KUKA

Annual Report 2020

beyond automation

Key figures

in € millions	2019	2020	Change in %
Orders received			
Systems	858.0	715.3	–16.6
Robotics	1,037.1	901.3	–13.1
Swisslog	750.2	643.9	–14.2
Swisslog Healthcare	251.3	210.1	–16.4
China	456.4	490.4	7.4
Group	3,190.7	2,792.2	–12.5
Sales revenues			
Systems	925.4	671.6	–27.4
Robotics	1,159.2	899.2	–22.4
Swisslog	600.0	527.7	–12.1
Swisslog Healthcare	222.3	217.0	–2.4
China	458.2	397.1	–13.3
Group	3,192.6	2,573.5	–19.4
Order backlog (Dec. 31)	**1,967.4**	**1,992.6**	**1.3**
EBIT			
Systems	27.7	–37.4	>–100
Robotics	63.2	–3.9	>–100
Swisslog	18.2	2.9	–84.1
Swisslog Healthcare	–9.2	3.1	>100
China	5.7	–4.7	>–100
Group	47.8	–113.2	>–100
EBIT in % of sales			
Systems	3.0	–5.6	–860 Bp
Robotics	5.5	–0.4	–590 Bp
Swisslog	3.0	0.5	–250 Bp
Swisslog Healthcare	–4.1	1.4	550 Bp
China	1.2	–1.2	–240 Bp
Group	1.5	–4.4	–590 Bp
Earnings after taxes	**17.8**	**–94.6**	**>–100**

in € millions	2019	2020	Change in %
Financial situation			
Free cash flow	20.7	37.0	78.7
Capital employed (annual average)	1,374.3	1,321.1	–3.9
ROCE	3.5	–8.6	>–100
Capital expenditure	151.1	80.7	–46.6
Employees (Dec. 31)[1]	14,014	13,700	–2.2
Net worth			
Balance sheet total	3,426.6	3,116.5	–9.0
Equity	1,348.6	1,203.7	–10.7
in % of balance sheet total	39.4	38.6	–80 Bp
Share			
Weighted average number of shares outstanding (in millions of shares)	39.8	39.8	0.0
Diluted/undiluted earnings per share (in €)	0.24	–2.59	>–100
Dividend per share (in €)	0.15	0.11[2]	0.0
Market capitalization (Dec. 31)	1,452	1,635	12.6

Bp: Basis point (= 1/100 percentage point)

[1] The term “employee” refers equally to persons of all gender identities. Figures for employees are based on the full-time equivalent throughout the annual report.

[2] Subject to approval by shareholders at the Annual General Meeting on May 21, 2021

KUKA at a glance

KUKA is a global automation company with sales revenues of around 2.6 billion euro and a workforce of about 14,000. As one of the world's leading suppliers of intelligent automation solutions, KUKA offers its customers a full range of products and services from a single source: from the core component – such as robots, automated guided vehicles (AGVs) and other automation components – to production cells, turnkey systems and networked production with the aid of cloud-based IT tools. Industrie 4.0 is bringing the digital networking of production, flexible manufacturing concepts and new business models to the fore. The aim is to support customers by providing comprehensive automation and digitalization know-how in order to optimize their value creation.

Key figures 2020

Sales revenue	Orders received	Employees
2.6 billion €	2.8 billion €	13,700

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Foreword

Dear Shareholders,

Rarely in KUKA's history have we looked back on a year that was so marked by an unexpected crisis and such a severe market slump. 2020 was such a year. The coronavirus pandemic, which spread rapidly throughout the world in the first quarter, turned everything upside down. We have felt – and are indeed still feeling – the direct effects, as a society and as an economy, in social interaction in both private and business life. For the economy, the crisis means extreme constraints, but also realignments and a radical reordering of business conditions.

