



KUKA AKTIENGESELLSCHAFT

SUPERVISORY BOARD REPORT

CONSOLIDATED FINANCIAL REPORT and

ANNUAL FINANCIAL STATEMENTS 2019

SUPERVISORY BOARD REPORT

CONSOLODATED FINANCIAL REPORT OF KUKA AKTIENGESELLSCHAFT

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Supervisory Board report

The coronavirus pandemic currently spreading around the world is facing us all with an unprecedented challenge. Not only the economic impact, but also the political and social consequences cannot yet be seriously foreseen. We must assume that KUKA too will be sustainably affected by the coronavirus pandemic in the 2020 fiscal year. Be assured that the Supervisory Board, together with KUKA's Executive Board and the complete KUKA management, is cooperating very closely to mitigate the effects of the corona crisis to the greatest possible extent. The health of KUKA employees and their families has top priority and we aim to protect it as well as we can through various measures.

The 2019 fiscal year that we are reporting on here was already a challenging one for KUKA. It was characterized by a difficult geo-economic environment, above all by the trade dispute between China and the USA, and the global discussion on climate protection and sustainability. Both topics have considerable influence on the industrial sectors that are traditionally of key importance to KUKA. KUKA was therefore faced with significant reluctance on the part of customers in the automotive industry to make investment decisions in the 2019 fiscal year. The company countered these developments with a larger cost-cutting program and the continued focus on innovative automation solutions in the general industry sector.

The Supervisory Board, also through the work of its committees, supported the company intensively during this phase of adjustment and ongoing development, thereby fulfilling its control and advisory functions. Particular attention was paid to the budget, while consultation also focused strongly on matters of strategy and new technologies. Cooperation between the Supervisory Board and the Executive Board was constructive.

The Supervisory Board performed its duties in plenary sessions, committee meetings, conference calls and through circular resolutions. Above all, the Chairman of the Supervisory Board and the chairs of its committees held regular talks with the Executive Board and were thus available as particularly trusted partners. The key performance indicators of the Group (e.g. orders received, sales revenues, EBIT, staff levels) were discussed in detail at every Supervisory Board meeting in connection with the management report of the Executive Board. Deviations of business performance from the plans and targets or from the budgets were discussed in detail in the Supervisory Board and examined on the basis of the documents submitted. The Supervisory Board was thus continuously aware of the company's economic situation.

Questions regarding Executive Board remuneration were prepared in the Personnel Committee, with subsequent decisions being made at the plenary meetings of the Supervisory Board.

Changes to the Executive Board and Supervisory Board

The Executive Board of KUKA Aktiengesellschaft currently consists of its Chairman Peter Mohnen (CEO) and Andreas Pabst (CFO). In addition, Prof. Dr. Peter Hofmann was a member of the company's Executive Board during the period from November 1, 2019 to February 20, 2020. Prof. Dr. Peter Hofmann had been appointed to the Executive Board as CTO with responsibility for technology and development. After intensive discussions, the Supervisory Board and Prof. Dr. Peter Hofmann came to the conclusion in February 2020 that Prof. Dr. Peter Hofmann's position on the Executive Board should be terminated prematurely. Prof. Dr. Peter Hofmann's appointment was terminated by mutual agreement with effect from the end of February 20, 2020.

There was no cause to alter the quota for female Executive 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 to the Supervisory Board took place in fiscal 2019:

Mr. Hongbo (Paul) Fang resigned from the Supervisory Board as of May 31, 2019. Mr. Fang was succeeded by Dr. Chengmao Xu, who was appointed to the Supervisory Board by court order with effect from June 17, 2019.

Mr. Alexander Tan resigned from the Supervisory Board as of December 31, 2019. As Mr. Tan's successor, Mr. Helmut Zödl was appointed to the Supervisory Board of KUKA AG by court order effective January 24, 2020.

The appointments of Dr. Chengmao Xu and Mr. Zödl are limited in time until the end of the next Annual General Meeting on June 19, 2020.

At the time the report of the Supervisory Board was submitted, the Board was thus composed of the following members: Representing the shareholders, the Supervisory Board comprises Dr. Yanmin (Andy) Gu (Chairman), Dr. Chengmao Xu, Prof. Dr. Henning Kagermann, Min (Francoise) Liu, Dr. Myriam Meyer and Helmut Zödl. As employee representatives, the Supervisory Board consists of Michael Leppek (Deputy Chairman), Wilfried Eberhardt, Manfred Hüttenhofer, Armin Kolb, Carola Leitmeir and 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.

Dr. Yanmin (Andy) Gu
Chairman of the Supervisory Board



Meetings of the Supervisory Board and its committees

The Supervisory Board held nine plenary sessions. It organized four telephone conferences and reached two resolutions passed by written circulatory procedure.

The first meeting of the Supervisory Board was held by telephone on January 28, 2019; it dealt with the appointments and employment contracts of Peter Mohnen and Andreas Pabst.

Another telephone conference was held on February 13, 2019, at which the current business development was discussed and the Group's structuring on the basis of the KUKA Business Organization (KBO) was decided.

The first ordinary meeting took place in Augsburg on March 27, 2019. This meeting addressed the 2018 annual financial statements prepared for KUKA Aktiengesellschaft and the Group. In its role as auditor, KPMG 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 2018 balance sheet profit and supported a dividend payment of €0.30 per share. The Supervisory Board approved both the Corporate Governance report and the Supervisory Board report for 2018. A further topic dealt with by the Supervisory Board was 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. The Board then decided on proposed resolutions for the Annual General Meeting planned for May 29, 2019. The Supervisory Board also dealt with fundamental issues of future software development and the quality of project management in the area of systems engineering. Lastly, issues relating to Executive Board compensation, such as the extent to which the targets stipulated for the Executive Board members for 2018 had been achieved and the 2018 success factor for the variable bonus relating to the company's financial targets, were also on the agenda. In addition, the success factor for settlement of the phantom share program 2016 – 2018 was determined and the KUKA Added Value Incentive ("KAVI") 2019 – 2021 was discussed. The Supervisory Board also decided that a Chief Technology Officer should be sought to strengthen the Executive Board.

The Supervisory Board met before and after the Annual General Meeting held on May 29, 2019. Beforehand, the Supervisory Board prepared for the Annual General Meeting. After the Annual General Meeting, the 2018 ICS report was submitted and a final decision was made regarding the introduction of the newly devised KUKA Added Value Incentive Plan ("KAVI") 2019 – 2021, which is to be granted to the members of the Executive Board as a long-term variable component of their remuneration (details of this are presented in the compensation report on page 15). As part of regular professional training, the attorneys Dr. Christian Vogel and Dr. Dominik Hess held a lecture on current legal developments in stock corporation law.

On July 29, 2019 and August 9, 2019, two extraordinary telephone conferences were held to decide on the selection of the new Executive Board member for technology and development, and finally on the employment and appointment of Prof. Dr. Peter Hofmann as Chief Technology Officer and member of the Executive Board. Another ordinary meeting took place in Augsburg on September 24, 2019. Besides the market and business development in Q2/2019, restructuring was a further topic. An update was also presented on the joint ventures with Midea. At the end of the meeting, decisions were made on contractual matters relating to the Executive Board.

The last ordinary meeting of the Supervisory Board was convened in Shunde on November 29, 2019. The 2020 budget and the 2022 medium-term planning were discussed and approved. The Board was also updated on the restructuring. This was followed by the annual reports of the Personnel Committee, the Audit Committee and the Strategy and Technology Committee. Furthermore, under the agenda item of Executive Board matters, the personal and company targets of the Executive Board members for the 2020 fiscal year were resolved and the KAVI 2020 – 2022 was adopted.

All members of the Supervisory Board, except Mr. Hongbo (Paul) Fang, participated in more than half of the plenary and committee meetings in the year under review (German Corporate Governance Code, section 5.4.7). Unless indicated otherwise, the Supervisory Board met in the presence of the Executive Board except when matters of its remuneration were on the agenda (German Corporate Governance Code, section 3.6, para. 2).

Further aspects of corporate governance can be found in the report of the same name which forms part of the annual report.

The Supervisory Board has the following committees: Personnel Committee (chaired by Dr. Yanmin (Andy) Gu), Audit Committee (chaired by Mr. Alexander Tan until December 31, 2019 and by Mr. Helmut Zödl from January 29, 2020), Strategy and Technology Committee (chaired by Prof. Dr. Henning Kagermann), Mediation Committee pursuant to section 27 para. 3 of the German Co-Determination Act (chaired by Dr. Yanmin (Andy) Gu). The Nomination Committee has also been established in accordance with section 5.3.3 of the German Corporate Governance Code.

The Personnel Committee met seven times during the year under review. It addressed both the remuneration of the Executive Board and the composition and expansion of the Executive Board. At one meeting, for example, the candidates for the CTO position were selected and the recruitment of Prof. Dr. Peter Hofmann was discussed.

The Audit Committee held six meetings in the 2019 fiscal year. The financial statements of KUKA Group and KUKA AG were discussed regularly. Furthermore, the audit plan for 2018, the current risk report and a regular report on the progress of the internal audits were addressed. The company's Chief Compliance Officer also reported to the Audit Committee on a regular basis.

The Strategy and Technology Committee convened four times in the 2019 fiscal year. In addition to consultations on Group strategy, discussions covered the new organizational structure of Robotics and Systems, further developments of industrial robots and control software, the Quantec-2 market launch and Visual Components.

On January 29, 2020 the Supervisory Board and subsequent to it the Audit Committee held extraordinary meetings. The Supervisory Board has appointed Mr. Helmut Zödl as a member of the Audit Committee. Following that decision, Mr. Helmut Zödl was elected by the Audit Committee as Chairman.

It should also be mentioned that the Personnel Committee and subsequently the entire Supervisory Board convened at short notice on February 19, 2020 for extraordinary telephone conferences. The subject of these meetings of the Personnel Committee and the Supervisory Board was the premature termination of the appointment of Prof. Dr. Peter Hofmann as a member of the Executive Board and the premature termination of his employment contract.

On February 19, 2020, the Supervisory Board resolved – following the Personnel Committee's recommendation – to terminate Prof. Dr. Hofmann's appointment to the Executive Board prematurely and by mutual consent.

There was no occasion to convene the Nomination and Mediation Committees.

Independence and conflicts of interest, Declaration of Compliance

The Supervisory Board members Dr. Yanmin (Andy) Gu, Ms. Min (Françoise) Liu, Dr. Chengmao Xu and Mr. Helmut Zödl have employment contracts with Midea Group, which holds a 94.5 percent stake in KUKA. Dr. Yanmin (Andy) Gu also holds an executive position within this group.

The Supervisory Board and the Executive Board submitted identically worded declarations in accordance with section 161 of the German Stock Corporation Act (AktG). The annual declarations were made first by the Executive Board on January 28, 2019 and then by the Supervisory Board on February 15, 2019. 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, 2019 and the Group financial statements as at December 31, 2019, as well as the consolidated management report for KUKA Aktiengesellschaft and KUKA Group, including the bookkeeping, were audited by auditors KPMG AG, Wirtschaftsprüfungsgesellschaft, Berlin, which issued an unqualified audit opinion in each case on March 11, 2020.

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, KPMG, as per the resolution at the Annual General Meeting of May 29, 2019. 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 Executive 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 in accordance with section 7.2.1 para. 1 of the GCGC and monitored the auditors' independence.

As was the case in previous years – always in respect of different matters – focal points were defined for the audit in the 2019 fiscal year: namely the capitalization of internally generated intangible assets (especially software); recognition, measurement and disclosure of finance leases in which KUKA is the lessor; conversion to IFRS 9; segment reporting and allocation of goodwill to the new cash generating units, recognition and measurement of restructuring provisions; Group tax rate; scope of consolidation; valuation of investments; dependency report.

In a joint meeting with the auditors on March 11, 2020, the Audit Committee reviewed the two sets of financial statements for fiscal 2019, taking into consideration the auditors' reports. The Executive 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 25, 2020 and recommended that the Board approve KUKA Aktiengesellschaft's annual financial statements and KUKA Group's consolidated annual financial statements for 2019.

The full Supervisory Board reviewed the draft annual financial statements and the Executive Board's recommendation on appropriation of net income on March 25, 2020.

The auditors, KPMG, 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.

KPMG explained in detail the financial position and performance of the company and the Group. The auditors also reported that there are no material weaknesses in the internal controlling of the accounting system or the risk early detection system. The Board and the auditors jointly reviewed and discussed the financial statements and KPMG answered all questions posed by the Audit Committee. The audits of the KUKA Aktiengesellschaft and KUKA Group annual financial statements for 2019 were thus fully comprehensible.

Furthermore, in the meeting on March 25, 2020, a sustainability report for 2018 prepared for KUKA Group pursuant to sections 315b, 315c, 289c of the German Commercial Code (HGB) was reviewed for the second time by the plenum following discussion by the Audit Committee. There were no objections.

Finally, in view of Midea's shareholder status (94.55 percent), the Supervisory Board had to address the dependency report for 2019 prepared by the Executive Board pursuant to section 312 of the German Stock Corporation Act (AktG).

This report was also reviewed by KPMG in its role as auditor. Following preparatory discussion by the Audit Committee, the Supervisory Board conducted a further review. All reviews confirmed the Executive Board's final declaration that, with regard to the business relationships of KUKA Group with Midea companies in the 2019 fiscal year, appropriate compensation was received and KUKA companies did not suffer any disadvantages therefrom.

Adoption of 2019 financial statements

After completing its own review of the financial statements for 2019 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 25, 2020. 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 Executive 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 25, 2020, the Supervisory Board therefore approved KUKA Aktiengesellschaft's financial statements for fiscal 2019 as prepared by the Executive Board. The annual financial statements are thereby adopted.

The Supervisory Board also approved KUKA Aktiengesellschaft's consolidated financial statements and the Corporate Governance report for the 2019 fiscal year as prepared by the Executive Board.

Initially, the Executive Board recommended payment of a dividend of €0.30 per no-par-value share with dividend entitlement from the balance sheet profit. At its meeting on March 25, 2020, the Supervisory Board, under the impression of the corona crisis and after detailed discussion, approved a proposal for a dividend of €0.15 per entitled no-par-value share, with the remaining amount being carried forward to new account. The Executive Board acceded to this proposal of the Supervisory Board on the same day.

Thanks to the staff

For KUKA, 2019 was a challenging year on account of the general economic environment. Despite these challenges, a dividend can again be paid for this year. This is attributable not just to the Executive Board, but to all KUKA Group employees.

The Supervisory Board is therefore especially grateful to all staff of KUKA companies for their commitment. The employees worked hard for KUKA again in 2019, preparing the company for the future. However, the Supervisory Board also extends its thanks to the members of the Executive Board, the CEOs of the Group companies and the employee representatives. Through their efforts, all of them have served the company and the welfare of its customers and shareholders in an impressive manner.

For the current fiscal year 2020, the Supervisory Board wishes all KUKA employees good health, first and foremost. Particularly in times of the corona crisis, we can see that the employees continue to show undiminished commitment to the company. This deserves our very special gratitude.

Augsburg, March 25, 2020
The Supervisory Board



Dr. Yanmin (Andy) Gu
Chairman

Consolidated financial 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.

As a global technology corporation, KUKA offers its customers a full range of products and services from a single source: from the core component – the robot – 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.

The improved organizational structure – KUKA Business Organization (KBO) – introduced on January 1, 2019, comprises five business segments: KUKA Systems, KUKA Robotics, Swisslog (formerly Logistics Automation), Swisslog Healthcare (formerly Healthcare) and China. The former centralized structure was loosened and the individual divisions were given greater responsibility. Consequently, the holding structure too was streamlined. The former business segment Swisslog was split into the Swisslog and Swisslog Healthcare segments in accordance with their range of products and services and their industry expertise.

Systems division

The Systems division offers custom-tailored complete solutions for automating manufacturing processes in the automotive industry. These include body production, the assembly of engines and transmissions, and also future-oriented business areas, such as electromobility with the development of charging assistants and battery module production systems. The portfolio covers the entire value chain of a system: from individual system components, tools and fixtures through automated production cells all the way to complete turnkey systems. Know-how lies in the bundling of experience and expertise in engineering, project management, process knowledge, commissioning and service for the automated production of vehicles.

The Systems division possesses expertise in the design of flexible and efficient production processes and can guide its customers towards Industrie 4.0 and electromobility with future-oriented solutions.

Markets in Germany and elsewhere in Europe are looked after from 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. Automated assembly lines and test rigs for engines and transmissions are designed at and supplied from the KUKA Systems sites in Bremen, Greater Detroit and Shanghai. In Toledo (USA), KUKA Toledo Production Operations (KTPO) manufactures the Jeep Gladiator for Chrysler under the terms of a pay-on-production contract.

Robotics division

The core component for automating production processes is provided by the Robotics division, which produces industrial robots together with robot controllers, cells and software. The broad product portfolio covers payload ranges from three to 1,300 kilograms. This enables KUKA to meet the various requirements of its customers optimally. Robotics also offers a wide range of 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. KUKA's new products and technologies open up additional markets and create new applications for robot-based automation. Driven by the philosophy of Industrie 4.0, the focus of product development is on open networking and collaboration.

Open networking and collaboration are the core ideas of Industrie 4.0, the production of the future. This paradigm shift is already underway today, indeed the company is consciously forcing the pace. After all, robots will play the 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, counteract demographic change. Industrie 4.0 is not a buzzword for us, but a sustainable investment in our future.

Swisslog division

With its Swisslog division, previously Logistics Automation, KUKA is tapping the growth markets of e-commerce/retail, consumer goods and healthcare in the field of intralogistics. Based in Buchs, Aarau (Switzerland), Swisslog serves customers in over 50 countries worldwide. From planning and design, through to implementation and service over the whole life cycle of a system, Swisslog provides integrated systems and services from a single source.

The division implements integrated automation solutions for forward-looking warehouses and distribution centers. As a general contractor, this division offers complete turnkey solutions, from planning

through to implementation and service, employing data-controlled and robot-based automation in particular. Swisslog offers an Industrie 4.0 portfolio with smart technologies, innovative software and adapted support services to ensure that the competitiveness of its customers in the logistics sector is sustainably improved. 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 gain more time for patient care. At the same time, the use of automation solutions demonstrably reduces 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 healthcare systems are developed, offered and sold in China. Industrial robots are produced at the Shanghai location. The first robot models for the Asian market were manufactured at the new production site in Shunde, China, in 2019. Furthermore, research & development activities for new robot models, such as SCARA robots, are planned.

Markets and competitive positions

Automation in the worlds of production and logistics is continuously advancing. Many factories are no longer imaginable without it. The role of the robot in production shops has undergone great change. Whereas in the past, isolated robots were used to automate individual tasks and process steps behind safety fences, the current trend is towards intelligent assistants that can be fully integrated into production operations and work hand in hand with human operators. General industry is also profiting from this development and thus small and medium-sized companies whose production until now has hardly been automated. This is one major reason why global robot density is increasing year by year. At the same time, there is a focus on the gradual transformation to smart, digital production. Data collection, analysis and evaluation provide new opportunities for making processes more efficient and production facilities competitive for demanding markets.

In 2019, around 50% of KUKA's total sales revenues were generated from the automotive target market. The automotive industry thus remains an important pillar in KUKA Group's success. The company is one of the market-leading automation firms for the automotive industry. Beyond this, there are also major opportunities for growth in markets outside the automotive sector, i. e. in general industry. KUKA was able to further expand its business here, particularly in its strategic market segments of electronics, consumer goods, healthcare and e-commerce/retail.

KUKA is one of the market-leading companies in the European market and the North American market. The Asia region shows growth potential, particularly in the Chinese market. KUKA has strengthened its presence in China in recent years. Not only industrial robots, but also automation solutions such as warehouse management systems or solutions for healthcare systems are offered and sold in China. Robot models for the Asian market are manufactured at the production locations in Shanghai and Shunde. The International Federation of Robotics (IFR) forecast that sales of industrial robots in China will increase by an average of 20% per year between 2019 and 2022. However, due to current political and economic developments, customers remain cautious.

Corporate strategy

KUKA has grown strongly in recent years, benefiting from the highly dynamic, innovation-driven market environment that is being redefined under the influence of digitalization. Robotic automation in production and logistics, and increasing networking in factories are a global trend.

In the year under review, the company found itself faced with more adverse market conditions. In particular, the continuing weakness of the global economy, especially in KUKA's focus markets of automotive and electronics, and the trade dispute between the USA and China were a source of uncertainty and consequently resulted in restrained investment activities of customers.

Business models that enable customers to adjust their production facilities flexibly to the digital transformation and the associated changes, such as the individualization of products or demographic change, are thus all the more in demand. KUKA's aim is to support its customers in the overall optimization of their value creation processes by providing comprehensive automation and digitalization know-how. KUKA is therefore continuously supplementing its automation expertise with know-how in relation to cloud-based networking of machines and systems as well as data analytics. Furthermore, KUKA has bundled its Industrie 4.0 expertise within the company. The Munich-based subsidiary Device Insight is playing a central role here. It optimally complements KUKA's expertise, offering a comprehensive portfolio of products and services in the field of the Industrial Internet of Things (IIoT). New business models will fundamentally and permanently transform not only production in the future, but also the value creation process as a whole. KUKA regards supporting the customer through this transformation as a core task. Internal corporate structures have also been adapted to the digitalized world. With the "Customer Journey", Sales and Service are being integrated more closely into the digital processes. Important foundations were also laid for a strongly customer-oriented organization in the year under review. KUKA supports its customers on the road to automation and digitalization with the relevant expertise spanning from components, cells and systems or logistics solutions to their integration into the world of IT.

With the vision of becoming the first choice for intelligent automation and thus ensuring the long-term success of the company, KUKA is focusing on three strategic directions:

1. Leadership in technology and innovation

KUKA stands for innovations in robotic automation and has set itself the goal of driving digitalization forward. Together with customers and partners, KUKA is developing smart products and solutions for the intelligent factory of the future.

With a new generation of robots that are sensitive and can work hand in hand with humans, KUKA is setting new trends in robotics. While humans control and monitor production, collaborative robots complement their skills and perform arduous and non-ergonomic tasks. Enhanced with mobility and autonomous navigation, robots are being transformed into flexible production assistants that are becoming more and more intelligent.

The trend is towards robots that are simple to program, flexible to deploy and easily integrated and networked. The LBR iiwa is meanwhile the second sensitive robot from KUKA that now meets precisely these requirements. With KUKA Marketplace and KUKA Connect, KUKA is digitalizing the customer experience and driving ahead with the transformation towards the factory of the future. KUKA Connect, for example, enables customers from a wide range of different industries to network machinery and systems digitally in the cloud and thus to access and analyze their data at any time and from anywhere. KUKA is taking another decisive step on the road to the digital and connected future with the modular, service-oriented and user-friendly logistics software platform SynQ. Swisslog's intelligent warehouse management system orchestrates and improves all flows of material in warehouse operations and visualizes them in real-time and in 3D. In the year under review, KUKA also launched the new generation of the successful KR QUANTEC robot series.

In this way, KUKA is supporting its customers on the way to the factory of the future. New business models need to be developed because customers are being confronted with new challenges posed by increasing type variety, more frequent changes of model and fluctuating production quantities. They require flexible automation solutions with quickly adaptable production cells. And the conversion times of the systems must be as short as possible. It is in response to these requirements that KUKA has developed "Smart Production" – a demo factory that meets precisely these needs. Parts logistics and production are linked by automated guided vehicles. With the help of data-driven analytics, manufacturers can also track their energy consumption or the maintenance intervals in their own production facilities.

2. Diversification of business activities

KUKA is one of the market-leading automation companies for the automotive industry. There are also many opportunities to expand business in sectors outside the automotive industry, i.e. in general industry.

KUKA concentrates on markets that are primarily characterized by high growth and profit potential. The degree of automation in many sectors is still relatively low, particularly when compared with the automotive industry. KUKA's aim is to support its customers in the holistic optimization of their value creation processes by providing automation and digitalization know-how. This enables processes to be designed for greater efficiency and flexibility. Additionally, it will optimize resource and energy consumption while raising quality. Through various acquisitions and their integration, KUKA has selectively expanded know-how here, making use of it to strengthen its own market position.

In 2019, KUKA further intensified its focus on the following strategic market segments:

Automotive

The automotive industry has always been of great significance for KUKA. It is a very important driver of technology and innovation. The automotive segment currently accounts for about 50% of sales revenues. KUKA will continue to grow around the world with its automotive customers and support them as a partner in automation and digitalization.

Electronics

The electronics industry is one of the most diverse branches of modern industry. It encompasses the production of electrical household appliances, cutting-edge technologies such as solar cells, precision medical equipment, electronic automotive and aerospace components as well as industrial electronics. The most important submarket with the highest revenues is the 3C market (computers, communications and consumer electronics). The electronics industry will experience great demand for automation and a significant rise in the number of new robots deployed in the coming years.

e-commerce/retail

Electronic commerce results in large quantities of varied goods being sent to consumers via goods distribution centers. Fast and correct order processing 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 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. New generations of robots that are sensitive and mobile, and thus able to work hand in hand with humans, supported by the software at the heart of every system, are opening up new applications along the process chain.

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 resulting 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: After all, 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 gain 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: KUKA robots are used in applications ranging from X-ray imaging and radiation therapy to patient positioning and robot-based assistance systems for surgical procedures in operating rooms, or as a supporting partner in the field of rehabilitation.

3. Sustainable and efficient cost structures

The past financial year was characterized by a general economic slow-down, particularly in markets that are important for KUKA, namely the automotive and electronics markets and China.

The cost structure in all divisions was intensively scrutinized and numerous optimization measures were implemented at short notice. KUKA achieved its efficiency target for 2019: savings of around €100 million were generated and the socially acceptable reduction of 350 jobs at the Augsburg location has been completed. Our focus for the following financial year continues to remain on increased efficiency in all divisions.

Financial management system

The Group's strategy is aimed at sustainably increasing the enterprise value. The internal Group management and monitoring of the business performance is based on various key financial performance indicators (KPIs). KUKA Group's financial targets are also KPIs that track the enterprise value of the company.

The most important KPIs for KUKA Group are revenues, EBIT and free cash flow. The development of these variables is presented in the "Business performance" section starting on page 9 and under "Financial position and performance" from page 11 on. 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 – cash flow from operating and investment activities less capital spending – shows whether the investments can be funded from cash flow, and how much cash is available to pay a dividend and service debt.

These key indicators are published and are also partly taken into account 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 a key 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	2015	2016	2017	2018	2019
Sales revenues	2,965.9	2,948.9	3,479.1	3,242.1	3,192.6
EBIT	135.6	127.2	102.7	34.3	47.8
Free cash flow	95.7	-106.8	-135.7	-213.7	20.7

Achievement of targets

In its outlook in the 2018 annual report and at the annual results press conference on March 28, 2019, the Executive Board forecast sales revenues for fiscal 2019 of around €3.3 billion and an EBIT margin of around 3.5% before final evaluation of the reorganization expenditure.

On September 24, 2019, KUKA adjusted its original forecast, anticipating sales revenues of around €3.2 billion and an EBIT margin that, including all reorganization expenditure, should be above the previous year's level of 1.1%.

This adjustment was primarily due to the cooling of the global economy, which had a negative impact on the company's business development. The focus markets of automotive and electronics were particularly affected by this, as well as the Europe and China regions. In addition, there were further costs resulting from existing orders and the need for restructuring a subdivision. All this had a negative impact on the expected revenue and earnings for fiscal 2019 and necessitated an adjustment.

