the coming fiscal year. Different scenarios were considered in this respect and included in the risk exposure. The exposure is a significant part of the economic risks. The trend toward automation in the logistics sector, which is still being driven by the pandemic, is opening up further opportunities. Overall, the economic risks have increased only slightly.

Swisslog risk exposure

in € millions	2020	2021
Legal risks	0.0	0.0
Economic risks	7.0	15.6
Financial risks	6.3	0.0
Other risks	0.0	0.0
Total for Swisslog	**13.3**	**15.6**

Swisslog Healthcare

The Swisslog Healthcare segment also expands KUKA's range of products and services, thereby contributing to independence from the automotive industry. Market data indicate that the increasing pressure on costs and the strict safety requirements for hospital logistics offer high growth potential for automation. Furthermore, consolidated service centers, in which hospitals standardize their logistics processes and achieve cost advantages, generate greater demand for automation solutions. Risks arise from complex technical and regulatory requirements. Risks arise from delayed and postponed investments by customers due to shifts in priorities as a result of the crisis.

Swisslog Healthcare risk exposure

in € millions	2020	2021
Legal risks	0.6	0.4
Economic risks	0.1	0.2
Financial risks	1.7	0.5
Other risks	0.0	0.0
Total for Swisslog Healthcare	**2.4**	**1.1**

China

The China segment comprises all business activities of the Chinese companies in the Systems, Robotics, Swisslog and Swisslog Healthcare divisions. For this reason, the risks arise from the above-mentioned segment and product-specific risks.

As in the other segments, risks remain due to the current geopolitical situation and the effects of the new coronavirus variants, such as travel restrictions or supply chain disruptions, shortages of key materials and pressure on prices. KUKA can only take limited measures to mitigate these risks, which are of a global magnitude. For this reason, KUKA is focusing on trust-based cooperation with local customers and a suitable product portfolio, although certain risks exist in the local research and development of controllers and platforms, for example. The slowdown in economic growth from Q4 2021 onwards has brought with it the risk of significantly lower order volumes and margins. Here, too, KUKA is taking measures to increase selling prices and improve efficiency in the areas of production and project management in order to reduce costs still further.

Also with regard to the planned higher output in China, associated supply chain risks represent the majority of the increased economic risks.

China risk exposure

in € millions	2020	2021
Legal risks	0.0	0.0
Economic risks	1.4	21.4
Financial risks	2.3	3.6
Other risks	0.0	0.0
Total for CHINA	**3.7**	**25.1**

Risks and opportunities managed at holding level (KUKA AG)

Cross-division opportunities and risks are analyzed and managed at Group level for central functions such as legal matters, taxes, corporate finance and treasury, personnel and IT, rather than by the individual divisions, which is why said risks are only addressed from the Group perspective in the opportunity and risk report. Information about this can be found in the specified sections.

KUKA AG acts as the Group's management holding company, performing central service functions. KUKA AG's result in the separate financial statements depends primarily on the profit transfers of the German subsidiaries and on dividends from the subsidiaries. This gives rise to corresponding opportunities and risks with possible implications for the carrying amounts of investments and the receivables from affiliated companies recognized in the balance sheet.

KUKA AG risk exposure

in € millions	2020	2021
Legal risks	8.7	12.9
Economic risks	1.1	5.2
Financial risks	12.9	9.7
Other risks	7.0	9.3
Total for KUKA AG	**29.6**	**37.1**

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.

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 annually in order to ensure sufficient cover and to weigh the relationship between the insurance protection and deductibles against the risk premium.

Financial risks

KUKA Group is under the financial control of KUKA AG. The primary objectives of financial management are to secure the liquidity and creditworthiness of the Group, thus ensuring financial independence. Effective management of foreign exchange, interest rate and default risk also serves to reduce earnings volatility.

KUKA AG identifies, coordinates and manages the financial requirements of the Group companies and optimizes the financing of the Group. For this it employs a Group-wide standard treasury management and reporting system. 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 the promissory note loans issued in 2015 and 2018 with staggered maturities up to 2023, on an inter-company loan concluded with Midea in December 2019 with a term until 2025, and on a syndicated loan refinanced in 2018 with a term until 2025 and providing cash credit facilities and guarantee lines. Two standard financial covenants (leverage and interest coverage ratio) have been agreed for the syndicated loan. Furthermore, KUKA has access to a credit line concluded with Midea in 2018, which also has a term until 2025. 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

The political framework conditions, such as the trade war between the USA and China, the tensions with Russia and the associated situation on the commodities markets, also have an impact on KUKA's business success. The resulting risks have been identified, analyzed and assessed, but not yet finally quantified. Risks have currently been identified with regard to the supply chain, commodity prices and sales markets as a result of the Russia-Ukraine conflict. These cannot be reliably assessed at present. From the Group's current perspective, the risks to its direct operating business are low. However, we expect prices for raw materials, semi-finished and finished goods to rise. The risks arising from this conflict are being monitored and assessed on an ongoing basis.

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.

IT risks and opportunities

IT risks have risen over the past number of years owing to the importance of IT to business processes. These risks relate to both 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 an increasing number of external threats as well as dependence on the ever-expanding digitalization of business processes.

Risks in the area of information security and data protection are continuously monitored and analyzed, as they can 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 2021 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.

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 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.

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 a significant increase in potential risks, such as those arising from the effects of the coronavirus pandemic and the associated disruption to supply chains, 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

The coronavirus pandemic has been a burden on society and the global economy for almost two years now. The outlook has improved in 2021 with the result that the OECD expects the global economy to recover, but remains cautious. There are still enormous uncertainties and risks. These include the Russia-Ukraine conflict but also the ongoing global supply difficulties. Despite a very good order situation, many industrial companies are under pressure and finding it difficult to meet demand. The price increases in the supply chain can hardly be passed on to customers and pose challenges for small and medium-sized companies in particular. Moreover, the renewed rise in coronavirus infection rates and the associated consumer uncertainty are once again slowing the economic recovery. Added to this are high inflation rates, which are dampening the mood on the markets. Fears of a further escalation in the Russia-Ukraine conflict and the economic consequences of the sanctions are weighing on the world economy and the global growth outlook. Potential impacts include continued pressure on global supply chains, increased risks from cyberattacks, and rising commodity and energy prices, which are heightening inflation concerns. As a result of inflation, central banks could raise interest rates earlier than planned. Overall, a prolonged period of uncertainty is to be expected, which could impact growth prospects.

In its Economic Outlook, the OECD raised its forecast for the global economy for 2022 slightly from 4.4 percent (OECD Economic Outlook May 2021) to 4.5 percent (OECD Economic Outlook December 2021). The growth forecast was confirmed in the December outlook, but growth will be unevenly distributed. The forecast for the euro zone was still 4.4 percent in May 2021 and was lowered to 4.3 percent in the December outlook. For Germany, the outlook was reduced from 4.4 percent in May 2021 to 3.9 percent in December 2021. The forecast is influenced primarily by the global uncertainties and risks outlined above. The forecast for economic development in the United States was raised slightly for 2022. The growth outlook was 3.6 percent in May 2021 and was increased slightly to 3.7 percent in December 2021. A strong recovery in Europe, the probability of additional fiscal support in the United States next year, and a lower household savings rate are having a positive impact on growth prospects in the industrialized countries. For the Chinese economy, the OECD lowered the growth outlook from 5.8 percent in May 2021 to 5.1 percent in December 2021.

For the coming years, the OECD forecasts a considerable increase in government spending on health, long-term care and pensions due to the aging population and the rising cost of services. In order to cushion the impending costs, the OECD recommends that countries implement structural reforms that will lower the unemployment rate and reduce the number of early retirements.

Automation & digitalization

Increasing complexity, growing numbers of variants with fluctuating production volumes, new technologies and ever-increasing global competition (in terms of prices) are presenting manufacturing companies with new challenges. Manufacturers therefore require flexible automation solutions in order to adapt quickly to a changing environment and continuously improve efficiency. In many production and material flow processes, the role of a robot has thus changed significantly in recent years. In the past, isolated robots were used to automate individual tasks and process steps behind safety fences. Automation has traditionally been a complex task, from programming through to commissioning. 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.

In the medium term, global megatrends such as the increasing customization of products, digitalization, demographic change, but also increased regionalization will continue to intensify, primarily as a result of the experience gained from the coronavirus crisis and trade disputes. This experience shows how important new business models are becoming which enable customers to flexibly adapt their processes to rapidly changing market needs. Logistical and political risks could thus be minimized. With increasing regionalization, local capacities are being built up and the demand for intelligent automation solutions is growing. Especially in high-wage countries, companies are compelled to produce at high efficiency levels in order to remain internationally competitive. In addition, the growing demand for customized products will further increase the degree

of automation. This calls for new business models that will fundamentally and lastingly transform not only production in the future, but also the value creation process as a whole.

In the long term, robot installations will increase worldwide. This development is supported by robots which can perform activities around the clock that are dangerous or harmful to humans. The increasing digitalization of production facilities and the stronger focus on energy efficiency will also have a positive impact. With technological advancements such as human-robot collaboration and easy programming, additional new applications and markets will emerge. So-called cobots can work safely alongside humans by stopping automatically as soon as an obstacle enters their workspace. The further development of sensor and vision technologies allows robots to react to changes in their environment in real time. Whereas traditional industrial robots operate quickly and are primarily important for increasing productivity, cobots will assist humans in their work. In addition, the use of easily programmable robots will expand the spectrum of applications, especially in the case of frequent changes in the production process. Combined with mobile platforms, this will open up a whole new range of possibilities in automation. Additionally, more and more robot manufacturers have recognized that the total cost of ownership (TCO) is still considered as too high by many potential customers. The development of robots with lower energy consumption reduces not only the carbon footprint, but also the operating costs.

The IFR predicts a compound annual growth rate (CAGR) of 6 percent for global robot installations from 2021 to 2024, according to its forecast in the World Robotics Report of October 2021. Catch-up effects will have a positive impact on market growth in 2021, which should lead to an increase of 13 percent. These effects will weaken again in 2022 or 2023, with the result that a slight temporary decline is expected. For 2024, the IFR forecasts a renewed increase, and the number of robots installed worldwide could exceed the threshold of 500,000. The US economy is expected to grow at a disproportionately high rate, with a CAGR of 10 percent. The forecast for Europe is 2 percent, with growth predicted to be strongest in Central and Eastern Europe and in Spain. On average, no growth is expected for Germany (0 percent). The Asian market, especially China, continues to be the growth driver. The CAGR in China is forecast at 7 percent. An average growth rate of 6 percent is expected for the Japanese market and a CAGR of 8 percent for Korea.

In many countries, direct and indirect subsidies for digitalization of local production offer opportunities for automation. For example, the EU has earmarked several billion euros for digitalization with its “NextGenerationEU” plan.

Automotive

As a result of the transformation from fossil fuel-burning combustion engines to new, sustainable drive technologies, the automotive industry is facing the biggest change in its history. This change will also affect the supplier industry. According to a study entitled “The Transformation of German Automotive Suppliers towards Electromobility” conducted by Deloitte and the German Automotive Industry Association (VDA) in August 2021, more than 80 percent of suppliers expect electromobility to prevail as the technology of the future. The majority of suppliers have already adapted to this and started converting to electromobility. However, this also means that suppliers are facing high investments and thus major challenges. Consequently, companies require planning security above all, which the VDA believes goes hand in hand with the political and economic framework conditions, such as the expansion of renewable energies, the charging infrastructure and the training of skilled workers.

Germany is already the world’s third-largest producer of electric vehicles, and German manufacturers have been able to expand their market shares for electric vehicles in all major regions. In Europe, German manufacturers account for more than half of all new electric vehicle registrations. They plan to invest 150 billion euros in future technologies by 2025. From January to November 2021, new registrations of electric vehicles in Germany even rose by 92 percent year on year to 600,700 units. The share of electric cars in the overall market was 25 percent from January to November 2021. The strong growth could be slowed down, however, by a lack of charging facilities in Germany. In July 2021, the VDA predicted that more than 1 million charging points for e-cars and e-transporters will be required in Germany by 2030.

Moreover, worldwide supply bottlenecks, especially for semiconductors, have also impacted global automotive production. Due to a shortage of parts, production at numerous automotive plants had to be partially halted. This also had a negative impact on Germany’s export figures. The global supply chain situation is only expected to ease during the course of 2022.

Non-automotive

The customers of mechanical and systems engineering companies expect efficient production and logistics processes in the manufacture of individualized products, and this at competitive prices. Automated solutions can help make processes more flexible, faster and more efficient. Growth opportunities here are primarily offered by markets outside the automotive industry. Despite the worldwide increase in robot installations in the non-automotive sector during the past few years, robot densities (number of robots per 10,000 workers) are still at a low level. In Germany, the non-automotive robot density was equivalent to 216 robots per 10,000 workers according to the October 2021 IFR report. By comparison, the automotive industry had a robot density of 1,395 robots. In the USA, the robot density rose to 157 in general industry and 1,528 in the automotive industry. In China, the world's largest robot market, the robot density in non-automotive markets was only 126 and in the automotive industry 1,150 per 10,000 workers.

In 2020, the electronics industry became the largest customer group for robot-based automation with approximately 109,000 robots installed worldwide. On average, annual sales of robots in the electronics industry increased by 11 percent between 2015 and 2020. Contributing factors are the high demand for electrical products and components as well as increasing investments in infrastructure, particularly in 5G technologies. The electronics industry operates under strong margin pressure and very strict production and quality standards. Robots are particularly suitable for processing very small parts at high speeds and at the same time with high precision, around the clock. This enables manufacturers in the electronics industry to guarantee the required quality with high throughput and to produce at competitive prices. With intelligent end effectors and vision technologies, the areas of application can be expanded still further.

New technologies enabling the simpler operation of robots, for example, are also providing a boost to automation. This increases the attractiveness of automation solutions in production and logistics environments that have previously not been automated to any great extent. But also the strong growth of sectors such as e-commerce offers opportunities for automation. Ever more goods are being ordered online and customers want delivery times to be as short as possible. As a result, the demands on warehousing are becoming increasingly complex in the efforts to fulfill the growing number of incoming orders even faster. The cost and competitive pressures in e-commerce are intense and companies that do not adapt quickly enough to the dynamic environment will be forced out of the market. Consequently, efficient automation solutions are in greater demand as a means of remaining competitive.