At KUKA, we responded early to the pandemic. A cross-divisional task force, which was set up immediately and worked with great dedication, quickly initiated the requisite measures. Well thought-out distance and hygiene concepts at our locations worldwide ensured that the health of our employees and our business partners was optimally protected. In the production facility at our headquarters in Augsburg, we created a safe working concept thanks to the unparalleled flexibility of the employees and the high level of commitment of everyone involved. This enabled production to continue uninterrupted. The majority of KUKA employees with jobs that allowed it started working from home and showed themselves to be pragmatic and open. Everything worked quickly and smoothly thanks to a well-organized and well-equipped IT infrastructure.

The effects of the pandemic on our markets, however, were much worse. In many places, customer plants and construction sites were shut down completely for a time. Travel around the globe, especially for our installation and service teams, has been extremely restricted. Commissioning jobs and maintenance work have had to be reorganized. And last but not least, customers worldwide have been holding back on investments. Projects have been postponed or abandoned entirely. As a supplier of capital equipment, we have naturally been greatly impacted.

Last year, we saw Group sales revenues fall by 19 percent – which was well within the average for engineering and industrial automation companies. Our orders received fell by 12 percent. This corresponds to a shortfall of around 400 million euro compared with a previous year that had already been overshadowed by difficult economic conditions, namely the slump in growth in our most important customer market, the automotive industry, as well as in what is certainly the most dynamic market for automation – China. Nevertheless, China was the only one of our five business segments to report a year-on-year increase in orders received (+7.4 percent).

Against this backdrop, the clearly negative earnings (EBIT) were painful, but would have been much worse if we had not jointly succeeded in making the utmost efforts to generate savings. No division or location was excluded. And because savings alone are no longer sufficient in a crisis of this nature, we have embarked on a multifaceted global restructuring program. It goes without saying that this has been very hard at times, both for employees and for the people having to

Peter Mohnen
Chief Executive Officer

Andreas Pabst
Chief Financial Officer

take management decisions. I have been deeply impressed by the extremely committed and dedicated work of some 14,000 KUKA colleagues around the world. None of them bears any responsibility for the crisis, and yet each and every one of them is doing everything they can to steer our company steadily through the crisis. It is precisely this spirit, the "KUKA Spirit", that I value so greatly in our Group. To my mind, it makes KUKA a really special company.

The fact that our cost-cutting drive and focus on a stable financial position have borne fruit even in difficult times is demonstrated by our free cash flow, which at €37 million is not only distinctly positive, but also nearly 80 percent above the previous year's figure and thus higher than at KUKA for many years.

We have done what we can to put our operating business on an even keel – and that under difficult external conditions. In the Robotics segment, we have rounded out the portfolio with new models in the low payload category as well as a SCARA robot. This makes KUKA one of the very few "full-range" suppliers that can cover the entire spectrum of industrial robots: from smartphone assembly to the handling of SUV bodies.

Economic researchers have predicted that markets will not fully recover until 2022 at the earliest, and not before 2025 in the case of the automotive sector. It was therefore right and important to adapt our structures. This is a balancing act, for at the same time we want to lose as little know-how as possible from the company, convinced as we are that automation can actually benefit from the crisis in the medium term – and because many customers are already rethinking their vulnerable, globally networked production and supply chains. Smart automation, such as that offered across the board by KUKA, will be a solution to this.

I am proud of our team in these difficult times. Together, we will tackle the steps and challenges that lie ahead of us, on our way back to significant growth.

Sincerely, Peter Mohnen

Supervisory Board report

Dear Shareholders,

The 2020 fiscal year was a difficult one for KUKA Group. KUKA already felt the effects of the global COVID-19 pandemic in the first quarter of 2020. The pandemic-related lockdowns in virtually all countries relevant to KUKA's business rendered access to our customers more difficult. Additionally, the automotive sector, which is particularly important for KUKA, was severely impacted by the COVID-19 pandemic in 2020. In response to declining sales figures as a result of the pandemic and the general market situation, automotive manufacturers scaled back their investments and adjusted capacities. Even the signs of recovery that began to emerge in the second half of 2020 were unable to prevent KUKA Group from closing the financial year 2020 with a considerable loss overall. Based on all the information available to date, a further recovery of the global economy is to be expected for fiscal 2021. KUKA will also profit from this, as the demand for innovative automation solutions remains unbroken and should continue in the coming years.