At the time of publication of the third quarter results, KUKA expected a slight decline in demand for fiscal 2019. Overall, a positive development was forecast for the Americas region and a decline for Asia and Europe. From a sector perspective, KUKA expected the sales markets in general industry to develop slightly positively compared with the previous year, while an overall decline was anticipated for the automotive industry. In its forecast for fiscal 2019, KUKA pointed out the uncertainties arising from the highly unpredictable political and global economic developments. This was because the world's largest sales markets for robotics – the automotive and electronics industries – were affected.

2019 target values

	Sales revenues	EBIT margin
Annual results press conference for the full year 2018	~€3.3 billion	~ 3.5% ¹
1 st quarter 2019	~€3.3 billion	~ 3.5% ¹
2 nd quarter 2019	~€3.3 billion	~ 3.5% ¹
Ad hoc September 24, 2019	~€3.2 billion	>1.1% ²
3 rd quarter 2019	~€3.2 billion	>1.1% ²

¹ Before final evaluation of final reorganization expenditure

² Including all reorganization expenditure

In the year under review, the adjusted target value for sales revenues released in September 2019 was met. The Group generated sales revenues totaling €3,192.6 million (2018: €3,242.1 million). The EBIT margin of 1.5% including reorganization expenditure was thus above the previous year's figure of 1.1%. The adjusted target value was reached. For detailed information on the development of the segments, please refer to "Business performance".

In the year under review, KUKA generated net income of €17.8 million, thus surpassing the previous year's result slightly (2018: €16.6 million). Investments totaled €151.1 million and were therefore considerably below the previous year's amount (2018: €295.4 million). In the year under review, KUKA invested in the expansion of its sites around the world as well as in innovative products and solutions.

Free cash flow in fiscal 2019 was positive, amounting to €20.7 million. Trade working capital improved significantly and KUKA achieved a positive free cash flow for the first time in three years. A free cash flow level was forecast consistent with that of the previous year (2018: –€213.7 million). For detailed information, please refer to the section "Financial position and performance" from page 11 onwards.

Research and development

The area of research and development (R&D) is of crucial importance for the sustainable and long-term success of KUKA as an innovative technology enterprise. That is why KUKA once again invested heavily in innovative technologies, products and solutions in the year under review. Research and development expenditure amounted to €160.5 million in 2019, higher than the value for the previous year (2018: €151.9 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 renowned 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 108 patent applications and 280 patents were granted. The focus was on innovations in the area of simplified use and on applications in the field of 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:

New generation of the best-selling KUKA robot and expansion of the product portfolio

At the start of 2019, KUKA launched the new generation of the successful KR QUANTEC series. The robot for high payloads is KUKA's bestseller. Since its market launch in 2010, over 100,000 robots of this series have been delivered. The reasons for this are the "all-rounder" robot's high reliability and also its uniquely broad spectrum of applications compared to competitors. The robots are designed for use in nearly every market segment – such as the automotive industry, the foundry sector and the field of medicine, as well as for machining and handling tasks.

With the new series, we were able to achieve greater efficiency and thus lower total cost of ownership (TCO). Use of low-maintenance or maintenance-free components enables longer maintenance intervals, therefore reducing downtimes. KUKA is thus committed to an innovative servicing and maintenance concept for optimal operational efficiency throughout the life cycle. The service life of the robot arm is now up to 400,000 operating hours. Thanks to a 50 percent reduction in the main components, such as a new cable routing and energy supply concept, it has been possible to reduce downtimes and maintenance costs by up to 75%.

To expand its product portfolio, KUKA is pressing ahead with the development of a SCARA robot. The SCARA robot will especially meet the needs of customers in the electronics market and other sectors of general industry.

Digitalization in our own production shops

Digitalization of the production environment continues to advance in many branches of industry. In order to provide customers with insights into usable robot data, KUKA offers a cloud-based analysis and intelligence platform: KUKA Connect. The solution gives users access to their KUKA robot data at any time and from any device, and is also used by KUKA in its own production, for example in the machining of components. Similar to a smart watch, the robots and machines collect a variety of data and transmit these data to the cloud. The data collected by the KUKA robot can then be processed and evaluated via KUKA Connect. In this way, it is possible to have full visibility and exercise full control over the current production process at all times.

smartProduction_control – first AI-based KUKA software in an automotive plant

The AI-based software SmartProduction_control for controlling versatile, highly flexible production systems has been available on the market since 2019. The software is already in use and controls a section of a modern automotive plant in Europe. The loading robots of the production line here are alternately presented with a total of eight different car side panels and roofs for assembly. These components are kept ready in three supply areas close to the line, each of which is equipped with three intelligent KMP1500 robotic AGVs from KUKA. The software communicates with the line PLC, the AGVs, the safety equipment and other system software using the communication protocol OPC-UA, thereby ensuring that the production line is supplied with the requisite material. Unlike other solutions, the AI-based software SmartProduction_control is able to provide the parts exactly matching the cycle time, as well as controlling the unloading of the material from a delivery vehicle and the removal of empty containers.

Arena2036: production of the future

The production of the future needs to be flexible, individual and, of course, functionally integrated. In ARENA2036, experts from more than 30 companies and scientific institutions are discussing how this can be implemented in practice. "ARENA" stands for Active Research Environment for the Next Generation of Automobiles. And in 2036 the automobile will be celebrating its 150th anniversary. It is the largest research platform for mobility and the automotive industry in Germany. In a number of bilateral and multilateral projects, KUKA is addressing the question of how to make the production of the future more flexible and efficient. As a partner in one of the major flagship projects of ARENA2036, KUKA is involved in the development and testing of fluid production methods, among other things. Work is being carried out, for example, on using augmented reality (AR) in systems engineering. AR helps to depict the construction and conversion of a production system in the early stages of planning and provides the opportunity of identifying improvement potential in good time. Is accessibility sufficient for employees, for example? Has the space been optimally used? In the case of subsequent conversions of the cells, simulation using a realistic digital model saves time and money.

Swisslog and KUKA Robotics present joint development

The variety of products in small parts warehouses is overwhelming. The same is true of their packaging. More and more orders are placed online. This is transforming the logistics sector. At LogiMAT 2019, Swisslog presented the next generation of its robotic order-picking solution ItemPiQ. The solution, a perfect example of how the expertise of KUKA Robotics and Swisslog dovetails, uses new robot technology and an intelligent vision system to enhance picking performance and to utilize machine learning functions. ItemPiQ picks a great variety of articles, which are recognized by the intelligent vision system from Roboception. This system is able to identify the gripping points on unknown items. Thanks to its multi-function gripper, the small robot from the KR AGILUS family can handle a wide spectrum of common products in the retail, e-commerce and pharmaceutical sectors weighing up to 1.5 kg. Depending on the size, weight, goods-to-robot transfer system and storage method, ItemPiQ can pick up to 1,000 items per hour. Solutions such as ItemPiQ serve to improve users' efficiency and give them a competitive edge in their warehouse logistics. High-performance, integrative control software, innovative robotics solutions, and machine learning are the elements that really set these solutions apart.

KUKA Innovation Award 2019: focus on medical robotics for the first time

The KUKA Innovation Award has been a fixed institution for researchers, developers and entrepreneurs since 2014. In 2019, the focus was on medical robotics for the first time. The topic: "Healthy Living". From a large number of entries, an international panel of judges selected five promising teams to present their concepts at the KUKA booth at MEDICA – the world's largest medical technology fair. Each team was loaned a KUKA LBR Med for its project. The sensitive robot for medical technology is the first robotic component worldwide to be certified for integration into medical products. The panel of judges crowned the RoboFORCE team, consisting of researchers from the Universities of Leeds, Vanderbilt and Turin, as the winners. This team impressed the panel with its concept of robot-assisted, magnetic endoscopy for painless colorectal cancer screening. The KUKA Innovation Award is revolving around medical robotics once again in 2020. The topic this year is "Medical Robotics Challenge".

Foundation of an alliance for the implementation of existing standards in the Industrie 4.0 environment

The capability of networking different machines is the basis for a successful fourth industrial revolution. In October 2019, KUKA and SAP became founding members and partners of the "Open Industry 4.0 Alliance". The objective is to enable up to 80% of a manufacturing company's machines to communicate with each other in a Smart Factory. In doing so, proprietary isolated solutions must be overcome in order to give a decisive boost to integrated digital transformation in industry.

The companies in this alliance have committed themselves to implementing uniform standards for integrated communication between machines. Among other things, the framework includes agreement on existing industrial communication standards such as IO-Link, OPC UA or NAMUR.

The members of the Alliance contribute their core technical competencies in such a way that operating companies and end users benefit from an established, reliable and scalable overall solution – the Alliance's "Interoperability Framework". The focus is always on secure and simple data exchange between the partners. The alliance sees itself as an open, standardized "ecosystem" in which additional companies are always welcome.

At the end of 2019, the Open Industry 4.0 Alliance successfully presented itself for the first time with all nine founders and 33 members with a joint exhibition booth at the SPS trade fair in Nuremberg.

Presentation of sensitive robotics for complex industrial and medical applications at ICRA 2019

KUKA exhibited an innovative project on automated assembly and showcased highly innovative robot-based medical technology at the International Conference on Robotics and Automation (ICRA) in 2019. In Montreal, Canada, KUKA presented an application in which robots can grasp and assemble objects, even when these are not located in a precisely defined position. The KUKA application at ICRA demonstrated the potential in industrial applications for intelligent robots that are capable of learning. Here, the sensitive KUKA LBR iiwa lightweight robot joined components that had been placed randomly on a table beforehand. For this, the operator guided the robot manually to the approximate position of the components. The LBR iiwa then picked up the components autonomously and fitted them together precisely.

In the surgery area of the future, robots and surgeons will work closely together. The “Next Generation Surgery” workshop explored how humans and machines can better collaborate by means of machine learning and the seamless integration of robots into the operating room. KUKA gave two lectures and presented KUKA’s own innovations in the field of medical robotics as well as selected contributions from the finalists for the KUKA Innovation Award.

KUKA at the 2019 European Robotics Forum

At a meeting of the European Robotics Forum (ERF) in Bucharest, Romania, KUKA demonstrated how robots can support people. Researchers, politicians and industry representatives offered more than 50 workshops on current topics in the fields of robotics and artificial intelligence. At the accompanying exhibition, companies, universities and institutes had the opportunity to provide an insight into current research and projects and to exchange ideas within the robotics network. The event is initiated every year by the European robotics association euRobotics aisbl, in which KUKA is also involved.

In a joint research project with the Technical University of Cluj-Napoca, KUKA presented an application with the LBR iiwa sensitive lightweight robot at the ERF. In this, the human operator navigates the robot by hand through a 3D labyrinth, guided by virtual walls. The robot remembers the path and is then able to follow it again exactly. The application demonstrates how closely humans and robots can collaborate. Thanks to the sensitive characteristics of the LBR iiwa, safety fencing is not required and direct human-robot collaboration (HRC) becomes possible. In day-to-day production, people can thus be relieved of monotonous, repetitive and ergonomically demanding work and devote themselves to more complex tasks. In this way, current challenges facing society, such as demographic change, can be met with the aid of HRC-capable robots.

KUKA showcases innovation project at the IROS research trade fair

In cooperation with the Hong Kong Applied Science and Technology Research Institute, KUKA showed how new technologies help to minimize complexity, costs and time in production at this year’s IROS in Macau. The International Conference on Intelligent Robots and Systems is one of the most important robotics conferences worldwide. Participants and specialists can exchange views on the latest innovations and technical developments in workshops, forums, discussions and the accompanying robotics exhibition. In addition to the exhibition, KUKA was actively involved in forums and workshops, including the CEO Forum, the Industrial Forum and the workshop on the topic of “Intelligent Robotics Research” to encourage the exchange of ideas between industry and research. The conference is sponsored by the IEEE (Institute of Electrical and Electronics Engineers), as well as by other associations, societies and companies.

The application at IROS demonstrated a robotic welding process on a workpiece. First, the user defines the welding path in the virtual world using a 3D model of the workpiece. Everything runs automatically after that: a camera detects the workpiece and determines its position in space and in relation to the robot. For this, various algorithms come into play in order to estimate the position – some using artificial neural networks – and to plan the motion. The robot then executes the determined process path. A laser pointer helps to visualize the welding process. The combination of simulation in the virtual world and camera-based automatic calibration in the real world enables the system to adapt quickly to new workpieces and potential variations. Processes can also be checked and optimized in the simulation. Digital twins help to minimize the complexity of the design and thus to reduce cost and time.

Procurement

Efficient purchasing management is essential for successful order processing. This includes ensuring the required quality at optimal costs and implementation on schedule. 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 processes in the procurement departments within the segments are increasingly standardized and are regularly being improved. This allows KUKA to further optimize its delivery availability. In the project business, for example, it was possible to optimize the availability of supplies and services through even closer interdepartmental cooperation. In this way, deadlines and quality can be measured better and actively controlled via the process chain. In turn, the improved coordination facilitates planning of the entire supply chain.

The procurement departments also focus on optimizing working capital management. In the Robotics business segment, it has been possible to achieve significant improvements, for example, by expanding consignment stock procedures, making ordering and delivery concepts more flexible and optimizing distribution warehouse management.

KUKA is in close contact with its major suppliers. To improve quality and achieve cost advantages, the supplier base is regularly reviewed and further expanded. Procurement is becoming an increasingly local matter. In the Robotics segment, for example, the share of local suppliers in China has grown continuously in recent years and procurement management has been optimized with regard to qualitative aspects.

Economic report

Macroeconomic and industry conditions

Weak growth of the global economy

In January 2020, the International Monetary Fund (IMF) reduced its forecasts for growth of the global economy for both 2019 and 2020. The IMF now expects an increase of 2.9% (2019) and 3.3% (2020), reducing its previous forecasts by 0.1 percentage points in each case. The reasons stated for the reduction were geopolitical tensions, for example between the USA and Iran, and the anti-government protests in many countries. These could have a further impact on development of the economy. The current forecast does not yet take into account the effects of the coronavirus crisis. In its January 2020 forecast, the IMF noted positively that the continuing expansionary monetary policy, the partial agreement in the trade conflict between the USA and China, and the easing concerns about an unregulated Brexit are regarded as signs of stabilization.

For the eurozone, the IMF estimates that economic growth was 1.2% over the past year. A slight recovery and growth of 1.3% are predicted for 2020. According to the IMF, Europe is increasingly becoming the powerhouse of the global economy and making a major contribution to increasing global economic output. The German economy should be able to pick up some momentum again in 2020. The IMF is predicting a growth rate of 1.1%. In 2019 growth was just 0.5%. For 2021, the IMF expects a 1.4% increase in Germany's economic output. As an export nation, Germany is set to benefit from stabilization of the global economy.

The US economy grew by 2.3% in 2019. The IMF forecasts growth of only 2.0% for 2020 and of just 1.7% for 2021. In China, the sentiment among companies had deteriorated significantly due to the ongoing trade war. At the end of the year, however, hopes of an agreement served to brighten the mood. The IMF expects China to grow by 6.0% in 2020 and by 5.8% in 2021.

The current market environment remains difficult, however. In particular, the dispute over import tariffs and discussions about free trade are influencing companies' investment decisions and putting pressure on the global economy.

The Business Climate Index of the Institute of Economic Research (ifo) is regarded as an early indicator of economic development in Germany. The ifo index rose to 96.3 points in December 2019 after 95.1 points in November. Companies assessed both their current business situation and the outlook for the coming months as better than in November. It is assumed that the lowest point of the economic downturn in 2019 has been overcome.

Inconsistent development of car markets worldwide

According to the German Automotive Industry Association (VDA), automotive business showed a varied development around the world in 2019. With about 15.8 million newly-registered cars in 2019, Europe surpassed the previous year's level. While car sales were up +5% in Germany and +2% in France, new registrations were down -2% in the UK and -5% in Spain.

The Chinese automobile market contracted last year, decreasing by almost 10% year-on-year to 21 million new vehicles. The total volume of new registrations in 2018 was about 23.3 million cars. The weak overall economic growth of the Chinese market was disproportionately reflected in the car market.

In the US market, the number of new sales declined by -1% to just under 17 million vehicles. This was the first time in three years that the 17 million mark was not exceeded. There was even an 11% drop in car sales. In contrast, sales of German car brands increased by almost 2% to 1.37 million vehicles. According to the VDA, their market share consequently rose from 7.8% to 8.1%. German manufacturers produced 720,000 vehicles in the USA in the first eleven months of the year under review, 4% more than the year before.

The automotive industry is caught in a challenging position between a downturn in the global automotive market, uncertainties in trade politics and the advance of alternative drive technologies and digitalization. Manufacturers are thus confronted with the challenge of having to make high investments in a fundamental structural transformation in the face of declining market momentum.

German automakers and suppliers are addressing the challenges and plan to invest around €50 billion in the research & development of alternative drive systems by 2024 in order to achieve climate protection targets. Over the same period, a further €25 billion is earmarked for digitalization as well as connected and automated driving. By 2023, German manufacturers intend to triple their range of electric vehicles to over 150 EV models.

After 2019, 2020 will be another challenging year for them. The VDA is expecting a decline of 2% in Europe compared with the previous year. A decrease of 3% is forecast for the US market and 2% for the Chinese market. According to the VDA, the major markets are suffering from a lack of growth drivers in both 2019 and 2020. It can be assumed that the road will become more arduous for German car manufacturers, competition tougher and the headwind harsher.

Difficult market environment for the engineering sector

According to the German Mechanical Engineering Industry Association (VDMA), German engineering companies are having to hold their own in an increasingly difficult market environment. The main reasons for this are the weak global economy, increasingly harsh threats and sanctions in the global trade disputes, and far-reaching structural changes in the automotive industry. As a result, production of machinery in the first eleven months of 2019 fell by 2.4% (in real terms) year-on-year. For the full year 2019, the VDMA is predicting a decline of around 2%. The mechanical engineering sector reported a 15% drop in orders received over the same period. There was a continuation of the predominantly negative development from the

previous months. Orders from domestic customers fell by 15%, those from foreign customers by 14%. The volume of orders received in the robotics and automation sector was 16% lower in the first eleven months.

The VDMA does not see the industry in a crisis, but reports that many customers are lacking confidence and are postponing or stopping their investments. There is no short-term improvement in sight and the VDMA anticipates a further decline of 2% in 2020. However, economic growth is still hampered by a high degree of uncertainty.

Robotics and automation still on course for growth

According to the International Federation of Robotics (IFR), around 422,000 robots were installed worldwide in 2018¹, an increase of 6% over the previous year. More than a third of the industrial robots were installed in China. The automotive and electronics industries are among the world's largest customer segments. Of the robots sold worldwide in 2018, 30% were installed in the automotive industry and 25% in the electronics industry.

For the 2019 financial year, the IFR forecasts global sales of around 421,000 industrial robots. Sales will thus be at a similar level to the previous year. In Asia, the IFR anticipates sales of about 285,000 industrial robots in 2019. This also means stagnation compared to the previous year. A slightly positive development is predicted for the Chinese market. The number of robots sold is estimated at 160,000. The IFR is anticipating an average annual growth rate (CAGR) of 12% worldwide between 2020 and 2022. This includes growth of 8% in North and South America, 14% in Asia/Australia and 5% in Europe.

According to the IFR's predictions, the global trend towards robot-based automation of manufacturing processes is set to continue. Innovations and technologies will create new products and solutions. New areas of application are being opened up and the worldwide market is growing. Automation enables companies of different sizes in a variety of sectors to structure their production so as to be more efficient. Today, ever more process steps can be automated where the use of robots has previously been inconceivable. This development is being driven by the combination of the real and virtual production worlds in the context of Industrie 4.0 and by technologies such as safe human-robot collaboration and mobile robotics. In a networked, digital factory, robot-based solutions that ensure safe working and intuitive operability will play an important role.

Business performance

KUKA Group

KUKA was confronted with challenges on account of the difficult market environment. The dispute over import duties and discussions about free trade exerted pressure on the global economy and affected companies' investment decisions. The focus markets of automotive and electronics were particularly affected by this, as well as the Europe and China regions. In the year under review, KUKA Group's volume of orders received therefore declined by 3.5% from €3,305.3 million to €3,190.7 million. Sales revenues fell slightly by 1.5% to €3,192.6 million from €3,242.1 million in the previous year. The book-to-bill ratio was 1.00 in the 2019 financial year, a small decrease on the previous year (2018: 1.02). Values above 1 mean good capacity utilization and are an indicator of growth. The order backlog

¹ The final figures for 2019 will be published by the IFR in September 2020.

decreased by 4.3% from €2,055.7 million as at December 31, 2018 to €1,967.4 million as at December 31, 2019. Despite the difficult market environment, EBIT grew significantly from €34.3 million in 2018 to €47.8 million in the financial year under review. This includes a low double-digit million euro amount from a deconsolidation transaction. KUKA reacted to the changed framework conditions in good time and initiated wide-ranging efficiency measures in January 2019. This made it possible to improve the cost structure considerably. EBIT rose 39.4% year-on-year. It must also be taken into account that sales of shareholdings in companies worth a double-digit million euro amount had a positive effect on earnings in the previous year. In the current financial year, the change of consolidation method resulted in income in the low double-digit millions. The EBIT margin increased from 1.1% to 1.5% in 2019.

Systems

The Systems business segment saw its volume of orders received fall from €959.8 million in 2018 to €858.0 million in the current year. This corresponds to a considerable decline of 10.6% and reflects the noticeable reluctance of customers to place orders. The sales revenues of €925.4 million were at the same level as in 2018 (€925.4 million). The lower revenues due to the reduced order volume were offset by the start of production at KTPO. The book-to-bill ratio decreased year-on-year from 1.04 to 0.93 in 2019. The order backlog totaled €614.3 million as at December 31, 2019 (December 31, 2018: €713.2 million). EBIT amounted to €26.9 million, thus remaining 8.8% below the previous year's level of €29.5 million. The earnings were impacted by the difficult order situation and deteriorations in existing projects in Europe. The high complexity of these projects led to delays and consequently also to additional costs. The EBIT margin fell from 3.2% to 2.9% in the financial year under review.

Robotics

In the 2019 financial year, the Robotics segment generated orders received totaling €1,037.1 million, 13.3% down on the previous year (2018: €1,196.5 million). Revenues decreased by 7.1% from €1,247.3 million in 2018 to €1,159.2 million in 2019. Due to the ongoing difficult situation of the global economy, customers are still holding back on placing orders. The book-to-bill ratio stood at 0.89 (2018: 0.96). The order backlog totaled €275.8 million as at December 31, 2019 (December 31, 2018: €395.9 million). Not only the lower revenue volume, but also the strained economic development in a subdivision of Robotics over recent years had a negative impact on earnings. The subdivision supplies automated production solutions, such as cells and special machines, worldwide and is facing a restructuring process, which had a negative impact on EBIT in the low double-digit millions in the year under review. EBIT amounted to €37.7 million, after €80.9 million in the previous year. The EBIT margin of 3.3% was down on the previous year's figure of 6.5%. This decline was caused mainly by the restructuring of a subdivision. In the previous year, a double-digit million euro amount from the sale of shareholdings in companies had a positive effect on EBIT.

Swisslog

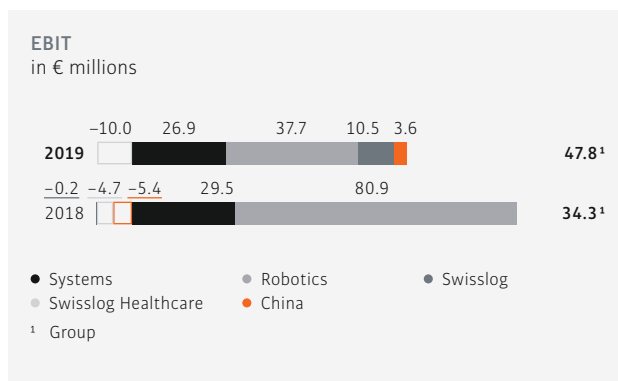
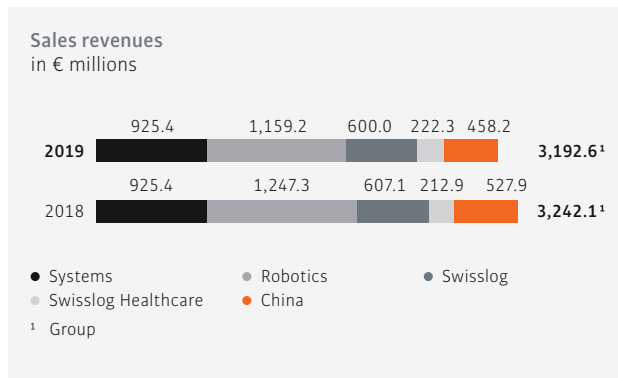
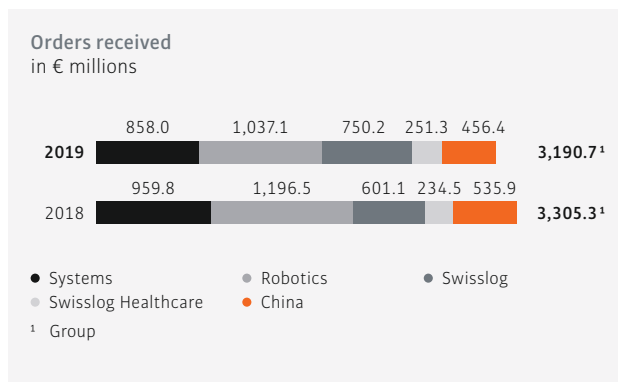
Swisslog recorded a strong increase in orders received of 24.8% to €750.2 million, after €601.1 million in the 2018 financial year. This increase was possible due to systematic implementation of the growth strategy. Swisslog continues to benefit from high global customer demand in its focus markets of e-commerce/retail and consumer goods. Sales revenues totaled €600.0 million and were thus 1.2% below the previous year's level of €607.1 million. It must be noted here that since 2019, the business in China has been included only proportionately in the earnings and no longer in the sales revenues on account of the changed control situation. The book-to-bill ratio rose to 1.25 (2018: 0.99). The order backlog stood at €653.9 million as at December 31, 2019, after €531.6 million as at December 31, 2018. EBIT increased sharply to €10.5 million after –€0.2 million in the previous year. The EBIT margin was up to 1.8% from 0.0% in 2018.

Swisslog Healthcare

At €251.3 million, orders received at Swisslog Healthcare in 2019 considerably surpassed the prior-year figure of €234.5 million by 7.2%. The segment succeeded in generating more orders especially in the areas of Pharmacy Automation and Transport Automation. The sales revenues of €222.3 million achieved in the reporting period were 4.4% above the previous year's level of €212.9 million. This increase is attributable in particular to the areas of Pharmacy Automation and Transport Automation. The book-to-bill ratio improved accordingly from 1.10 in 2018 to 1.13 in 2019. The order backlog of €231.4 million as at December 31, 2019, showed an increase year-on-year (December 31, 2018: €216.4 million). EBIT amounted to –€10.0 million, after –€4.7 million in the previous year. This corresponds to an EBIT margin of –4.5% (2018: –2.2%). The decrease is due in part to one-off effects. In addition, deteriorations in ongoing customer projects and increased R&D expenditure also had an impact on earnings. Swisslog Healthcare continued to invest in software developments and is expanding its product portfolio in order to strengthen its customer base.