China

While the Chinese economy was already slowly recovering in 2020, Europe and North America were still in the midst of the coronavirus crisis. Consequently, China was the only country to report an increase in the numbers of robots installed. According to the IFR, the installations even increased by 20 percent in 2020. With its high growth rates, the Chinese market remains the largest robotics market in the world. 168,377 robots were installed in China in 2020 according to the IFR. This is the highest figure ever recorded in any country. The installed base increased to 943,000 units, up 21 percent on the previous year. Meanwhile, 44 percent of all robots installed worldwide are in China. The automotive industry was primarily responsible for the strong growth over the past ten years. However, non-automotive markets have caught up and since 2016, the electronics industry has overtaken the automotive industry as the largest purchaser of industrial robots. Both Chinese and international manufacturers have expanded their production capacities in China.

China's economic development continues to progress. As wages have risen, purchasing power in the country has increased and the middle class has expanded. Industries have increased their capacities and installed modern automation technologies in order to keep up with rising demand. This development has had a positive impact on robot density per year, which has risen by an average of 37 percent from 51 to 246 units since 2015.

The long-term market outlook remains positive. The Chinese government plans to develop the country into a leading global high-tech manufacturing landscape. However, the increase in automation over the last few years is not attributable to government support alone, but also to increased wages, higher quality standards and more environmentally-friendly production processes. Existing factories are being modernized and new factories are being built to take advantage of the rapidly growing market.

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 shares in China. For 2022, the IFR expects a slight increase of 1 percent in installed robots in China. Due to the strong increase in the previous year, the growth forecast for 2022 is at a low level.

Summary*

The outlook for the global economy is subject to major uncertainties and risks. A prolonged period of uncertainty is expected, mainly due to the Russia-Ukraine conflict, which could impact growth prospects. In addition, there are still major uncertainties as a result of the ongoing global supply difficulties, which could affect KUKA's business performance in 2022. Material shortages and supply bottlenecks not only lead to price increases, but they also make it difficult to reliably plan the availability of necessary components for production and project execution.

KUKA 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. Possible effects due to the escalation in the Russia-Ukraine conflict are not included in the current forecast.

Anticipated business development in KUKA Group

in € millions	2021	2022 expectations
Orders received	3,565.3	slightly above prior-year level[1]
Sales revenues	3,286.2	slightly above prior-year level[1]
EBIT margin	1.9%	rising
Earnings after taxes	49.4	above prior-year level[1]
Free cash flow	100.4	positive / below prior-year level[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

The forecast for orders received in the full year 2022 is slightly above the prior-year level. For sales revenues, KUKA expects the figure to also be slightly above the prior-year level. The anticipated EBIT margin will be in the low single-digit percentage range in 2022.

Earnings after taxes

In the 2021 fiscal year, KUKA Group reported earnings after taxes of €49.4 million. For 2022, KUKA expects earnings after taxes 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 2022, free cash flow is expected to be positive but below the prior-year level.

KUKA AG

KUKA AG'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.

Internal control and risk management system

Basic principles

Pursuant to section 289 para. 4 and section 315a sentence 1 of the German Commercial Code (HGB), KUKA Aktiengesellschaft, as a publicly traded parent company, must describe within the management report the key characteristics of its internal control and risk management system with regard to the accounting process. The description must include the accounting processes of the companies included in the consolidated financial statements.

The risk management system comprises all organizational rules and measures related to identifying risk and dealing with entrepreneurial risk (see the opportunity and risk report). The internal control system is an integral part of the risk management system.

The internal control system (ICS) comprises all principles, processes and measures introduced to the company by management that result in systematic and transparent risk management. The focus here is on the organizational implementation of management decisions made to ensure the effectiveness and efficiency of business operations (for example, the protection of assets, including the prevention and detection of asset misappropriation), the correctness and reliability of internal and external accounting, and compliance with the legal provisions applicable to the company.

The objective of the ICS is to obtain sufficient certainty using the implemented controls to monitor and manage risks so that the company's goals can be achieved. Various monitoring measures – both integrated into and independent of the processes – contribute to the preparation of annual and consolidated financial statements that are in conformity with the legal provisions.
Regardless of its specific form, an ICS is unable to provide absolute certainty as to whether it will achieve its objectives. Taking this into account, the accounting-related ICS can only provide relative certainty rather than absolute certainty that material misstatements in accounting will be avoided or detected.

Structures and processes

With regard to the accounting process, the structures and processes described below have been implemented in KUKA Group. The Management Board of KUKA Aktiengesellschaft bears full responsibility for the scope and design of the ICS.

The system extends via clearly defined management and reporting structures to all subsidiaries that are included in the consolidated financial statements.

The accounting and human resources activities for the German companies are mainly performed centrally at the Shared Service Center of KUKA Aktiengesellschaft.

Intra-group tasks such as treasury, legal services and taxes are also largely performed centrally by KUKA Aktiengesellschaft on the basis of uniform Group processes.

The principles, organizational structures and processes of the (Group) accounting-related internal control and risk management system are defined in policies and organizational procedures. Adjustments based on external and internal developments are integrated on a continuous basis and made available to all employees concerned.

Characteristics of the accounting-related internal control and risk management system

With respect to the accounting process, we regard those characteristics of the internal control and risk management system as material that can significantly impact the accounting and the overall presentation of the consolidated and annual financial statements, including the consolidated management report. At KUKA Group, these include, in particular:

- Identifying the main areas of risk (see the opportunity and risk report) and control that affect the (Group) accounting process;
- Quality controls to monitor the (Group) accounting process and the accounting results at the level of the Group Management Board, the management companies and individual reporting entities included in the consolidated financial statements;
- Preventive control measures in the finance and accounting systems of the Group and the companies included in the consolidated financial statements as well as in operating business performance processes that generate key information for the preparation of the consolidated and annual financial statements and the consolidated management report, including a separation of functions of predefined approval processes in relevant areas;
- Process-integrated monitoring measures such as the principle of dual control for which each material business transaction must be signed or otherwise approved by at least two authorized persons;
- Measures to ensure proper, IT-supported processing of (Group) accounting-related facts and data. These include, for example, central management of access rights to the bookkeeping systems and automated plausibility checks when data are recorded in the reporting and consolidation system;
- Definition and monitoring of the implementation of control requirements for the accounting-related ICS, carried out by the central Group ICS department, which remains independent of the processes. By means of a defined procedure, the internal controls are documented by the responsible departments and then examined by independent parties – normally the Group ICS department – for functional capability and effectiveness. Any weak points in the control system are targeted through action plans, whose implementation is monitored. Significant control weaknesses and the implementation of action plans are reported to the Management and Supervisory Boards.

Internal Audit constitutes an additional control entity that is independent of processes and regularly reviews the organizational structures, processes and orderliness in addition to the defined ICS requirements, thus contributing to compliance with the ICS and risk management system.

In addition, the CFOs of all subsidiaries must provide an internal responsibility statement in the context of external reporting every quarter, confirming that the data reported are correct. Only then do the members of the Management Board of KUKA Aktiengesellschaft issue and sign a responsibility statement at year-end,

In its meetings, the Audit Committee of the Supervisory Board regularly reviews the effectiveness of the accounting-related internal control system and obtains an appropriate view of the Group's risk situation. In so doing, the Management Board of KUKA Aktiengesellschaft presents the risks associated with financial reporting at least once per year, outlines the control measures implemented, and monitors their correct execution.

Summary

The structures, processes and characteristics of the internal control and risk management system that have been depicted ensure that the accounting processes of KUKA Aktiengesellschaft and KUKA Group are uniform and are implemented in accordance with the legal requirements, generally accepted accounting principles, international accounting standards and internal Group policies.

They also ensure that transactions are recognized and measured uniformly and accurately throughout the Group and that accurate and reliable information is therefore provided to the internal and external recipients of the information reported.

Disclosures in accordance with section 289a sentence 1 and section 315a sentence 1 of the German Commercial Code (HGB) including accompanying explanations

The supplementary disclosures required by sections 289a sentence 1 and 315a sentence 1 of the German Commercial Code (HGB) are presented as at December 31, 2021 and explained in the following.

Composition of subscribed capital

As at December 31, 2021, the total share capital of KUKA Aktiengesellschaft amounted to €103,416,222.00 and consisted of 39,775,470 no-par-value bearer shares with pro rata share capital of €2.60 per share. The share capital is fully paid up. All shares have equal rights and each share guarantees its holder one vote at the Annual General Meeting. Shareholders are not entitled to have share certificates issued for their shares (section 4 para. 1 of the Articles of Association). When new shares are issued, the start of profit sharing may be established at variance with section 60 para. 2 of the German Stock Corporation Act (AktG) (section 4 para. 3 of the Articles of Association).

Restrictions affecting voting rights or transfer of shares

There are no restrictions affecting voting rights or transfer of shares.

Shareholdings that exceed 10% of the voting rights

According to the German Securities Trading Act (WpHG), any investor who reaches, exceeds or falls below the voting rights threshold pursuant to section 33 of the WpHG through purchase, sale or by other means is obliged to report this to the company and the German Federal Financial Supervisory Authority (BaFin).

As at December 31, 2021, KUKA Aktiengesellschaft has received information from the following investors whose direct or indirect shareholdings in the capital of KUKA Aktiengesellschaft exceed 10% of voting rights:

Midea Group

1.	Midea Electric Netherlands (I) BV	81.0387%	directly
2.	Midea Electric Netherlands (II) BV	14.2760%	directly
3.	Guangdong Midea Electric Co., Ltd.	95.3147%	allocated
4.	Midea Group Co., Ltd.	95.3147%	allocated

Midea Group Co. Ltd. which indirectly holds more than 95% of the voting rights via the above-mentioned subsidiaries, sent a letter on November 23, 2021 with the formal request pursuant to section 327a of the German Stock Corporation Act (AktG) that the Annual General Meeting of KUKA Aktiengesellschaft should resolve to transfer the shares of the remaining shareholders to Guangdong Midea Electric Co., Ltd. in return for an appropriate cash compensation (a so-called squeeze-out).

Shares with special rights that confer powers of control

There are no shares with special rights conferring powers of control.

Method of voting rights control when employees hold an interest in the share capital and do not directly exercise their rights of control

No employees hold an interest in the share capital within the meaning of section 289a sentence 1 no. 5 and section 315a sentence 1 no. 5 of the German Commercial Code (HGB).

Legal provisions and provisions of the Articles of Association regarding the appointment and dismissal of Management Board members and amendments to the Articles of Association

Pursuant to section 6 para. 1 of the Articles of Association, the company's Management Board must consist of at least two persons. The Supervisory Board determines the number of Management Board members (section 6 para. 2 of the Articles of Association). The appointment and dismissal of members of the Management Board are governed by sections 84 and 85 of the Stock Corporation Act (AktG), section 31 of the Co-Determination Act (MitbestG) and section 6 of the Articles of Association.

Pursuant to sections 119 para. 1 no. 5 and 179 para. 1 of the Stock Corporation Act (AktG), any changes to the Articles of Association require a resolution by the Annual General Meeting. Section 22 para. 1 of the Articles of Association states that a simple majority of the share capital represented at the Annual General Meeting is sufficient to pass a resolution, provided that a greater majority is not required by law. A greater majority is required in particular for resolutions on changes to the company's business purpose, reductions in the share capital and changes to the form of incorporation.

Pursuant to section 11 para. 3 of the Articles of Association, the Supervisory Board is authorized to make amendments to the company's Articles of Association that only affect the wording.

The resolution passed at the Annual General Meeting held on May 29, 2019 also authorized the Supervisory Board to amend the wording of section 4 para. 1 and 5 of the Articles of Association following complete or partial increase of the share capital in accordance with utilization of Authorized Capital 2019 and, if Authorized Capital 2019 has not been fully used by May 28, 2024, following expiration of the authorization.

The Supervisory Board was also authorized by the resolution passed at the Annual General Meeting of May 29, 2019 to amend the wording of section 4 para. 1 and 6 of the Articles of Association as per the respective issue of shares offered under the stock option plan and all other associated amendments to the Articles of Association that only affect the wording. The same applies in the event that the authorization to issue bonds is not exercised after expiry of the period of authorization, or to the extent that Conditional Capital 2019 has not been utilized at the time of expiry of the option or conversion rights, or deadline for fulfillment of the conversion or option obligations.

Management Board authorization to issue and buy back shares

Authorized capital

As per the resolution of the Annual General Meeting on May 29, 2019 and section 4 para. 5 of the company's Articles of Association, which was added on the basis of this resolution, the Management Board, subject to approval by the Supervisory Board, is authorized to increase the company's share capital on or before May 28, 2024 by up to €31,024,866.60 through the issue of new shares in exchange for contributions in cash or in kind in multiple tranches (Authorized Capital 2019). The shareholders shall be granted subscription rights. The new shares may also be underwritten by one or more financial institutions or by enterprises operating according to section 53 para. 1 sentence 1 or section 53b para. 1 sentence 1 or para. 7 of the German Banking Act (KWG), as specified by the Management Board, subject to the obligation that they are offered to the shareholders for subscription (indirect subscription right). However, the Management Board shall be authorized, subject to approval by the Supervisory Board, to exclude fractional amounts from shareholder subscription rights and to exclude shareholder subscription rights if a capital increase in exchange for contributions in kind takes place for the purpose of acquiring companies or parts of companies or interests in companies or other assets (including third-party claims against the company). Subject to approval by the Supervisory Board, the Management Board shall be further authorized to exclude shareholder subscription rights in the event of Authorized Capital 2019 being utilized once or several times in exchange for cash contributions up to a capital increase amount. This may not exceed 10% of the existing share capital at the time this authorization comes into effect and – if this value is lower – at the time this authorization is exercised, so that the new shares can be issued at a price that is not significantly lower than the stock market price of the company's shares already listed at the time the issue price is finalized. Shares sold as a result of, and during the term of, the authorization granted at the Annual General Meeting of May 29, 2019 in accordance with section 71 para. 1 no. 8 sentence 5 AktG in conjunction with section 186 para. 3 sentence 4 AktG shall count towards the aforementioned 10%

threshold. Furthermore, this 10% threshold shall also include shares issued for the purpose of servicing warrant or convertible bonds, participation rights or participating bonds or a combination of these instruments, provided that these instruments were issued as a result of, and during the term of, an authorization granted at the Annual General Meeting of May 29, 2019 in accordance with the appropriate application of section 186 para. 3 sentence 4 AktG.

The Management Board is authorized, subject to approval by the Supervisory Board, to stipulate other details regarding the capital increase and its execution, in particular with regard to share rights and the terms and conditions relating to the issuance of shares.