The outstanding performance of KUKA Group employees deserves particular mention. As a result of the COVID-19 pandemic, they had to adapt very quickly to new working conditions. With great dedication, they ensured that customer orders were processed even under difficult circumstances, that supply chains were maintained and that important development projects were continued.

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

Cooperation between the Supervisory Board and the Management Board was constructive.

The Supervisory Board performed its duties in plenary sessions, committee meetings, telephone and video conferences, and by means of circular resolutions. Due to the COVID-19 pandemic and the associated travel restrictions, the meetings of the Supervisory Board and its committees in the reporting period were held exclusively in virtual form by means of video conferencing.

Changes to the Management Board and Supervisory Board

The Management Board of KUKA Aktiengesellschaft currently consists of its Chairman Peter Mohnen (CEO) and Andreas Pabst (CFO). In addition, Prof. Dr. Peter Hofmann was a member of the company's Management Board until February 20, 2020.

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

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

- Dr. Chengmao Xu was elected as a member of the Supervisory Board by the Annual General Meeting on June 19, 2020; he had previously been appointed by court order. He resigned as a member of the Supervisory Board with effect from January 17, 2021 and took up the position of Chief Development Officer at KUKA Aktiengesellschaft with effect from January 18, 2021.
- Helmut Zodl was appointed by court order to the Supervisory Board as Alexander Tan's successor with effect from January 24, 2020. The Annual General Meeting on June 19, 2020, then elected Helmut Zodl as a member of the Supervisory Board. Helmut Zodl is Chairman of the Audit Committee.
- Lin (Avant) Bai was appointed by court order to the Supervisory Board as Dr. Chengmao Xu's successor with effect from February 23, 2021.

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

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

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

Supervisory Board meetings

In 2020, the year under review, five ordinary and three extraordinary Supervisory Board meetings were held. Furthermore, two resolutions were passed by written circulatory procedure.

The first extraordinary meeting of the Supervisory Board was held on January 29, 2020; it dealt with the introduction of Helmut Zodl and the composition of the Audit Committee.

Another extraordinary meeting was held on February 19, 2020, at which the termination of the employment contract of Prof. Peter Hofmann as CTO of the company was discussed and resolved.

The first ordinary meeting of the Supervisory Board took place on March 25, 2020. The Management Board first reported on the situation of the company and the Group. The Supervisory Board meeting was centered on the 2019 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 2019 balance sheet profit. The Supervisory Board approved both the Corporate Governance report and the Supervisory Board report for 2019. The Supervisory Board also dealt with the sustainability report pursuant to sections 315b, 315c, 289c of the German Commercial Code (HGB). The Supervisory Board reviewed this report – as the Audit Committee had done in advance – and raised no objections to it. The Board then decided on the proposed resolutions for the Annual General Meeting planned for June 19, 2020. The Supervisory Board dealt with other operational issues as well as the determination of the variable remuneration of the Management Board members for the past financial year.

On the day of the Annual General Meeting held on June 19, 2020, the Supervisory Board convened for ordinary meetings before and after the Annual General Meeting. At the meeting prior to the Annual General Meeting, the Management Board again reported on the situation of the company and the Group. The Supervisory Board then prepared itself for the Annual General Meeting. In the meeting following the Annual General Meeting, the composition of the Strategy and Technology Committee and the Audit Committee was discussed and approved. The reporting on the internal control systems (ICS report 2019) was also carried out. The Supervisory Board also addressed the restructuring of KUKA Systems EMEA and an operational issue at Swisslog Healthcare. As part of regular professional development, the attorney Dr. Christian Vogel gave a lecture on the subject of “rights and obligations of Supervisory Board members”.