China

In 2019, the China segment posted orders received amounting to €456.4 million. This represents a substantial decline of 14.8% on the previous year's value (2018: €535.9 million). In China, the reluctance of customers to place orders due to the developments in trade politics and the global uncertainties can be clearly felt, particularly in the automotive and electronics industries. Sales revenues fell by 13.2% from €527.9 million to €458.2 million as a result of the lower volume of orders received. The book-to-bill ratio remained stable at 1.00 in 2019 (2018: 1.02). The order backlog dropped from €282.9 million as at December 31, 2018 to €229.2 million as at December 31, 2019. EBIT amounted to €3.6 million in the past year (2018: –€5.4 million). This corresponds to an EBIT margin of 0.8% (2018: –1.0%). Despite the difficult general conditions, the margin showed a small improvement year-on-year and was slightly positive at the end of the year. This increase is partly attributable to the positive effects of the change of consolidation method in the first quarter of 2019. One Chinese subsidiary was deconsolidated and conversely a 50% at-equity investment was recognized. The reluctance of customers to place orders had a negative impact on the margin development.



Financial position and performance

Summary

At the beginning of the 2019 fiscal year, KUKA's Executive Board adopted a comprehensive immediate action package to position the company for the long term and guide it onto a sustainable, profitable growth course. The program covers four key areas: an efficiency program focusing on indirect areas such as administration, purchasing, sales and project management, a German-Chinese task force as a driving force behind the Chinese joint ventures and the development of specific products for the Asian market, a focus on investments in research & development (R&D) with shorter development cycles, and a more customer-focused and less centralized organizational structure. In the past financial year, the efficiency program achieved savings in the three-digit million euro range. This also included cutting a total of 350 full-time jobs at the Augsburg location. The organizational structure – KUKA Business Organization (KBO) – was fine-tuned over

the past financial year with the aim of improving global collaboration and placing an even stronger focus on customers. The new structure comprises five business segments – Systems, Robotics, Swisslog, Swisslog Healthcare and China. The previous year's figures have also been adapted to the new segment structure.

Particularly in the second half-year, the cooling of the global economy had a negative impact on business development. The automotive and electronics focus markets were particularly affected by this, as well as the Europe and China regions. In addition, there were further costs resulting from existing orders and the need for restructuring a subdivision. For these reasons, it was necessary to adjust the existing sales revenue forecast of around €3.3 billion and an EBIT margin of around 3.5% before final evaluation of the reorganization expenditure. KUKA Group now anticipated sales revenues of around €3.2 billion and an EBIT margin above the previous year's level of 1.1%, including all reorganization expenditure. KUKA was able to maintain the previous year's level despite the difficult general conditions.

After three years of negative free cash flow, a positive figure was achieved again for the first time in the year under review. KUKA nonetheless kept up its ongoing investments, as these constitute the basis of KUKA's innovative strength. In the operating business, the optimization measures to strengthen trade working capital took effect.

The order backlog of €2.0 billion (2018: €2.1 billion) indicates good capacity utilization in the 2020 fiscal year.

Despite difficult economic conditions and declining sales and new orders, KUKA Group's earnings before interest and taxes increased to €47.8 million (2018: €34.3 million). In absolute terms, this represents an increase of €13.5 million, corresponding to 39.4%. The EBIT margin was up to 1.5% from 1.1% in the previous year. In the Systems business segment, EBIT fell from €29.5 million in 2018 to €26.9 million in 2019, corresponding to a decrease of 8.8%. The cost allocations from restructuring a sub-segment within the Robotics business segment had a negative impact on EBIT, resulting in an EBIT of €37.7 million in the Robotics segment (2018: €80.9 million). This led to an EBIT margin of 3.3% (2018: 6.5%). On the other hand, the EBIT was substantially improved in the Swisslog segment. It rose from –€0.2 million in 2018 to €10.5 million in 2019. The EBIT margin developed accordingly from 0.0% in 2018 to 1.8% in 2019. In the Swisslog Healthcare segment, EBIT fell to –€10.0 million (2018: –€4.7 million), resulting in an EBIT margin of –4.5% (2018: –2.2%). The China business segment recorded an increase in EBIT of €9.0 million from –€5.4 million in 2018 to €3.6 million in 2019. This corresponds to an EBIT margin of 0.8% in 2019 after –1.0% in the previous year. Overall, the net assets, financial position and performance of the Group were satisfactory in the year under review.

Earnings

The volume of orders received for the 2019 fiscal year amounting to €3,190.7 million (2018: €3,305.3 million) reflects the difficult economic situation and the reluctance of customers to place orders. With sales revenues of €3,192.6 million in the 2019 fiscal year, the forecast adjusted in September 2019 was achieved. Sales revenues were nevertheless slightly down by €49.5 million on the previous year (2018: €3,242.1 million). The order backlog also fell compared to the previous year from €2,055.7 million in 2018 to €1,967.4 million in 2019; this is still a stable value and corresponds to approx. 62% of annual revenues.

in € millions	2015	2016	2017	2018	2019
Orders received	2,838.9	3,422.3	3,614.3	3,305.3	3,190.7
Order backlog	1,639.0	2,048.9	2,157.9	2,055.7	1,967.4
Sales revenues	2,965.9	2,948.9	3,479.1	3,242.1	3,192.6
EBIT	135.6	127.2	102.7	34.3	47.8
in % of revenues	4.6	4.3	3.0	1.1	1.5
in % of capital employed (ROCE)	20.0	16.2	10.9	2.9	3.5
Growth investment and one-off effects ¹	–	28.0	31.9	48.7	–
EBIT adjusted ¹	135.6	155.2	134.6	83.0	47.8
EBIT adjusted ¹ in % of revenues	4.6	5.3	3.9	2.6	1.5
EBIT adjusted ¹ in % of capital employed (ROCE)	20.0	19.8	14.2	7.0	3.5
EBITDA	259.1	205.3	180.2	121.2	176.5
in % of revenues	8.7	7.0	5.2	3.7	5.5
Growth investments and one-off effects ¹	–	28.0	31.9	48.7	–
EBITDA adjusted ¹	259.1	233.3	212.1	169.9	176.5
EBITDA adjusted ¹ in % of revenues	8.7	7.9	6.1	5.2	5.5
(Average) capital employed	676.8	783.0	950.4	1,185.0	1,379.0
Employees (Dec. 31) ²	12,300	13,188	14,256	14,235	14,014

¹ 2016: one-off effect due to the takeover bid by Midea Group
2017: growth investments
2018: growth investments and reorganization expenditure
2019: no one-off effects

² Figures for employees are based on the full-time equivalent throughout the annual report.

With effect from January 1, 2019, the new KUKA Business Organization (KBO) comprises five business segments: Systems, Robotics, Swisslog, Swisslog Healthcare and China. Key elements, such as the systematic customer centricity, were retained and transferred to the new structure. Additionally, each business segment has a different focus in order to achieve targeted development of KUKA Group's market and competitive position. The focus in all cases is naturally on the customer. Furthermore, corporate responsibility is more strongly anchored within the business segments. A description of the new segment structure can be found in the section "Fundamental information about the Group" (from page 1 onwards). Based on a management approach, certain Chinese companies are reported both in the China business segment and at Swisslog or Swisslog Healthcare. Further details can be found in the notes.

In the Systems business segment, sales revenues totaled €925.4 million and thus remained at exactly the same level as the previous year (2018: €925.4 million). The volume of orders received totaling €858.0 million was 10.6% below that for fiscal 2018, which totaled €959.8 million. The order backlog also decreased, namely by €98.9 million from €713.2 million in 2018 to €614.3 million in 2019. EBIT fell slightly to €26.9 million, corresponding to an EBIT margin of 2.9% (2018: €29.5 million; 3.2%). The difficult order situation and the deteriorations in existing projects had a negative impact on earnings.

Sales revenues in the Robotics segment fell in 2019 to €1,159.2 million, corresponding to a slight decrease of €88.1 million or 7.1% on the previous year (2018: €1,247.3 million). Not only sales revenues, but also the volume of orders received exceeded the billion euro mark. The latter totaled €1,037.1 million in the past fiscal year and was thus 13.3% down on the previous year (2018: €1,196.5 million), but still at a high level. The order backlog fell from €395.9 million in 2018 to €275.8 million in 2019. EBIT also declined, to €37.7 million (2018: €80.9 million), resulting in an EBIT margin of 3.3% (2018: 6.5%).

The lower revenue volume, the economic development of the global robotics market and the cost allocations resulting from restructuring a subdivision of Robotics had a negative impact on earnings in the low double-digit millions. In the previous year, a double-digit million euro amount from the sale of shareholdings in companies had a positive effect on EBIT. The subdivision supplies automated production solutions, such as cells and special machines, worldwide and is currently undergoing restructuring.

At Swisslog, sales revenues decreased slightly in 2019 by 1.2% to €600.0 million (2018: €607.1 million). It must be noted here that since 2019, the business in China has been included only proportionately in the earnings and no longer in the sales revenues on account of the changed control situation. Orders received rose, however, by 24.8% or €149.1 million to €750.2 million (2018: €601.1 million). This was due, among other things, to a number of major orders. The order backlog developed similarly, growing from €531.6 million in 2018 to €653.9 million in 2019. This corresponds to an increase of 23.0%. EBIT also rose sharply, amounting to €10.5 million in the year under review (EBIT margin: 1.8%) after a negative prior-year value of –€0.2 million (EBIT margin: 0.0%). Swisslog benefited from high global customer demand in its focus markets, which had a positive impact on EBIT.

The Swisslog Healthcare division recorded a slight year-on-year increase of 4.4% in revenues (2019: €222.3 million; 2018: €212.9 million). The volume of orders received and the order backlog also increased compared to the previous year. The former amounted to €251.3 million and was thus €16.8 million or 7.2% higher than the figure of €234.5 million for fiscal 2018. The order backlog rose by €15.0 million to €231.4 million as at December 31, 2019 (2018: €216.4 million). EBIT fell from –€4.7 million to –€10.0 million, corresponding to an EBIT margin of –2.2% and –4.5% respectively. The decrease is primarily attributable to one-off effects in the low double-digit millions. Here, deteriorations in ongoing customer projects

and increased R&D expenditure also had an impact on earnings. Swisslog Healthcare continued to invest in software developments and is expanding its product portfolio in order to strengthen its customer base.

The uncertainties in trade politics and the economic slowdown are having a negative impact on sales revenues in the China business segment, which fell from €527.9 million in 2018 to €458.2 million in 2019. The reluctance of customers to place orders had a negative impact on the margin development. At the same time, orders received fell by 14.8% to €456.4 million (2018: €535.9 million) and the order backlog amounted to €229.2 million, representing a decrease of €53.7 million (2018: €282.9 million). EBIT, by contrast, rose from –€5.4 million to €3.6 million, corresponding to an EBIT margin of 0.8% (2018: –1.0%). Despite the difficult general conditions, the margin showed a small improvement year-on-year and was slightly positive at the end of the year. This increase is partly attributable to the positive effects of the change of consolidation method in the first quarter of 2019, amounting to a low double-digit million euro sum. One Chinese subsidiary was deconsolidated and conversely a 50% at-equity investment was recognized.

KUKA Group generated gross earnings of €677.0 million during the year under review, down 6.7% on the previous year's figure (2018: €725.9 million). The gross margin fell from 22.4% to 21.2%, which was due to the almost unchanged cost of sales in both fiscal years. The gross margin in the Swisslog business segment rose from 17.1% in 2018 to 18.6% in 2019. The other segments had to report a year-on-year decline in gross margin (Systems: 2019: 10.6%; 2018: 12.5%; Robotics: 2019: 31.2%; 2018: 31.5%; Swisslog Healthcare: 2019: 32.9%; 2018: 33.7% and China: 2019: 8.3%; 2018: 10.3%).

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

Key figures – Systems

in € millions	2018	2019
Orders received	959.8	858.0
Order backlog	713.2	614.3
Sales revenues	925.4	925.4
EBIT	29.5	26.9
in % of revenues	3.2%	2.9%
in % of capital employed (ROCE)	11.3%	8.9%
EBITDA	37.8	45.2
in % of revenues	4.1%	4.9%
Capital employed	260.7	301.1
Employees (Dec. 31)	3,112	3,208

Key figures – Robotics

in € millions	2018	2019
Orders received	1,196.5	1,037.1
Order backlog	395.9	275.8
Sales revenues	1,247.3	1,159.2
EBIT	80.9	37.7
in % of revenues	6.5%	3.3%
in % of capital employed (ROCE)	21.9%	8.8%
EBITDA	143.6	83.1
in % of revenues	11.5%	7.2%
Capital employed	369.7	430.7
Employees (Dec. 31)	5,957	5,502

Key figures – Swisslog

in € millions	2018	2019
Orders received	601.1	750.2
Order backlog	531.6	653.9
Sales revenues	607.1	600.0
EBIT	–0.2	10.5
in % of revenues	0.0%	1.8%
in % of capital employed (ROCE)	–0.2%	8.6%
EBITDA	16.2	33.7
in % of revenues	2.7%	5.6%
Capital employed	100.5	122.7
Employees (Dec. 31)	1,975	2,168

Key figures – Swisslog Healthcare

in € millions	2018	2019
Orders received	234.5	251.3
Order backlog	216.4	231.4
Sales revenues	212.9	222.3
EBIT	–4.7	–10.0
in % of revenues	–2.2%	–4.5%
in % of capital employed (ROCE)	–4.2%	–6.6%
EBITDA	8.7	4.6
in % of revenues	4.1%	2.1%
Capital employed	112.3	152.5
Employees (Dec. 31)	931	1,159

Key figures – China

in € millions	2018	2019
Orders received	535.9	456.4
Order backlog	282.9	229.2
Sales revenues	527.9	458.2
EBIT	-5.4	3.6
in % of revenues	-1.0%	0.8%
in % of capital employed (ROCE)	-6.0%	2.3%
EBITDA	-0.4	14.4
in % of revenues	-0.1%	3.1%
Capital employed	90.2	158.6
Employees (Dec. 31)	1,514	1,382

KUKA Group's functional costs, which are made up of administration, sales and research & development expenses, fell by €76.0 million in the 2019 fiscal year to €642.5 million (2018: €718.5 million). The ratio of functional costs to revenues declined accordingly from 22.5% in 2018 to 20.1% in 2019. This indicates initial successes from the implementation of the efficiency program launched in January 2019.

In fiscal 2019, selling expenses decreased by €28.3 million or 8.8% to €291.6 million (2018: €319.9 million). The reduction in costs is also reflected in the reduced number of sales employees. As at December 31, 2019, 1,614 employees (2018: 1,712 employees) were working in this area. Capacities have been adjusted and areas of expertise bundled as part of the efficiency program. Nevertheless, customer centricity is a key element of the new organizational structure, even though the selling expenses ratio dropped from 9.9% in 2018 to 9.1% in 2019.

The projects initiated in previous years to harmonize, standardize and optimize processes, combined with the savings from the efficiency program, have led to a reduction of €56.3 million in administrative expenses (2019: €190.4 million; 2018: €246.7 million). Additionally, expenditure for consultancy services also fell, resulting in an overall ratio of administrative expenses to sales of 6.0% (2018: 7.6%).

As an innovative technology enterprise, KUKA Group is continuously investing in future-oriented technologies that are incorporated into new products and solutions. This is intended to ensure the long-term success of the company. Compared with the previous year, research & development expenses increased once again in the year under review, totaling €160.5 million (2018: €151.9 million). The increase is due to the planned, higher personnel expenditure and the amortization of R&D expenditure capitalized in the previous year. Please refer to the research and development section of this management report for further information and details.

In order to be able to implement a sustainable and long-term research and development strategy, the corresponding personnel conditions must be created. As at the balance sheet date of December 31, 2019, 1,264 employees (December 31, 2018: 1,251 employees) were employed in research and development. This corresponds to 9.0% of the total workforce (2018: 8.8%).

In fiscal 2019, the capitalized costs for new developments totaled €30.2 million (2018: €36.4 million). These costs, which are primarily incurred in the area of research and development, will be reported as scheduled amortization in subsequent financial statements. Amortization increased from €15.6 million in 2018 to €17.2 million in 2019. The capitalization ratio fell from 21.1% to 17.4% in the year under review due to lower capitalization.

Please refer to the research and development section of this management report for further information and details.

Other operating income exceeded expenditure by €16.9 million (2018: €29.2 million). Other operating income (2019: €30.7 million; 2018: €45.8 million) mainly includes income from the change in the consolidation method of a Chinese subsidiary which has been deconsolidated and subsequently accounted for at equity. In the previous year, income was also affected by the sale of the two companies KBee AG, Munich, and connyun GmbH, Karlsruhe. Income from subsidies decreased (2019: €0.7 million; 2018: €1.6 million) while income from the reimbursement of claims increased (2019: €1.7 million; 2018: €0.3 million). Other operating expenses were down slightly by €2.8 million from €16.6 million in 2018 to €13.8 million in 2019 and include expenditure for other taxes (2019: €8.2 million; 2018: €8.4 million).

EBIT margin of 1.5%

in € millions	2015	2016	2017	2018	2019
Group	135.6	127.2	102.7	34.3	47.8
in % of sales revenues	4.6%	4.3%	3.0%	1.1%	1.5%

Earnings before interest and taxes (EBIT) rose by €13.5 million to €47.8 million in fiscal 2019 (2018: €34.3 million), resulting in an EBIT margin of 1.5% (2018: 1.1%). The increase in EBIT is attributable in part to the success of the efficiency program, which includes cost savings on the one hand and the focusing of research and development on the other.

EBIT in the Systems business segment fell by €2.6 million from €29.5 million in 2018 to €26.9 million in 2019. The decline is attributable to the deteriorations in individual projects. The resulting EBIT margin was 2.9% (2018: 3.2%).

The Robotics business segment also recorded a reduction in EBIT. After €80.9 million in the 2018 fiscal year, an EBIT of €37.7 million has now been achieved, corresponding to an EBIT margin of 6.5% in 2018 and 3.3% in 2019. On the one hand, this decline is due to expenditure in conjunction with the restructuring in this business segment. On the other, EBIT was still positively impacted in the previous year by the one-off effect from the sale of KBee AG, Munich. If both one-off effects are eliminated, the EBIT of the past fiscal year would be higher than in 2018.

At Swisslog, one factor behind the significant increase in EBIT to €10.5 million (2018: -€0.2 million) was high demand in the focus markets. The EBIT margin rose accordingly to 1.8% (2018: 0.0%).

As in the previous year, Swisslog Healthcare recorded a negative EBIT. After –€4.7 million in 2018 (EBIT margin: –2.2%), an EBIT of –€10.0 million (EBIT margin: –4.5%) now had to be accepted. One-off effects, additional expenses for project finalizations and increased research and development expenditure for software developments that are to be incorporated into future products for pharmacy automation had a negative impact on EBIT.

In the China business segment, EBIT rose from –€5.4 million in fiscal 2018 to €3.6 million in the year under review, while the EBIT margin also increased from –1.0% in fiscal 2018 to 0.8% in 2019. The one-off effect from the change of consolidation method had a positive impact.

in € millions	2018	2019
Systems	29.5	26.9
in % of sales revenues	3.2%	2.9%
Robotics	80.9	37.7
in % of sales revenues	6.5%	3.3%
Swisslog	–0.2	10.5
in % of sales revenues	0.0%	1.8%
Swisslog Healthcare	–4.7	–10.0
in % of sales revenues	–2.2%	–4.5%
China	–5.4	3.6
in % of sales revenues	–1.0%	0.8%

Depreciation and amortization rose by €41.8 million in the 2019 fiscal year from €86.9 million to €128.7 million. With the introduction of the new IFRS 16 leases standard, €36.8 million (2018: €0.0 million) was recognized in amortization of capitalized leases. The depreciation and amortization of €128.7 million breaks down into €16.5 million (2018: €8.2 million) for the Systems business segment, €42.4 million (2018: €29.9 million) for Robotics, €17.8 million (2018: €11.2 million) for the Swisslog division, €11.1 million (2018: €4.9 million) for Swisslog Healthcare, and €10.8 million (2018: €5.0 million) for the China segment.

EBITDA (earnings before interest, taxes, depreciation and amortization) thus rose overall by €55.3 million or 45.6% to €176.5 million (2018: €121.2 million). Group EBITDA is presented below:

in € millions	2015	2016	2017	2018	2019
Group	259.1	205.3	180.2	121.2	176.5
in % of sales revenues	8.7%	7.0%	5.2%	3.7%	5.5%

The following table shows the development of EBITDA at segment level:

in € millions	2018	2019
Systems	37.8	45.2
in % of sales revenues	4.1%	4.9%
Robotics	143.6	83.1
in % of sales revenues	11.5%	7.2%
Swisslog	16.2	33.7
in % of sales revenues	2.7%	5.6%
Swisslog Healthcare	8.7	4.6
in % of sales revenues	4.1%	2.1%
China	–0.4	14.4
in % of sales revenues	–0.1%	3.1%

Financial result up considerably on previous year

In the year under review, the net expenses and income in the financial result equated to an income of €6.6 million. Compared with the previous year, this represents an increase of €6.0 million (2018: €0.6 million income).

Interest income of €28.6 million in fiscal 2019 (2018: €14.1 million) is significantly higher than the figure for the previous year. For one thing, interest income was generated from leases of KUKA Toledo Production Operations LLC, Toledo/USA as the lessor. Beyond that, the joint venture established in the past fiscal year received interest income on bank balances. Foreign currency gains and losses in connection with financial assets led to a surplus of €1.0 million (2018: €3.0 million income), which is allocated to the interest income.

Interest expense of €19.9 million in 2019 was up €6.5 million on the previous year (2018: €13.4 million). At €5.6 million (2018: €0.0 million), interest expenses in connection with the introduction of the IFRS 16 leases standard accounted for a significant proportion of this figure. In addition, interest expenses of €8.7 million (2018: €5.2 million) were incurred for the promissory note loan placed in October 2015 and the new US dollar assignable loan. The net interest expenditure for pensions increased to €2.0 million (2018: €1.7 million). Expenditure for sureties and guarantees amounted to €1.7 million (2018: €1.8 million).

A value adjustment for a loan also had a negative impact of €2.1 million (2018: €0.1 million) on the financial result.

EBT (earnings before taxes) rose accordingly to €54.4 million (2018: €34.9 million), up €19.5 million on the previous year. The tax expense amounted to €36.6 million in the year under review (2018: €18.3 million). This corresponds to a tax rate of 67.3% (2018: 52.4%) – an increase on the previous year. The effective tax rate is mainly influenced by adjustments in the valuation of deferred tax assets; tax subsidies have an opposite effect.

Proposed dividend of €0.30 per share

KUKA Group generated earnings after taxes of €17.8 million (2018: 16.6 million) and once again demonstrated a positive year-on-year trend. The development was positive for the ninth year running, even though the economic market environment for KUKA Group is challenging. Earnings per share amounted to €0.24 in 2019 (2018: 0.32 €).

The Executive Board is thus proposing to the Annual General Meeting that a dividend of €0.30 per share be paid for fiscal 2019.

Group income statement (condensed)

in € millions	2015	2016	2017	2018	2019
Sales revenues	2,965.9	2,948.9	3,479.1	3,242.1	3,192.6
EBIT	135.6	127.2	102.7	34.3	47.8
EBIT adjusted ¹	135.6	155.2	134.6	83.0	47.8
EBITDA	259.1	205.3	180.2	121.2	176.5
EBITDA adjusted ¹	259.1	233.3	212.1	169.9	176.5
Financial result	-7.4	-4.9	-9.2	0.6	6.6
Taxes on income	-39.3	-36.1	-5.3	-18.3	-36.6
Earnings after taxes	86.3	86.2	88.2	16.6	17.8

¹ 2016: one-off effect due to the takeover bid by Midea Group
2017: growth investments
2018: growth investments and reorganization expenditure
2019: no one-off effects

Financial position

Principles and goals of financial management

KUKA Aktiengesellschaft is responsible for the central financial management of all KUKA Group companies. Group financing and interest rate and currency risk management are controlled centrally via KUKA Aktiengesellschaft. The financing and investment needs of Group companies and hedging transactions for interest rate and currency management are bundled by KUKA Aktiengesellschaft, which concludes the necessary internal and external financial transactions with Group companies and banks. KUKA Aktiengesellschaft performs these tasks on the basis of a uniform planning and reporting system in which risks related to credit, liquidity, interest rates and exchange rates are recorded. The objective of interest rate and currency management is to minimize the risks involved. Only standard derivative financial instruments are used to hedge risk. The hedging transactions are concluded exclusively on the basis of the hedged item or planned transactions. KUKA has issued a standard set of guidelines for all Group companies for the purpose of managing financing risk. The guidelines were continuously reviewed and optimized during the financial year to ensure that they remained up to date.

Group financing and cash pooling

The objective of KUKA Group's financing policy is to ensure that the Group has sufficient liquidity reserves at all times, in the form of liquid assets and non-utilized, committed long-term credit lines as well as sufficient guarantee facilities, in order to be able to cover the operating and strategic financing requirements of the Group companies and also to have sufficient reserves as a buffer against unforeseen events. The financing requirements of the Group companies are calculated on the basis of the multi-year budget and financial projections and rolling liquidity forecasts over twelve months, each of which includes all the relevant companies consolidated in the Group accounts.

Payments received on the basis of operating activities of Group companies represent the Group's most important source of liquidity. KUKA Aktiengesellschaft's cash management uses the liquidity surpluses of individual Group companies to meet the liquidity requirements of other Group companies. This central, intra-Group cash pooling optimizes the Group's liquidity position and has a positive impact on net interest income.

Components of the financing structure

Promissory note loans

KUKA AG issued unsecured promissory note loans with a total volume of €250.0 million in two tranches on October 9, 2015. Tranche 1 has a volume of €142.5 million with an original term to maturity of five years (maturing October 2020); tranche 2 has a volume of €107.5 million and an original term to maturity of seven years (maturing October 2022). The promissory note loans carry interest coupons of 1.15% for tranche 1 and 1.61% for tranche 2.

In order to finance the construction of a new manufacturing facility under the terms of a pay-on-production contract of KUKA Toledo Production Operations LLC, Toledo/Ohio, USA, this company issued USD assignable loans in 2018 with a total volume of USD 150.0 million in several maturity tranches, underwritten by KUKA AG: tranche 1 has a volume of USD 10.0 million with a term to maturity of two years (maturing August 2020), tranche 2 has a volume of USD 90.0 million with a term to maturity of 3½ years (maturing February 2022), and tranche 3 has a volume of USD 50.0 million with a term to maturity of five years (maturing August 2023). The interest rate of the tranches is linked to the 3-month USD LIBOR rate and is thus variable. Margins on this reference interest rate depend on the term and are 85, 105 and 140 basis points respectively. As at the reporting date, the interest rates on the tranches were 4.15%, 4.35% and 4.70% p.a. The funds from this assignable loan were received on August 10/September 10, 2018.

Syndicated loan agreement

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

Guaranteed credit lines

In addition to the guarantee lines and the cash facilities which can be used for guarantees under the syndicated loan agreement, there were also further guarantee line framework agreements in 2019 to support operating business. The guarantee facilities agreed bilaterally with banks and surety companies had a commitment volume of €153.0 million as at December 31, 2019 (2018: €118.0 million). In total at December 31, 2019, KUKA therefore had credit lines to utilize for sureties and guarantees in an amount of €673.0 million (2018: €638.0 million). These were utilized in the amount of €271.3 million (2018: €311.3 million).