Conditional capital

Section 4 para. 6 of the Articles of Association stipulates a conditional increase in share capital by up to €15,512,432.00, divided into up to 5,966,320 no-par-value bearer shares (Conditional Capital 2019).

The conditional capital increase will be applied to grant no-par-value shares when conversion or option rights are exercised (or upon fulfillment of corresponding option/conversion obligations) or when KUKA Aktiengesellschaft exercises its option to grant no-par-value shares of KUKA Aktiengesellschaft instead of paying wholly or partially the monies due to the holders of conversion or warrant bonds, participation rights or participating bonds (or a combination of these instruments), issued by KUKA Aktiengesellschaft or a dependent Group company up to May 28, 2024 in exchange for cash contributions as a result of the authorization granted by the shareholders at the Annual General Meeting of May 29, 2019. Furthermore, new shares will be issued according to the condition in the aforementioned authorization resolution at the option or conversion price to be determined respectively. The conditional capital increase shall only be conducted in the event of an issue of bonds to which option or conversion rights or obligations are attached in accordance with the authorization by shareholders at the Annual General Meeting of May 29, 2019 and only to the extent that option or conversion rights are exercised or to the extent that holders of bonds obligated to convert or exercise their options fulfill their conversion or option obligations, or to the extent that KUKA Aktiengesellschaft exercises its option to grant no-par-value shares of KUKA Aktiengesellschaft wholly or partially instead of paying the monies due and provided in each case no cash settlement is granted or treasury shares or shares of another listed company are used to service the bonds. The new shares issued shall participate in the profits as of the beginning of the financial year in which they are issued. The Management Board is authorized, subject to approval from the Supervisory Board, to define the further details of the execution of the conditional capital increase.

Acquisition of treasury shares

As per the resolution passed by the Annual General Meeting on May 29, 2019, the company is authorized, until May 28, 2024, to buy back its own shares in an amount not to exceed 10% of the share capital existing at the time the resolution was passed via the stock market or in the form of a public purchase offer addressed to all shareholders by the company. In doing so, the purchase price (excluding transaction costs) may not be more than 10% higher or lower than the average stock market price defined in detail in the authorization.

The company may exercise this authorization in whole or partial amounts, once or several times; however, it may also be executed by dependent companies or companies in a majority holding of the company, or through a third party on behalf of the company or its dependants.

Pursuant to the above resolution, the Management Board is also authorized, subject to approval by the Supervisory Board, to treat the treasury shares acquired subject to the exclusion of shareholder subscription rights on the basis of that and earlier authorizations as follows:

(1) To sell the treasury shares acquired to third parties in connection with company mergers or the acquisition of companies, or parts of companies, or interests in companies, or for the purpose of acquiring other assets (including claims of third parties against the company);

(2) To sell the treasury shares acquired by means other than via the stock exchange or an offer to all shareholders, provided the shares are sold for cash at a price that is not substantially lower than the quoted stock market price of treasury shares at the time of sale.

However, this authorization only applies subject to the proviso that the shares sold subject to the exclusion of subscription rights pursuant to section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG) may not, in total, exceed 10% of the share capital, whether on the effective date of the authorization or on the date on which it is exercised. The limit of 10% of the share capital is to include shares

(a) that are issued to service bonds with warrants or convertible bonds, participation rights or participating bonds, or a combination of these instruments, provided the instruments were issued on the basis of an authorization resolved by the Annual General Meeting of May 29, 2019 pursuant to the corresponding application of section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG);

(b) that are issued by exercising an authorization – in effect on the date on which the above authorization took effect or that was resolved by the Annual General Meeting of May 29, 2019, from authorized capital pursuant to section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG), under exclusion of subscription rights;

(3) To use the treasury shares acquired to introduce the treasury stock on foreign stock exchanges on which they have not previously been admitted for trading.

Treasury shares acquired on the basis of this authorization or authorizations granted at an earlier time may be canceled without requiring a further resolution at the Annual General Meeting for the cancelation. Cancelation leads to reduction of the share capital. However, the cancelation can also be effected by means of a simplified process without the reduction of share capital by adjusting the proportionate amount of share capital of the remaining shares according to section 8 para. 3 of the German Stock Corporation Act (AktG). The Management Board is in this case authorized to change the disclosure of the number of shares in the Articles of Association accordingly. This authorization for the acquisition of treasury shares, as well as the resale or cancelation of such shares, may be used once or several times, in whole or in part.

Significant company agreements that are conditional upon a change of control, and the resulting impact

Employment contracts of Management Board members

The employment contracts of the Management Board members contain no “change-of-control” clauses.

Syndicated loan agreement

KUKA Aktiengesellschaft and its associated companies signed a syndicated loan agreement on February 1, 2018 with a consortium of banks and amended this agreement through an amendment and accession agreement on June 21, 2019. According to the terms of the loan agreement, the creditors provide working capital and guarantee lines of €520,000,000. The loan agreement had an original term of 5 years up to February 1, 2023 and was subject to two extension options. Following the approval of all syndicate banks for the second extension option in December 2019, the loan agreement now runs until February 1, 2025 with an unchanged structure.

The loan agreement covers the main working capital requirements of KUKA Group (including the furnishing of bank guarantees). The contract contains a change-of-control clause that is typical in the industry, under the terms of which the syndicated banks may demand repayment of the loan in the event that a shareholder (or group of shareholders acting in concert) acquires control of at least 30% of the voting rights of KUKA Aktiengesellschaft, or otherwise has the ability to direct the business policy of the company. A change of the direct owner within Midea Group is not affected by this provision as long as Midea Group Co., Ltd. directly or indirectly holds 100% of the shares and voting rights of the new owner.

Each consortium bank may also declare its share of the loan agreement due for repayment in the cases of a delisting, a squeeze-out or the conclusion of a control and/or profit transfer agreement with a company of Midea Group.

In a letter dated November 23, 2021, Midea announced its intention to initiate a squeeze-out process. KUKA Aktiengesellschaft has informed the bank consortium accordingly and will enter into discussions with the syndicate banks regarding a continuation of the syndicated loan agreement.

Promissory note loan 2015

On October 9, 2015, led by Landesbank Baden-Württemberg and UniCredit Bank AG, KUKA Aktiengesellschaft had issued a promissory note loan with an overall volume of €250,000,000 and staggered terms to 2020 and 2022. On October 9, 2020, KUKA Aktiengesellschaft repaid the tranche of €142,500,000 due in 2020.

The terms and conditions of the promissory note loan contain a standard change-of-control clause. Accordingly, immediately it learns of a change of control, KUKA Aktiengesellschaft must disclose this in accordance with the terms and conditions of the loan. The lenders then have the right, within 30 days of receiving notification of a change of control, to demand repayment of their (pro rata) loan at the next interest due date after receipt of the request for repayment and the interest due up to the date of repayment. A "change of control" within the meaning of the terms and conditions of the loan is given if a person or persons acting in concert directly or indirectly (i) either hold more than 30% of the voting shares, (ii) hold more than 30% of the voting rights in the company and/or (iii) otherwise have the possibility of directing the company's business policy.

US assignable loans of KUKA Toledo Production Operations LLC

On August 7, 2018 and September 6, 2018, led by Deutsche Bank AG, Landesbank Baden-Württemberg and UniCredit Bank AG, KUKA Toledo Production Operations LLC (KTPO) as borrower and KUKA Aktiengesellschaft as guarantor issued a total of four assignable loans with an overall volume of USD 150,000,000 and staggered terms to 2020, 2022 and 2023. The tranche of USD 10,000,000 due in 2020 was repaid on August 10, 2020.

The terms and conditions of the assignable loans contain a standard change-of-control clause. Accordingly, immediately it learns of a change of control, KUKA Aktiengesellschaft must disclose this in accordance with the terms and conditions of the loans. In this case, the lenders have the right, within 15 days of receiving notification of a change of control, to terminate the assignable loan agreements prematurely and demand repayment of their (pro rata) loan and the interest due up to the date of repayment. A "change of control" within the meaning of the terms and conditions of the assignable loans is given if a person or persons acting in concert directly or indirectly (i) either hold more than 30% of the voting shares, (ii) hold more than 30% of the voting rights in KTPO or KUKA Aktiengesellschaft and/or (iii) otherwise have the possibility of directing the business policy of KTPO or KUKA Aktiengesellschaft. A change of the direct owner within Midea Group is not affected by this provision as long as Midea Group Co., Ltd. directly or indirectly holds 100% of the shares and voting rights of the new owner. Also excluded is restructuring within KUKA Group, meaning a change of control at KTPO insofar as control is exercised by a KUKA Group company.

Agreements concluded between the company and members of the Management Board or employees governing compensation in the event of a takeover bid

No agreements have been concluded between the company and members of the Management Board or employees governing compensation in the event of a takeover bid.

Corporate Governance Statement

For the corporate governance statement pursuant to section 289f and section 315d of the German Commercial Code (HGB), reference is made to information published on the website www.kuka.com.

Non-financial declaration

Please refer to the website at www.kuka.com for the non-financial declaration pursuant to sections 315b, 315c and 289c of the German Commercial Code (HGB). The declaration will be published on April 30, 2022.

Balance sheet

of KUKA Aktiengesellschaft, Augsburg as of December 31, 2021

ASSETS

in € thousands	Notes	Dec. 31, 2020	Dec. 31, 2021
Fixed assets	(1)		
Intangible assets		15,947	11,793
Tangible assets		8,807	9,991
Financial investments		495,716	759,471
		520,470	**781,255**
Current assets			
Inventories	(2)	16	10
Receivables from affiliated companies	(3)	946,867	561,384
Other receivables and assets	(4)	998	817
Securities	(5)	25,000	20,000
		972,881	**582,211**
Cash and cash equivalents	(6)	19,872	14,428
		992,753	**596,639**
Prepaid expenses	(7)	2,517	3,607
		1,515,740	**1,381,501**

EQUITY AND LIABILITIES

in € thousands	Notes	Dec. 31, 2020	Dec. 31, 2021
Equity			
Subscribed capital [1]	(8)	103,416	103,416
Capital reserve		305,796	305,796
Other retained earnings		311,402	237,918
Balance sheet profit	(9)/(10)	48,408	7,299
		769,022	**654,429**
Provisions	(11)		
Pension provisions		11,721	11,645
Provision for taxes		15,440	14,173
Other provisions		25,428	37,949
		52,589	**63,767**
Liabilities	(12)		
Liabilities due to banks	(13)	258,622	252,625
Trade payables		5,661	3,622
Accounts payable to affiliated companies	(14)	422,275	402,657
Liabilities to provident funds	(15)	2,468	2,525
Other liabilities	(16)	5,103	1,876
		694,129	**663,305**
		1,515,740	**1,381,501**

1) Conditional Capital as of December 31, 2021 in the amount of k€15,512 (previous year: k€15,512)

Income statement

of KUKA Aktiengesellschaft, Augsburg for the period January 1 to December 31, 2021

in € thousands	Notes	2020	2021
Sales revenues	(17)	115,578	109,273
Other company-produced and capitalized assets	(18)	1,328	1,286
Other operating income	(19)	152,504	47,819
Cost of materials	(20)	-54,065	-57,408
Personnel expense	(21)	-51,222	-55,311
Depreciation and amortization of tangible and intangible assets	(22)	-22,639	-9,957
Other operating expenses	(23)	-89,507	-123,321
Income from equity investments	(24)	-9,721	-4,080
Other interest and similar income	(25)	12,553	11,959
Depreciation of financial investments	(26)	-10,000	-21,877
Interest and similar expenses	(27)	-8,509	-7,324
Taxes on income	(28)	-10,747	-1,276
Earnings after taxes		**25,553**	**-110,217**
Net income/Net loss for the year		**25,553**	**-110,217**
Profit carry-forward from the previous year		35,631	22,016
Withdrawal from revenue reserves		0	95,500
Transfer to retained earnings		-12,776	0
Balance sheet profit	**(10)**	**48,408**	**7,299**

KUKA Aktiengesellschaft, Augsburg

Notes to the financial statements for the financial year 2021

GENERAL INFORMATION

ACCOUNTING PRINCIPLES

The 2021 annual financial statements of KUKA Aktiengesellschaft were prepared in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG).

KUKA Aktiengesellschaft is registered in the commercial register of the Augsburg district court under HRB 22709 and its registered office is in Augsburg.

To give a clearer presentation, the legal classification scheme of the balance sheet has been extended to include the item “Liabilities to provident funds”.

The items which are combined in the balance sheet and the income statement plus the additional information are shown individually below.

The income statement is drawn up in euros and, unless otherwise indicated, the amounts are shown in thousands of euros (k€).

The accounting and valuation methods were unchanged compared with the financial statements of the previous year.

ACCOUNTING AND VALUATION

ASSETS

Purchased **intangible assets** are capitalized at cost. Scheduled depreciation is based on the straight-line method over an estimated useful life of between three and five years.

Internally generated intangible assets are not capitalized.

Tangible fixed assets are recognized at acquisition or production cost, less scheduled depreciation.

Scheduled depreciation is applied over a useful life of 33 years for buildings and over 3 to 15 years for other tangible fixed assets. Depreciation is applied solely on a straight-line basis. Technical progress and the economic efficiency of the usage are also taken into consideration accordingly.

In the case of low-value assets with cost values of up to €800.00, the option has been taken to depreciate them in full at the time of acquisition and to show them as disposals.

Financial assets include holdings in affiliated companies and equity investments. They are recognized at cost. The subsequent valuation is at the lower of cost or fair value if the impairment is likely to be permanent.

Inventories are valued at the lower of average cost or at market value. Where necessary, inventory risks are taken into consideration in the form of marketability discounts.

Receivables and other assets are recognized at nominal values after applying individual discounts for all recognizable risks. Long-term interest-free or low-interest receivables and other assets are shown at their cash values.

Securities held as current assets consist exclusively of fixed-interest other debt instruments and are carried at the lower of cost or fair value on the balance sheet date.

Liquid assets are shown at their nominal value.

Prepaid expenses and accrued income include costs before the cut-off date which represent expenditure for a specific later period.

LIABILITIES

Pension provisions and similar obligations are created on the basis of actuarial calculations taking into consideration the Heubeck 2018 G guideline tables using the projected unit credit method. When calculating the provision, the average market interest rate for the past ten years, projected to December 31, 2021, was used, based on an assumed remaining term of 15 years. This is consistent with the interest rate published by the German central bank as of December 31, 2021. Other calculation parameters, as stated under point (11) of the Notes, are also adopted.