Another regular Supervisory Board meeting was held on September 22, 2020. The Management Board also reported on the situation of the company and the Group at the meeting. Other topics included the status of the restructuring measures that had been initiated and the report from the Strategy and Technology Committee. Additionally, the Supervisory Board was informed of a resolution deficiency action filed by several shareholders regarding the resolution of the Annual General Meeting on June 19, 2020, on the discharge of the Supervisory Board for fiscal 2019 see page 9.

The last ordinary meeting of the Supervisory Board in fiscal 2020 was held on November 12, 2020. The Management Board once again reported to the Supervisory Board on the situation of the company and the Group. Another key focus of this meeting was the budget for 2021 and the medium-term planning up to 2023. The chairs of the Supervisory Board committees then presented a summarized report on the work of the Personnel Committee, the Audit Committee and the Strategy and Technology Committee. The Supervisory Board also discussed and approved internal Group restructuring measures. Finally – in the absence of the Management Board – the Supervisory Board discussed matters pertaining to the Management Board and discussed initial proposals for a new Management Board remuneration model.

Another extraordinary Supervisory Board meeting was held on December 17, 2020. At this meeting, which was held in the absence of the Management Board, the Supervisory Board set the personal targets and financial targets of the Management Board members for fiscal 2021; the Long Term Incentive Plan 2021 – 2023 for the Management Board members was also adopted. At this meeting, the Supervisory Board also adopted its new rules of procedure.

In the period leading up to the submission of this report, an extraordinary meeting of the Supervisory Board was held on March 3, 2021. At this meeting, the Supervisory Board dealt with the new compensation system for the Management Board and oher matters of the Management Board.

The first ordinary Supervisory Board meeting in 2021 took place on March 24, 2021.

Meetings of the Supervisory Board committees

The Supervisory Board has a total of five committees. The duties and members of the committees are listed in detail in the section “Declaration on corporate governance” and are also available on the company’s website at www.kuka.com.

The Personnel Committee convened a total of four times in the 2020 reporting year. It dealt with all topics pertaining to Management Board matters, including the departure of Prof. Dr. Peter Hofmann, Management Board compensation and the new compensation model for the Management Board from 2021 onwards.

The Personnel Committee has held further meetings during the current fiscal year 2021 (before submission of the report). The main topics of discussion were the new compensation system for the Management Board and further matters of the Management Board.

The Audit Committee held six meetings in fiscal 2020. At the meetings, the quarterly reports of KUKA Aktiengesellschaft and KUKA Group were discussed. Other recurring topics were the current forecast, risk reporting, toxic projects, the reports of the Chief Compliance Officer and the reports of the Head of Internal Audit. Furthermore, special topics were dealt with in depth at various meetings of the Audit Committee. At the meeting on March 11, 2020, the Audit Committee focused on the 2019 financial statements of KUKA Aktiengesellschaft and KUKA Group and their audit by the auditors. The Audit Committee also discussed the invitation to tender for the audit of the annual financial statements and consolidated financial statements for 2020.

In preparation for the Supervisory Board’s financial statements meeting on March 24, 2021, a regular meeting of the Audit Committee was held on March 11, 2021.

The Strategy and Technology Committee convened six times in fiscal 2020. The strategy for the Group as a whole and for the individual segments was discussed. Other key topics included specific product developments and market launches, as well as regional market positioning.

In the period prior to submission of this report, a further meeting of the Strategy and Technology Committee was held on March 23, 2021.

The Nomination Committee convened on March 24, 2020. The Nomination Committee prepared the Supervisory Board’s proposal to the Annual General Meeting on June 19, 2020 for the election to the Supervisory Board of Dr. Chengmao Xu and Helmut Zodl as shareholder representatives.

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

There was no occasion to convene the Mediation Committee.