Asset-backed securities program/sale of receivables

The ABS program with a volume of €25.0 million still in existence at the last balance sheet date expired in January 2019 as contractually agreed. As at the 2018 balance sheet date, KUKA Deutschland GmbH had utilized this structured receivables sales program in the amount of €14.0 million.

As part of working capital management, KUKA sold trade receivables totaling approximately €41.0 million in December 2019.

Inter-company loan

In December 2019, KUKA AG signed an inter-company loan agreement for the advance refinancing of the tranches of the existing promissory note loans due in August and October 2020 (US dollar assignable loan from 2018: USD 10.0 million, euro promissory note loans from 2015: €142.5 million) for a loan volume of €150.0 million with Midea International Corporation Company Limited, Hong Kong, a 100% subsidiary of Midea Group. At the same time, Midea International Corporation Company Limited declared in a subordination agreement with the syndicate banks of KUKA AG's syndicated loan agreement that its receivables arising from this loan agreement are deeply subordinated. KUKA AG received the loan amount on December 20, 2019. Repayment is due on June 20, 2025, i.e. the term is 5½ years. The interest rate applicable to the inter-company loan is 0.85% p.a.

KUKA Group's financing requirements are primarily covered by the following available elements:

- 1) The promissory note loans with a nominal value of €250.0 million issued in October 2015 and maturing in October 2020 and October 2022.
- 2) The assignable loans with a nominal value of USD 150.0 million issued in August/September 2018 and maturing in August 2020, February 2022 and August 2023.
- 3) The inter-company loan concluded in December 2019 with a nominal value of €150.0 million and maturing in June 2025.
- 4) The €520.0 million syndicated loan agreement signed in February 2018 with a term extending to February 2025. Cash drawings up to a volume of €260.0 million are possible under this agreement.
- 5) Bilateral agreements with banks and surety companies for surety and guarantee lines in the amount of €153.0 million.

From the perspective of the Executive Board, the measures taken ensure that KUKA Group has appropriate long-term financing and the necessary leeway to quickly implement important strategic decisions.

Assessment by rating agencies

Since Moody's withdrew its rating in January 2019 at KUKA AG's request, KUKA AG is now rated only by the rating agency Standard & Poor's. In August 2019, Standard & Poor's confirmed KUKA AG's investment grade rating of BBB- with a stable outlook. Following KUKA AG's ad hoc announcement on September 24, 2019, in which the expectations for sales revenues and EBIT margin in 2019 were reduced, the rating agency changed the outlook to "negative" on September 30, 2019, but confirmed the investment-grade rating at an unchanged BBB-.

Condensed Group cash flow statement

in € millions	2015	2016	2017	2018	2019
Cash earnings	260.8	203.9	184.6	129.0	167.1
Cash flow from operating activities	169.2	-9.6	92.0	-48.2	214.5
Cash flow from investment activities	-73.5	-97.2	-227.7	-165.5	-193.8
Free cash flow	95.7	-106.8	-135.7	-213.7	20.7

Cash earnings increased due to higher income taxes and the first-time depreciation of right-of-use assets in accordance with IFRS 16. They amounted to €167.1 million (2018: €129.0 million). The cash earnings are amongst other things an indicator derived from the earnings after taxes, adjusted for income taxes (excluding deferred taxes), net interest, cash-neutral depreciation on tangible assets and right-of-use assets pursuant to IFRS 16, together with other non-cash income and expenses (including deferred taxes).

Cash flow from current business operations of KUKA Group rose significantly from -€48.2 million in 2018 to €214.5 million in 2019. This high increase of €262.7 million is primarily attributable to the positive change in current assets and liabilities.

After trade working capital rose continuously to €566.3 million at the end of fiscal 2018, a project was set up within KUKA Group to monitor and optimize the trade working capital. A reduction of €56.2 million as at the end of fiscal 2019 demonstrated the initial success of this project. Trade working capital amounted to €510.1 million on the balance sheet date. Trade receivables and receivables from contract assets decreased by €4.0 million (2019: €905.0 million; 2018: €909.0 million), and inventories also fell by €122.3 million to €344.5 million (2018: €466.8 million), reflecting the optimization of the procurement measures. Trade payables and contract liabilities fell by €70.1 million from €809.5 million in 2018 to €739.4 million in 2019.

Overall, trade working capital has developed as follows:

Trade working capital

in € millions	2015	2016	2017	2018	2019
Inventories ¹	297.8	318.8	387.4	466.8	344.5
Trade receivables and contract assets	658.3	888.9	923.8	909.0	905.0
Trade payables and contract liabilities ¹	691.5	778.6	857.3	809.5	739.4
Trade working capital	264.6	429.1	453.9	566.3	510.1

¹ For reasons of better comparability, the trade working capital KPI has been adjusted for the previous year's figures and the advance payments received are shown under contract liabilities.

Capital expenditure in KUKA Group

As a high-tech enterprise, KUKA Group invests continuously and systematically. Compared with the previous year, however, the volume of investment in intangible and tangible fixed assets fell to €151.1 million (2018: €295.4 million). Construction of the production plant for the finance lease (KTPO) has been completed, as have the new production facilities at the Augsburg location and in Shunde, China. In the past fiscal year, investments were made in the education center at the Augsburg location.

The carrying amount of the company's own development work and internally generated intangible assets totaled €103.1 million (2018: €94.2 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	2015	2016	2017	2018	2019
Group	107.0	99.6	138.8	295.4	151.1

In the area of intangible assets, investments in fiscal 2019 totaled €39.6 million (2018: €59.7 million), including €8.0 million (2018: €18.7 million) for licenses and other rights, €30.2 million (2018: €36.4 million) for internally generated software and development costs, and €1.3 million for advance payments (2018: €3.9 million).

Investments in tangible assets amounted to €111.5 million in 2019 (2018: €235.7 million) and were attributable to land, property rights and buildings (including buildings on third party land) (2019: €24.9 million; 2018: €37.9 million), technical plant and machinery (2019: €20.3 million; 2018: €17.5 million), other plant/operating and office equipment (2019: €20.6 million; 2018: €19.1 million) and advances paid and construction in progress (2019: €45.7 million; 2018: €161.2 million). In particular, the decline in the area of advances paid and assets under construction indicates that the investments from previous years have largely been completed and are now being used. These include the production facilities in Augsburg and Shunde, China, as well as the production plant used in conjunction with the finance lease at KTPO in the USA. Buildings still under construction include the education center at the Augsburg location.

Of the total investments of €151.1 million (2018: €295.4 million), €24.3 million (2018: €143.0 million) was accounted for by the Systems business segment. The significant reduction compared to the previous year is due to the start of production at KTPO in April 2019 (for further details, see note 11 "Leases"). Investments in the Robotics division amounted to €40.1 million after €49.1 million in the previous year. Investments were made in technical equipment, a new building at the Augsburg site, a canteen at the site in Hungary, and the optimization of production including operating and office equipment. The largest share within Robotics is attributable to company-produced and capitalized assets. In the Swisslog segment, investments totaled €12.0 million and were thus almost at the previous year's level of €12.5 million. More than half of the investments were made in intangible assets. This involves the development and optimization of customer software used in conjunction with automation solutions. At €12.6 million, investments of the Swisslog Healthcare business segment were €1.1 million higher than in the previous year (2018: €11.5 million). The majority of investments are accounted for by future-oriented solutions and further developments of existing products for hospitals. In the China segment, the €13.8 million (2018: €41.9 million) that was invested was spent on new plant and office equipment, among other things. The decline is due to the fact that the previous year's figure included the new production plant in Shunde, China. Other investments rose from €38.1 million in 2018 to €48.4 million in 2019. A significant proportion is attributable to advances paid and assets under construction, for example for the education center at the Augsburg location and the production building in Augsburg completed in the year under review. A refrigeration plant was also installed and the energy duct is being extended. The investment volume by segment is presented below:

Investments in intangible assets and property, plant and equipment

in € millions	2018	2019
of which Systems	143.0	24.3
of which Robotics	49.1	40.1
of which Swisslog	12.5	12.0
of which Swisslog Healthcare	11.5	12.6
of which China	41.9	13.8
of which others	38.1	48.4

The (subsequent) payments for acquisitions of consolidated companies, which were also carried out in the previous year, and other investments during the past fiscal year came to a total of €39.1 million (2018: €23.0 million) and were subdivided as follows:

Company acquisitions

in € millions	2018	2019
Company acquisitions		
Visual Components	–	1.9
Device Insight GmbH	–	18.2
UTICA Enterprises, Shelby Township, Michigan/USA	11.4	6.2
Mor-Tech Design Inc.; Mor-Tech Manufacturing Inc., Michigan/USA	9.4	–
Other	2.2	0.3
Total	23.0	26.6
Other participations		
Pharmony	–	1.2
Servotronix	–	11.3
Total		12.5
Total payments	23.0	39.1

Cash inflows for investments in financial assets and at-equity investments mainly comprise the capital contributions of Midea's participation in the so-called joint ventures.

Positive free cash flow

Cash flow from current business operations (2019: €214.5 million; 2018: –€48.2 million) and cash flow from investment activities (2019: –€193.8 million; 2018: –€165.5 million) together result in a positive free cash flow of €20.7 million. The free cash flow of –€213.7 million in the previous year was primarily driven by higher investment activities as well as an increase in trade working capital.

Positive cash flow from financing activities

Cash flow from the financing activities of KUKA Group amounted to €87.8 million after €89.6 million in the previous year. At €11.9 million, the dividend payments are below the prior-year figure of €19.9 million. This corresponds to a dividend per share of €0.30 (2018: €0.50 per share). In the last quarter of the 2019 fiscal year, KUKA Group received a payment from a loan granted by parent company Midea. The increase in interest paid (2019: –€18.6 million; 2018: –€11.3 million) and the repayment of leases (2019: –€33.4 million; 2018: €0.0 million) had a negative impact on cash flow from financing activities.

Consolidated net liquidity/debt

in € millions	2018	2019
Cash and cash equivalents	478.6	584.8
Current financial liabilities	5.2	152.6
Non-current financial liabilities	380.5	382.0
Group net liquidity	92.9	50.2
Cash and guarantee facilities from Syndicated Senior Facilities Agreement	520.0	520.0
Guarantee facility from banks and surety companies	118.0	153.0
ABS program line	25.0	–

At €50.2 million, net liquidity at the end of fiscal 2019 was lower than in the previous year (2018: €92.9 million). On the one hand, cash and cash equivalents increased from €478.6 million in 2018 to €584.8 million in 2019. At the same time, KUKA Group received a loan from Midea Group for €150.0 million, which led to an increase in financial liabilities. Current financial liabilities grew due to the reclassification of the first tranche of the promissory note loan, which has to be repaid in fiscal 2020.

Net worth

As at December 31, 2019, non-current assets amounted to €1,384.4 million and were thus €194.0 million higher than at December 31, 2018. With the introduction of the new leases standard IFRS 16, right-of-use assets are capitalized in the balance sheet. This extended the non-current assets in the balance sheet by €134.0 million as at January 1, 2019. With the start of the finance lease at KTPO, the production facility, which had been allocated to tangible assets, was reclassified as a finance lease receivable. Tangible assets fell accordingly from €493.7 million as at December 31, 2018 to €366.6 million as at December 31, 2019. Finance lease receivables, by contrast, increased from €1.0 million in 2018 to €152.5 million in 2019 within non-current assets and from €0.6 million as at December 31, 2018 to €29.4 million as at December 31, 2019 within current assets.

Under intangible assets, which totaled €565.5 million (December 31, 2018: €563.9 million), goodwill of €315.3 million (December 31, 2018: €308.7 million) is reported. The amortization of purchase price allocations for acquisitions has an opposite effect of €12.6 million (2018: €13.9 million).

The carrying amount for investments accounted for at equity rose to €34.0 million as at the balance sheet date (December 31, 2018: €13.9 million). This increase mostly resulted from the deconsolidation of a Chinese subsidiary and its simultaneous recognition as an investment accounted for at equity. Financial investments also registered an increase. In the past fiscal year, holdings were acquired in Servotronix Motion Control Ltd. and Pharmony SPRL. As a result, the balance sheet item for financial investments showed a balance of €24.1 million as at December 31, 2019 (December 31, 2018: €8.7 million).

Deferred tax assets amounted to €86.7 million (December 31, 2018: €90.5 million), with €41.9 million being attributable to losses carried forward (2018: €42.6 million).

On the balance sheet date of fiscal 2019, current assets amounted to €2,042.2 million (December 31, 2018: €2,028.1 million), which corresponds to a slight increase of €14.1 million. The level of trade receivables was up on the previous year to €443.5 million (December 31, 2018: €415.1 million). Current receivables from finance leases and other assets and prepaid expenses also increased (December 31, 2019: €152.4 million; December 31, 2018: €130.3 million). Other assets include securities held as current assets with a term of significantly less than one year.

Inventories were reduced and now stand at €344.5 million, and thus €122.3 million lower than the figure of €466.8 million as at December 31, 2018. Cash and cash equivalents increased from €478.6 million as at December 31, 2018 to €584.8 million as at December 31, 2019, due in particular to the loan granted by Midea Group.

Group net assets

in € millions	2015	2016	2017	2018	2019
Balance sheet total	2,381.7	2,543.9	2,640.1	3,218.5	3,426.6
Equity	732.5	840.2	866.6	1,339.6	1,348.6
in % of balance sheet total	30.8%	33.0%	32.8%	41.6%	39.4%
Net liquidity/debt	199.9	113	-45.2	92.9	50.2

The balance sheet total of KUKA Group increased by €208.1 million from €3,218.5 million as at December 31, 2018 to €3,426.6 million as at December 31, 2019. With the introduction of the IFRS 16 leases standard, the balance sheet total as at December 31, 2018 grew by €134.0 million to €3,352.5 million as at January 1, 2019.

Equity ratio of 39.4%

Equity rose from €1,339.6 million as at the balance sheet date in 2018 to €1,348.6 million in 2019. On the one hand, retained earnings decreased from €669.9 million (December 31, 2018) to €659.8 million (December 31, 2019) and, on the other hand, minority interests rose to €278.8 million (December 31, 2018: €259.7 million). The increase of €19.1 million in minority interests is attributable to the investments of Midea Group in the so-called joint ventures controlled by KUKA. Payment of the dividend for the 2018 fiscal year to the shareholders of KUKA AG in the amount of €11.9 million (2018: €19.9 million) reduced equity. Actuarial gains from pension accounting (including related deferred taxes) amounted to €18.2 million (2018: gain of €5.2 million). The recognized foreign exchange effects of €10.9 million (2018: €25.4 million) also had a positive effect on equity. Besides the US dollar, this related to the Swiss franc and Chinese renminbi. The equity ratio fell from 41.6% as at December 31, 2018 to 39.4% as at December 31, 2019. This is related to the introduction of the IFRS 16 leases standard, which led to an extension of the balance sheet and a corresponding decline in the equity ratio.

Deferred tax liabilities fell slightly from €42.4 million in 2018 to €41.8 million in 2019. Financial liabilities amount to a total of €534.6 million as at December 31, 2019 (December 31, 2018: €385.7 million). Current financial liabilities of €152.6 million (December 31, 2018: €5.2 million) now include the current portion of the promissory note loan, the first tranche of which is due in 2020. Non-current financial liabilities amounted to €232.0 million (December 31, 2018: €380.5 million). The loan in the amount of €150.0 million from Midea Group Ltd. is reported under accounts payable to affiliated companies.

The lease liabilities that have to be recognized in the balance sheet since the introduction of IFRS 16 at the start of fiscal 2019 amount to €138.3 million (December 31, 2018: €0.0 million; January 1, 2019: €134.0 million), of which €32.5 million (December 31, 2018: €0.0 million; January 1, 2019: €32.4 million) is current and €105.8 million (December 31, 2018: €0.0 million; January 1, 2019: €101.6 million) is non-current. Non-current liabilities thus total €690.2 million as at the 2019 balance sheet date (December 31, 2018: €569.2 million; January 1, 2019: €670.8 million).

The current portion of liabilities also increased as at December 31, 2019, amounting to €1,387.8 million (December 31, 2018: €1,309.7 million; January 1, 2019: €1,342.1 million). Trade payables were almost unchanged from the previous year (December 31, 2019: €402.3 million; December 31, 2018: €402.7 million), but contract liabilities decreased by €69.7 million to €337.1 million (December 31, 2018: €406.8 million). On the other hand, as already mentioned above, current financial and lease liabilities showed an increase. Income tax liabilities (December 31, 2019: €46.1 million; December 31, 2018: €40.5 million) and other provisions (December 31, 2019: €187.2 million; December 31, 2018: €166.7 million) were also up. By contrast, a decrease to €229.9 million (December 31, 2018: €287.7 million) was recorded in the area of other liabilities and deferred income. In addition to personnel-related liabilities totaling €125.4 million (2018: €145.2 million), these also include conditional purchase price adjustments that mainly concern acquisitions from previous fiscal years, but have declined significantly compared with the previous year (December 31, 2019: €3.4 million; December 31, 2018: €28.1 million) due to the payments made (see also page 19 "Company acquisitions").

Group assets and financial structure

in € millions	2018	2019
Current assets	2,028.1	2,042.2
Non-current assets	1,190.4	1,384.4
Assets	3,218.5	3,426.6
Current liabilities	1,309.7	1,387.8
Non-current liabilities	569.2	690.2
Equity	1,339.6	1,348.6
Liabilities	3,218.5	3,426.6

Reduction in working capital and increase in capital employed

Working capital decreased from €293.2 million in 2018 to €177.3 million in 2019. Here, the monitoring of the items included in trade working capital and working capital is showing success. All divisions except the Swisslog segment are showing a year-on-year improvement in working capital (Systems: 2019: €12.6 million; 2018: €34.7 million; Robotics: 2019: €173.4 million; 2018: €185.5 million; Swisslog: 2019: –€92.6 million; 2018: €2.0 million; Swisslog Healthcare: 2019: €41.2 million; 2018: €49.9 million; China: 2019: €37.1 million; 2018: €67.0 million).

Return on capital employed (ROCE)

ROCE (return on capital employed) is a key performance indicator for KUKA Group, as it illustrates the effectiveness and profitability of the capital employed.

The capital employed is calculated as the average of capital employed at the beginning and end of a given fiscal year. KUKA Group's average capital employed in 2019 was €1,374.3 million – an increase of €189.3 million on the previous year (2018: €1,185.0 million). The EBIT of €47.8 million (2018: €34.4 million) divided by average capital employed results in a ROCE of 3.5% after 2.9% in fiscal 2018.

Return on capital employed (ROCE)

in % of capital employed	2015	2016	2017	2018	2019
Group ¹	20.0%	16.2%	10.9%	2.9%	3.5%

¹ incl. consolidations

Compared with the previous year, all business segments recorded an increase in average capital employed in the year under review. In the Systems business segment, ROCE of 8.9% (2018: 11.3%) was achieved with an average capital employed of €301.1 million (2018: €260.7 million). In the Robotics segment, capital employed increased from €369.7 million in 2018 to €430.7 million in 2019, while ROCE dropped to 8.8% from 21.9% in the previous year. Here, provisions for restructuring impacted on earnings and hence ROCE. With a capital employed of €122.7 million (2018: €100.5 million), Swisslog achieved a ROCE of 8.6% and thus a significant increase on the previous year's figure of –0.2%. The Swisslog Healthcare division reported capital employed of €152.5 million in fiscal 2019 (2018: €112.3 million), but ROCE deteriorated to –6.6% from –4.2% in the previous year. The China segment was able to increase ROCE from –6.0% in 2018 to 2.3% in 2019. The average capital employed amounted to €155.6 million (2018: €90.2 million).

Return on capital employed (ROCE)

in % of capital employed	2018	2019
of which Systems	11.3%	8.9%
of which Robotics	21.9%	8.7%
of which Swisslog	–0.2%	8.6%
of which Swisslog Healthcare	–4.2%	–6.6%
of which China	–6.0%	2.3%

Events after the balance sheet date

Mr. Helmut Zödl was appointed by court order to the Supervisory Board with effect from January 24, 2020 (by order of the Augsburg Local Court dated January 23, 2020). The Supervisory Board elected Mr. Zödl as a member of the Audit Committee with its resolution of January 29, 2020. Said committee elected Mr. Zödl as Chairman of the Audit Committee on the same day.

On February 20, 2020, KUKA's Supervisory Board and Prof. Dr. Peter Hofmann, Chief Technology Officer, decided by mutual agreement to terminate their working relationship for personal reasons. Prof. Dr. Peter Hofmann had been Chief Technology Officer on the Executive Board since November 2019 and was also responsible for research and development in the Robotics business segment.

The particular risks and effects of the coronavirus crisis for KUKA cannot be assessed at this time.

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.

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	2018	2019
Sales revenues	128.6	142.3
Other company-produced and capitalized assets	1.4	1.3
Other operating income	52.4	18.3
Cost of materials	–69.5	–72.5
Personnel expense	–61.5	–61.2
Depreciation and amortization of tangible and intangible assets	–14.8	–15.9
Other operating expenses	–59.2	–31.6
Income from equity investments	86.7	37.2
Other interest and similar income	13.0	12.5
Interest and similar expenses	–10.4	–8.3
Taxes on income	–0.3	0.3
Net profit for the year	66.4	22.4
Profit carry-forward from the previous year	9.1	30.4
Transfer to retained earnings	–33.2	–11.2
Balance sheet profit	42.3	41.6

Balance sheet of KUKA Aktiengesellschaft (HGB)

Assets in € millions	2018	2019
Fixed assets		
Intangible assets	34.9	28.9
Tangible assets	109.4	147.3
Financial assets	484.8	484.8
	629.1	661.0
Current assets		
Receivables from affiliated companies	557.6	716.3
Other receivables and assets	4.3	1.5
Securities	–	41.0
	561.9	758.8
Cash and cash equivalents	5.6	67.5
	567.5	826.3
Prepaid expenses	2.6	2.6
	1,199.2	1,489.9
Liabilities in € millions	2018	2019
Equity		
Subscribed capital	103.4	103.4
Capital reserve	305.8	305.8
Other retained earnings	287.4	298.6
Balance sheet profit	42.3	41.6
	738.9	749.4
Provisions		
Pension provisions	11.6	11.6
Provisions for taxes	7.6	7.7
Other provisions	34.8	29.8
	54.0	49.1
Liabilities		
Liabilities due to banks	255.1	250.8
Trade payables	6.5	7.3
Accounts payable to affiliated companies	128.4	419.9
Liabilities to provident funds	2.4	2.4
Other liabilities	13.9	11.0
	406.3	691.4
	1,199.2	1,489.9

Results of operations of KUKA Aktiengesellschaft

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

Sales revenues increased from €128.6 million in 2018 to €142.3 million in 2019. KUKA Aktiengesellschaft mainly generates its sales revenues from cost allocations and cost transfers to subsidiaries. These rose by 12.0% to €128.0 million in the past fiscal year (2018: €114.3 million). KUKA Aktiengesellschaft generated €14.2 million (2018: €14.2 million) by renting buildings to companies which belong to the Group. The expenses associated with sales revenues are reported as cost of materials and services purchased. These amounted to €72.5 million during the financial year (2018: €69.5 million).

The other operating income in the amount of €18.3 million (2018: €52.4 million) consisted mainly of currency translation gains, primarily from the US dollar, Swiss franc and Swedish krona. The previous year's figure also included income from the disposal of financial assets. Other operating expenses fell from €59.2 million to €31.6 million. In addition to a decline in currency translation losses, lower external service costs for the global IT projects had a particularly positive effect on earnings. In the previous year, this item also included expenses from the change to the Executive Board which took place in December 2018.

Compared with the previous year, personnel expenditure fell slightly by 0.5% to €61.2 million (2018: €61.5 million). The average number of employees decreased from 624 in the previous year to 617 in fiscal 2019.

Income from investments totaled €37.2 million (2018: €86.7 million) and was thus down on the figure for the previous year. The decrease is due to the lower earnings contribution of the German companies that have a profit transfer agreement with KUKA Aktiengesellschaft. This is offset by increased other income from investments in related companies totaling €71.3 million (2018: €56.0 million).

Net interest increased by €1.6 million to €4.2 million (2018: €2.6 million). Both interest income and interest expenditure fell in fiscal 2019. Compared with 2018, there were lower expenses for bank loans and interest expenses to banks in particular. The interest result with affiliated companies fell by €0.4 million from the previous year to €10.9 million.

The reported taxes on income and earnings amounting to €0.3 million include tax refunds for past assessment periods as well as capital gains taxes and foreign withholding taxes.

The net income of KUKA Aktiengesellschaft amounted to €22.4 million in fiscal 2019 (2018: €66.4 million). Taking into account the profit carried forward from the previous year of €30.4 million and the transfer to revenue reserves of €11.2 million, this results in a balance sheet profit of €41.6 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. Since 2019, they also include a new 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 €296.4 million (2018: €429.2 million). Both receivables from and liabilities to affiliated companies are higher than in the previous year, with the change in liabilities being primarily attributable to the new loan mentioned above.

The liquid assets of KUKA Aktiengesellschaft rose significantly from €5.6 million to €67.5 million. Financial liabilities fell by €4.3 million on the previous year to €250.8 million (2018: €255.1 million) and relate to the promissory note loan.

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 rose from €557.6 million in the previous year to €716.3 million. The increase is related to the aforementioned dividend distribution by a Swiss subsidiary, among other factors. 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 increased from €14.8 million in 2018 to €15.9 million in 2019. This is due to the increased investment volume in both intangible and tangible assets. Investments totaling €48.5 million (2018: €38.0 million) were made in fiscal 2019. The investments relate mainly to construction work at the Augsburg site. The construction of a new production building was completed at the end of 2019. Other construction measures, such as the building of a new education center, are currently still ongoing.

KUKA Aktiengesellschaft's direct equity investments in its subsidiaries are reported under financial assets. The disposals in fiscal 2019 relate to Freadix FryTec GmbH, Augsburg and Metaalwarenfabriek's-Hertogenbosch B.V., s-Hertogenbosch, Netherlands. Since the aforementioned companies had already been fully written down in previous years, the balance sheet value of other financial assets remains unchanged at €484.8 million (2018: € 484.8 million).

Other assets decreased to €1.5 million in 2019 (2018: €4.3 million); this is attributable to lower income tax receivables.

The short-term securities totaling €41.0 million (2018: €0.0 million) have a term of four months and relate to long-term freely available financial resources invested in conjunction with liquidity management.

Equity was up €10.5 million on the previous year and thus reflects the positive result for the fiscal year. Additionally, the dividend of €11.9 million for fiscal 2018 was paid out in the 2019 fiscal year. The equity ratio of KUKA Aktiengesellschaft amounted to 50.3% as at the balance sheet date December 31, 2019 (2018: 61.6%).

As at December 31, 2019, other provisions totaled €29.8 million (2018: €34.8 million) and were thus down on the corresponding figure for the previous year. One factor for this decline is lower provisions relating to personnel. Other liabilities also decreased from €13.9 million to €11.0 million due to lower tax liabilities.

The net impact on the balance sheet total of KUKA Aktiengesellschaft resulting from the effects described was an increase of €290.7 million to €1,489.9 million (December 31, 2018: €1,199.2 million).