Assets which serve solely to meet pension obligations and are not accessible to all creditors are recognized at their fair value and offset against the corresponding obligations. As the assets are reinsurance policies, the fair value is measured according to the tax asset value, i.e. at amortized cost.

The interest components of the allocations to pension provisions and comparable obligations are shown in order to give an economically correct presentation of the operating result not in personnel costs but in the net interest item.

Tax provisions and **other provisions** are created for all recognizable risks, uncertain obligations, impending losses and for all other future charges. Provisions are recognized at the settlement amounts deemed necessary on the basis of a reasonable commercial assessment. Provisions with a residual term of more than one year are discounted at the average market interest rate published by the German central bank corresponding to their residual term.

KUKA Aktiengesellschaft uses **derivative financial instruments** and these are accounted for using the imparity principle. Thus, in the event of impending losses from these pending transactions, corresponding provisions are recognized. If derivative financial instruments (with original and derivative underlying transactions) are combined to form valuation units, unrealized losses resulting from hedged risks are not recognized in the balance sheet in accordance with section 254 of the German Commercial Code (HGB), provided that these losses are offset by unrealized gains in the same amount (freezing method).

Liabilities are recognized at the settlement amount.

Deferred taxes originate from the differences between corporate and taxation values which are reversed in subsequent years as well as from loss carryforwards and the offsettable loss as limited partner in accordance with section 15a of the Income Tax Act (EStG). Tax loss carryforwards are only taken into consideration if it is expected that the loss can be offset within five years. The tax regulations applicable or adopted on the balance sheet date are applied. Deferred taxes are ascertained based on a combined income tax rate of 32.0% for valuation differences and loss carryforwards of KUKA Aktiengesellschaft or at 15.8% of the offsettable loss in accordance with section 15a of the Income Tax Act (EstG). The resulting tax charges

and tax relief amounts are netted against each other. After netting off, the option stated in section 274 para. 1 sentence 2 of the German Commercial Code (HGB) is exercised not to capitalize the remaining deferred tax assets.

An analysis of the differences existing between the commercial balance sheet and the tax balance sheet showed that the deferred tax assets are principally attributable to temporary differences in pension provisions, impending loss provisions as well as deferred taxes from loss carryforwards and the loss that can be offset in accordance with section 15a of the Income Tax Act (EStG). Deferred tax liabilities are of minor importance.

The values for **contingent liabilities** from guarantees and warranty agreements are the amounts assessed at the balance sheet date.

INCOME STATEMENT

The income statement is prepared in accordance with section 275 para. 2 of the German Commercial Code (HGB) using the total cost (nature of expense) method.

Pursuant to section 277 of the German Commercial Code (HGB), **cost allocations** are recorded as sales revenue according to the contractual agreements and to the services provided. Following this principle, expenses to provide these services are shown under cost of materials.

Taxes on income and profit encompass the taxes paid or owed on income and profit. Taxes on income and profit consist of trade tax, corporation tax, solidarity surcharge and foreign income taxes for the current fiscal year and income taxes for previous years.

Other taxes are shown under other operating expenses.

Transactions with **related parties and companies** are conducted by KUKA Aktiengesellschaft under the same terms as for external third parties.

CURRENCY TRANSLATION

Receivables and payables denominated in foreign currency are valued at the rate on the date of acquisition. The subsequent valuation is based on the average spot rate at the balance sheet date. Gains from foreign currency translations are only taken into consideration if they relate to receivables and liabilities with a residual term of up to one year.

The following conversion rates were applied:

		Balance sheet date	
Country	**Curreny**	**Dec. 31, 2020**	**Dec. 31, 2021**
United Arab Emirates	AED	4.4683	4.1188
Australia	AUD	1.5896	1.5615
Brazil	BRL	6.3735	6.3101
China	CNY	8.0225	7.1947
China, Hong Kong	HKD	9.5142	8.8333
India	INR	89.6605	84.2292
Japan	JPY	126.4900	130.3800
Canada	CAD	1.5633	1.4393
Korea	KRW	1,336.0000	1,346.3800
Malaysia	MYR	4.9340	4.7184
Mexico	MXN	24.4160	23.1438
Norway	NOK	10.4703	9.9888
Poland	PLN	4.5597	4.5969
Romania	RON	4.8694	4.9481
Russia	RUB	91.4671	85.3004
Sweden	SEK	10.0343	10.2503
Switzerland	CHF	1.0802	1.0331
Singapore	SGD	1.6218	1.5279
Taiwan	TWD	33.2194	30.1768
Thailand	THB	36.7270	37.6530
Czech Republic	CZK	26.2420	24.8580
Hungary	HUF	363.8900	369.1900
USA	USD	1.2271	1.1326
United Kingdom	GBP	0.8990	0.8403

NOTES TO THE BALANCE SHEET AND INCOME STATEMENT

(1) FIXED ASSETS

Movements in the fixed assets of KUKA Aktiengesellschaft are shown in the following table of assets.

	Acquistion / manufacturing costs				
in € thousands	Status as of Jan. 1, 2021	Additions	Disposals	Reclassi-fications	Status as of Dec. 31, 2021
I. Intangible assets					
1. Purchased rights and similar assets	69,269	3,491	159	-	72,601
	69,269	**3,491**	**159**	-	**72,601**
II. Tangible assets					
1. Land, similar rights and build-ings	985	1,995	-	-	2,980
2. Technical plant and equipment	3,012	37	-	-	3,049
3. Other equipment, factory and office equipment	29,674	1,711	289	62	31,158
4. Advances paid and construc-tion in progress	244	-	182	-62	0
	33,915	**3,743**	**471**	**-**	**37,187**
III. Financial assets					
1. Shares in affiliated companies	560,911	285,911	279	-	846,543
	560,911	**285,911**	**279**	**-**	**846,543**
Total	**664,095**	**293,145**	**909**	**-**	**956,331**

Depreciation				Book value	
Status as of Jan. 1, 2021	Additi-ons	Dispo-sals	Status as of Dec. 31, 2021	Status as of Dec. 31, 2020	Status as of Dec. 31, 2021
53,322	7,645	159	60,808	15,947	11,793
53,322	**7,645**	**159**	**60,808**	**15,947**	**11,793**
1	60	-	61	984	2,919
1,142	160	-	1,302	1,870	1,747
23,965	2,092	224	25,833	5,709	5,325
-	-	-	-	244	0
25,108	**2,312**	**224**	**27,196**	**8,807**	**9,991**
65,195	21,877	-	87,072	495,716	759,471
65,195	**21,877**	**-**	**87,072**	**495,716**	**759,471**
143,625	**31,834**	**383**	**175,076**	**520,470**	**781,255**

The focus of the investments made during the financial year can be found in the consolidated management report for KUKA Aktiengesellschaft and KUKA Group.

The direct shareholdings of KUKA Aktiengesellschaft are reported under shares in affiliated companies.

Additions in the financial year relate to the contribution of a shareholder loan to KUKA Real Estate GmbH & Co. KG, as well as investments in Swisslog Group and KUKA U. S. Holdings Company LLC.

A full list of KUKA Aktiengesellschaft's shareholdings can be found at the end of the Notes.

(2) INVENTORIES

Inventories include raw materials and supplies.

(3) RECEIVABLES FROM AFFILIATED COMPANIES

Receivables from affiliated companies include receivables from financial resources in the amount of k€554,631 (previous year: k€936,718) and receivables from cost allocations to group companies in the amount of k€6,753 (previous year: k€10,149). There were no long-term receivables with a term of more than one year from affiliated companies either at the balance sheet date or in the previous year.

(4) OTHER ASSETS

Other assets mainly include other receivables from third parties. As in the previous year, there were no income tax receivables as of the balance sheet date.

There are no other assets with a remaining term of more than one year (previous year: k€150).

(5) SECURITIES

Securities held as current assets consist exclusively of fixed-interest other debt instruments and are carried at the lower of cost or fair value on the balance sheet date.

(6) CASH AND CASH EQUIVALENTS

Cash and cash equivalents include bank balances.

KUKA Aktiengesellschaft holds bank balances exclusively at financial institutions with an excellent credit rating. Furthermore, funds to be invested are distributed across several institutions in order to diversify risk.

(7) PREPAID EXPENSES AND ACCRUED INCOME

Prepaid expenses and accrued income include costs before the cut-off date which represent expenditure for a specific later period.

(8) SUBSCRIBED CAPITAL

As in the previous year, the total number of KUKA shares is 39,775,470. The no-par-value bearer shares have a theoretical portion of the share capital amounting to €2.60. The company's total share capital amounted to €103,416,222.00, as in the previous year. Each share carries one vote.

Authorized capital

As per the resolution of the Annual General Meeting on May 29, 2019 and section 4 para. 5 of the company's Articles of Association, which was added on the basis of this resolution, the Management Board, subject to approval by the Supervisory Board, is authorized to increase the company's share capital on or before May 28, 2024 by up to €31,024,866.60 through the issue of new shares in exchange for contributions in cash or in kind on one or more occasions (Authorized Capital 2019). The shareholders shall be granted subscription rights. The new shares may also be underwritten by one or more financial institutions or by enterprises operating according to section 53 para. 1 sentence 1 or section 53b para. 1 sentence 1 or para. 7 of the German Banking Act (KWG), as specified by the Management Board, subject to the obligation that they are offered to the shareholders for subscription (indirect subscription right). However, the Management Board shall be authorized, subject to approval by the Supervisory Board, to exclude fractional amounts from shareholder subscription rights and to exclude shareholder subscription rights if a capital increase in exchange for contributions in kind takes place for the purpose of acquiring companies or parts of companies or interests in companies or other assets (including third-party claims against the company). Subject to approval by the Supervisory Board, the Management Board shall be further authorized to exclude shareholder subscription rights in the event of Authorized Capital 2019 being used once or several times in exchange for cash contributions in an amount not exceeding 10% of the existing share capital at the time this authorization comes into effect and – if this value is lower – at the time this authorization is exercised, in order to issue the new shares at a price that is not significantly lower than the price of the company's shares already quoted on the stock exchange at the time the new share issue price is finalized. Shares sold as a result of, and during the term of, the authorization granted at the Annual General Meeting of May 29, 2019 in accordance with section 71 para. 1 no. 8 sentence 5 AktG in conjunction with section 186 para. 3 sentence 4 AktG shall count towards the aforementioned 10% threshold. Furthermore, this 10% threshold shall also include shares issued for the purpose of servicing warrant or convertible bonds, participation rights or participating bonds or a combination of these instruments, provided that these instruments were issued as a result of, and during the term of, an authorization granted at the Annual General Meeting of May 29, 2019 in accordance with the appropriate application of section 186 para. 3 sentence 4 AktG.

The Management Board is authorized, subject to approval by the Supervisory Board, to stipulate other details regarding the capital increase and its execution, in particular with regard to share rights and the terms and conditions relating to the issuance of shares.

Conditional capital

Section 4 para. 6 of the Articles of Association stipulates a conditional increase in share capital by up to €15,512,432.00, divided into up to 5,966,320 no-par-value bearer shares (Conditional Capital 2019).

The conditional capital increase will be applied to grant no-par-value shares when conversion or option rights are exercised (or upon fulfillment of corresponding option/conversion obligations) or when KUKA Aktiengesellschaft exercises its option to grant no-par-value shares of KUKA Aktiengesellschaft instead of paying wholly or partially the monies due to the holders of conversion or warrant bonds, participation rights or participating bonds (or a combination of these instruments), issued by KUKA Aktiengesellschaft or a dependent Group company up to May 28, 2024 in exchange for cash contributions as a result of the authorization granted by the shareholders at the Annual General Meeting of May 29, 2019. Furthermore, new shares will be issued according to the condition in the aforementioned authorization resolution at the option or conversion price to be determined respectively. The conditional capital increase shall only be conducted in the event of an issue of bonds to which option or conversion rights or obligations are attached in accordance with the authorization by shareholders at the Annual General Meeting of May 29, 2019 and only to the extent that option or conversion rights are exercised or to the extent that holders of bonds obligated to convert or exercise their options fulfill their conversion or option obligations, or to the extent that KUKA Aktiengesellschaft exercises its option to grant no-par-value shares of KUKA Aktiengesellschaft wholly or partially instead of paying the monies due and provided in each case no cash settlement is granted or treasury shares or shares of another listed company are used to service the bonds. The new shares issued shall participate in the profits as of the beginning of the financial year in which they are issued. The Management Board is authorized, subject to approval from the Supervisory Board, to define the further details of the execution of the conditional capital increase.

Acquisition of treasury shares

As per the resolution passed by the Annual General Meeting on May 29, 2019, the company is authorized, until May 28, 2024, to buy back its own shares in an amount not to exceed 10% of the share capital existing at the time the resolution was passed via the stock market or in the form of a public purchase offer addressed to all shareholders by the company. In doing so,

the purchase price (excluding transaction costs) may not be more than 10% higher or lower than the average stock market price defined in detail in the authorization.

The company may exercise this authorization in whole or partial amounts, once or several times; however, it may also be executed by dependent companies or companies in a majority holding of the company, or through a third party on behalf of the company or its dependants.

Pursuant to the above resolution, the Management Board is also authorized, subject to approval by the Supervisory Board, to treat the treasury shares acquired subject to the exclusion of shareholder subscription rights on the basis of that and earlier authorizations as follows:

(1) To sell the treasury shares acquired to third parties in connection with company mergers or the acquisition of companies, or parts of companies, or interests in companies, or for the purpose of acquiring other assets (including claims of third parties against the company);

(2) To sell the treasury shares acquired by means other than via the stock exchange or an offer to all shareholders, provided the shares are sold for cash at a price that is not substantially lower than the quoted stock market price of treasury shares at the time of sale.

However, this authorization only applies subject to the proviso that the shares sold subject to the exclusion of subscription rights pursuant to section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG) may not, in total, exceed 10% of the share capital, whether on the effective date of the authorization or on the date on which it is exercised. The limit of 10% of the share capital is to include shares

(a) that are issued to service bonds with warrants or convertible bonds, participation rights or participating bonds, or a combination of these instruments, provided the instruments were issued on the basis of an authorization resolved by the Annual General Meeting of May 29, 2019 pursuant to the corresponding application of section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG);

(b) that are issued by exercising an authorization – in effect on the date on which the above authorization took effect or that was resolved by the Annual General Meeting of May 29, 2019, from authorized capital pursuant to section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG), under exclusion of subscription rights;

(3) To use the treasury shares acquired to introduce the treasury stock on foreign stock exchanges on which they have not previously been admitted for trading.