The members of the Supervisory Board attended the following meetings of the Supervisory Board and the committees in the 2020 reporting year:

	Supervisory Board (as a whole)		Nomination Committee		Personnel Committee		Audit Committee		Strategy and Technology Committee	
Number of meetings Attendance in %	Number	in %	Number	in %	Number	in %	Number	in %	Number	in %
Dr. Andy Gu Chairman	8/8	100	1/1	100	4/4	100	6/6	100	6/6	100
Michael Leppek Deputy Chairman	8/8	100			4/4	100	6/6	100	6/6	100
Wilfried Eberhardt	8/8	100								
Manfred Hüttenhofer	8/8	100							6/6	100
Prof. Dr. Henning Kagermann	8/8	100							6/6	100
Armin Kolb	8/8	100			4/4	100			6/6	100
Carola Leitmeir	8/8	100					6/6	100	6/6	100
Francoise Liu	8/8	100	1/1	100	4/4	100			6/6	100
Dr. Myriam Meyer	8/8	100					6/6	100	6/6	100
Tanja Smolenski	8/8	100					6/6	100		
Dr. Chengmao Xu	8/8	100							3/3*	100
Helmut Zodl	8/8	100					6/6	100		
		100		**100**		**100**		**100**		**100**

*Dr. Chengmao Xu was appointed to the Strategy and Technology Committee after the Annual General Meeting on June 19, 2020. He attended all meetings of the Strategy and Technology Committee held after the Annual General Meeting on June 19, 2020.

Independence and conflicts of interest, Declaration of Compliance

Supervisory Board members Dr. Yanmin (Andy) Gu and Ms. Min (Francoise) Liu have employment contracts with Midea Group, which holds a 94.5% stake in KUKA Aktiengesellschaft. Dr. Yanmin (Andy) Gu also holds an executive position within this group. Dr. Chengmao Xu resigned from his office as a member of the Supervisory Board with effect from January 17, 2021. Mr. Helmut Zodl was employed by Midea Group until January 31, 2021, but took up a new post with GE Healthcare in Chicago with effect from February 1, 2021.

The Supervisory Board and the Management Board submitted identically worded declarations in accordance with section 161 of the German Stock Corporation Act (AktG). The resolutions were adopted by the Management Board and the Supervisory Board on February 11, 2021. The Declarations of Compliance were made permanently available to shareholders on the company's website.

Work with the auditors

The annual financial statements of KUKA Aktiengesellschaft as at December 31, 2020 and the Group financial statements as at December 31, 2020, as well as the consolidated management report for KUKA Aktiengesellschaft and KUKA Group, including the bookkeeping, were audited by auditors PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main ("PricewaterhouseCoopers"), which issued an unqualified audit opinion in each case on March 11, 2021.

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

The Supervisory Board's Audit Committee appointed the external auditors, PricewaterhouseCoopers, as per the resolution at the Annual General Meeting of June 19, 2020. During the course of appointing the auditors of the financial statements of the company and the Group, the chair of the Audit Committee and the Chairman of the Supervisory Board conducted a review with the auditors regarding key audit issues, scope and fees. The auditors agreed to immediately inform the chair of the Audit Committee about any disqualification or bias issues encountered during the audit, provided such disqualification or bias issues could not immediately be resolved. The auditors also agreed to report on an ongoing basis during the audit all material findings and developments arising during the audit that were within the scope of the Supervisory Board's responsibilities. Furthermore, the auditors were instructed to inform the Supervisory Board, or note in the audit report, if information was encountered during the audit that was contrary to the declarations released by the Management Board and Supervisory Board as per section 161 para. 1 sentence 1 of the German Stock Corporation Act (AktG).

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

As in the previous years – always in respect of different topics – key issues were defined for the audit in fiscal 2020. These were: determination of risk provisioning pursuant to IFRS 9, revenue recognition pursuant to IFRS 15, lease accounting pursuant to IFRS 16, scope of consolidation pursuant to IFRS 13, internal (risk) reporting and valuation of (loss-making) projects, as well as subsidies and project risks in China. Further topics were the recognition of deferred taxes, the impairment of goodwill and the dependency report.