Dependency report

Since there is no control agreement between KUKA Aktiengesellschaft and the majority shareholders, the Executive Board is obliged to prepare 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 measure being taken. There were no omitted measures."

Non-financial key performance indicators¹

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. To ensure long-term success, KUKA sets high standards for its products, systems and solutions and is committed to responsible and transparent corporate governance.

Resource-saving production and environmental protection

KUKA products and systems stand for innovation and quality. We therefore set the bar very high when it comes to our own production processes. KUKA also contributes to environmental protection by minimizing the use of raw materials and the level of pollution generated. KUKA has taken extensive measures to minimize its environmental impact. Most of our production locations work according to internationally recognized management standards in the areas of quality (ISO 9001), environment (ISO 14001), energy (ISO 50001) and other industry-specific regulations, e.g. VDA 6 Part 4. Throughout the Group, our guidelines for Personnel Policy and for Quality, Health, Safety and Environmental Management apply.

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 components 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 2019 amounted to 104,217 m³ (2018: 112,872 m³).

CO₂ emissions at our largest production locations totaled 31,923 tonnes in 2019 (2018: 35,353 tonnes).

KUKA is investing in an environmentally-friendly and future-proof energy supply. A new, almost CO₂-neutral refrigeration plant has been built at the Augsburg location, as well as new buildings that have been heated via district heating since 2015. As part of the new site concept, KUKA once again invested in the expansion of the district heating network in 2019. The new district heating pipeline was put into service by the Augsburg public utility company in 2019 and offers KUKA greater supply reliability. This also created the basis for the continued use of district heating in the case of expansions to the site, thereby minimizing the environmental impact. The new district heating pipeline also supplies the surrounding industrial estates. Around 44,000 kWh of heat can be transported via the new district heating pipeline alone – this corresponds to a climate-neutral thermal capacity for 4,400 single-family homes. In opting for district heating, KUKA set the stage at the Augsburg location for an energy-efficient, environmentally friendly and future-proof energy supply for itself and the surrounding industrial areas.

The use of district heating enables KUKA to reduce CO₂ emissions significantly. KUKA also meets the requirements of the latest version of the German Energy Saving Ordinance (EnEV) in terms of energy efficiency and the requirements of the Renewable Energies Heat Act (EEWärmeG) for new and existing buildings. Through the modernization and increase in efficiency of the entire heating system, additional savings are expected in consumption and thus in the operating costs.

Reducing energy consumption

Energy savings can be achieved first and foremost in the production of robots. KUKA has production locations in Germany, Hungary and China. At the production sites in Germany, KUKA analyzes the consumption of electric power with the aid of a software tool. Detailed analyses – for example of the paint shop, individual assembly areas or production machine units – help us to initiate improvements as needed. In Augsburg, for example, data are collected using meter installations with more than 550 measurement points, the number of which is continuously being increased. Other environmentally friendly and energy-saving influences that have an impact on the purchase of new components are also evaluated at all sites.

The global strategic energy and environmental goals are:

- › Lowering of energy consumption
- › Lowering of CO₂ emissions
- › Reduction of waste
- › Research and development of sustainable products and technologies

Energy-efficient solutions in systems engineering

KUKA offers its customers intelligent, energy-efficient solutions. These include tailored complete solutions for automating the manufacturing processes of systems, covering all activities from planning and design through to the implementation of automated production systems. Here, KUKA is able to offer its customers alternative energy-efficient solutions.

Swisslog has created its own energy efficiency label called GreenLog, which provides information on potential savings. In the course of the ongoing development of products from the Swisslog business segment, steel chains have been replaced by plastic toothed belts in the CycloneCarrier shuttle and the Tornado light goods crane, for example. This allows customers to cut maintenance and service costs, dispense with lubricants and reduce noise. Furthermore, all drives have been converted from synchronous to asynchronous motors in order to reduce the use of rare earths.

Contribution to the circular economy – recycling and retooling

We offer our customers a retooling service for older robots. Robots that are no longer in use are taken back by KUKA and refurbished. These are sold again as used machinery in many cases. Where this is not possible, KUKA offers disposal services or recycling for used robots. Together with its customers, KUKA thus strives to achieve a closed-loop materials cycle.

¹ Information not included in the management report: no verification 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, health and sports offerings and promotes diversity and equal opportunities.

Slight decline in the number of employees

As at December 31, 2019 KUKA Group employed 14,014 people. The headcount thus showed a slight decline of 1.6% on the previous year (2018: 14,235). The Systems division employed 3,208 staff as at December 31, 2019. This was a slight increase of 3.1% on the previous year (2018: 3,112). In the Robotics division, the workforce declined by 7.6% to 5,502 employees (2018: 5,957). The headcount at Swisslog rose by 9.8% to 2,168 (2018: 1,975). At Swisslog Healthcare, the number of employees increased by 24.4% from 1,159 after 931 in the previous year. Under the new organizational structure, the Swisslog and Swisslog Healthcare segments, previously consolidated under Swisslog, were separated. Employees in central functions previously responsible for both companies were allocated to the new segments, resulting in the difference compared to the previous year. The workforce in China comprised 1,382 employees at the end of the financial year, 8.7% below the headcount of 1,514 in the previous year. There were 3,505 employees at the Augsburg site as at December 31, 2019.

The currently difficult market environment presents KUKA with many challenges. KUKA reacted to this at an early stage and initiated an immediate action plan in January 2019 to achieve sustainable and profitable growth once again. The efficiency program developed for this purpose also included personnel measures. Around 350 full-time jobs had to be cut at the Augsburg location, mainly in the so-called indirect departments such as Administration, Purchasing, Sales and Project Management. Management worked closely with the employee representatives to develop a socially acceptable concept.

A sustainable business model is being implemented in the new fiscal year for a unit in the Robotics segment that is responsible for project business and based in both Augsburg and Obernburg. The goal is that the restructuring will enable the division to return to profitability in the future and make a sustainable contribution to KUKA's success. The need for reorientation is due to the economic development in this subdivision, which has already been tense for some years. This was compounded by the currently difficult market environment. The reorientation will also affect part of the workforce at both locations and entail the loss of up to 255 jobs. The objective is for the subdivision to operate with a simpler structure, improving its performance, making it more competitive and day-to-day operations more efficient.

High standard of training and further education

When it comes to the professional training of young people, KUKA offers 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. KUKA maintains a high standard in the quality of training and the level of performance. This is why KUKA apprentice graduates finish best in class in their respective training occupation time and again. 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 the commercial sector with 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 the KUKA Academy, we accompany and support our employees in their personal and professional development. At the 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 computer and language courses, specific professional courses from the fields of sales, purchasing, business administration, strategic implementation and project management, along with seminars for leadership, communication and change management.

Diversity and tolerance are the order of the day

At KUKA, diversity involves promoting and benefiting from 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, KUKA offers employees flexible working times in order to better combine work and private life. Accepting and promoting 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. In 2019 the network was further expanded and orangeWIN was founded in the USA.

KUKA has also been involved in the Augsburg cross-mentoring program since 2011, which is committed to gender equality at work, and is engaged in MigraNet, which aims to achieve the professional integration of people with a migrant background.

Fostering talent and facilitating intercultural exchange

In 2019, a Global Exchange Program was established to promote intercultural exchange and offer the opportunity to work on projects on site. The program enables employees to spend a period of between three and six months abroad, subject to the existence of concrete project ideas. It applies to an exchange between Germany and China and between the USA and China. The project ideas are intended to contribute to the corporate strategy and are examined by a commission consisting of representatives from the home country and the host country.

Around 114 employees were added to the global talent pool as part of a structured identification process. Individual development plans are concluded with them and specific measures for personal and professional skills development are agreed. In addition to employee retention, we also use this as a basis for succession planning for key positions in the company.

Focus on occupational health and safety

Occupational health and safety are an essential requirement for ensuring that business operations run smoothly in manufacturing companies like KUKA. Appropriate management systems and general awareness of occupational safety protect the health of employees. Occupational health and safety is therefore firmly embedded in management systems and supported in some cases by external certifications at the major locations of KUKA Group.

In order to reduce the number of accidents further, the Executive Board gave the go-ahead in 2019 for the multi-year "Vision Zero" campaign – a working world with "zero" work-related accidents or health hazards. An important element of "Vision Zero" is behavioral measures aimed at ensuring that employees consistently act in a safety-conscious manner.

Social engagement

KUKA employees in Augsburg founded Orange Care e. V., a non-profit association which supports people in need, especially in terms of helping young people and families. Orange Care has also sponsored a children's daycare center since 2014 with the goal of improving the work-life balance for our employees. In 2019, for example, Orange Care supported the KlinikClowns e. V. of the pediatric ward in the Josefinum specialist clinic in Augsburg. The two clowns visit the children's ward once a week and make everyday life in the hospital easier for the children through play and fun. Orange Care also donated to the Regens Wagner Foundation in Holzhausen. The foundation offers people with disabilities broad support for school, training, employment and daycare. Through its donation, Orange Care supported severely disabled people with musical encouragement. Orange Care also provided financial support to "Verein Kinderweihnachtswunsch" (Christmas wish association for children), through which it was able to fulfill several Christmas group wishes for children and young people in social institutions. Donations included entrance tickets to the televised singing competition "The Voice of Germany" in December, and a bicycle.

In Augsburg, KUKA works with the Ulrich Workshops of the social enterprise CAB Caritas Augsburger Betriebsträger GmbH. The Ulrich Workshops find jobs for people who are unable to find employment in the general labor market due to the nature or severity of their disability.

KUKA also supports the youth research center "Herrenberg-Gäu Aerospace Lab e. V." as a premium sponsor. The aim is to encourage young people, especially girls, to study STEM subjects by mentoring them over the long term and introducing them to technical topics and research, rather than making one-off contributions. Several young people taking part in the Lab have won awards at the "Jugend Forscht" (Young Researchers) competition.

KUKA employees worldwide take on responsibility in the community and support social causes. Employees in the USA, for example, are involved in the KUKA Cares Foundation, which was established by KUKA Systems and partner companies. One of the core missions of the foundation is to support people in distress and families in need, for example in terms of health, their financial situation or educational projects.

Bringing robotics and automation closer to the public

European Robotics Week (ERW) was initiated by the European robotics association euRobotics and takes place every year in November. In November 2019, KUKA took part in ERW for the ninth time. During this week of events, KUKA employees have the opportunity to get involved in raising awareness of robotics and automation in the general public. Another aim is to arouse the interest of young people in technology and scientific subjects. Children's lectures on robotics were offered in schools and kindergartens in the year under review along with talks on the topic of "Humans and Robots" held in Augsburg Planetarium and the Development and Technology Center.

In addition, the draft of an innovative concept with the KUKA LBR Med for use in hospitals and rehabilitation centers, developed by a research team from the universities of Leeds, Vanderbilt and Turin, won the KUKA Innovation Award in the year under review.

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 Executive 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 Executive 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 divisions 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, i.e. risks according 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. The information collected in this way is summarized in a risk report that is also prepared each month and addressed to the Executive 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 Executive 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 Executive 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 Executive Board and Supervisory Board meetings, especially by the Audit Committee.

The management of the business segments and the individual subsidiaries is directly responsible for the early identification, control and communication of the respective risks. 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.

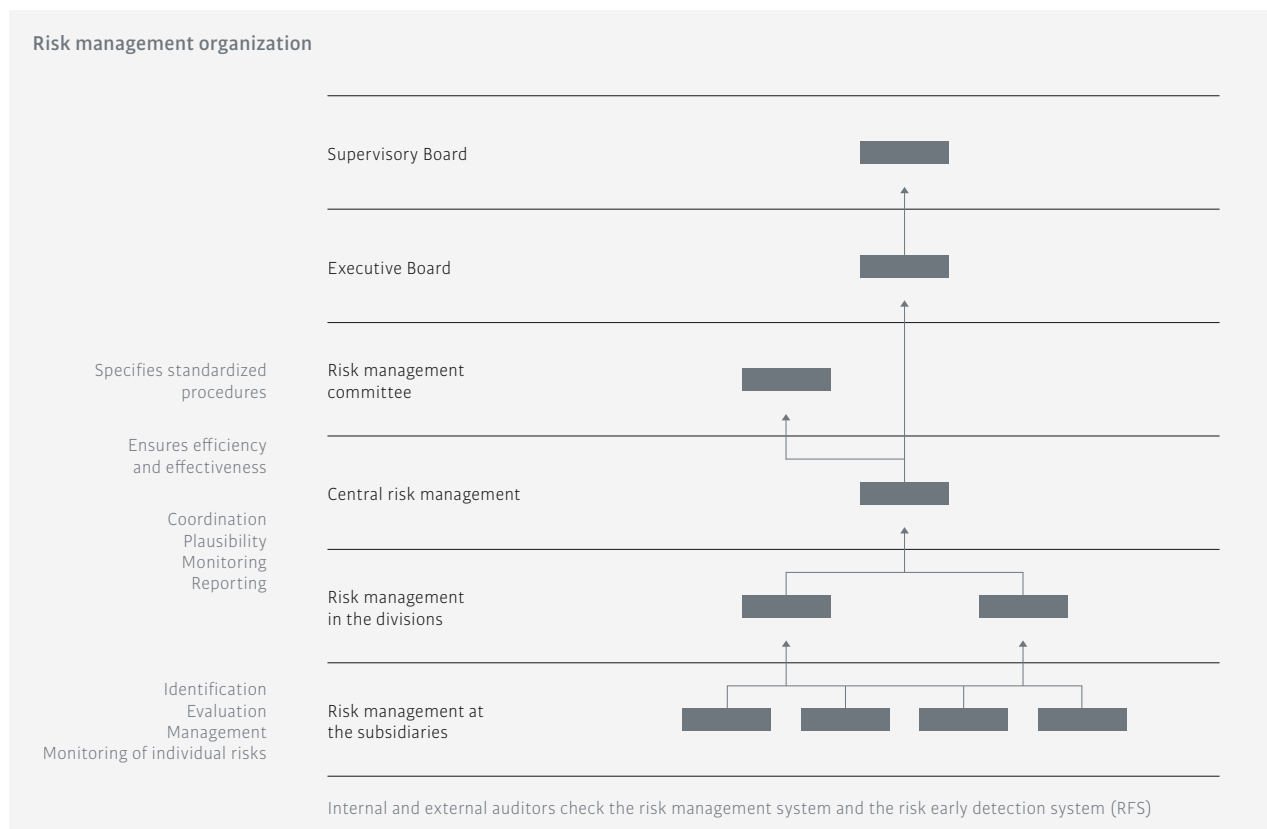
In principle, the Group's risk management system enables the Executive Board to identify material risks at an early stage, initiate appropriate steps to counter these risks and monitor implementation of the steps. The internal audit department regularly monitors compliance with the risk management guideline 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 control system (see Management Report, "Internal control and risk management system" section, page 36) 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	2018	2019
Legal risks	10.7	7.7
Economic risks	-0.7	2.7
Financial risks	13.0	21.8
Total for the Group	23.0	32.2

In the previous year, intensified risk mitigation measures resulted in a theoretically negative expected risk value in individual cases.

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.

During the course of 2019, KUKA felt the effects of further weakened investment activities in both the automotive industry and the general machinery and systems engineering sector. The cooling of the global economy had a negative impact on the company's business

development, particularly in its focus markets of automotive and electronics. The Europe and China regions have been hit particularly hard. In addition, there are further costs resulting from existing orders and the need for restructuring in the Robotics business segment. The ongoing trend towards automation invariably also offers opportunities in non-industrial sectors, such as the long-term prospects associated with assisting an aging society. The digitalization strategy has been implemented continuously through various projects.

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.

KUKA Group introduced the KBO structure at the beginning of 2019. From now on, Group reporting will be based on five business segments – Systems, Robotics, Swisslog, Swisslog Healthcare and China.

The Swisslog segment was restructured in this context. The Swisslog and Swisslog Healthcare divisions are now shown separately in this report. The figures reported for the previous year were reconciled from the existing data.

The new China segment contains risks previously reported in the Systems, Robotics and Swisslog divisions.

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 while already processing the orders, 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 associated with the project business arise mainly when parts can be purchased at a lower cost than originally estimated and by invoicing the customer for any change orders received over the course of the project. In 2019, several projects in Europe were subject to significant additional costs due to the high complexity of these projects and the associated delays. These effects have been taken into account in the amended project calculation and are already included in earnings for 2019 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 has 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 soon have to invest in new production lines or upgrade their existing assembly lines.

Pay-on-production contracts such as KTPO's (KUKA Toledo Production Operations) offer additional opportunities, but also risks. The Jeep brand continues to promise above-average 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.

Systems risk exposure

in € millions	2018	2019
Legal risks	0.3	0.0
Economic risks	-0.2	0.4
Financial risks	0.0	0.0
Total for Systems	-0.1	0.4

In the previous year, intensified risk mitigation measures resulted in a theoretically negative expected risk value in individual cases.

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 subsuppliers. 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.

KUKA sees an opportunity to continuously expand its customer base in general industry with a focus on Handling, Machining & Processing (HMP). One of the company's key strategic thrusts is to penetrate new, non-automotive markets. The company's profitability will become less and less dependent on exchange-rate fluctuations as it increasingly spreads its value added across different local currencies.

The cell business has come under pressure in recent years due to high project risks and falling market prices. It is necessary to adapt the structure to the changed conditions. The business model has been restructured to focus on standardized cells. A provision was set up in fiscal 2019 for the resulting one-off costs. In addition to projects based on customer-specific solution requests, this includes the expansion of project business towards modules and standardized cells.

Robotics risk exposure

in € millions	2018	2019
Legal risks	0.3	0.0
Economic risks	0.0	0.5
Financial risks	0.0	0.1
Total for Robotics	0.3	0.6

Intensified risk mitigation measures result in a theoretically negative expected risk value in individual cases.

Swisslog

The Swisslog segment broadens KUKA's range of products and services and makes a decisive contribution 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. In 2019, the increase in the order book has also created a considerably higher risk position for possible project delays and potential financial risks.

The segment has been reported separately for the first time in this annual report.

Swisslog risk exposure

in € millions	2018	2019
Legal risks	0.0	0.0
Economic risks	-0.5	1.8
Financial risks	1.0	13.6
Total for Swisslog	0.5	15.3

Swisslog Healthcare

The Swisslog Healthcare segment likewise broadens KUKA's range of products and services and contributes 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.

The segment has been reported separately for the first time in this annual report.

Swisslog Healthcare risk exposure

in € millions	2018	2019
Legal risks	0.0	0.2
Economic risks	0.0	0.1
Financial risks	2.4	3.0
Total for Swisslog Healthcare	2.4	3.3

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.

In general, risks and impacts are identifiable on account of the current geopolitical situation. Beyond this, there are risks attributable to the coronavirus crisis, which in many regions of China is leading to major constraints on public and business life as a result of official restrictions. Negative effects on global economic development are therefore to be expected. KUKA can only take limited risk-reducing measures to mitigate these risks of global magnitude. For this reason, KUKA is focusing on trust-based cooperation with local customers and a suitable product portfolio. The reluctance to invest is leading to increased competition, which entails the risk of significantly lower order volumes and margins. Here, also, KUKA is taking measures to improve efficiency in production and project management in order to further reduce costs.

As part of restructuring, local expertise and capacity to act have been strengthened and geared towards the requirements of the Chinese market. This makes it possible to take greater advantage of business opportunities.

The segment has been reported separately for the first time in this annual report.

China risk exposure

in € millions	2018 ¹	2019
Legal risks	0.0	0.0
Economic risks	0.0	-0.2
Financial risks	0.0	0.9
Total for China	0.0	0.7

¹ 2018: Risks for China were included in the divisions.

Intensified risk mitigation measures result in a theoretically negative expected risk value in individual cases.

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, taxes, financing, human resources 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.

Risiko-Exposure KUKA AG

in € millions	2018	2019
Legal risks	10.1	7.6
Economic risks	0.0	0.0
Financial risks	9.6	4.3
Total for the Group	19.7	11.9

Strategic risks and opportunities

KUKA's business segments aim to be among the technology and market 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 technical 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 by, for example, 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 the lack of patent and brand protection in Asia. KUKA has developed an independent strategy to safeguard its intellectual property, which is primarily secured by patents and trademark rights.

In the context of insurance/risk management, sufficient property insurance, loss-of-profits insurance, public, product and environmental liability insurance, transportation insurance and cyber insurance are maintained centrally for the Group. 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 a syndicated loan refinanced in 2018 with a term until 2025 and providing cash credit facilities and guarantee lines, and on an inter-company loan concluded with Midea in December 2019, also with a term until 2025. Two standard financial covenants (leverage and interest coverage ratio) have been agreed for the syndicated loan. KUKA monitors adherence to these covenants based both on the current figures and on planning. The covenants were complied with throughout fiscal 2019. As at December 31, 2019, both covenants were well within the contractually defined limits. 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" (from page 39 onwards).

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, i.e. 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 guidelines 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, starting on page 41.

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).

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 or employee suggestion programs 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, not least because of the importance of IT to business processes. These risks relate to both the frequency of viruses or hacking and the damage they could potentially cause. The existing IT security and business continuity management systems as well as guidelines 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 2019 due to the active countermeasures taken by KUKA to mitigate risk at an early stage and to eliminate risk sources, e.g. 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. There is no evidence of environmental risks from operational activities, since the company largely abstains from the use of hazardous materials and the locations are regularly certified to ISO 14001. 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 improve 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 increasing risk potential that has been identified and evaluated in the risk management system, the Executive 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 International Monetary Fund (IMF) expects the global economy to achieve stronger growth in 2020 than in the previous year (3.3% in 2020 after 2.9% in 2019). For 2021, the IMF predicts growth of 3.4%. In particular, the continuing expansionary monetary policy of the central banks is seen as a supportive factor, underpinning consumption and ensuring that many companies continue to have access to financing on favorable terms. In addition, concerns about an unregulated Brexit are diminishing and initial positive signals in the trade dispute between the USA and China are regarded as signs of stabilization. But despite the partial agreement, the trade dispute is not off the table and many tariffs are still being maintained. According to the IMF, the turning point has not yet been reached and numerous risks still exist. A renewed escalation in the trade dispute or geopolitical tensions, such as between the USA and Iran, as well as anti-government protests in many countries could become renewed burdens on economic development. The IMF sees the effects of weather-related and other natural disasters as a further economic risk.

For the eurozone, the IMF anticipates economic growth of 1.3% for 2020. Growth will thus be slightly above the 1.2% of the previous year. According to IMF expectations, European economic growth should increase by a further tenth of a percentage point in 2021; the growth rate is forecast to reach 1.4%.

The German economy should be able to pick up some momentum again in 2020. The IMF is predicting a growth rate of 1.1%; in 2019 growth was just 0.5%. For 2021, the IMF expects a 1.4% increase in Germany's economic output. The export-oriented German industries in particular should benefit from stabilization of the global economy.

The US economy grew by 2.3% in 2019. The IMF forecasts growth of only 2.0% for 2020 and of just 1.7% for 2021.

In China, the sentiment among companies had deteriorated significantly due to the ongoing trade war. At the end of the year, however, hopes of an agreement served to brighten the mood. The IMF expects China to grow by 6.0% in 2020 and by 5.8% in 2021.

The current market environment remains difficult, however. In particular, the dispute over import tariffs and discussions about free trade are influencing companies' investment decisions and putting pressure on the global economy.

Robotics and automation

Global uncertainties, mainly caused by the trade dispute and the unresolved Brexit, had a major impact on investment decisions worldwide; growth in the global economy as a whole slowed down. In its latest report, the International Federation of Robotics (IFR) therefore anticipates only a stable development of the worldwide demand for robots in 2019 (0%). Robot sales in Europe and in North and South America are expected to decrease by -1% on the previous year, and those in Asia to increase slightly by +1%. For 2020, the IFR then predicts renewed growth of 10% in global demand for robots. An increase of 5% is expected for Europe, 8% for North and South America, and 12% for Asia. The forecast for China is a year-on-year

increase in demand of 19%. These forecasts refer to the entire robot market and all robot types. The strongest growth is expected in the SCARA robot segment.

Technological advances in robot-based automation also offer high additional growth opportunities. Examples include human-machine collaboration, intelligent IIoT solutions (IIoT = Industrial Internet of Things) with cloud-based systems, and easy-to-use applications. The achievement of climate protection targets poses additional challenges for many companies. Customers expect sustainable and energy-efficient products and solutions from manufacturers.

Growth opportunities for KUKA

Automotive

The automotive industry is one of the largest customers for industrial robots worldwide. In recent years, manufacturers have invested in the modernization of existing plants and also expanded their production capacities in emerging markets. Between 2013 and 2018, average annual robot sales (CAGR) in the automotive industry were 13%. However, the automotive industry is facing great challenges. In the USA alone, the number of different models and the diversity of model variants have almost doubled over the last 20 years. At the same time, the complexity of the vehicles and thus the number of parts has increased enormously. In particular, the new drive technologies with hybrid and electric vehicles required to achieve the climate targets for 2030 will further strengthen this trend.

These changing market conditions necessitate suitable and competitive production solutions. Digitalization and automation play a key role here. As an automation specialist, KUKA has developed matrix production, a versatile and flexible production solution, in order to meet these requirements. This enables various individualized products to be manufactured on a single system. Faced with increasing type variety, frequent changes of model and quantity fluctuations, the production system can be converted extremely quickly as required. The system is equipped with software based on artificial intelligence. Quickly adaptable production cells thus replace rigid systems that can typically take many weeks or even months to convert. In highly competitive markets, flexible systems increase the competitiveness of our customers.

Growth potential also lies in the digitalization of factories, which is creating new business models. In the so-called Smart Factory, for example, communication technologies are used that make predictive maintenance possible. The practical advantages of predictive maintenance include reliable production planning and maximum machine availability. Unplanned downtimes can thus be avoided and enormous costs saved as a result.

General Industry

The general industry market, in other words the market for robots outside the automotive industry, offers high growth potential. This is because the robot density in general industry is still relatively low compared with the automotive industry. According to the latest IFR report from October 2019, the robot density in general industry in Germany is 195 robots per 10,000 workers. By comparison, the automotive industry has a robot density of 1,268 robots. In China, the world's largest robot market, the robot density in general industry is 70 and in the automotive industry 732 per 10,000 workers.

The potential in industrialized countries also remains high, above all due to necessary modernization measures and conversions of existing production facilities. Growth opportunities are offered by the electronics, logistics /e-commerce, machine tools, healthcare and food and beverage industries amongst other sectors. The electronics industry is the largest market within general industry, accounting for 25% of all robots installed worldwide; in global terms, it is the second largest sales market after the automotive industry. The electronics industry is one of the sectors heavily affected by the trade war. However, as soon as the global economic environment stabilizes, KUKA expects a significant recovery in the market.

The manufacturing companies in general industry are also facing major challenges. These include the ever shortening product life cycles, the desire of consumers for more individualized products, increasing competitive pressure and the efforts required to further reduce emissions in this sector too. As in the automotive industry, the automation and digitalization of production processes can help to overcome these challenges. This requires the appropriate technologies. Human-robot collaboration and cloud technologies, but also ready-to-use and plug-and-play applications as well as mobility concepts are the right approaches here as well. Companies in general industry too can make their production more efficient and flexible with the digital factory. This is why the sales potential in the automation sector is high. Moreover, increasing global consumption will generally necessitate the expansion of production capacities and thus have a positive effect on the growth of general industry.