Treasury shares acquired on the basis of this authorization or authorizations granted at an earlier time may be canceled without requiring a further resolution at the Annual General Meeting for the cancelation. Cancelation leads to reduction of the share capital. However, the cancelation can also be effected by means of a simplified process without the reduction of share capital by adjusting the proportionate amount of share capital of the remaining shares

according to section 8 para. 3 of the German Stock Corporation Act (AktG). The Management Board is in this case authorized to change the disclosure of the number of shares in the Articles of Association accordingly. This authorization for the acquisition of treasury shares, as well as the resale or cancelation of such shares, may be used once or several times, in whole or in part.

(9) LIMITATION ON DISTRIBUTIONS

Pursuant to the valuation regulations of section 253 of the German Commercial Code (HGB) for accounting for pension provisions and the related extension of the smoothing period when discounting the provision from an average 7-year interest rate to a 10-year interest rate, a limitation has been introduced on the distribution of positive balances. As a result KUKA Aktiengesellschaft has a difference of k€551 (previous year: k€761) which is blocked for distribution.

(10) BALANCE SHEET PROFIT

in € thousands	2020	2021
Balance sheet profit at Jan. 1	**41,598**	**48,408**
Transfer to revenue reserves as per section 58, para. 3 AktG	-	-22,017
Dividend paid for fiscal 2019 and fiscal 2020	-5,967	-4,375
Retained earnings	**35,631**	**22,016**
2020 net income/2021 net loss	25,553	-110,217
Transfer to revenue reserves as per section 58, para. 2 AktG	-12,776	-
Withdrawal from revenue reserves as per section 158, para. 1 AktG	-	95,500
Balance sheet profit at Dec. 31	**48,408**	**7,299**

On the basis of a Management Board resolution dated March 21, 2022, an amount of k€95,500 was withdrawn from other retained earnings, most of which was used to offset impairment losses and also to partially cover other losses.

(11) PROVISIONS

in € thousands	Dec. 31, 2020	Dec. 31, 2021
Pension provisions	11,721	11,645
Provisions for taxes	15,440	14,173
Other provisions		
Provisions for impending loss	968	7,608
Personnel area	8,978	10,061
Miscellaneous provisions	15,482	20,280
Total	**52,589**	**63,767**

The amount of pension obligations (defined benefit obligation) was calculated using actuarial methods (Projected Unit Credit Method) for which certain assumptions are necessary. Company-specific fluctuation expectations are applied here. In addition to assumptions related to life expectancy, this involves the following significant premises:

	Dec. 31, 2020	Dec. 31, 2021
Actuarial interest rate	2.30%	1.87%
Salary and qualifying trend	0.50%	0.50%
Pension trend	1.00 % - 2.50 %	1.00 % - 2.50 %

In addition, deferred compensation models also exist within KUKA Aktiengesellschaft. These cover pension commitments for which the defined benefit obligation is measured exclusively by the fair value of a reinsurance claim. In this respect the commitments meet the conditions of a “value-based pension commitment”. The obligations are therefore valued at the amount of the respective fair value of the insurance policies (as at December 31, 2021: k€1,148; previous year: k€1,067). As the assets are not available to all other creditors and serve exclusively to meet the debts arising from pension obligations, they are known as coverage assets. Accordingly, pursuant to section 246 para. 2 sentence 2 of the German Commercial Code (HGB), the two amounts need to be netted off, which results in a balance sheet value of €0, as in the previous year. The acquisition costs of the assets to be offset correspond to the fair value. In the 2021 financial year, interest income of k€31 (previous year: k€26) was offset against interest expenses from the deferred compensation.

Partial retirement obligations are valued on the basis of the actual agreements and probable future obligations as a shortfall in contribution at the cash value in accordance with the provisions of IDW RS HFA 3 based on an actuarial interest rate of 0.40% (previous year: 0.54%). The expected dynamic of the partial retirement obligation or its basis of measurement is taken into consideration by applying a salary trend of 2.50% (previous year: 2.50%). During the course of the partial retirement obligations shortfalls in contributions are covered by insurance companies. The value of these insurance policies is not available to all the other creditors and

serves exclusively to fulfill the obligations from the partial retirement contracts, so there is an offset against the debts in this case too (section 246 para. 2 sentence 2 HGB). During the reporting year in accordance with this offsetting principle, obligations amounting to k€3,108 (previous year: k€3,347) were netted off against the corresponding coverage assets from the pension liability insurance in an amount of k€1,790 (previous year: k€1,955) and interest expenses amounting to k€15 (previous year: k€21) were netted off against income of k€5 (previous year: k€1). The asset value of the pension liability insurance corresponds to the amortized cost.

Other provisions include all the necessary amounts to allow for the risks of KUKA Aktiengesellschaft. These include in particular anticipated losses from transactions with derivatives as described in point (31), outstanding bills in the amount of k€7,064 (previous year: k€4,822), personnel expenses, Supervisory Board compensation, impending losses, other risks and other costs still due.

In 2018, a long-term incentive plan (LTIP) was launched for members of executive management and the Management Board. The program runs from 2018-2020, with the contractually defined entitlements being paid out in fiscal 2021.

The LTIP is structured as a value-based system of compensation. Depending on the achievement of certain three-yearly performance indicators and certain – also three-yearly – strategic success factors, a payment is made at the end of the term. Early payment is possible only under certain conditions when leaving the Group. As of December 31, 2021, the payments under the long-term incentive plan no longer resulted in any future entitlements.

Since the 2019 financial year, Management Board members and the executive management team have been entitled to participate in the newly designed KUKA Added Value Incentive Plan (hereinafter “KAVI”) as a long-term compensation component. In contrast to the long-term incentive plans, the KAVI is again based on long-term development of the earnings per share and the share price performance of KUKA Aktiengesellschaft and Midea Group Co. Ltd. The 2019-2021 KAVI plan has a term of three financial years. As at the balance sheet date, the provision for the executive management team of KUKA Aktiengesellschaft for the 2019-2021 KAVI is k€86 (previous year: k€39) and for the Management Board is k€126 (previous year: k€86). In the 2020 financial year, a new KAVI plan was launched with a term of 2020-2022. As at the balance sheet date, the provision for the executive management team of KUKA Aktiengesellschaft for the 2020-2022 KAVI is k€207 (previous year: k€54) and for the Management Board k€276 (previous year: k€107).

In the current fiscal year 2021, a new KAVI plan was established for members of executive management with a term of 2021-2023 and a provision amount of k€75. A plan with a term of

2021-2024 and a provision amount of k€104 was established for members of the Management Board.

See the compensation report for further details about the structure of the LTIP and the KAVI plan.

(12) LIABILITIES

	Remaining maturity				Remaining maturity			
in € thousands	**up to 1 year**	**> 1 year**	**> 5 years**	**Dec. 31, 2020 Total**	**up to 1 year**	**> 1 year**	**> 5 years**	**Dec. 31, 2021 Total**
Liabilities due to banks	151,122	107,500	-	258,622	252,625	-	-	252,625
Trade payables	5,661	-	-	5,661	3,622	-	-	3,622
Accounts payable to affiliated companies	272,275	150,000	-	422,275	252,657	150,000	-	402,657
Liabilities to provident funds (affiliated companies)	91	2,377	2,015	2,468	91	2,434	2,069	2,525
Other liabilities	5,103	-	-	5,103	1,876	-	-	1,876
Total	**434,252**	**259,877**	**2,015**	**694,129**	**510,871**	**152,434**	**2,069**	**663,305**

(13) LIABILITIES DUE TO BANKS

Liabilities to banks at the balance sheet date relate to the promissory note loans issued in 2015 as well as liabilities from interest costs to be accrued in connection with the promissory note loans and short-term utilization of the working capital line under the syndicated loan agreement.

Promissory note loans

KUKA Aktiengesellschaft issued unsecured promissory note loans with a total volume of €250.0 million in two tranches on October 9, 2015.

The total volume was placed in two separate maturity tranches. Tranche 1 had a volume of €142.5 million with an initial term to maturity of five years. It was due on October 9, 2020 and was repaid as contractually agreed. Tranche 2 has a volume of €107.5 million with an initial term to maturity of seven years (due in October 2022). Interest payments are made at yearly intervals on October 9. Interest of €0.3 million (2020: €0.4 million) was accrued as at the balance sheet date.

Syndicated loan agreement of KUKA Aktiengesellschaft

On February 1, 2018, KUKA Aktiengesellschaft 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 sureties and guarantees, likewise in the amount of €260.0 million.

The initial term of the loan agreement was five years until February 1, 2023 and contained two contractually agreed one-year extension options (5+1+1). With the approval of all banks for the first agreed extension option in 2018 and the second one in 2019, the term was extended in 2018 and 2019 by one year in each case. The loan agreement now terminates in February 2025. The syndicated loan agreement was concluded on an unsecured basis and contains only the customary equal treatment clauses and negative pledges. The agreed financial covenants with regard to thresholds for leverage (net financial liabilities/EBITDA) and interest coverage (EBITDA/net interest expense) remain unchanged.

Uncertainties arose in the course of fiscal 2021 with regard to the calculation of the financial covenants. In September 2021, at KUKA AG’s request, the lending banks therefore entered into a clarifying agreement with KUKA AG in which they waived, with retroactive effect as of December 31, 2020, any rights arising from potential non-compliance with these financial covenants due to the calculation uncertainties. Throughout the 2021 fiscal year, the covenants set out in the credit agreement were 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 Aktiengesellschaft amounted to a total of €313.4 million (2020: €329.3 million).

The contract contains a change-of-control clause that is typical in the industry, under the terms of which the syndicated banks may demand repayment of the loan in the event that a shareholder (or group of shareholders acting in concert) acquires control of at least 30% of the voting rights of KUKA Aktiengesellschaft, or otherwise has the ability to direct the business policy of the company. A change of the direct owner within Midea Group is not affected by this provision as long as Midea Group Co., Ltd. directly or indirectly holds 100% of the shares and voting rights of the new owner. Each syndicate bank may also declare its share of the loan agreement due for repayment in the cases of a delisting, a squeeze-out or the conclusion of a control and/or profit transfer agreement with a company of Midea Group.

Guarantee facilities from banks and surety companies

The guarantee facility lines pledged by banks and surety companies outside the syndicated loan agreement totaled €170.4 million as at December 31, 2021 (2020: €170.3 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 reporting year, the company had utilized €76.0 million (2020: €52.1 million). None of these bilaterally agreed guarantee facility lines contains a change-of-control clause.

(14) ACCOUNTS PAYABLE TO AFFILIATED COMPANIES

Accounts payable to affiliated companies relate primarily to financial resources. Of the liabilities to affiliated companies, €150 million have a term of up to 5 years. These relate to a loan granted in 2019 by Midea International Corporation Company Limited, Hong Kong. As in the previous year, the €150 million financing facility agreed with Midea Electric Trading (Singapore) Company Pte. Ltd. of Singapore in June 2018 was not utilized in 2021.

(15) LIABILITIES TO PROVIDENT FUNDS

The liabilities to provident funds reported relate to KUKA Unterstützungskasse GmbH and to IWK Unterstützungseinrichtung GmbH.

(16) OTHER LIABILITIES

Liabilities from the sales tax group of KUKA Aktiengesellschaft in the amount of k€853 (previous year: k€3,945) are reported under “Other liabilities”. In addition, other tax liabilities of k€873 (previous year: k€945) are also reported. As in the previous year there are no social security liabilities.

(17) SALES REVENUES

Sales revenues include proportionate charges to affiliated domestic and foreign companies for services which are recorded in line with the contractual agreements and the services provided. This also includes services provided in connection with KUKA Facility Management. The previous year's sales revenues additionally include rents and leasehold payments. Of the sales revenues 77% relate to Germany (previous year: 73%) and 23% to abroad (previous year: 27%).

(18) OTHER COMPANY-PRODUCED AND CAPITALIZED ASSETS

This item relates to own work capitalized in connection with improvements and renewals in land and buildings and also the IT infrastructure.

(19) OTHER OPERATING INCOME

Other operating income includes gains from foreign currency conversions in a total amount of k€44,539 (previous year: k€35,093). Income received during the financial year relating to other accounting periods amounted to k€1,272 (previous year: k€1,445). This mainly results from the release of provisions created in previous years.

(20) COST OF MATERIALS

in € thousands	2020	2021
Cost of raw materials and supplies and goods purchased	2,316	4,410
Cost of service purchased	51,749	52,998
Total	**54,065**	**57,408**

(21) PERSONNEL EXPENSE / EMPLOYEES

in € thousands	2020	2021
Wages and salaries	45,107	48,766
Social security payments and contributions for retirement benefits and provident funds	6,115	6,545
(of that for retirement benefits)	(62)	(126)
Total	**51,222**	**55,311**

The annual average number of employees of KUKA Aktiengesellschaft and the number of employees at the balance sheet date were as follows:

	Annual average		Balance sheet date	
	2020	2021	2020	2021
Salaried employees	470	454	469	452
Apprentices	162	157	177	168
Headcounts	**632**	**611**	**646**	620

(22) DEPRECIATION AND AMORTIZATION

Scheduled depreciation and amortization of intangible and tangible fixed assets amount to k€9,957 (previous year: k€16,402). No impairment losses were recognized on intangible assets and property, plant and equipment in the reporting year.

(23) OTHER OPERATING EXPENSES

Other operating expenses of KUKA Aktiengesellschaft include material costs, losses on foreign currency items and allocations to provisions. Currency translation losses amount to k€40,018 (previous year: k€35,703). Expenses charged during the financial year relating to other accounting periods amount to k€44 (previous year: k€943). In addition, individual value adjustments on receivables from affiliated companies totaling k€58,546 (previous year: k€35,800) are included. For reasons of materiality, other taxes are not shown separately and this item amounting to k€617 (previous year: k€934) is included under other operating expenses. PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft provided other assurance services. These relate to the audit of systems in accordance with section 20 of the German Securities Trading Act (WpHG) at non-financial counterparties. See Group notes of KUKA Aktiengesellschaft regarding the fees for the auditor, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, recognized as an expense in the 2021 financial year.

(24) INCOME FROM EQUITY INVESTMENTS

in € thousands	2020	2021
Income from holdings in affiliated companies	78,625	-
Income from profit transfer agreements with affiliated companies	-	39,386
Expenses from loss assumptions for affiliated companies	-88,346	-43,466
Total	**-9,721**	**-4,080**

The income from profit transfer agreements and expenses from loss assumptions contain the results of KUKA Deutschland GmbH and KUKA Systems GmbH.

(25) OTHER INTEREST AND SIMILAR INCOME

in € thousands	2020	2021
Other interest and similar income	12,553	11,959
(of that from affiliates)	(12,126)	(11,921)

(26) DEPRECIATION OF LONG-TERM INVESTMENTS

The depreciation of long-term investments relates to shares in a subsidiary that are expected to be permanently impaired. As a result, a value adjustment was made in the financial year in accordance with section 253 para. 3 sentence 5 of the German Commercial Code (HGB).

(27) INTEREST AND SIMILAR EXPENSES

in € thousands	2020	2021
Interest and similar expenses	-8,509	-7,324
(of that to affiliates)	-(2,291)	-(2,080)

Interest costs of pension provisions and similar obligations amounting to k€236 (previous year: k€299) are included. The included interest expenses for liabilities to provident funds amounting to k€148 (previous year: k€144).

(28) TAXES ON INCOME AND PROFITS

As at the balance sheet date, after netting off the deferred tax assets and deferred tax liabilities, there is a net deferred tax asset balance. On this basis, the company exercises the option under section 274 para.1. sentence 2 HGB not to recognize deferred tax assets in the balance sheet.

Tax credits for previous assessment periods in the amount of k€63 (previous year: k€404) were recognized in tax expense. No tax arrears were incurred for previous assessment periods (previous year: k€495). In addition to this, k€1,338 (previous year: k€10,656) was recognized as a tax expense for the current year. This relates primarily to foreign withholding tax.

(29) CONTINGENT LIABILITIES

in € thousands	2020	2021
Liabilities from guarantees	71,125	76,719
Liabilities from warranty agreements	147,257	181,544
Total	**218,382**	**258,263**

Guarantee obligations mainly relate to advance payment and warranty guarantees in favor of affiliated companies.

Obligations from warranty agreements originate mainly from the guaranteeing of leasing agreements and payment and contractual performance guarantees in favor of affiliated companies.

KUKA Aktiengesellschaft only enters into contingent liabilities after carefully assessing the underlying risks. The associated risks are also subject to constant monitoring during the term of the contingent liabilities. On the basis of these continual assessments, KUKA

Aktiengesellschaft assumes that all obligations underlying the contingent liabilities can be met by the respective principal debtors and that KUKA Aktiengesellschaft is not expected to be held liable.

As of the reporting date, letters of comfort exist for a subsidiary in Vietnam and a subsidiary in Taiwan. Both letters of comfort are limited in amount. The total amount is k€4,916 and KUKA AG does not expect any claims to be asserted.

(30) OTHER FINANCIAL COMMITMENTS

in € thousands	2020	2021
Commitments from rental and leasing agreements		
Due within 1 year	679	4,946
(of that due to affiliates)	(-)	(4,704)
Due in 1 to 5 years	392	339
(of that due to affiliates)	(-)	(-)
Total	**1,071**	**5,285**
Purchase commitments (discounted notes)		
Total	1,755	3,526
(of that due to affiliates)	(-)	(-)
Total	**1,755**	**3,526**
Other commitments		
Due within 1 year	9,915	9,183
(of that due to affiliates)	(-)	(-)
Due in 1 to 5 years	1,724	1,999
Total	**11,639**	**11,182**

Commitments in connection with rental and leasing agreements include leases for passenger cars and office premises. Purchase commitments mainly relate to purchase obligations under IT service agreements.

Other commitments relate in particular to IT maintenance and insurance agreements. There are no further miscellaneous financial commitments which are not included in the balance sheet or listed above.

(31) DERIVATIVES

The management duties connected with interest rate and currency risks at KUKA Group are carried out primarily by KUKA Aktiengesellschaft. These risks are hedged using customary derivative financial instruments such as forward exchange transactions, non-deliverable forwards and interest rate swaps. The conclusion of transactions is subject to Group guidelines with a strict separation between trading, settlement and control.

Foreign currency hedges

In their operational activities, KUKA Group companies are exposed to currency risks. To hedge against the exchange rate risk, the exchange rate hedging strategy is aimed at general hedging of incoming and outgoing payments in foreign currencies.

There are two types of hedging relationships entered into. On the one hand, exchange rate risks from operating activities in which KUKA Group receives or has to make payments in foreign currency are hedged and, on the other hand, KUKA Aktiengesellschaft hedges exchange rate risks from the granting of intra-Group loans in foreign currency to its subsidiaries. The fair value of all forward exchange contracts and currency swaps is determined using standard financial mathematical methods based on the respective yield curve of the currency pairs and their exchange rates.

Foreign currency derivatives with valuation units

KUKA Aktiengesellschaft, as the Group's internal central counterparty, concludes hedging transactions with its Group companies and hedges these positions of KUKA Aktiengesellschaft that have arisen in this way by concluding corresponding hedging transactions with banks. The related intragroup derivative with a subsidiary and the outtragroup derivative with a bank are combined in a valuation unit using the freezing method. All hedging transactions are directly related to the manufacture or sale of products and services. In individual cases, particularly on regulated markets on which KUKA Aktiengesellschaft is unable to conclude reasonable collateral transactions with Group companies, it supports and supervises the direct conclusion of hedging transactions of the Group companies with banks. KUKA Aktiengesellschaft only concludes hedging transactions of its own in connection with the financing of Group companies in foreign currencies.

	Dec. 31, 2020			Dec. 31, 2021		
in € thousands	Nominal volume	Positive Fair Value	Negative Fair Value	Nominal volume	Positive Fair Value	Negative Fair Value
Forward exchange transac-tions						
Foreign exchange purchases with banks	150,585	3,781	-2,003	173,781	1,854	-2,445
Foreign exchange sales with banks	106,191	1,850	-662	249,938	129	-6,477
	256,776	**5,631**	**-2,665**	**423,719**	**1,983**	**-8,922**

The forward exchange transactions as of December 31, 2021 and in the previous year relate in particular to the currencies CHF, USD, GBP and SEK and have a maximum term until August 2024. The forward exchange transactions and swaps are measured individually at their fair value as of the reporting date. They form micro valuation units with the respective underlying transactions. The prospective effectiveness of the hedging relationships is determined at each balance sheet date using the critical terms match method. This ensures that the value-determining factors (nominal value, maturity, currency) for the hedged item and hedging instrument match. The individual hedge relationships are therefore each classified as effective over the entire hedging period. The same applies to the retrospective determination of past effectiveness, as all value-determining factors between the hedged portion of the hedged item and the hedging portion of the hedging instrument match. In these cases, no accounting-relevant ineffectiveness can arise in relation to the valuation units. The transactions combined in the valuation units are subject to the same risk. Accordingly, the offsetting changes in value of the hedged items and hedging instruments are expected to offset each other almost completely in the future for the respective hedged risk.

	Dec. 31, 2020			Dec. 31, 2021		
in € thousands	Nominal volume	Positive Fair Value	Negative Fair Value	Nominal volume	Positive Fair Value	Negative Fair Value
Forward exchange transactions						
with banks	106,191	662	-1,850	249,938	6,477	-129
of which offsetting contracts with affiliated and other companies	150,585	2,003	-3,781	173,781	2,445	-1,854
	256,776	**2,665**	**-5,631**	**423,719**	**8,922**	**-1,983**

Intra-Group derivatives exist to the same extent, whose positive fair values correspond to k€8,922 (previous year: k€2,665) and whose negative fair values correspond to k€1,983 (previous year: k€5,631). Due to the valuation unit formed, the negative fair value is not recognized as of December 31, 2021.

Foreign currency derivatives without valuation units

KUKA Aktiengesellschaft only concludes hedging transactions of its own in connection with the financing of Group companies in foreign currencies.

	Dec. 31, 2020			Dec. 31, 2021		
in € thousands	Nominal volume	Positive Fair Value	Negative Fair Value	Nominal volume	Positive Fair Value	Negative Fair Value
Forward exchange transactions						
Foreign exchange purchases with banks	96,672	63	-454	118,655	190	-382
Foreign exchange sales with banks	204,042	1,965	-514	270,616	13	-7,226
	300,714	**2,028**	**-968**	**389,271**	**203**	**-7,608**

For negative fair values relating to KUKA Aktiengesellschaft an impending loss provision of k€7,608 was formed (previous year: k€968). The forward exchange contracts as of December 31, 2021 and in the previous year relate in particular to the currencies CHF and USD and have a maximum term until December 2022.

Hedging interest rate risk

In KUKA Group, risks from changes in interest rates result only from the USD assignable loan issued by KUKA Toledo Production Operations LLC in 2018, which is linked to a variable interest rate. For most of the issue volume, these variable future interest payments were converted into fixed interest rate agreements by means of interest rate hedging transactions. In this case also, external interest rate hedging transactions with banks were concluded by KUKA Aktiengesellschaft. The interest terms thus secured for a nominal volume of USD 100 million were passed on to the US Group company by means of internal interest rate hedging transactions. The external interest rate hedge and the offsetting internal interest rate hedge are accounted for in a valuation unit using the net hedge presentation method.

	Dec. 31, 2020			Dec. 31, 2021		
in € thousands	Nominal volume	Positive Fair Value	Negative Fair Value	Nominal volume	Positive Fair Value	Negative Fair Value
Interest rate hedging						
with banks	81,493	-	-4,695	88,292	-	-2,148
of which offsetting contracts with affiliated and other companies	81,493	4,695	-	88,292	2,148	-
	162,986	**4,695**	**-4,695**	**176,584**	**2,148**	**-2,148**

The interest rate hedges have maturities corresponding to those of the hedged tranches of the USD assignable loan, i.e. until February 2022 and August 2023. Due to the valuation unit formed, the negative market value of k€2,148 as at December 31, 2021 (previous year: - k€4,695) is not reported in the balance sheet. The present value method is used to determine the market value.

OTHER NOTES

MANAGEMENT BOARD AND SUPERVISORY BOARD COMPENSATION

No business subject to reporting rules was conducted between any KUKA Group companies and members of KUKA Aktiengesellschaft's Management or Supervisory Boards with the exception of the legal transactions outlined in the compensation report.

The total remuneration of active members of the Management Board pursuant to section 285 no. 9a of the German Commercial Code (HGB) for the 2021 fiscal year amounted to k€5,125 (2020: k€4,131). Of this amount, k€4,265 was attributable to short-term benefits (2020: k€ 2,461), k€860 to long-term variable compensation components (2020: k€1,175), and k€0 to share-based payments (2020: k€495).

As of December 31, 2021, liabilities of k€529 were recognized in respect of current compensation components (2020: k€750). 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 2022. The entitlement for this was fully earned in the reporting year, but the actual payment is measured according to the target achievement determined by the Supervisory Board on the basis of the currently valid compensation system and will be made in 2022. The targets include performance criteria that are both financial (70% weighting) and personal (30% weighting).

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 either the reporting year or the previous year; moreover, no contingent liabilities were entered into in favor of Management Board members.

With a few exceptions, former Management Board members whose terms of office ended in 2008 at the latest have been granted commitments for company pension benefits, which include retirement, occupational disability, widow's and orphan's pensions. The amount of provisions for current pensions and pension entitlements recognized for this group of people in 2021 totals k€10,012 (2020: k€9,964). The pensions and surviving dependents' benefits for this group of persons amounted to k€830 (2020: k€ 822).

The members of the Supervisory Board received a total of k€1,183 (2020: k€1,076) for their board activities in the 2021 fiscal year.

The remuneration of the members of the Supervisory Board comprises an annual fixed remuneration. In addition, there is remuneration for committee work and an attendance fee. Employee representatives on the Supervisory Board also receive a regular salary from their

respective employment contracts, the amount of which corresponds to appropriate remuneration for the work performed in the Group.
As in the previous year, no loans or advances were granted to members of the Supervisory Board at the end of the reporting year; no contingent liabilities were entered into in favor of Supervisory Board members.

Please refer to the notes in the compensation report for further information and details about the compensation of individual Management Board and Supervisory Board members. The compensation report summarizes the basic principles used to establish the compensation of the Management and Supervisory Boards of KUKA Aktiengesellschaft.

DECLARATION CONCERNING CORPORATE GOVERNANCE CODE

The identically worded declarations of conformity pursuant to section 161 of the German Stock Corporation Act (AktG) made by the Management Board and the Supervisory Board can be accessed by any interested parties on the company's website (www.kuka.com) under Investor Relations/Corporate Governance.

NOTIFICATION ON THE EXISTENCE OF SHAREHOLDINGS PURSUANT TO SECTION 160 PARA. 1 NO. 8 OF THE GERMAN STOCK CORPORATION ACT (AKTG)

In the 2021 financial year, we did not receive any notifications in accordance with section 33 of the German Securities Trading Act (WpHG) regarding the existence of shareholdings. The share of the voting rights of Midea Group in KUKA Aktiengesellschaft remains unchanged on the previous year at 94.55% overall and is held directly by Midea Electric Netherlands (I) B.V. and Midea Electric Netherlands (II) B.V. (see voting rights notification dated December 21, 2018). According to further information provided by Midea Group, it has meanwhile increased its share of the voting rights to over 95%.

EVENTS AFTER THE BALANCE SHEET DATE

We do not expect the war in Ukraine to have any significant impact on KUKA AG.
There were no other events after the balance sheet date.