China

According to the IFR, around 422,000 industrial robots were installed worldwide in 2018, more than a third of them in China. The robot density (number of robots per 10,000 workers) increased from 11 to 140 there in the period from 2009 to 2018. The comparative figure for Germany was 338 in 2018. This enormous growth in the use of robots in China was achieved primarily due to the high level of investment by automotive manufacturers. But the electronics industry also invested massively. The industry is thus also one of the biggest growth drivers in China.

Over the last few years, foreign and Chinese robot manufacturers have increased their production capacities in China. KUKA also set up a new production facility in Shunde (Guangdong Province) to supplement the existing production in Shanghai. The first robots for the Chinese market were manufactured there at the end of 2019. KUKA is planning to expand the production facility over the next few years and will also develop and manufacture new robot types such as SCARA robots there.

As a result of the global uncertainties described above, growth in the Chinese market has weakened considerably since mid-2018. Investments also declined in the world's largest robot sales market. According to the IFR, the total number of newly installed robots of all robot types in China decreased by 1% in 2018. For 2019, too, the current forecast anticipates only comparatively low sales growth of around 4%, after more than 30% in the last forecast for 2019.

According to MIR (Mobile Industrial Robots/China), sales in the market for industrial robots of relevance for KUKA declined by 13% in 2019. The sharp decline was mainly due to the reluctance to invest on the part of the largest customers, namely the automotive and electronics industries. According to the IFR, the number of newly

installed industrial robots in the automotive industry fell by 7% in 2018. In the electronics industry, the number of robots sold by foreign manufacturers decreased by 9%.

The Chinese market nevertheless remains by far the largest market in the world. Due to its high growth potential, the Chinese robot and automation market is a core element of KUKA's growth strategy. Demographic developments in China and rising wages will encourage other industries to invest in automation. Rising quality requirements for products and increasing cost pressure will further strengthen the trend towards automated production solutions. Between 2019 and 2022, the IFR forecasts an annual average growth rate of 22%.

KUKA is planning not only to increase its robot sales in China, but also to further expand its market shares, and expects a boost to growth in China as soon as the economic and political conditions stabilize and the investment environment improves. Nevertheless, the present reluctance of customers to invest is currently making the Chinese market difficult and demanding.

Digitalization and IIoT (Industrial Internet of Things)

Global megatrends such as globalization, digitalization and automation will affect all industries and change the world of work. This opens up new opportunities and growth potential for KUKA.

Customers are facing great challenges, as the production of the future creates increasingly complex requirements. To address these, KUKA maintains a regular dialog with its partners and customers, identifying the relevant requirements for future production in a highly dynamic environment. Due to the advance of customization, the ever shorter product life cycles and the increasingly volatile markets, it will be even more important in the future to manufacture an increasing number of variants and models of a product in variable quantities. The trend is thus towards smaller batch sizes that have to be produced economically due to the simultaneously increasing cost pressure. The versatility of a production system will therefore be more important than ever. KUKA already supplies the right solutions for this trend. In several bilateral and multilateral projects, KUKA has focused on the issue of how to design the production of the future in a more flexible and efficient manner. The use of augmented reality (AR) enables the construction and conversion of a production system to be visualized even in the early stages of planning using modern technologies.

To allow machinery to be networked, uniform standards for integrated communication between machines are required. As a founding member and partner of the "Open Industry 4.0 Alliance", KUKA is committed to overcoming proprietary isolated solutions in order to give a decisive boost to integrated digital transformation in industry.

With integrated communication, data from the production processes can be collected and analyzed, enabling efficiency to be enhanced. However, digitalization is more than just an instrument for increasing efficiency. With the right analytics tools for large volumes of data ("big data"), companies can open up new business areas and new business models. Trends can be recognized at an early stage, products can be optimized according to customer requirements and new service models can be created. The digital image of products, processes and production facilities (digital twins) can be used to investigate and optimize various options for action. In this way, resources are managed efficiently and the automated, resource-optimized processing of production orders is prepared and initiated.

KUKA anticipates major growth opportunities based on further developments in digitalization and IIoT, and will continue to expand its competencies in these areas.

Summary

The current market environment remains difficult. Due to the weak global economy and the continuing uncertainties, customers are still holding back on investments. This applies above all to customers in the automotive and electronics industries. Beyond this, there are risks attributable to the coronavirus crisis, which in many regions of China is leading to major constraints on public and business life as a result of official restrictions. KUKA is working on the assumption that these developments will have a negative impact on the market environment and, based on the current economic forecasts and general conditions while also taking into consideration the current risk and opportunity potential, expects a fall in demand in fiscal 2020. For the Asian market, and for China in particular, KUKA anticipates a stable development compared to the previous year. Markets in the Americas are expected to remain stable, while a decline is predicted in Europe. From a sector perspective, KUKA predicts a stable development of the sales markets in general industry compared with the previous year. A decline is expected for the automotive industry as a whole, and this may also be further intensified for this market segment by the current coronavirus crisis.

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 US market, for example, contributes approximately one third of worldwide Group revenues and is therefore one of the most important regions. The US revenues are predominantly generated in US dollars. A US dollar that is strong against the euro thus has a positive effect on the key financial indicators of KUKA Group. On the other hand, a weaker US dollar would have negative effects. The handling of interest rate and currency risks in KUKA Group is described in detail in the opportunity and risk report from page 27 onwards and in the notes from page 1 onwards.

Anticipated business development at KUKA excluding potential effects of coronavirus crisis

Summary	2019 result	2020 outlook 1
Sales revenues	3,192.6	at prior-year level
EBIT margin	1.5 % ²	rising
Net income for the year	17.8	rising
Investments ³	151.1	below prior-year level
Free cash flow	20.7	slightly above prior-year level
Dividend per share	0.30	at prior-year level

¹ It is not yet possible to estimate the effects of the coronavirus crisis on the forecast results and they have therefore not been taken into account in the forecast.

² Including all reorganization expenditure

³ Before financial investments

Sales revenues and EBIT margin

On the basis of the currently difficult general conditions and exchange rates, KUKA is expecting revenues at the previous year's level for the full year 2020. The EBIT margin is expected to increase slightly over the previous year within a low single-digit percentage range.

KUKA AG acts as the Group's management holding company with central management responsibilities. The income situation of KUKA AG depends on the results of subsidiaries, its financing activities and the expenditure and income relating to the holding function. This includes, for example, income from the rental of buildings to the KUKA companies at the Augsburg location. A forecast for revenues and the EBIT margin is specified exclusively at Group level due to the purely holding function of KUKA AG.

Net income for the year

In the 2019 fiscal year, KUKA Group generated net income for the year of €17.8 million. The cost reductions in connection with the efficiency program should have a positive effect on the net income for 2020 along with other factors. KUKA thus expects a slight increase in the net income at Group level. KUKA Aktiengesellschaft also forecasts a slight year-on-year improvement in earnings.

In this connection, KUKA AG's earnings in the separate financial statements depend primarily on the profit transfers of the German subsidiaries and on dividends from the subsidiaries.

Research and development/investments

With the aim of securing the long-term success of the company, KUKA is investing in the expansion of its locations worldwide and in innovative products and solutions. In 2020, the expenditure for research and development will primarily focus on software solutions and on the enhancement of existing products in terms of performance, costs and customer benefits. KUKA plans to invest around 5% of the expected revenue volume (about €150 million to €180 million) in research and development in 2020 (2019: €160.5 million).

Free cash flow

KUKA Group's free cash flow is primarily generated from operating profits and the development of working capital. Free cash flow is anticipated to increase in the low double-digit million range. However, it is not yet possible to assess the particular risks and effects of the coronavirus crisis for KUKA on the forecast results at this time.

Dividend

The Executive and Supervisory Boards will recommend to shareholders at the Annual General Meeting on June 19, 2020 that a dividend of €0.30 per share be paid for fiscal 2019.

For the 2020 fiscal year, KUKA plans to maintain its dividend, allowing for the general conditions at the time.

Internal control and risk management system

Basic principles

Pursuant to section 289 para. 4 and section 315 para. 4 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 from page 27 onwards). 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 and to be able to monitor and manage risks to ensure 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 Executive 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.

For the Group's German companies, the Shared Service Center of KUKA Aktiengesellschaft is responsible at a central level for accounting and human resource operations.

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 guidelines 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 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 combined Management Report. At KUKA Group, these include, in particular:

- › Identifying the main areas of risk (see the Opportunity and Risk Report from page 27 onwards) 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 Executive 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 combined 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;
- › Implementation of the control requirements to be met by the accounting-related ICS is defined and monitored 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 Executive 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 Executive Board of KUKA Aktiengesellschaft issue and sign a responsibility statement at year-end, by which they confirm that they have adhered to the prescribed accounting standards of KUKA Group and that their figures give a true and fair view of the Group's financial performance, financial position and cash flows.

In its meetings, the Audit Committee of the Supervisory Board regularly reviews the effectiveness of the accounting-related internal control system. The Supervisory Board therefore continuously obtains an appropriate view of the Group's risk situation and monitors ICS effectiveness. In so doing, the Executive 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. Based on the Chinese SOX regulations, to which KUKA is subject on account of its affiliation to Midea Group, an annual review of the accounting-related control system at KUKA is additionally conducted by MIDEA's Group auditor.

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 guidelines.

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 para. 1 and section 315a para. 1 of the German Commercial Code (HGB) including accompanying explanations

The disclosures in accordance with takeover law required by sections 289a para. 1 and 315a para. 1 of the German Commercial Code (HGB) are presented as of December 31, 2019 and explained in the following.

Composition of subscribed capital

The disclosures in accordance with takeover related issues required by sections 289a para. 1 and 315a para. 1 of the German Commercial Code (HGB) are presented as of December 31, 2019 and explained in the following.

Composition of subscribed capital

As of December 31, 2019, 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 of December 31, 2019, KUKA Aktiengesellschaft has received notifications from the following investors whose direct or indirect shareholdings in the capital of KUKA Aktiengesellschaft exceed 10% of voting rights:

Midea Group – according to the voting rights notification dated December 21, 2018

1.	Midea Electric Netherlands (I) BV	81.04	directly
2.	Midea Electric Netherlands (II) BV	13.51	directly
3.	Guangdong Midea Electric Co., Ltd.	94.55%	allocated
4.	Midea Group Co., Ltd.	94.55%	allocated

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 para. 1 no. 5 and section 315a para. 1 no. 5 of the German Commercial Code (HGB).

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

Pursuant to section 6 para. 1 of the Articles of Association, the company's Executive Board must consist of at least two persons. The Supervisory Board determines the number of Executive Board members (section 6 para. 2 of the Articles of Association). The appointment and dismissal of members of the Executive 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 concerning 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 execution of the capital increase 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.

Executive 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 Executive 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 Executive Board, subject to the obligation that they are offered to the shareholders for subscription (indirect subscription right). However, the Executive 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 Executive 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 Executive 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 Executive 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 Executive 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 cancellation. Cancellation leads to reduction of the share capital. However, the cancellation 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 Executive 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 cancellation 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 Executive Board members

The employment contracts of the Executive Board members (with the exception of the contract of one Executive Board member) contain change-of-control clauses. In the event of a change of control within the company (sections 29 para. 2 and 30 of the German Securities Acquisition and Takeover Act (WpÜG)), the Executive Board members are entitled to terminate the employment contract within three months of the change in control occurring, subject to a notice period of three months. In the event of a termination, the Executive Board members will be entitled to a severance payment, which is measured against the compensation due for the remainder of their contract, but is restricted to twice the annual compensation at most.

Syndicated loan agreement

KUKA Aktiengesellschaft and its associated companies signed a new syndicated loan agreement on February 1, 2018 with a consortium of banks led by Commerzbank AG, Deutsche Bank AG Deutschlandgeschäft branch, Deutsche Bank Luxembourg S.A., UniCredit Bank AG, Landesbank Baden-Württemberg, Bayerische Landesbank, BNP Paribas S.A. German branch, DZ Bank AG Zentral-Genossenschaftsbank (Frankfurt am Main) and Credit Suisse AG. According to the terms of the loan agreement, the creditors provide working capital and guarantee lines of up to €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. The creditors may

also declare 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.

Promissory note loan 2015

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

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 loan 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 assignable loans serve to finance the investment of KTPO in connection with a new production facility at the Fiat Chrysler plant in Toledo, Ohio/USA.

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 loan. 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. 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, i.e. 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 Executive Board or employees governing compensation in the event of a takeover bid

No agreements have been concluded between the company and members of the Executive Board or employees governing compensation in the event of a takeover bid. The change-of-control clauses in the employment contracts of the Executive Board members do not constitute compensation clauses as defined in sections 289a para. 4 sentence 1 no. 9 and 315a para. 4 sentence 1 no. 9 of the German Commercial Code (HGB).

Declaration regarding corporate governance

Reference is made to published information on the KUKA AG website for the declaration regarding corporate governance pursuant to section 289f of the German Commercial Code (HGB): www.kuka.com/de-de/investor-relations/corporate-governance/unternehmensfuehrung.

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).

Forward-looking statements

The annual report contains forward-looking statements on expected developments. These statements are based on current assessments and are naturally subject to risks and uncertainties. Actual results may differ from these statements. The key performance indicators contained in the annual report have been rounded in accordance with standard commercial practice. In individual cases, it is therefore possible that figures in this report do not add up exactly to the total stated and that percentages do not precisely correspond to the values indicated.

Compensation report

The compensation report summarizes the basic principles used to determine the compensation of the Executive and Supervisory Boards of KUKA Aktiengesellschaft and describes the structure and compensation of the members of the Executive and Supervisory Boards. The compensation report is an integral part of the consolidated management report.

Executive Board compensation

1. Compensation structure

KUKA Aktiengesellschaft's Executive Board compensation contains fixed and variable components. The latter consist of several variable compensation elements. The Executive Board compensation system thus conforms with section 87 of the German Stock Corporation Act (AktG) and the requirements of the GCGC regarding sustainable corporate performance. The variable components take into consideration both positive and negative business developments.

Fixed compensation

The fixed compensation consists of a base salary and payments in kind. The base salary is paid in twelve equal monthly installments. The payments in kind made to Executive Board members consist mainly of the non-cash benefits for the provision and use of a company vehicle. In addition, Mr. Mohnen received a pro rata fixed remuneration for his activities on the administrative board of Swisslog Holding AG in the 2019 financial year.

Variable compensation

The variable compensation paid to Executive Board members is dependent on the achievement of personal and financial targets of KUKA Group (company targets). The key performance indicators for the company targets are the EBIT and free cash flow of KUKA Group. The breakdown between personal and financial targets is / was as follows for the members of the Executive Board in office in the financial year:

Executive Board members	Share of personal targets	Share of financial targets
Peter Mohnen (CEO)	30%	70%
Andreas Pabst (Executive Board member, CFO)	33.33%	66.67%
Prof. Dr. Peter Hofmann (Executive Board member, CTO)	30%	70%

The details of the variable compensation structure (in particular the achievement of targets) are agreed separately each year. The variable compensation component is capped (maximum target achievement of 200%) and achievement of the financial targets is linked to business performance over several years.

Variable compensation (long-term)

a) Phantom share program 2016 – 2018

Until the 2016 financial year, annual allocation volumes for participation in phantom share programs (hereinafter also referred to as the "programs") were agreed with the members of the Executive Board (in office at the time) as a further variable compensation component designed to provide a long-term incentive. Phantom shares are virtual shares that grant the holder the right to a cash payment in the amount of the company's applicable share price. In contrast to stock options, the proceeds from phantom shares reflect not only the increase in share value, but also the full value of the stock. Moreover, a dividend equivalent mirroring the actual dividend distributed on real KUKA shares was paid annually during the life of the plan for each virtual share held. There were no voting rights associated with phantom shares.

The programs each ran for three financial years. The allocation volume was either already contractually agreed or set by the Supervisory Board before the respective three-year period commenced. The allocation volume divided by a reference price for the KUKA share then resulted in a provisional number of phantom shares. The Supervisory Board had calculated the provisional number of phantom shares for the 2016–2018 program based on the average price of the KUKA share (opening price in XETRA trading on the Frankfurt Stock Exchange) between January 4, 2016 and March 7, 2016 (the last trading day prior to the Supervisory Board's financial review meeting). The relevant price thus determined for the KUKA share was €77.53.

The Supervisory Board also established an EVA (economic value added) for continuing operations (before taxes) at the beginning of the three-year performance period. The EVA was based on the operational planning for the three years of the program, which was geared towards the budget for the first financial year of the three-year period and the projections for the two subsequent financial years.

The cumulative EVA (actual EVA) for the three-year performance period was divided by the EVA for continuing operations in accordance with the operational planning for the three program years in order to determine a success factor. The success factor could fluctuate between 0 and 2.0. The final number of phantom shares depends on the success factor achieved, which is multiplied by the provisional number of phantom shares. The upper limit for the final number of phantom shares is capped at twice the number of provisional shares, which would constitute a success factor of 2.0. Payment is based on the final number of phantom shares at the final price of the KUKA share (average price of the KUKA share between January 2 of the year subsequent to the three reference years ("subsequent year") and the day prior to the financial review meeting of the Supervisory Board in the subsequent year). The relevant price thus determined for the KUKA share was €58.00.

The relevant Executive Board member was obliged to purchase a certain number of KUKA shares from the gross proceeds paid out on the basis of the programs, in order to build up a holding volume of 50% of the annual base remuneration (fixed annual remuneration) in the year of allocation. Until the holding volume had been built up, 25% of the gross amount paid out for the relevant year had to be spent on purchasing KUKA shares. The purchase amount is retained from the net proceeds.

The payment amounts (to be paid out in 2019) for the 2016–2018 phantom share program were limited to an amount equal to three times the allocation volume.

Of the Executive Board members currently in office, only Mr. Mohnen was entitled to participate in the 2016–2018 phantom share program. This program was settled for Mr. Mohnen in the 2019 financial year.

b) Long-term incentive plan

In the 2017 and 2018 financial years, the members of the Executive Board (in office at the time) were entitled to participate in long-term incentive plans (hereinafter “LTIPs”) with annual allocation volumes in place of the phantom share program. The LTIPs are variable compensation components with long-term incentives.

The LTIPs cover a period of three financial years. The allocation volume is either already contractually agreed or set by the Supervisory Board before the respective three-year period commences.

At the start of the three-year performance period, the Supervisory Board also determines the key indicators and specifications for the target values of the success factors for the LTIP concerned. The relevant factors are (i) the performance factor and (ii) the strategy factor.

The key indicator for the performance factor is the EVA over the performance period. The EVA in this context is the Group EBIT (on a consolidated basis) less minimum interest (9%) on the Group’s capital employed. The Supervisory Board stipulates the target values at its discretion, divided into (i) minimum target, (ii) target and (iii) maximum target. The minimum target corresponds to a performance factor of 0.50, the target to a performance factor of 1.00 and the maximum target to a performance factor of 1.50.

The relevant key indicators for the strategy factor are determined by the Supervisory Board at its discretion. The Supervisory Board also defines the target values for each key indicator. The minimum target corresponds to a strategy factor of 0.00, the target to a strategy factor of 1.00 and the maximum target to a strategy factor of 2.00.

The gross disbursement amount is calculated by multiplying the individual allocation value, performance factor and strategy factor for the performance period.

Under specific conditions defined in the LTIP, entitlement to payment of the gross disbursement amount may be waived in full or limited pro rata temporis.

c) KUKA Added Value Incentive Plan (KAVI)

Since the 2019 financial year, Executive Board members 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 LTIP, 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.

Under the terms of the KAVI, each member of the Executive Board is granted an individual allocation value in euros. This allocation value is then multiplied by the sum of the earnings factor (50% weighting) and the share price factor (50% weighting). The earnings factor and share price factor are defined as follows:

Earnings Factor	The earnings factor refers to KUKA Aktiengesellschaft’s earnings per share (EPS). The EPS target was formed from the average EPS for 2019–2021 as planned and amounts to €3.44 (factor 1). The minimum target for EPS was set at €2.06. If this minimum target is not reached, the earnings factor is 0.
Share Price Factor	The share price factor is made up of the following components: (i) share price performance of KUKA Aktiengesellschaft (80% weighting) and (ii) share price performance of Midea Group Co. Ltd. (20% weighting). With regard to the price development of KUKA shares, a benchmark group of 11 companies was defined, representing the Robotics, Systems, Swisslog and Swisslog Healthcare business segments. The share price factor is subject to minimum targets. If these are not achieved, the share price factor is 0.

The total amounts to be paid out from the LTIPs not yet settled and the ongoing KAVI are limited to three times the individual allocation value granted to each Executive Board member.

The total compensation for the Executive Board members (fixed annual salary, variable bonuses and payments under an LTIP or KAVI) is thus limited by the accumulation of caps on the individual items.

The employment contracts of Executive Board members contain “severance payment caps”. This means that a restriction is agreed upon in the event of the employment contracts being terminated prematurely without good cause in relation to potential severance payments. The regulations specifically stipulate that the settlement shall not exceed the compensation value for the remaining term of the employment contract, restricted to twice the annual compensation.

The employment contract of Mr. Mohnen also contains a change-of-control clause. In the event of a change in control within the company (sections 29 para. 2 and 30 of the German Securities Acquisition and Takeover Act (WpÜG)), they are entitled to terminate the employment contract within three months of the change in control occurring, subject to a notice period of three months. In the event of a termination, they will be entitled to a severance payment, which is measured against the compensation due for the remainder of the contract, but is restricted to twice the annual compensation at most. The employment contract of Mr. Pabst does not include such an arrangement. The employment contract between KUKA Aktiengesellschaft and Prof. Dr. Peter Hofmann was prematurely terminated effective end of day October 31, 2020, based on a termination agreement dated February 19, 2020. Prof. Dr. Peter Hofmann’s position on the Executive Board terminated at the end of February 20, 2020 under the provisions of the aforementioned termination agreement.

No loans were granted to Executive Board members during the year under review.

2. Compensation for 2019

Executive Board compensation for the 2019 financial year is disclosed for each individual member in accordance with the standardized reference tables recommended in the GCGC. Following this, the compensation is disclosed separately according to “granted benefits” (table 1) and “actual inflow” (table 2). The target values (payment for 100% target achievement) and the minimum and maximum values achieved are also disclosed for the benefits.

Table 1: Executive Board compensation for 2019 – Overview of benefits

	Peter Mohnen CEO				Andreas Pabst CFO				Prof. Dr. Peter Hofmann CTO ¹ from Nov. 1, 2019 until Feb. 20, 2020			
	2018	2019	2019 (min)	2019 (max)	2018	2019	2019 (min)	2019 (max)	2018	2019	2019 (min)	2019 (max)
in € thousands												
Fixed compensation (basic compensation)	628	1,000	1,000	1,000	42	600	600	600	–	75 ¹	75 ¹	75 ¹
Fringe benefits ²	35	35	35	35	1	11	11	11	–	10	10	10
Other compensation ³	200	73	73	73	–	–	–	–	–	–	–	–
Total	863	1,108	1,108	1,108	43	611	611	611	–	85	85	85
One-year variable compensation												
Bonus for 2018 ⁴	300	–	–	–	14	–	–	–	–	–	–	–
Bonus for 2019 ⁴	–	300	0	600	–	200	0	400	–	25	0	50
Multi-year variable compensation												
Company targets bonus for 2018 ⁵	328	–	–	–	0	–	–	–	–	–	–	–
Company targets bonus for 2019 ⁵	–	700	0	1,400	28	400	0	800	–	58	0	116
Long-term incentive plan 2017–2019 ⁶	0	0	0	0	0	0	0	0	–	–	–	–
Long-term incentive plan 2018–2020 ⁶	300	0	0	0	0	0	0	0	–	0	0	0
KAVI 2019–2021 ⁷	–	300	0	900	–	150	0	45	–	17	0	51
Total	928	1,300	0	2,900	42	750	0	1,245	–	100	0	217
Grand total	928	1,300	1,108	4,008	85	1,361	611	1,856	–	185	85	302
Pension cost	–	–	–	–	–	–	–	–	–	–	–	–
Total compensation	1,791	2,408	1,108	4,008	85	1,361	611	1,856	–	185	85	302

¹ Prof. Dr. Hofmann was a member of the Executive Board (Chief Technology Officer) from November 1, 2019 to February 20, 2020. His employment contract ends on October 31, 2020 on the basis of the termination agreement dated February 19, 2020 (the “Termination Agreement”). Prof. Dr. Hofmann receives annual fixed compensation of k€450. In the 2019 financial year, Prof. Dr. Peter Hofmann was paid the fixed compensation pro rata temporis due to the commencement of his employment on November 1, 2019.

² The fringe benefits include expenses and non-cash benefits for the provision of company cars and insurance allowances. The premium for D&O insurance is included in the fringe benefits because, unlike the accident insurance, it cannot be allocated individually, as the company pays a lump-sum premium for the insured group of persons which goes beyond the members of the Executive Board. Prof. Dr. Hofmann is contractually guaranteed reimbursement of relocation costs of up to k€5 on presentation of receipts and a monthly housing allowance of up to k€1.5 per full month for a period of up to 12 months from the start of his employment on presentation of receipts.

³ Compensation for activities as administrative board members of Swisslog Holding AG.

⁴ Portion of variable bonus for achieving personal targets (with 100% target achievement) in the specified financial years (possible target achievement from 0 to 200%). Prof. Dr. Peter Hofmann receives an annual variable bonus of k€500 (with 100% target achievement), of which k€150 is attributable to the achievement of personal targets (with 100% target achievement). In the 2019 financial year, Prof. Dr. Peter Hofmann was paid this amount pro rata temporis due to the commencement of his employment on November 1, 2019.

⁵ Deferred portion (50%) of variable bonus (with 100% target achievement) for the specified financial years. Prof. Dr. Peter Hofmann receives an annual variable bonus of k€500 (with 100% target achievement), of which k€350 is granted for the achievement of financial targets (with 100% target achievement). In the 2019 financial year, Prof. Dr. Peter Hofmann was paid the respective amounts pro rata temporis due to the commencement of his employment on November 1, 2019.

⁶ Allocation values for the long-term incentive plan 2017–2019 and long-term incentive plan 2018–2020.

⁷ Allocation values for the KAVI 2019–2021. For the KAVI 2019–2021, Prof. Dr. Peter Hofmann was granted an amount of k€17 in the 2019 financial year (allocation value pro rata temporis based on an amount of k€100) due to the commencement of his employment on November 1, 2019.