CORPORATE BODIES

SUPERVISORY BOARD

Name	Current occupation	Year of birth	First appointed**	Appointed unitl	Memberships in statutory supervisory boards and in comparable German and foreign controlling bodies of commercial enterprises As at Dec. 31. 2021
Dr. Yanmin (Andy) Gu Chariman of the Supervisory Board	Director Vice President Midea Group	1963	Feb. 10, 2017	AGM 2023	**International mandates:** › Midea Electric Trading (Singapore) Co., Pte. Ltd., Singapore, Singapore. › **Midea** Electric Trading (Thailand) Ltd., Bangkok, Thailand › Beautiland B.V., Amsterdam, Netherland › Frylands B.V., Amsterdam, Netherland › South American Holdco III, Amsterdam, Netherland › South American Holdco II B.V., Amsterdam, Netherland › Midea Electric Netherlands B.V., Amsterdam, Netherland › Midea Investment (Asia) Co. Ltd., Hongkong, China › Carrier Midea India Private Ltd., Haryana, India › Midea Heating and Ventilating Equipment Italia S.p.A., Saronno, Italia › Guangdong Midea Intelligent Robotics Co. Ltd., Guangdong, China
Michael Leppek* Deputy Chariman of the Supervisory Board	1st Authorized Representative and Managing Director IG Metall Augsburg	1970	Sep. 12, 2013	AGM 2023	**German mandates:** › MAN Energy Solutions SE › AIRBUS Helicopters Deutschland GmbH
Lin (Avant) Bai	President Midea Group Refrigerator Division	1981	Feb. 26, 2021	AGM 2023	
Wilfried Eberhardt*	Chief Marketing Officer KUKA AG	1959	May. 15, 2008	AGM 2023	
Prof. Dr. Henning Kagermann	Chairman of the acatech Board of Trustees	1947	May. 31, 2017	AGM 2023	**International mandates:** › SUSE SA, Luxemburg, Luxemburg
Armin Kolb*	Chairman of the Works Council of the KUKA Plants at Augsburg	1963	Jun. 5, 2013	AGM 2023	
Carola Leitmeir*	Deputy Chairman of the Works Council of the KUKA Plants at Augsburg	1968	Jul. 1, 2009	AGM 2023	
Min (Francoise) Liu	Vice President Yangshengtang Co. Ltd. (seit 03.06.2021 HR Director Midea Group (bis 31.05.2021)	1977	Feb. 10, 2017	AGM 2023	**International mandates:** › Foshan Midea Zhihui Real Estate Development Co., Ltd., Foshan, China › Guangdong Midea Smart Link Home Technology Co. Ltd., Foshan, China
Manfred Hüttenhofer*	Head of Competence Center Motion Control KUKA Deutschland GmbH	1964	Jun. 6, 2018	AGM 2023	
Dr. Myriam Meyer	Managing Director of mmtec	1962	Jun. 6, 2018	AGM 2023	**German mandates:** › Lufthansa Technik AG, Hamburg **International mandates:** › Wienerberger AG, Vienna, Austria

Tanja Smolenski*	Union Secretary to the Excecutive Committee of the IG Metall trade union, Fundamental Issues and Social Policy department, Berlin office	1973	Dec. 15, 2017	AGM 2023	
Dr. Chengmao Xu	President Corporate Research Center Midea Group (until Jan. 17, 2021) Chief Development Officer KUKA AG (from Jan. 18, 2021 until Aug. 31, 2021)	1965	Jun. 17, 2019	Resigned as of Jan. 17, 2021	
Helmut Zodl	CFO Midea Group (until Jan. 31., 2021) CFO GE Healthcare (from Feb. 01, 2021)	1972	Jan. 24, 2020	AGM 2023	**International mandates:** › Wipro GE Healthcare Pvt. Ltd. Bangalore, India

* Employee representive
** 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

MANAGEMENT BOARD

Name	Date of birth	First appointed	Appointed until	Memberships in statutory supervisory boards and in comparable German and foreign controlling bodies of commercial enterprises As at Dec. 31. 2021
Peter Mohnen Chief Executive Officer	1968	Aug. 1, 2012	Jun. 30, 2024	
Alexander Tan Chief Financial Officer	1970	Jul. 1, 2021	Jun. 30, 2024	
Andreas Pabst Chief Financial Officer	1973	Dec. 6, 2018	Jun. 30, 2021 left office	

SHAREHOLDINGS OF KUKA AKTIENGESELLSCHAFT

	Name and registered office of the company	Currency	Method of consolidation	Share of equity in %	Equity in thousands local currency	Net income in thousands local currency		Segment
	Germany							
1	Bopp & Reuther Anlagen-Verwaltungsgesellschaft mbH, Augsburg, Germany	EUR	k	100.00	14,955	-1,105	(3)	CF
2	Device Insight GmbH, München, Germany	EUR	k	100.00	5,163	439	(3)	RO
3	KUKA Assembly & Test GmbH, Bremen, Germany *	EUR	k	100.00	118	0	(1), (3)	SY
4	KUKA Deutschland GmbH, Augsburg, Germany *	EUR	k	100.00	59,187	0	(1), (3)	RO
5	KUKA Industries GmbH & Co. KG, Obernburg, Germany *	EUR	k	100.00	27,546	-627	(3)	RO
6	KUKA Real Estate GmbH & Co. KG, Augsburg, Germany *	EUR	k	100.00	11,407	-503	(3)	CF
7	KUKA Real Estate Management GmbH, Augsburg, Germany	EUR	k	100.00	25	0	(3)	CF
8	KUKA Systems GmbH, Augsburg, Germany *	EUR	k	100.00	23,683	0	(1), (3)	SY
9	Reis Holding GmbH, Obernburg, Germany	EUR	k	100.00	468	62	(3)	RO
10	Swisslog (Deutschland) GmbH, Dortmund, Germany	EUR	k	100.00	-103,743	-3,833	(2)	LA
11	Swisslog Augsburg GmbH, Augsburg, Germany	EUR	k	100.00	844	0	(1), (3)	HC
12	Swisslog GmbH, Dortmund, Germany	EUR	k	100.00	1,000	0	(1), (2)	LA
13	Swisslog Healthcare GmbH, Westerstede, Germany	EUR	k	100.00	4	-643	(3)	HC
14	Visual Components GmbH, München, Germany	EUR	k	100.00	38	-146	(3)	RO
15	WR Vermögensverwaltungs GmbH, Obernburg, Germany	EUR	k	100.00	1,138	678	(3)	RO
16	Roboception GmbH, München, Germany	EUR	b	26.74	-121	-683	(3)	RO
17	Otsaw Swisslog Healthcare Robotics GmbH	EUR	at	40.00	-	-		HC
18	IWK Unterstützungseinrichtung GmbH, Karlsruhe, Germany	EUR	nk	100.00	4,963	298	(3)	CF
19	KUKA Unterstützungskasse GmbH, Augsburg, Germany	EUR	nk	100.00	8,648	499	(3)	SY
	other Europe							
20	KUKA Automation ČR s.r.o. i.L., Chomutov, Czech Republik	CZK	k	100.00	8,805	-6,792	(5)	RO
21	KUKA Automatisering + Robots N.V., Houthalen, Belgium	EUR	k	100.00	4,654	1,038	(5)	RO
22	KUKA AUTOMATISME + ROBOTIQUE S.A.S., Villebon-sur-Yvette, France	EUR	k	100.00	2,650	321	(5)	RO
23	KUKA AUTOMATIZARE ROMANIA S.R.L., Sibiu, Romania	RON	k	100.00	22,017	-3,487	(5)	SY
24	KUKA CEE GmbH, Steyregg, Austria	EUR	k	100.00	5,762	1,963	(5)	RO
25	KUKA Hungaria Kft. , Taksony, Hungary	EUR	k	100.00	21,863	3,344	(5)	RO
26	KUKA Iberia, S.A.U. , Vilanova i la Geltrú, Spain	EUR	k	100.00	8,332	958	(5)	RO
27	KUKA Nordic AB, Västra Frölunda, Sweden	SEK	k	100.00	18,751	7,185	(5)	RO
28	KUKA Roboter Italia S.p.A., Rivoli, Italy	EUR	k	100.00	9,418	968	(5)	RO
29	KUKA Robotics Ireland Ltd, Dundalk, Ireland	GBP	k	100.00	-	-		RO
30	KUKA Robotics OOO, Moskau, Russia	RUB	k	100.00	112,145	-952	(5)	RO
31	KUKA Robotics UK Limited, Wednesbury, United Kingdom	GBP	k	100.00	2,013	316	(5)	RO
32	KUKA S-Base s.r.o. i.L., Roznov p.R., Czech Republic	CZK	k	100.00	810	-20	(5)	SY
33	KUKA Slovakia s.r.o., Dubnica nad Váhom, Slowakia	EUR	k	100.00	890	106	(5)	SY
34	KUKA Systems Aerospace SAS, Bordeaux-Merignac, France	EUR	k	100.00	-5,017	-1,775	(5)	SY
35	KUKA Systems France S.A., Montigny, France	EUR	k	99.99	-275	0	(5)	SY
36	KUKA Systems UK Limited, Halesowen, United Kingdom	GBP	k	100.00	-2,080	-2,946	(5)	RO
37	Reis Espana S.L. i.L., Esplugues de Llobregat (Barcelona), Spain	EUR	k	100.00	-	-		RO
38	Swisslog (UK) Ltd., Redditch, United Kingdom	GBP	k	100.00	-5,419	-591	(5)	LA
39	Swisslog AB, Partille, Sweden	SEK	k	100.00	7,027	-10,860	(5)	LA
40	Swisslog AG, Buchs AG, Switzerland	CHF	k	100.00	39,368	5,065	(5)	LA
41	Swisslog AS, Oslo, Norway	NOK	k	100.00	18,568	-432	(5)	LA
42	Swisslog B.V., Culemborg, Netherlands	EUR	k	100.00	1,632	748	(5)	LA
43	Swisslog France SAS, Suresnes, France	EUR	k	100.00	-5,988	-872	(5)	HC
44	Swisslog Healthcare AG, Buchs AG, Switzerland	CHF	k	100.00	42,533	-19,167	(5)	HC
45	Swisslog Healthcare Holding AG, Buchs AG, Switzerland	CHF	k	100.00	113,151	-657	(5)	HC
46	Swisslog Healthcare Italy SpA , Cuneo, Italy	EUR	k	100.00	-309	14	(5)	HC
47	Swisslog Holding AG, Buchs AG, Switzerland	CHF	k	100.00	414,448	3,516	(5)	LA
48	Swisslog Italia S.r.l., Mailand, Maranello, Italy	EUR	k	100.00	4,091	2,211	(5)	LA
49	Swisslog N.V., Wilrijk, Belgium	EUR	k	100.00	-409	99	(5)	LA
50	Swisslog Technology Center Austria GmbH, Sipbachzell, Austria	EUR	k	100.00	7,372	969	(5)	LA
51	Swisslog Technology Center Netherlands B.V. , Valkenswaard, Netherlands	EUR	k	100.00	-3,701	-588	(5)	LA
52	Swisslog Technology Center Sweden AB, Boxholm, Sweden	SEK	k	100.00	161,105	36,538	(5)	LA
53	Swissog Healthcare Netherlands B.V., Apeldoorn, Netherlands	EUR	k	100.00	273	578	(5)	HC
54	Visual Components Oy, Espoo, Finland	EUR	k	100.00	4,839	1,912	(5)	RO

	Name and registered office of the company	Currency	Method of consolidation	Share of equity in %	Equity in thousands local currency	Net income in thousands local currency	Segment
	North America						
55	KUKA Aerospace Holdings LLC, Sterling Heights, Michigan, USA	USD	k	100.00	-	-	SY
56	KUKA Assembly and Test Corporation, Saginaw, Michigan, USA	USD	k	100.00	45,972	-3,936 (5)	SY
57	KUKA de Mexico S.de R.L.de C.V., Mexico City, Mexiko	MXN	k	100.00	64,686	-4,452 (5)	RO
58	KUKA Manufactura S. de R.L.de C.V., Toluca, Mexiko	MXN	k	100.00	-	-	SY
59	KUKA Robotics Canada Ltd., Mississauga, Kanada	CAD	k	100.00	-210	-26 (5)	RO
60	KUKA Robotics Corp., Shelby Township, Michigan, USA	USD	k	100.00	15,167	2,525 (5)	RO
61	KUKA Systems de Mexico S. de R.L. de C.V., Toluca, Mexiko	MXN	k	100.00	201,808	65,944 (5)	SY
62	KUKA Systems North America LLC, Sterling Heights, Michigan, USA	USD	k	100.00	265,830	110,698 (5)	SY
63	KUKA Toledo Production Operations, LLC, Toledo, Ohio, USA **	USD	k	100.00	95,536	15,752 (5)	SY
64	KUKA U.S. Holdings Company LLC, Sterling Heights, Michigan, USA	USD	k	100.00	88,820	857 (5)	SY
65	Reis Robotics USA Inc. , Carpentersville, USA	USD	k	100.00	57	-345 (5)	RO
66	Swisslog Logistics, Inc., Newport News, USA	USD	k	100.00	-7,737	1,190 (5)	LA
67	Swisslog USA Inc., Dover, Delaware, USA	USD	k	100.00	53,802	9,340 (5)	HC
68	Translogic Corp., Dover, Delaware, USA	USD	k	100.00	95,887	17,644 (5)	HC
69	Translogic Ltd. (Canada), Mississauga, Ontario, Kanada	CAD	k	100.00	1,947	3,152 (5)	HC
70	Visual Components North America Corporation, Lake Orion, Michigan, USA	USD	k	100.00	463	167 (5)	RO
	Latin America						
71	KUKA Roboter do Brasil Ltda., Sao Bernardo do Campo / Sao Paulo, Brasil	BRL	k	100.00	7,921	2,920 (5)	RO
72	KUKA Systems do Brasil Ltda., Sao Bernardo do Campo / Sao Paulo, Brasil	BRL	k	100.00	-40,670	-14,739 (5)	SY
	Asia / Australia						
73	KUKA (Thailand) Co., Ltd., Bangkok, Thailand	THB	k	100.00	-11,937	-4,764 (5)	RO
74	KUKA Automation Equipment (Shanghai) Co., Ltd. , Shanghai, China	CNY	k	100.00	27,413	139 (5)	CN
75	KUKA Automation Taiwan Ltd., Taipei, Taiwan, Taiwan	TWD	k	100.00	66,088	7,452 (5)	RO
76	KUKA India Pvt. Ltd. , Haryana, India	INR	k	100.00	296,387	26,130 (5)	RO
77	KUKA Industries Automation (China) Co., Ltd., Kunshan, China	CNY	k	100.00	-224,037	-6,213 (5)	CN
78	KUKA Industries Singapore Pte. Ltd., Singapore, Singapore	SGD	k	100.00	1,006	13 (5)	RO
79	KUKA Japan K.K., Yokohama, Japan	JPY	k	100.00	218,924	10,661 (5)	RO
80	KUKA Robot Automation Malaysia Sdn BhD, Puchong, Selangor, Malaysia	MYR	k	100.00	10,963	469 (5)	RO
81	KUKA Robotics Australia Pty. Ltd., Port Melbourne, Australien	AUD	k	100.00	251	42 (5)	RO
82	KUKA Robotics China Co. Ltd., Shanghai, China	CNY	k	50.00	251,061	-188,254 (5)	CN
83	KUKA Robotics Guangdong Co., Ltd., Foshan, Shunde, China	CNY	k	100.00	3,569,674	293,839 (5)	CN
84	KUKA Robotics Korea Co. Ltd., Ansan, South Korea	KRW	k	100.00	-2,025	461 (5)	RO
85	KUKA Robotics Manufacturing China Co. Ltd., Shanghai, China	CNY	k	50.00	3,850,455	43,469 (5)	CN
86	KUKA Systems (China) Co. Ltd., Shanghai, China	CNY	k	100.00	4,373	20,510 (5)	CN
87	KUKA Systems (India) Pvt. Ltd., Maharashtra, Pune, India	INR	k	100.00	60,611	0 (5)	RO
88	KUKA Vietnam Co., Ltd., Hanoi, Vietnam	VND	k	100.00	1,559	4,252 (5)	RO
89	PT Swisslog Logistics Automation, Karet / Setiabudi / DKI Jakarta, Indonesia	IDR	k	100.00	2,121,762	-388,238 (5)	LA
90	Swisslog Malaysia Sdn Bhd, Selangor, Malaysia	MYR	k	100.00	42,163	20,102 (5)	LA
91	Swisslog Asia Ltd., Hongkong, China	HKD	k	100.00	189,889	-133 (5)	CN
92	Swisslog Australia Pty Ltd., Sydney, Australia	AUD	k	100.00	-13,372	-12,762 (5)	LA
93	Swisslog Healthcare Asia Pacific Pte. Ltd. , Singapore, Singapore	SGD	k	100.00	1,757	1,619 (5)	HC
94	Swisslog Healthcare Korea Co., Ltd. , Bucheon si, Kyeonggi-do, South Korea	KRW	k	100.00	-4,754	-681 (5)	HC
95	Swisslog Healthcare Shanghai Co., Ltd., Shanghai, China	CNY	k	50.00	123,819	4,706 (5)	CN
96	Swisslog Healthcare Trading MEA LLC, Emirate of Dubai, United Arab Emirates	AED	k	49.00	8,587	2,223 (5)	HC
97	Swisslog Middle East LLC, Dubai, United Arab Emirates	AED	k	49.00	-1,877	5,077 (5)	LA
98	Swisslog Singapore Pte Ltd., Singapore, Singapore	SGD	k	100.00	4,952	2,280 (5)	LA
99	Chang'an Reis (Chongqing) Robotic Intelligent Equipment Co. Ltd, Chongqing, China	CNY	at	50.00	14,899	671 (4)	RO
100	Guangdong Swisslog Technology Co., Ltd. , Shunde, China	CNY	at	50.00	621	7,607 (5)	CN
101	Otsaw Swisslog Healthcare Robotics Pte. Ltd., Singapore, Singapore	SGD	at	40.00	-	-	HC
102	Shanghai Swisslog Technology Co., Ltd., Shanghai, China	CNY	at	50.00	304,761	7,100 (5)	CN
103	Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., Yangzhou City, China	CNY	at	49.00	55,773	4,544 (5)	RO
104	Shanghai Swisslog Healthcare Technology Co., Ltd. i. L., Shanghai, FTZ, China	CNY	at	100.00	-	-	CN
105	Shanghai Swisslog Logistics Automation Co., Ltd., Shanghai, FTZ, China	CNY	at	100.00	-	-	CN