Table 2: Executive Board compensation for 2019 – Overview of inflow

	Peter Mohnen CEO		Andreas Pabst CFO		Prof. Dr. Peter Hofmann CTO ¹ from Nov. 1, 2019 until Feb. 20, 2020		Dr. Till Reuter CEO until Dec. 5, 2018	
in € thousands	2018	2019	2018	2019	2018	2019	2018	2019
Fixed compensation (basic compensation)	600	1,000	0	600	–	75	800	–
Fringe benefits ²	35	35	0	11	–	3	25	25
Other compensation ³	200	73	0	–	–	–	400	–
Back payment of fixed compensation for 2018⁴	–	29	–	69	–	–	–	–
Total	835	1,137	0	680	–	78	1,225	25
One-year variable compensation								
Bonus for 2017 ⁵	552	–	–	–	–	–	756	–
Bonus for 2018 ⁶	0	329	0	63	–	–	500	–
Multi-year variable compensation								
Company targets bonus for 2016	191	0	–	–	–	–	298	–
Company targets bonus for 2017 ⁷	0	161	–	–	–	–	504	–
Company targets bonus for 2018 ⁷	0	0	–	–	–	–	500	–
Phantom share program 2015 – 2017 ⁸	370	–	–	–	–	–	582	–
Phantom share program 2016 – 2018 ⁹	0	75	–	–	–	–	400	–
Long-term incentive plan 2017 – 2019 ¹⁰	0	0	–	–	–	–	333	–
Long-term incentive plan 2018 – 2020 ¹¹	0	0	–	–	–	–	167	–
KAVI 2019 – 2021 ¹²	–	–	–	0	–	0	–	–
Other share-based compensation ¹³	2	0	–	–	–	–	3	–
Severance payment ¹⁴	–	–	–	–	–	–	3,597	2,000
Total	1,115	565	0	63	–	0	7,640	2,000
Grand total	1,950	1,702	0	743	–	78	8,865	2,025
Pension cost	–	–	–	–	–	–	–	–
Total compensation	1,950	1,702	0	743	–	78	8,865	2,025

¹ Prof. Dr. Peter Hofmann was a member of the Executive Board (Chief Technology Officer) as of November 1, 2019. His employment contract ends on October 31, 2020 on the basis of the termination agreement dated February 19, 2020 (the "Termination Agreement"). In the 2019 financial year, Prof. Dr. Peter Hofmann received this amount pro rata temporis due to the commencement of his employment on November 1, 2019.

² The fringe benefits include expenses and non-cash benefits for the provision of company cars and insurance allowances. The premium for D&O insurance is included in the fringe benefits because, unlike the accident insurance, it cannot be allocated individually, as the company pays a lump-sum premium for the insured group of persons which goes beyond the members of the Executive Board. Prof. Dr. Hofmann is contractually guaranteed reimbursement of relocation costs of up to k€5 on presentation of receipts and a monthly housing allowance of up to k€1.5 per full month for a period of up to 12 months from the start of his employment on presentation of receipts. The reimbursement of lawyer's fees of up to k€25 to Dr. Reuter agreed under the terms of the severance agreement dated November 28, 2018 (the "Severance Agreement") accrued to him in the 2019 financial year.

³ Compensation for activities as administrative board members of Swisslog Holding AG.

⁴ For the period December 6 to December 31, 2018, Mr. Mohnen is entitled to additional, pro rata fixed compensation amounting to k€28. For the period December 6, 2018 to December 31, 2018, Mr. Pabst is entitled to pro rata fixed compensation and fringe benefits amounting to k€43. These sums accrued to Mr. Mohnen and Mr. Pabst in the form of a supplementary payment in the 2019 financial year.

⁵ Variable compensation paid out in the 2018 financial year for the achievement of personal targets for 2017.

⁶ Variable compensation paid out in the 2019 financial year for the achievement of personal targets for 2018. The bonus for 2018 was already paid out to Dr. Reuter in the 2018 financial year under the terms of the Severance Agreement.

⁷ Deferred portions of variable compensation from the 2017 financial year, which were paid out in the 2019 financial year. The bonus for the 2017 company targets and the bonus for the 2018 company targets were already paid out to Dr. Reuter in the 2018 financial year under the terms of the Severance Agreement.

⁸ Phantom share program 2015 – 2017 payout at a final price of €110.80 (average KUKA share price (opening price in XETRA trading on the Frankfurt Stock Exchange) between January 2, 2018 and March 20, 2018). The amounts paid out each represent the gross proceeds. The net payout results from the gross proceeds less taxes and social contributions, other statutory levies and the purchase price for actual KUKA shares.

⁹ Phantom share program 2016 – 2018 payout at a final price of €58.00 (average KUKA share price (opening price in XETRA trading on the Frankfurt Stock Exchange) between January 2, 2019 and March 26, 2019). The amounts paid out each represent the gross proceeds. The net payout results from the gross proceeds less taxes and social contributions, other statutory levies and the purchase price for actual KUKA shares.

¹⁰ Long-term incentive plan 2017 – 2019, payable in the 2020 financial year.

¹¹ Long-term incentive plan 2018 – 2020, payable in the 2021 financial year.

¹² KUKA Added Value Incentive (KAVI) 2019 – 2021, payable in the 2022 financial year.

¹³ Payment of dividend equivalents in 2018 amounting to €0.50 per provisional share in the phantom share program 2016 – 2018.

¹⁴ Severance payment under the terms of the Severance Agreement. The remaining portion of the severance payment amounting to k€2,000 was paid out in the 2019 financial year.

Payments granted to all members of the Executive Board in office in the 2019 financial year – taking into account the actual inflow – totaled k€2,523 in the 2019 financial year.

Provisions taking the total expected expense from the plans into account were recognized as of December 31, 2019 for all LTIPs in effect on that date and that have yet to be paid out and for the ongoing KAVIs that have yet to be paid out.

Apart from a few exceptions, former Executive Board members whose terms of office ended no later than 2008 were granted company pension benefits that included old age, professional and employment disability, widows' and orphans' pensions. The sum of the provisions recognized in 2019 for current pensions and expected pension benefits for this group of persons totaled k€9,966 (German Commercial Code) (2018: k€9,855).

Supervisory Board compensation

1. Compensation structure

Based on a resolution at the company's Annual General Meeting on January 1, 2006, the Articles of Association were amended to include fixed compensation for members of the Supervisory Board.

In addition to reimbursement of expenses, each member of the Supervisory Board is paid a fixed amount of k€30, payable at the end of the financial year.

The Chairman of the Supervisory Board is paid four times that amount, and the deputy chair receives double the compensation. Supervisory Board members receive additional compensation of k€30 for chairing the Annual General Meeting and for membership in any committee that is not of an interim nature, but at most for three committee memberships. A committee chairman additionally receives half the annual compensation even if he chairs more than one committee. This does not apply to the committee pursuant to section 27 para. 3 of the German Act on Company Co-Determination.

In addition, for each Supervisory Board meeting (including meetings of Supervisory Board committees), each Supervisory Board member is reimbursed for appropriate expenses incurred or is given a lump-sum payment of €450 per meeting (plus the applicable value added tax). The employee representatives on the Supervisory Board who are employed by KUKA Aktiengesellschaft or a KUKA Group company are still entitled to their regular salaries based on their employment contracts.

2. Compensation for 2018 and 2019

The following table compares the compensation paid to members of the Supervisory Board in the 2018 and 2019 financial years:

Table 3: Supervisory Board compensation in 2019

in € thousands	Payment in 2019 for 2018	Payment in 2020 for 2019
Dr. Yanmin (Andy) Gu Chairman of the Supervisory Board Chairman of the Personnel, Mediation and Nomination Committees	225	225
Michael Leppek¹ Deputy Chairman of the Supervisory Board	150	150
Wilfried Eberhardt	30	30
Hongbo (Paul) Fang (until May 31, 2019)	30	12
Siegfried Greulich¹ (until June 6, 2018)	39	–
Manfred Hüttenhofer¹ (from June 6, 2018)	34	60
Prof. Dr. Henning Kagermann Chairman of the Strategy and Technology Committee	75	75
Armin Kolb¹	90	90
Carola Leitmeir¹	90	90
Min (Francoise) Liu	90	90
Dr. Myriam Meyer (from June 6, 2018)	52	90
Prof. Dr. Michèle Morner (until June 6, 2018)	26	–
Tanja Smolenski¹	47	60
Alexander Liong Hauw Tan Chairman of the Audit Committee (until December 31, 2019)	88	105
Dr. Chengmao Xu (from June 12, 2019)	–	17

¹ The employee representatives on the Supervisory Board who are also members of IG Metall have declared that they shall pay their Supervisory Board compensation to the Hans Böckler Foundation in line with the guidelines of the Federation of German Trade Unions.

Balance sheet

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of KUKA Aktiengesellschaft as of December 31, 2019

ASSETS

in € thousands	Notes	Dec. 31, 2018	Dec. 31, 2019
Fixed assets	(1)		
Intangible assets		34,852	28,879
Tangible assets		109,393	147,335
Financial investments		484,841	484,841
		629,086	661,055
Current assets			
Inventories	(2)	15	19
Receivables from affiliated companies	(3)	557,565	716,314
Other receivables and assets	(4)	4,321	1,467
Securities	(5)	-	41,000
		561,901	758,800
Cash and cash equivalents	(6)	5,552	67,531
		567,453	826,331
Prepaid expenses	(7)	2,638	2,600
		1,199,177	1,489,986

EQUITY AND LIABILITIES

in € thousands	Notes	Dec. 31, 2018	Dec. 31, 2019
Equity			
Subscribed capital	(8)	103,416	103,416
Capital reserve		305,796	305,796
Other retained earnings		287,445	298,626
Balance sheet profit	(9)/(10)	42,350	41,598
		739,007	749,436
Provisions	(11)		
Pension provisions		11,583	11,609
Provision for taxes		7,587	7,684
Other provisions		34,809	29,769
		53,979	49,062
Liabilities	(12)		
Liabilities due to banks	(13)	255,091	250,771
Trade payables		6,502	7,348
Accounts payable to affiliated companies	(14)	128,371	419,942
Liabilities to provident funds	(15)	2,373	2,414
Other liabilities	(16)	13,854	11,013
		406,191	691,488
		1,199,177	1,489,986

Income statement

of KUKA Aktiengesellschaft for the period January 1 to December 31, 2019

in € thousands	Notes	2018	2019
Sales revenues	(17)	128,640	142,263
Other company-produced and capitalized assets	(18)	1,444	1,311
Other operating income	(19)	52,358	18,317
Cost of materials	(20)	-69,450	-72,547
Personnel expense	(21)	-61,507	-61,190
Depreciation and amortization of tangible and intangible assets	(22)	-14,786	-15,899
Other operating expenses	(23)	-59,191	-31,561
Income from equity investments	(24)	86,654	37,240
Other interest and similar income	(25)	13,051	12,533
Depreciation of financial investments	(26)	-50	-
Interest and similar expenses	(27)	-10,424	-8,347
Taxes on income	(28)	-319	242
Earnings after taxes		66,420	22,362
Net loss for the year/net income for the year		66,420	22,362
Profit carry-forward from the previous year		9,140	30,417
Transfer to retained earnings		-33,210	-11,181
Balance sheet profit	(10)	42,350	41,598

KUKA Aktiengesellschaft, Augsburg

Notes to the financial statements for the financial year 2019

GENERAL INFORMATION

ACCOUNTING PRINCIPLES

The 2019 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). The figures for the previous years have not been adjusted.

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 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. The amortization period is between three and five years depending on the anticipated useful life.

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 25 to 50 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.

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 provisions, the average market rate for the past ten years published by the German central bank as at October 31, 2019 with an assumed residual term of 15 years was applied. Other calculation parameters, as stated under point (10) 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. The fair value is measured at the asset value.

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 applied with the average market interest published by the German central bank corresponding to their residual term.

Liabilities are recognized at the settlement amount.

Deferred taxes originate from the differences between corporate and taxation values which are reversed in subsequent years and from 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 or 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 off. 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:

Country	Currency	Balance sheet date	
		Dec. 31, 2018	Dec. 31, 2019
United Arab Emirates	AED	4.1822	4.0715
Australia	AUD	1.6220	1.5995
Brazil	BRL	4.4440	4.5157
China	CNY	7.8751	7.8205
China, Hong Kong	HKD	8.9675	8.7473
India	INR	79.7298	80.1870
Japan	JPY	125.8500	121.9400
Canada	CAD	1.5605	1.4598
Korea	KRW	1,277.9300	1,296.2800
Malaysia	MYR	4.7317	4.5953
Mexico	MXN	22.4921	21.2202
Norway	NOK	9.9483	9.8638
Poland	PLN	4.3014	4.2568
Romania	RON	4.6639	4.7793
Russia	RUB	79.7153	69.9563
Sweden	SEK	10.2548	10.4468
Switzerland	CHF	1.1269	1.0854
Singapore	SGD	1.5591	1.5111
Taiwan	TWD	33.8434	32.4187
Thailand	THB	37.0520	33.4150
Czech Republic	CZK	25.7240	25.4080
Hungary	HUF	320.9800	330.5300
USA	USD	1.1450	1.1234
United Kingdom	GBP	0.8945	0.8508

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.

	Acquisition / manufacturing costs				
	Status as of			Reclassifi-	Status as of
in € thousands	Jan. 1, 2019	Additions	Disposals	cations	Dec. 31, 2019
I. Intangible assets					
1. Purchased rights and similar assets	67,839	3,366	207	0	70,998
	67,839	3,366	207	0	70,998
II. Tangible assets					
1. Land, similar rights and buildings	125,308	20,578	0	11,476	157,362
2. Technical plant and equipment	5,971	1,588	141	2,773	10,191
3. Other equipment, factory and office equipment	29,816	2,141	2,592	75	29,440
4. Advances paid and construction in progress	20,866	20,822	0	-14,324	27,364
	181,961	45,129	2,733	0	224,357
III. Financial assets					
1. Shares in affiliated companies	544,568	0	4,532	0	540,036
	544,568	-	4,532	0	540,036
Total	794,368	48,495	7,472	0	835,391

Depreciation				Book value	
Status as of Jan. 1, 2019	Additions	Disposals	Status as of Dec. 31, 2019	Status as of Dec. 31, 2018	Status as of Dec. 31, 2019
32,987	9,282	150	42,119	34,852	28,879
32,987	9,282	150	42,119	34,852	28,879
46,909	3,177	0	50,086	78,399	107,276
4,442	275	86	4,631	1,529	5,560
21,217	3,165	2,077	22,305	8,599	7,135
0	0	0	0	20,866	27,364
72,568	6,617	2,163	77,022	109,393	147,335
59,727	0	4,532	55,195	484,841	484,841
59,727	-	4,532	55,195	484,841	484,841
165,282	15,899	6,845	174,336	629,086	661,055

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

Shares in affiliated companies are those directly owned by KUKA Aktiengesellschaft. The disposals in the 2019 financial year relate to the two liquidated companies Freadix FryTec GmbH, Augsburg and Metaalwarenfabriek's-Hertogenbosch B.V., s-Hertogenbosch, Netherlands.

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 and from cost allocations to Group companies. There were no long-term receivables from affiliated companies either at the balance sheet date or in the previous year.

(4) OTHER ASSETS

Other assets mainly include amounts receivable from tax authorities. Of this amount k€1,048 (previous year: k€3,815) relates to income tax receivables.

As in the previous year, other assets have a residual term of less than one year.

(5) SECURITIES

Securities held as current assets consist exclusively of fixed-interest 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 Executive 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 Executive Board, subject to the obligation that they are offered to the shareholders for subscription (indirect subscription right). However, the Executive 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 Executive 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 Executive 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 Executive Board is authorized, subject to approval from the Supervisory Board, to define the further details of the execution of the conditional capital increase.

(9) LIMITATION ON DISTRIBUTIONS

Pursuant to the valuation regulations of section 253 of the German Commercial Code (HGB) when 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 AG has a difference of k€806 (previous year: k€977) which is blocked for distribution.

(10) BALANCE SHEET PROFIT

in € thousands	
Balance sheet profit at Jan. 1	42,350
Dividend paid for fiscal 2018	-11,933
Retained earnings	30,417
2019 net income	22,362
Transfer to revenue reserves as per section 58, para. 2 AktG	-11,181
Balance sheet profit at Dec. 31	41,598

(11) PROVISIONS

in € thousands	Dec. 31, 2018	Dec. 31, 2019
Pension provisions	11,583	11,609
Provisions for taxes	7,587	7,684
Other provisions		
Provisions for impending loss	1,279	3,612
Personnel area	17,256	10,981
Miscellaneous provisions	16,274	15,176
Total	53,979	49,062

The amount of pension obligations (defined benefit obligation) was calculated using actuarial methods for which estimates are necessary. In addition to assumptions related to life expectancy, this involves the following significant premises:

	Dec. 31, 2018	Dec. 31, 2019
Actuarial interest rate	3.21%	2.71%
Salary trend	2.50%	2.50%
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, 2019: k€1,041; previous year: k€1,118). 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.

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 0.72% (previous year: 0.97%). 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€3,813 (previous year: k€3,062) were netted off against the corresponding coverage assets from the pension liability insurance in an amount of k€1,796 (previous year: k€1,588) and expenses amounting to k€30 (previous year: k€33) were netted off against income of k€3 (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. This includes in particular outstanding bills, personnel expenses, Supervisory Board compensation, impending losses, other risks and other costs still due.

In an employee share program in 2016 the company acquired KUKA shares for KUKA employees in Germany (section 71 para. 1 no. 2 AktG) for the last time. Employees of the company are entitled to bonus shares based on the holding period of the shares. An amount of k€5 (previous year: k€15) is included in the other provisions for all employee share programs.

In previous years, KUKA had a so-called phantom share program for the executive management team. A phantom share program of this nature was launched for the last time for the period 2016 – 2018. The phantom share program was treated as a cash-settled, share-based compensation instrument using the fair value at the balance sheet date. The measurement parameters corresponded to the phantom share program of KUKA Aktiengesellschaft's Executive Board. The contractual entitlements were paid out in the 2019 financial year.

2017 saw the introduction of a so-called "long-term incentive plan" (LTIP) for the executive management team. This is scheduled to cover the period 2017 to 2019. A second long-term incentive plan was introduced in 2018, running from 2018 to 2020. Since the 2019 financial year, there is a further long-term incentive plan running from 2019 to 2021.

The LTIPs are 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. An amount of k€55 (previous year: k€35) was set aside as at December 31, 2019 for future claims arising from the LTIP 2017-2019 for the executive management team at KUKA Aktiengesellschaft. The provision for the executive management team of KUKA Aktiengesellschaft for the LTIP 2018-2020 is k€38 (previous year: k€11).

Since the 2019 financial year, Executive 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 AG for the 2019-2021 KAVI is k€35.

See the compensation report for further details about the structure of the phantom share program, the LTIP and the KAVI plan.

(12) LIABILITIES

in € thousands	Remaining maturity			Dec. 31, 2018 Total	Remaining maturity			Dec. 31, 2019 Total
	up to 1 year	1-5 years	> 5 years		up to 1 year	1-5 years	> 5 years	
Liabilities due to banks	5,091	250,000	0	255,091	143,271	107,500	0	250,771
Trade payables	6,502	0	0	6,502	7,348	0	0	7,348
Accounts payable to affiliated companies	128,371	0	0	128,371	269,942	0	150,000	419,942
Liabilities to provident funds (affiliated companies)	126	505	1,742	2,373	101	404	1,909	2,414
Other liabilities	13,854	0	0	13,854	11,013	0	0	11,013
Total	153,944	250,505	1,742	406,191	431,675	107,904	151,909	691,488

(13) LIABILITIES DUE TO BANKS

Liabilities to banks at the balance sheet date relate to the promissory note loan issued in 2015 as well as liabilities from interest costs to be accrued in connection with this promissory note loan.

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.

Tranche 1 has a volume of €142.5 million with an original term to maturity of 5 years (maturing October 2020); tranche 2 has a volume of €107.5 million and an original term to maturity of 7 years (maturing October 2022). The issue price was 100.0%; repayment shall occur at 100.0%, payable in one sum on maturity of each fixed-term tranche. The promissory note loans carry interest coupons of 1.15% for tranche 1 and 1.61% for tranche 2. Interest payments are made at yearly intervals on October 9. Interest of €0.8 million was deferred as at the balance sheet date.

Syndicated loan agreement of KUKA Aktiengesellschaft

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

As at the balance sheet date, the utilization of the guarantee facility and cash credit line from the syndicated loan agreement of KUKA AG amounted to a total of €208.5 million (2018: €225.4 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. The creditors may also declare 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 facilities promised by banks and surety companies outside the syndicated loan agreement amounted to €153.0 million as at December 31, 2019 (2018: €118.0 million). At the end of the reporting year, the company had utilized €62.8 million (2018: €85.9 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, k€150,000 have a term of more than 5 years. These relate to a loan granted in 2019 by Midea International Corporation Company Limited, Hong Kong.

(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€9,679 (previous year: k€9,797) are reported under “Other liabilities”. In addition, other tax liabilities of k€1,089 (previous year: k€3,869) 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. Sales revenues additionally include rents and leasehold payments. Of the sales revenues 73% relate to Germany and 27% to abroad.

(18) OTHER COMPANY-PRODUCED AND CAPITALIZED ASSETS

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

(19) OTHER OPERATING INCOME

Other operating income includes gains from foreign currency conversions in a total amount of k€15,226 (previous year: k€21,029).

Income received during the financial year relating to other accounting periods amounted to k€2,587 (previous year: k€1,126). This mainly results from the release of provisions created in previous years.

(20) COST OF MATERIALS

in € thousands	2018	2019
Cost of raw materials and supplies and goods purchased	2,574	2,411
Cost of services purchased	66,876	70,136
Total	69,450	72,547

(21) PERSONNEL EXPENSE / EMPLOYEES

in € thousands	2018	2019
Wages and salaries	54,366	54,232
Social security payments and contributions for retirement benefits and provident funds	7,141	6,958
(of that for retirement benefits)	(194)	(54)
Total	61,507	61,190

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	
	2018	2019	2018	2019
Salaried employees	491	477	516	442
Apprentices	133	140	151	161
Employees	624	617	667	603

(22) DEPRECIATION AND AMORTIZATION

Scheduled depreciation and amortization on intangible and tangible fixed assets amounts to k€15,899 (previous year: k€14,786). Unscheduled depreciation and amortization on intangible and tangible fixed assets was not applied during the year under review.

(23) OTHER OPERATING EXPENSES

Other operating expenses of KUKA Aktiengesellschaft include material costs, losses on foreign currency items and allocations to provisions. Currency translation expenses amount to k€13,479 (previous year: k€17,572). Expenses charged during the financial year relating to other accounting periods amounted to k€16 (previous year: k€17). For reasons of materiality, other taxes are not shown separately and this item amounting to k€1,338 (previous year: k€965) is included under other operating expenses. See Group notes of KUKA Aktiengesellschaft regarding the fees for the auditor, KPMG AG, Wirtschaftsprüfungsgesellschaft, Munich, recognized as an expense in the 2019 financial year.

(24) INCOME FROM EQUITY INVESTMENTS

in € thousands	2018	2019
Income from holdings in affiliated companies	55.989	71.320
Income from profit transfer agreements with affiliated companies	78.086	31.656
Expenses from loss assumptions for affiliated companies	-47.421	-65.736
Total	86.654	37.240

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	2018	2019
Other interest and similar income	13,051	12,533
(of that from affiliates)	(12,952)	(11,962)

(26) DEPRECIATION OF LONG-TERM INVESTMENTS

In the previous year, this item related to the effects on net income of the valuation of the shareholding in Freadix FryTec GmbH.

(27) INTEREST AND SIMILAR EXPENSES

in € thousands	2018	2019
Interest and similar expenses	-10,424	-8,347
(of that to affiliates)	-(1,663)	-(1,059)

Interest costs of pension provisions and similar obligations amounting to k€495 (previous year: k€575) are included.

(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 arrears of k€285 (previous year: k€536) and tax credits of k€880 (previous year: k€2,850) for past assessment periods were taken into consideration in the tax expense. In addition to this, k€353 (previous year: k€2,634) was recognized as a tax expense for the current year. This relates primarily to foreign withholding tax.

Since the 2014 financial year there has been no apportionment of the tax expense to the companies controlled by KUKA Aktiengesellschaft.

(29) CONTINGENT LIABILITIES

in € thousands	2018	2019
Liabilities from guarantees	88,361	91,306
Liabilities from warranty agreements	136,284	160,162
Total	224,645	251,468

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.

Besides this, KUKA AG guarantees all payments that are due in connection with the assignable loan of KUKA Toledo Production Operations LLC for USD 150,000,000 placed in 2018.

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

(30) OTHER FINANCIAL COMMITMENTS

in € thousands	2018	2019
Commitments from rental and leasing agreements		
Due within 1 year	1,786	1,320
(of that due to affiliates)	(63)	(63)
Due in 1 to 5 years	2,476	893
(of that due to affiliates)	(0)	(0)
Total	4,262	2,213
Purchase commitments (discounted notes)		
Total	37,619	3,809
(of that due to affiliates)	(0)	(0)
Total	37,619	3,809
Other commitments		
Due within 1 year	7,280	9,055
(of that due to affiliates)	(0)	(0)
Due in 1 to 5 years	3,966	87
Total	11,246	9,142

Commitments in connection with rental and leasing agreements include leases for passenger cars and office premises. Purchase commitments mainly relate to construction work at the Augsburg location. The reduction of the purchase commitments is due to the degree of completion of the construction activities. For example, the construction of a new production building was completed at the end of 2019. Other construction measures that have not yet been completed, such as the construction of a new training center, also made further progress in 2019.

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.

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. Related hedged items and derivatives are combined into valuation units using the net hedge presentation method.

As the central contracting party within the Group, KUKA Aktiengesellschaft enters into hedging transactions with its Group companies and concludes corresponding hedging transactions with banks to hedge the resultant positions of KUKA Aktiengesellschaft. 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.

in € thousands	Nominal volume		Maturing within 1 year	Maturing in 1 - 5 years	Fair values			Dec. 31, 2019 Total
	Dec. 31, 2018	Dec. 31, 2019			Dec. 31, 2018 Total	Maturing within 1 year	Maturing in 1 - 5 years	
Forward exchange transactions with banks	700,263	609,898	376	-215	161	-3,655	277	-3,378
of which offsetting contracts with affiliated and other companies	392,405	315,898	44	295	339	1,061	-277	784
	1,092,668	925,796	420	80	500	-2,594	0	-2,594

The listed fair values correspond to the price at which external third parties would take on the rights or obligations of the derivative financial instruments. The mark-to-market valuation is obtained using the zero-coupon method.

The maximum default risk of derivative financial instruments is recognized as the sum of their positive fair values. As at December 31, 2019, the sum of the positive fair values of external derivative financial instruments amounted to k€2,841 (previous year: k€3,923) and the negative fair values to k€6,219 (previous year: k€3,762). A default can occur if individual business partners are unable to meet their contractual obligations and KUKA Aktiengesellschaft thus suffers a financial loss. To diversify the risk of default, hedging transactions are only entered into with various partners with an excellent credit rating. The effectiveness of the valuation units formed is demonstrated using the critical terms match method.

For negative fair values relating to KUKA Aktiengesellschaft an impending loss provision of k€3,612 was formed (previous year: k€1,279).

In KUKA Group, risks from changes in interest rates result only from the USD promissory note loans issued by KUKA Toledo Production Operations LLC in 2018, which are 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 (k€89,015) were passed on to the US Group company by means of internal interest rate hedging transactions.

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€3,644 as at December 31, 2019 (previous year: -k€1,510) is not reported in the balance sheet. The present value method is used to determine the market value.

OTHER NOTES

EXECUTIVE BOARD AND SUPERVISORY BOARD COMPENSATION

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

The Executive Board of KUKA Aktiengesellschaft received total compensation of k€4,548 (previous year: k€10,815). Over the financial year, the Executive Board members received a fixed salary including payments in kind and other compensation of k€1,920 (previous year: k€2,060). Target achievement and performance-based compensation amounted to k€628 (previous year: k€5,158). Of this, k€75 (previous year: k€1,352) related to compensation in connection with the phantom share program, k€0 to compensation in connection with the Long-Term Incentive Plan (previous year k€500) and k€0 to compensation in connection with the KUKA Added Value Incentive Plan. In addition, severance payments amounting to k€2,000 (previous year: k€3,597) are also included.