Footnotes

*) Companies that have made use of the exemption pursuant to section 264 para. 3 or section 264 b of the German Commercial Code
**) Principle place of business
1) after profit transfer
2) Annual Financial Statement as of December 31, 2019
3) Annual Financial Statement as of December 31, 2020
4) Group's Annual Financial Statement as of December 31, 2020
5) Group's Annual Financial Statement as of December 31, 2021

Method of consolidation as of December 31, 2021

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

Segments

SY	Systems
RO	Robotics
LA	Logistic Automation
HC	Healthcare
CN	China
CF	Central Functions

PROPOSED APPROPRIATION OF PROFIT

For the current financial year the net loss of KUKA Aktiengesellschaft amounts to k€110,217. In order to report retained earnings of k€7,299, a withdrawal of k€95,500 will be made from existing other revenue reserves. The Management Board proposes to the Annual General Meeting that a dividend of €0.11 per share, totaling k€4,375, be paid. The remaining retained earnings are then to be carried forward to new account.

GROUP ACCOUNTS

Largest consolidated group

Midea Group Co. Ltd. indirectly holds over 95% of the voting rights of KUKA Aktiengesellschaft and is incorporated in the consolidated financial statements of Midea Group Co. Ltd., Foshan City, Guangdong Province, China. The consolidated financial statements are available from the website www.cninfo.com.cn or directly on the website of Midea Group Co. Ltd. at www.midea-group.com/Investors/reports.

Smallest consolidated group

KUKA Aktiengesellschaft prepares consolidated financial statements in accordance with IFRS and these are submitted to the Federal Gazette and can be viewed on the central register of companies at (www.Unternehmensregister.de). The consolidated financial statements include all direct and indirect shareholdings of KUKA Aktiengesellschaft.

Augsburg, March 21, 2022

KUKA Aktiengesellschaft

The Management Board

Peter Mohnen Alexander Tan

RESPONSIBILITY STATEMENT

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

Augsburg, March 21, 2022

KUKA Aktiengesellschaft

The Management Board

Peter Mohnen Alexander Tan

INDEPENDENT AUDITOR'S REPORT

To KUKA Aktiengesellschaft, Augsburg

REPORT ON THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND OF THE MANAGEMENT REPORT

Audit Opinions

We have audited the annual financial statements of KUKA Aktiengesellschaft, Augsburg, which comprise the balance sheet as at December 31, 2021**,** and the statement of profit and loss for the financial year from January 1 to December 31, 2021, and notes to the financial statements, including the presentation of the recognition and measurement policies. In addition, we have audited the management report of KUKA Aktiengesellschaft, which is combined with the group management report, for the financial year from January 1 to December 31, 2021. In accordance with the German legal requirements, we have not audited the content of those parts of the management report listed in the "Other Information" section of our auditor's report.

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

- the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law and give a true and fair view of the assets, liabilities and financial position of the Company as at December 31, 2021 and of its financial performance for the financial year from January 1 to December 31, 2021 in compliance with German Legally Required Accounting Principles, and

- the accompanying management report as a whole provides an appropriate view of the Company's position. In all material respects, this management report is consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the management report does not cover the content of those parts of the management report listed in the "Other Information" section of our auditor's report.

Pursuant to § [Article] 322 Abs. [paragraph] 3 Satz [sentence] 1 HGB [Handelsgesetzbuch: German Commercial Code], we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements and of the management report.

Basis for the Audit Opinions

We conducted our audit of the annual financial statements and of the management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report" section of our auditor's report. We are independent of the Company in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional

responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the annual financial statements and on the management report.

Key Audit Matters in the Audit of the Annual Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual financial statements for the financial year from January 1 to December 31, 2021. These matters were addressed in the context of our audit of the annual financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matter of most significance in our audit was as follows:

❶ Valuation of investments in affiliated companies and receivables from these affiliated companies

Our presentation of this key audit matter has been structured in each case as follows:

① Matter and issue

② Audit approach and findings

③ Reference to further information

Hereinafter we present the key audit matter:

❶ **Valuation of shares in affiliated companies and receivables from these affiliated companies**

① In the annual financial statements of the Company shares in affiliated companies amounting to EUR 759.5 million are reported under the "Financial assets" balance sheet item. In addition, receivables from and payables to these affiliated companies amounting to EUR 561.4 million are reported. Together, the carrying amount of the total engagement amounts to EUR 1,320.9 million (95.6% of total assets). Shares in affiliated companies and receivables are measured in accordance with German commercial law at the lower of cost and fair value. The fair values are calculated based on present values of the expected future cash flows according to the planning projections prepared by the executive directors using discounted cash flow models. Expectations relating to future market developments and assumptions about the development of macroeconomic factors as well as the expected effects of the ongoing Corona crisis on the business activities of the affiliated companies are also taken into account. The discount rate used is the individually determined cost of capital for the relevant affiliated company. On the basis of the values determined and supplementary documentation, write-downs of shares in affiliated companies amounting to EUR 21.9 million and receivables against affiliated companies amounting to EUR 58.5 million were required for the financial year.

The outcome of this valuation is dependent to a large extent on the estimates made by the executive directors of the future cash flows, and on the respective discount rates and rates of growth used. The valuation is therefore, also against the background of the effects of the

Corona crisis, subject to material uncertainties. Against this background and due to the highly complex nature of the valuation and its material significance for the Company's assets, liabilities and financial performance, this matter was of particular significance in the context of our audit.

② As part of our audit, we assessed the methodology used by the Company for the purposes of the valuation of shares in affiliated companies and receivables from these affiliated companies, among other things. In particular, we assessed whether the fair values had been appropriately determined based on discounted cash flow models in compliance with the relevant measurement standards. We based our assessment, among other things, on a comparison with general and sector-specific market expectations as well as on the executive directors‘ detailed explanations regarding the key value drivers underlying the expected cash flows. We also evaluated the assessment of the executive directors regarding the effects of the Corona crisis on the business activities of the affiliated companies and examined how they were taken into account in determining the future cash flows. In the knowledge that even relatively small changes in the discount rate and rates of growth applied can have a material impact on the value of the entity, we focused our testing in particular on the parameters used to determine the discount rate applied, and assessed the calculation model and the determination of the growth rate. Finally, we evaluated whether the values calculated in this way were properly compared against the carrying amount in order to determine any write-downs or reversals of write-downs.

In our view, taking into consideration the information available, the valuation parameters and underlying assumptions used by the executive directors are appropriate overall for the purpose of appropriately measuring the shares in affiliated companies and receivables from these affiliated companies.

③ The Company's disclosures relating to the shares in affiliated companies and receivables from these affiliated companies are contained in the sections “Accounting and Valuation – Assets” and “Notes to the Balance Sheet and the Statement of Profit and Loss” and subsections “(1) Fixed Assets”, “(3) Receivables against affiliated companies”, “(23) Other operating expenses” and “(26) Impairments on Financial Assets” of the notes to the financial statements.

Other Information

The executive directors are responsible for the other information. The other information comprises the sub-sections marked with (*) in the sections “research and development” as well as “sustainability at KUKA” as non-audited parts of the management report.

The other information further comprises

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB included in section “Corporate Governance Statement” of the management report
- the separate non-financial report pursuant to § 289b Abs. 3 HGB and § 315b Abs. 3 HGB

Our audit opinions on the annual financial statements and on the 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 and, in so doing, to consider whether the other information

- is materially inconsistent with the annual financial statements, with the management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Annual Financial Statements and the Management Report

The executive directors are responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German Legally Required Accounting Principles. In addition, the executive directors are responsible for such internal control as they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the executive directors are responsible for assessing the Company'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, provided no actual or legal circumstances conflict therewith.

Furthermore, the executive directors are responsible for the preparation of the management report that as a whole provides an appropriate view of the Company's position and is, in all material respects, consistent with the annual 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 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 management report.

The supervisory board is responsible for overseeing the Company's financial reporting process for the preparation of the annual financial statements and of the management report.

Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the management report as a whole provides an appropriate view of the Company's position and, in all material respects, is consistent with the annual 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 annual financial statements and on the 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 the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual financial statements and this 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 annual financial statements and of the 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 annual financial statements and of arrangements and measures (systems) relevant to the audit of the 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 of the Company.

- 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 Company'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 annual financial statements and in the 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 Company to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German Legally Required Accounting Principles.

- Evaluate the consistency of the management report with the annual financial statements, its conformity with German law, and the view of the Company's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the 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.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the annual financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Report on the Assurance on the on the Electronic Rendering of the Annual Financial Statements and the Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB

Assurance Opinion

We have performed assurance work in accordance with § 317 Abs. 3a HGB to obtain reasonable assurance about whether the rendering of the annual financial statements and the management report (hereinafter the "ESEF documents") contained in the attached electronic file „KUKA_JA_LB.zip" and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work only extends to the conversion of the information contained in the annual financial statements and the management report into the ESEF format and therefore relates neither to the information contained within this rendering nor to any other information contained in the above-mentioned electronic file.

In our opinion, the rendering of the annual financial statements and the management report contained in the above-mentioned attached electronic file and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format. We do not express any opinion on the information contained in this rendering nor on any other information contained in the above-mentioned electronic file beyond this reasonable assurance conclusion and our audit opinion on the accompanying annual financial statements and the accompanying management report for the financial year from January 1 to December 31, 2021 contained in the "Report on the Audit of the Annual Financial Statements and on the Management Report" above.

Basis for the Assurance Opinion

We conducted our assurance work on the rendering of the annual financial statements and the management report contained in the above mentioned attached electronic file in accordance with § 317 Abs. 3a HGB and the IDW Assurance Standard: Assurance in Accordance with § 317 Abs. 3a HGB on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes (IDW AsS 410 (10.2021) and the International Standard on Assurance Engagements 3000 (Revised). Accordingly, our responsibilities are further described below in the "Auditor's Responsibilities for the Assurance Engagement on the ESEF Documents" section. Our audit firm has applied the IDW Standard on Quality Management: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the Executive Directors and the Supervisory Board for the ESEF Documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic rendering of the annual financial statements and the management report in accordance with § 328 Abs. 1 Satz 4 Nr. 1 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have considered necessary to enable the preparation of ESEF documents that are free from material non-compliance with the requirements of § 328 Abs. 1 HGB for the electronic reporting format, whether due to fraud or error.

The executive directors of the Company are also responsible for the submission of the ESEF documents together with the auditor's report and the attached audited annual financial statements and audited management report as well as other documents to be published to the operator of the German Federal Gazette [Bundesanzeiger].

The supervisory board is responsible for overseeing the preparation of the ESEF documents as part of the financial reporting process.

Auditor's Responsibilities for the Assurance Work on the ESEF Documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error. We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also:

- Identify and assess the risks of material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance conclusion.

- Obtain an understanding of internal control relevant to the assurance work on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance conclusion on the effectiveness of these controls.

- Evaluate the technical validity of the ESEF documents, i.e., whether the electronic file containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815 in the version applicable as at the balance sheet date on the technical specification for this electronic file.

- Evaluate whether the ESEF documents enables a XHTML rendering with content equivalent to the audited annual financial statements and to the audited management report.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditor by the annual general meeting on June 19, 2021. We were engaged by the supervisory board on December 22, 2022. We have been the auditor of KUKA Aktiengesellschaft, Augsburg, without interruption since the financial year 2020.

We declare that the audit opinions expressed in this auditor’s report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Holger Grassnick."