With a few exceptions, former Executive Board members have been granted benefits from the company pension scheme, which include old-age, vocational and employment disability, widow's and orphan's pensions. The sum of the provisions recognized in 2019 for current pensions and vested pension benefits for this group of persons totals k€9,966 (previous year: k€9,855).

In the 2019 financial year the members of the Supervisory Board received a total of k€1,095 (previous year: k€1,066) for their activities as members of this body.

Please refer to the notes in the compensation report for further information and details about the compensation of individual Executive Board and Supervisory Board members. The compensation report is part of the corporate governance report and summarizes the basic principles used to establish the compensation of the Executive and Supervisory Boards of KUKA Aktiengesellschaft. The compensation report is an integral part of the management report.

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 Executive 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 2019 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 AG 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).

EVENTS AFTER THE BALANCE SHEET DATE

Mr. Helmut Zodl was appointed by court order to the Supervisory Board with effect from January 24, 2020 (by order of the Augsburg Local Court dated January 23, 2020). The Supervisory Board elected Mr. Zodl as a member of the Audit Committee with its resolution of January 29, 2020. Said committee elected Mr. Zodl as Chairman of the Audit Committee on the same day. On February 20, 2020, KUKA's Supervisory Board and Prof. Dr. Peter Hofmann, Chief Technology Officer, decided by mutual agreement to terminate their working relationship for personal reasons. Prof. Dr. Peter Hofmann had been Chief Technology Officer since November 2019 and was also responsible for research and development in the Robotics business segment.

CORPORATE BODIES

SUPERVISORY BOARD

Dr. Yanmin (Andy) Gu

Guangzhou, China

Chairman of the Supervisory Board of KUKA Aktiengesellschaft

Vice President Midea Group, Board Director

Membership in comparable controlling bodies of business enterprises in Germany and abroad:

- Servotronix Motion Control Ltd., Petach Tikva, Israel
- Guangdong Midea Intelligent Technologies Co., Ltd., Foshan, China
- Midea Intelligent Technologies (Singapore) Pte. Ltd., Singapore
- Midea Electric Trading (Singapore) Co., Pte. Ltd., Singapore
- Midea Electric Trading (Thailand) Ltd., Bangkok, Thailand
- Midea Electric Espana S.R.L., Madrid, Spain
- Beutiland B.V., Amsterdam, Netherlands
- Frylands B.V., Amsterdam, Netherlands
- South American Holdco III, Amsterdam, Netherlands
- South American Holdco II B.V., Amsterdam, Netherlands
- Midea Electric Netherlands B.V., Amsterdam, Netherlands
- Midea Investment (Asia) Co. Ltd., Hong Kong, China
- PT Midea Heating and Ventilating Air Conditioner Indonesia, Jakarta, Indonesia

Michael Leppek

Stadtbergen, Germany

Deputy Chairman of the Supervisory Board of KUKA Aktiengesellschaft

Employee representative

1st Authorized Representative of IG Metall trade union, Augsburg branch

Membership in other statutory supervisory boards:

- MAN Energy Solutions SE
- AIRBUS Helicopters Deutschland GmbH

Wilfried Eberhardt

Aichach, Germany

Employee representative

Chief Marketing Officer of KUKA AG

Hongbo (Paul) Fang

Foshan, China

Member of the Supervisory Board of KUKA Aktiengesellschaft (until May 31, 2019)

Chairman and CEO Midea Group

Armin Kolb

Augsburg, Germany

Employee representative

Chairman of the Group Works Council of KUKA Aktiengesellschaft

Chairman of the Works Council of the KUKA Plants at Augsburg

Alexander Tan

Singapore, Singapore

Member of the Supervisory Board of KUKA Aktiengesellschaft (until December 31, 2019)

CFO Goodpack Ltd.

Prof. Dr. Henning Kagermann

Königs Wusterhausen, Germany

Member of the Supervisory Board of KUKA Aktiengesellschaft

Chairman of the acatech Board of Trustees – German Academy of Science and Engineering,
acatech Senator

Membership in other statutory supervisory boards:

- Deutsche Post AG (until May 15, 2019)
- Münchener Rückversicherungsgesellschaft (until April 30, 2019)

Carola Leitmeir

Großaitingen, Germany

Employee representative

Deputy Chairman of the Works Council of the KUKA Plants at Augsburg

Min (Francoise) Liu

Shunde, China

Member of the Supervisory Board of KUKA Aktiengesellschaft

HR Director Midea Group

Membership in comparable controlling bodies of business enterprises in Germany and abroad:

- Guangdong Midea Smart Link Home Technology Co. Ltd., Foshan, China
- Foshan Midea Zhihui Real Estate Development Co., Ltd., Foshan, China
- Midea Electric Espana S.R.L., Madrid, Spain
- Midea Polska SP.z.o.o., Warsaw, Poland

Dr. Myriam Meyer

Birchwil, Switzerland

Member of the Supervisory Board of KUKA Aktiengesellschaft

Proprietor of mmtec

Membership in other statutory supervisory boards:

- Lufthansa Technik AG, Hamburg, Germany

Membership in comparable controlling bodies of business enterprises in Germany or abroad:

Wienerberger AG, Vienna, Austria

Tanja Smolenski

Berlin, Germany

Employee representative

Political Secretary to the Executive Committee of the IG Metall trade union

Head of the Fundamental Issues and Social Policy department of the Executive Committee of the IG Metall trade union, Berlin office

Manfred Hüttenhofer

Meitingen, Germany

Employee representative

Head of Motion Control Competence Center, KUKA Deutschland GmbH

Dr. Chengmao Xu

Shunde, China

Member of the Supervisory Board of KUKA Aktiengesellschaft (since June 17, 2019)

President of Corporate Research Center Midea Group

Helmut Zodi

Shunde, China

Member of the Supervisory Board of KUKA Aktiengesellschaft (since January 24, 2020)

CFO Midea Group

EXECUTIVE BOARD

Peter Mohnen

Munich, Germany

Chief Executive Officer

Andreas Pabst

Bobingen, Germany

Chief Financial Officer

Prof. Dr. Peter Hofmann

Wiesenfelden, Germany

Chief Technology Officer (from November 1, 2019 to February 20, 2020)

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	17,713	-1,558 (2)	CF
2 Device Insight GmbH, München, Germany	EUR	k	100.00	4,265	669 (2)	RO
3 Faude Automatisierungstechnik GmbH, Ehningen, Germany	EUR	k	100.00	0	-733 (2)	RO
4 KUKA Deutschland GmbH, Augsburg, Germany *	EUR	k	100.00	59,187	0 (1), (2)	RO
5 KUKA Industries GmbH & Co. KG, Obernburg, Germany *	EUR	k	100.00	0	-35,773 (2)	RO
6 KUKA Systems GmbH, Augsburg, Germany *	EUR	k	100.00	23,794	0 (1), (2)	SY
7 Reis GmbH, Obernburg, Germany	EUR	k	100.00	75	2 (2)	RO
8 Reis Group Holding GmbH & Co. KG, Obernburg, Germany *	EUR	k	100.00	27,198	292 (2)	RO
9 Reis Holding GmbH, Obernburg, Germany	EUR	k	100.00	354	352 (2)	RO
10 Swisslog (Deutschland) GmbH, Dortmund, Germany	EUR	k	100.00	0	-6 (2)	SL
11 Swisslog Augsburg GmbH, Augsburg, Germany	EUR	k	100.00	529	0 (1), (2)	SL HC
12 Swisslog GmbH, Dortmund, Germany	EUR	k	100.00	1,000	0 (1), (2)	SL
13 Swisslog Healthcare GmbH, Westerstede, Germany	EUR	k	100.00	1,089	390 (2)	SL HC
14 Verwaltungsgesellschaft Walter Reis GmbH, Obernburg, Germany	EUR	k	100.00	44	1 (2)	RO
15 Visual Components GmbH, München, Germany	EUR	k	100.00	169	91 (4)	RO
16 Walter Reis GmbH & Co KG, Obernburg, Germany *	EUR	k	100.00	12,215	1,058 (2)	RO
17 WR Vermögensverwaltungs GmbH, Obernburg, Germany	EUR	k	100.00	1,470	-379 (2)	RO
18 RoboCepion GmbH, München, Germany	EUR	b	26.74	745	944 (2)	RO
19 IWK Unterstützungseinrichtung GmbH, Karlsruhe, Germany	EUR	nk	100.00	5,324	438 (2)	CF
20 KUKA Unterstützungskasse GmbH, Augsburg, Germany	EUR	nk	100.00	8,525	530 (2)	SY
21 Schmidt Maschinentechnik GmbH i.L., Niederstotzingen, Germany	EUR	nk	100.00	0	-6,389 (4)	SY
sonstiges Europa						
22 Easy Conveyors B.V., Zaltbommel, Netherlands	EUR	k	100.00	400	-1,746 (3)	SL
23 KUKA Automation ČR s.r.o., Chomutov, Czech Republic	CZK	k	100.00	55,918	1,301 (3)	RO
24 KUKA Automatisering + Robots N.V., Houthalen, Belgium	EUR	k	100.00	3,274	999 (3)	RO
25 KUKA AUTOMATISME + ROBOTIQUE S.A.S., Villebon-sur-Yvette, France	EUR	k	100.00	2,286	511 (3)	RO
26 KUKA AUTOMATIZARE ROMANIA S.R.L., Sibiu, Romania	RON	k	100.00	18,466	272 (3)	SY
27 KUKA CEE GmbH, Steyregg, Austria	EUR	k	100.00	4,587	3,004 (3)	RO
28 KUKA Hungaria Kft., Taksony, Ungarn	EUR	k	100.00	20,541	2,253 (3)	RO
29 KUKA Iberia, S.A.U., Vilanova i la Geltrú, Spain	EUR	k	100.00	7,086	691 (3)	RO
30 KUKA Industries Italia srl i.L., Bellusco, Italy	EUR	k	100.00	45	-112 (3)	RO
31 KUKA Nordic AB, Västra Frölunda, Sweden	SEK	k	100.00	8,646	-3,809 (3)	RO
32 KUKA Roboter Italia S.p.A., Rivoli, Italy	EUR	k	100.00	8,218	1,305 (3)	RO
33 KUKA Robotics Ireland Ltd, Dundalk, Ireland	GBP	k	100.00	-	-	RO
34 KUKA Robotics UK Limited, Wednesbury, United Kingdom	GBP	k	100.00	1,638	359 (3)	RO
35 KUKA Russia OOO, Moskau, Russia	RUB	k	100.00	101,328	12,045 (3)	RO
36 KUKA S-Base s.r.o. i.L., Roznov p.R., Czech Republic	CZK	k	100.00	851	-20 (3)	SY
37 KUKA Slovakia s.r.o., Dubnica nad Váhom, Slovakia	EUR	k	100.00	836	103 (3)	SY
38 KUKA Systems Aerospace SAS, Bordeaux-Mérignac, France	EUR	k	100.00	3,310	-2,472 (3)	SY
39 KUKA Systems France S.A., Montigny, France	EUR	k	99.99	-69	0 (3)	SY
40 KUKA Systems UK Limited, Halesowen, United Kingdom	GBP	k	100.00	7,104	-930 (3)	RO
41 Reis Espana S.L. i.L., Esplugues de Llobregat (Barcelona), Spain	EUR	k	100.00	-	- (3)	RO
42 Reis SCI i.L., Pontault Combault, France	EUR	k	100.00	1,170	342 (3)	CF
43 Swisslog (UK) Ltd., Redditch, United Kingdom	GBP	k	100.00	-6,584	-39 (3)	SL
44 Swisslog AB, Partille, Sweden	SEK	k	100.00	14,152	-7,559 (3)	SL
45 Swisslog Accalon AB, Boxholm, Sweden	SEK	k	100.00	106,194	8,947 (3)	SL
46 Swisslog AG, Buchs AG, Switzerland	CHF	k	100.00	19,440	25,858 (3)	SL
47 Swisslog AS, Oslo, Norway	NOK	k	100.00	31,197	10,273 (3)	SL
48 Swisslog B.V., Culemborg, Netherlands	EUR	k	100.00	2,055	761 (3)	SL
49 Swisslog Evomatic GmbH, Sipbachzell, Austria	EUR	k	100.00	6,166	1,256 (3)	SL
50 Swisslog France SAS, Suresnes, France	EUR	k	100.00	-5,783	-2,611 (3)	SL HC
51 Swisslog Healthcare AG, Buchs AG, Switzerland	CHF	k	100.00	14,116	-6,817 (3)	SL HC
52 Swisslog Healthcare Holding AG, Buchs AG, Switzerland	CHF	k	100.00	13,340	-733 (3)	SL HC
53 Swisslog Healthcare Italy SpA, Cuneo, Italy	EUR	k	100.00	4,645	-3,049 (3)	SL HC
54 Swisslog Holding AG, Buchs AG, Switzerland	CHF	k	100.00	390,736	5,741 (3)	CF
55 Swisslog Italia S.r.l., Mailand, Maranello, Italy	EUR	k	100.00	3,014	924 (3)	SL
56 Swisslog N.V., Wilrijk, Belgium	EUR	k	100.00	-3,714	-832 (3)	SL
57 Swissog Healthcare Netherlands B.V., Apeldoorn, Netherlands	EUR	k	100.00	180	-436 (3)	SL HC
58 Visual Components Oy, Espoo, Finland	EUR	k	100.00	5,298	2,120 (3)	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
Nordamerika						
59 KUKA Aerospace Holdings LLC, Sterling Heights, Michigan, USA	USD	k	100.00	-	- (3)	SY
60 KUKA Assembly and Test Corporation, Saginaw, Michigan, USA	USD	k	100.00	47,186	12,645 (3)	SY
61 KUKA de Mexico S de R.L.de C.V., Mexico City, Mexiko	MXN	k	100.00	66,192	8,232 (3)	RO
62 KUKA Recursos S. de R.L. de C.V., Toluca, Mexiko	MXN	k	100.00	-	- (3)	SY
63 KUKA Robotics Canada Ltd., Mississauga, Canada	CAD	k	100.00	595	526 (3)	RO
64 KUKA Robotics Corp., Shelby Township, Michigan, USA	USD	k	100.00	11,638	2,274 (3)	RO
65 KUKA Systems de Mexico S. de R.L. de C.V., Toluca, Mexiko	MXN	k	100.00	132,590	18,797 (3)	SY
66 KUKA Toledo Production Operations, LLC, Toledo, Ohio, USA **	USD	k	100.00	221,830	61,075 (3)	SY
67 KUKA Toledo Production Operations, LLC, Toledo, Ohio *, USA **	USD	k	100.00	73,455	14,725 (3)	SY
68 KUKA U.S. Holdings Company LLC, Sterling Heights, Michigan, USA	USD	k	100.00	71,514	-1,526 (3)	SY
69 Reis Robotics USA Inc., Carpentersville, USA	USD	k	100.00	557	442 (3)	RO
70 Swisslog Logistics, Inc., Newport News, USA	USD	k	100.00	8,937	-5,220 (3)	SL
71 Swisslog USA Inc., Dover, Delaware, USA	USD	k	100.00	34,980	-700 (3)	SL HC
72 Translogie CORPORATION, Dover, Delaware, USA	USD	k	100.00	101,599	9,812 (3)	SL HC
73 Translogie Ltd. (Canada), Mississauga, Ontario, Canada	CAD	k	100.00	5,808	925 (3)	SL HC
74 Visual Components North America Corporation, Lake Orion, Michigan, USA	USD	k	100.00	127	46 (3)	RO
75 Pipeline Health Holdings LLC, San Francisco, USA	USD	at	25.00	6,069	-11,753 (3)	SL HC
Süd- und Mittelamerika						
76 KUKA Roboter do Brasil Ltda., Sao Bernardo do Campo / Sao Paulo, Brasil	BRL	k	100.00	5,001	3,028 (3)	RO
77 KUKA Systems do Brasil Ltda., Sao Bernardo do Campo SP, Brasil	BRL	k	100.00	-25,866	-9,668 (3)	SY
Asien / Australien						
78 KUKA (Thailand) Co., Ltd., Bangkok, Thailand	THB	k	100.00	-72,658	5,525 (3)	RO
79 KUKA Automation Equipment (Shanghai) Co., Ltd., Shanghai, China	CNY	k	100.00	27,060	4,265 (3)	CN
80 KUKA Automation Taiwan Ltd., Taipei, Taiwan, Taiwan	TWD	k	100.00	-110,281	1,930 (3)	RO
81 KUKA India Pvt. Ltd., Haryana, Indien	INR	k	100.00	220,506	29,304 (3)	RO
82 KUKA Industries Automation (China) Co., Ltd., Kunshan, China	CNY	k	100.00	-252,993	-106,497 (3)	CN
83 KUKA Industries Singapore Pte. Ltd., Singapore, Singapore	SGD	k	100.00	985	18 (3)	RO
84 KUKA Japan K.K., Yokohama, Japan	JPY	k	100.00	201,905	12,805 (3)	RO
85 KUKA Robot Automation (Malaysia) Sdn Bhd, Puchong, Selangor, Malaysia	MYR	k	100.00	9,464	8 (3)	RO
86 KUKA Robotics China Co. Ltd., Shanghai, China	CNY	k	50.00	511,212	54,871 (3)	CN
87 KUKA Robotics Australia Pty. Ltd., Port Melbourne, Victoria, Australia	AUD	k	100.00	53	542 (3)	RO
88 KUKA Robotics Guangdong Co., Ltd., Foshan, Shunde, China	CNY	k	100.00	3,138,884	37,140 (3)	CN
89 KUKA Robotics Korea Co. Ltd., Ansan, South Korea	KRW	k	100.00	-2,671	352 (3)	RO
90 KUKA Robotics Manufacturing China Co. Ltd., Shanghai City, China	CNY	k	50.00	3,755,763	39,635 (3)	CN
91 KUKA Systems (China) Co. Ltd., Shanghai, China	CNY	k	100.00	8,603	-67,747 (3)	CN
92 KUKA Systems (India) Pvt. Ltd., Maharashtra, Pune, India	INR	k	100.00	82,993	0 (3)	RO
93 KUKA Vietnam Co. Ltd., Hanoi, Vietnam	VND	k	100.00	-1,174	-1,813 (3)	RO
94 Swisslog Asia Ltd., Hongkong, China	HKD	k	100.00	190,200	179,957 (3)	SL/CN
95 Swisslog Australia Pty Ltd., Sydney, Australia	AUD	k	100.00	-4,796	-3,375 (3)	SL
96 Swisslog Healthcare Asia Pacific Pte. Ltd., Singapore, Singapore	SGD	k	100.00	-1,833	-6,590 (3)	SL HC
97 Swisslog Healthcare Korea Co., Ltd., Bucheon si, Kyeonggi-do, South Korea	KRW	k	100.00	-1,512	-1,277 (3)	SL HC
98 Swisslog Healthcare Shanghai Co., Ltd., Shanghai, China	CNY	k	50.00	112,833	-7,898 (3)	SL HC/CN
99 Swisslog Healthcare Trading MEA LLC, Emirate of Dubai, United Arab Emirates	AED	k	49.00	4,463	1,166 (3)	SL HC
100 Swisslog Malaysia Sdn Bhd, Selangor, Malaysia	MYR	k	100.00	13,581	6,034 (3)	SL
101 Swisslog Middle East LLC, Dubai, United Arab Emirates	AED	k	49.00	-3,022	1,132 (3)	SL
102 Swisslog Singapore Pte Ltd., Singapore, Singapore	SGD	k	100.00	6,969	2,824 (3)	SL
103 Shanghai Swisslog Healthcare Technology Co. Ltd., Shanghai, FTZ, China	CNY	nk	100.00	-	- (3)	SL HC/CN
104 Shanghai Swisslog Logistics Automation Co. Ltd., Shanghai, FTZ, China	CNY	nk	100.00	-	- (3)	SL/CN
105 Chang'an Reis (Chongqing) Robotic Intelligent Equipment Co. Ltd, Chongqing, China	CNY	at	50.00	15,228	624 (3)	SY
106 Guangdong Swisslog Technology Co. Ltd., Shunde, China	CNY	at	50.00	-	- (3)	SL/CN
107 Swisslog (Shanghai) Co. Ltd., Shanghai, China	CNY	at	100.00	278,566	-2,010 (3)	SL/CN
108 Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., Yangzhou City, China	CNY	at	49.00	58,953	-3,693 (3)	SY

Fußnoten

*) 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, 2018

3) Group's Annual Financial Statement as of December 31, 2019

4) Abbreviated financial year

Method of consolidation

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

SL Swisslog

SL HC Swisslog Healthcare

CN China

CF Central Functions

PROPOSED APPROPRIATION OF PROFIT

One half, or k€11,181, of the annual net income of KUKA Aktiengesellschaft amounting to k€22,362 will be transferred to the other retained earnings. The Executive Board proposes to the Annual General Meeting that a dividend of €0.30 per share totaling k€11,933 should be paid from the remaining balance sheet profit of k€41,598 and that the remaining amount of k€29,665 should be carried forward.

GROUP ACCOUNTS

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.

KUKA Aktiengesellschaft is a 94.55% indirect subsidiary of Midea Group Co. Ltd., Foshan City, Guangdong Province, China. KUKA Aktiengesellschaft is incorporated in the consolidated financial statements of Midea Group Co. Ltd., Foshan City, Guangdong Province, China, which are available from the website www.cninfo.com.cn directly on the website of Midea Group Co. Ltd. at www.midea-group.com/Investors/reports.

Augsburg, March 3, 2020

KUKA Aktiengesellschaft

The Executive Board

Peter Mohnen

Andreas Pabst

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 3, 2020

KUKA Aktiengesellschaft

The Executive Board

Peter Mohnen

Andreas Pabst

INDEPENDENT AUDITOR'S REPORT

To KUKA AG, Augsburg

Report on the Audit of the Annual Financial Statements and of the Management Report

Opinions

We have audited the annual financial statements of KUKA Aktiengesellschaft, Augsburg, which comprise the balance sheet as of December 31, 2019, the Statement of profit and loss for the financial year from January 1 to December 31, 2019, as well as the notes to the financial statements, including the accounting policies presented therein. In addition, we have audited the combined management report of KUKA AG and of the KUKA Group (hereinafter: the 'management report') for the financial year from January 1 to December 31, 2019. In accordance with German legal requirements, we have not audited the content of those components of the management report specified 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 applicable to business corporations and give a true and fair view of the assets, liabilities and financial position of the Company as of December 31, 2019 and of its financial performance for the financial year from January 1, to December 31, 2019 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 opinion on the management report does not cover the content of those components of the management report specified in the "Other Information" section of the auditor's report.

Pursuant to Section 322 (3) 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 Opinions

We conducted our audit of the annual financial statements and of the management report in accordance with Section 317 HGB and the EU Audit Regulation No 537/2014 (referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the 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)(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 evidence we have obtained is sufficient and appropriate to provide a basis for our 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, 2019. These matters were addressed in the context of our audit of the annual financial statements as a whole, and in forming our opinion thereon, we do not provide a separate opinion on these matters.

Impairment of Investments in Affiliated Companies

Concerning the accounting principles applied, please refer to the "Accounting and measurement" section in the notes.

THE FINANCIAL STATEMENT RISK

Deferred tax assets totaling EUR 485 million are reported in the financial statements of KUKA AG under Financial assets - investments in affiliated companies - as at December 31, 2019. Its share of total assets amounts to 40 % and thus has a significant impact on the Company's assets.

Investments in affiliated companies are recognized at the lower of cost or fair value if the decline in value is expected to be permanent. The Company calculates fair value using the discounted cash flow method.

The cash flows used for the discounted cash flow method is based on individual planning for each long-term investee for the next three years and a transitional year which is based on assumptions relating to long-term growth rates. The respective discount rate is derived from the yield on an alternative investment commensurate with the risk. If the fair value is lower than the book value, an examination is made on the basis of qualitative and quantitative criteria if the impairment is expected to be permanent

The calculation of fair value using the discounted cash flow method is complex and in respect to the assumptions made highly dependent on the assessment and judgments of the Company. This applies particularly to the estimate of future cash flows and long-term growth rates and the calculation of the discount rates as well as the assessment of the length of the impairment.

There is the financial statement risk that the investments in affiliated companies are not recoverable.

OUR AUDIT APPROACH

We implemented our audit on a risk-oriented basis. Initially on the basis of the information gained in our audit, we assessed for which stakes there were indications of a need to take impairment. Subsequently, in consultation with our assessment specialists, we assessed the appropriateness of the material assumptions as well as the measurement model used by the Company. To this end, we discussed the expected cash flows and the long-term growth rates that are assumed with the responsible planning staff. Furthermore, we conducted reconciliations with other internally available forecasts, e.g. for tax purposes, and with the budget approved by the management. In addition, we assessed the consistency of the assumptions on the basis of external market estimates.

We furthermore satisfied ourselves of the quality of the Company's previous forecasting by comparing plans for earlier fiscal years with the results that were actually achieved and analyzed any deviations.

We compared the assumptions and parameters underlying the discount rate, especially the risk-free interest rate, the market risk premium, and the beta factor, with our own assumptions and publicly available data. In order to take the existing forecasting uncertainty into account,

we also examined possible changes of the discount rate on the recoverable amount, the expected cash flows and the long-term growth rate on the fair value (sensitivity analysis) by calculating alternative scenarios and comparing them with the Company's valuation results. In order to ensure that the measurement model used is mathematically correct, we verified the Company's calculations in a risk-oriented way on the basis of selected elements.

OUR OBSERVATIONS

The method forming the basis of the impairment test of the investment in affiliated companies is appropriate and consistent with the measurement principles. The Company's assumptions and parameters are appropriate.

Other Information

Management and the Supervisory Board are responsible for the other information. The other information comprises the following components of the management report, whose content was not audited:

- the non-financial statement, the management report is referring to
- the corporate governance statement which prospectively will be presented to us subsequent to the auditors' report and the management report is referring to, and
- information extraneous to management reports and marked as unaudited.

The other information also includes the remaining parts of the annual report.

The other information does not include the annual financial statements, the management report information audited for content and our auditor's report thereon.

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

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

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

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

Management is responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law applicable to business corporations, 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, management is 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, management is 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, management is 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, management is 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 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 Section 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 judgement 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 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 the internal control relevant for 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 opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the management and the reasonableness of estimates made by management and related disclosures.
- Conclude on the appropriateness of management's 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 opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or circumstances 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 management in the management report. On the basis of sufficient appropriate audit evidence, we evaluate, in particular, the significant used by management as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

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

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditor at the annual general meeting on May 29, 2019. We were engaged by the supervisory board on November 29, 2019. We have been the auditor of KUKA AG without interruption since fiscal year 2011.

We declare that the 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).

The fee for the auditing services of KPMG AG WPG related primarily to the audit of the consolidated financial statements and of the annual financial statements of KUKA AG as well as various audits of the annual financial statements of its subsidiaries, including legal contract extensions and areas of audit focus agreed with the Supervisory Board. A review of the semi-annual report was additionally integrated in the audit.

German Public Auditor Responsible for the Engagement

The auditor responsible for the engagement is Hans Querfurth.

Augsburg, March 11, 2020

KPMG AG
Wirtschaftsprüfungsgesellschaft

Querfurth
Wirtschaftsprüfer
[German Public Auditor]

Specht
Wirtschaftsprüfer
[German Public Auditor]