In a joint meeting with the auditors on March 11, 2021, the Audit Committee reviewed the annual financial statements of KUKA Aktiengesellschaft and the consolidated financial statements for fiscal 2020, taking into consideration the auditors' reports. The Management Board and the auditors presented the highlights of the financial reports to the committee. The Audit Committee members reviewed, discussed and checked in detail the documentation relating to the financial statements and discussed the audit report in depth with the auditors. The auditors answered the questions posed by the Audit Committee members. The Audit Committee reported to the Supervisory Board on the results of its discussions during the Board's meeting on March 24, 2021 and recommended that the Board approve KUKA Aktiengesellschaft's annual financial statements and KUKA Group's consolidated annual financial statements for 2020.

The full Supervisory Board reviewed the draft annual financial statements and the Management Board's recommendation on appropriation of net income on March 24, 2021.

The auditors, PricewaterhouseCoopers, attended the Supervisory Board meeting in order to report on material findings in the audit and to provide additional information. All members of the Supervisory Board were in possession of the audit reports provided by the auditors. PricewaterhouseCoopers explained in detail the assets, liabilities, financial position and profit or loss of the company and the Group and also reported that there were no material weaknesses in the internal control system relating to the accounting process and the risk early detection system. The Board and the auditors jointly reviewed and discussed the financial statements and PricewaterhouseCoopers answered all questions posed by the Audit Committee. The audits of the KUKA Aktiengesellschaft and KUKA Group annual financial statements for 2020 were thus fully comprehensible.

Furthermore, in the meeting on March 24, 2021, a sustainability report for 2020 prepared for KUKA Group pursuant to sections 315b, 315c, 289c of the German Commercial Code (HGB) was reviewed by the plenum following discussion by the Audit Committee. There were no objections.

Dependency report 2019 and 2020

In view of Midea's shareholder status, the Supervisory Board had to address, on March 25, 2020, the report on relations with affiliated companies (dependency report) prepared by the Management Board for fiscal 2019 pursuant to section 312 of the German Stock Corporation Act (AktG). This report was reviewed by KPMG in its role as auditor for fiscal 2019. Following preparatory discussion by the Audit Committee, the Supervisory Board conducted a further review. All reviews confirmed the Management Board's final declaration that, with regard to the business relationships of KUKA Group with Midea companies in the 2019 fiscal year, appropriate compensation was received and KUKA companies did not suffer any disadvantages therefrom.

Several shareholders have filed a resolution deficiency action before Regional Court Munich I against the resolution of the Annual General Meeting of June 19, 2020, on the discharge of the Supervisory Board members for fiscal 2019 on the grounds that the report of the Supervisory Board in the Annual Report 2019 does not contain the verbatim reproduction of the audit opinion on the dependency report. On January 20, 2021, KUKA Aktiengesellschaft and the plaintiff shareholders reached an agreement to the effect that KUKA Aktiengesellschaft will make up for the missing verbatim reproduction of the audit opinion by including it in the 2020 Supervisory Board report. The audit opinion on the dependency report for fiscal 2019 reads verbatim as follows:

Audit results and audit opinion

Based on the final results of our audit, there are no objections within the meaning of section 313 para. 4 of the German Stock Corporation Act (AktG) to the report of the Management Board on relations with affiliated companies. We therefore issue the following unqualified audit opinion pursuant to section 313 para. 3 of the German Stock Corporation Act (AktG) on the report of the Management Board on relations with affiliated companies of KUKA Aktiengesellschaft, Augsburg, for fiscal 2019 as set out in Annex 1:

To KUKA Aktiengesellschaft, Augsburg

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

- 1. the factual statements made in the report are correct,
- 2. the payment made by the company for the legal transactions listed in the report was not unreasonably high,
- 3. there are no circumstances that would indicate a materially different assessment of the measures listed in the report than that of the Management Board.

Augsburg, March 11, 2020

KPMG AG

Wirtschaftsprüfungsgesellschaft

On March 24, 2021, the Supervisory Board dealt with the report on relationships with affiliated companies (dependency report) prepared by the Management Board pursuant to section 312 of the German Stock Corporation Act (AktG) for fiscal 2020. This report was reviewed by PricewaterhouseCoopers in its role as auditor for fiscal 2020. Following preparatory discussion by the Audit Committee, the Supervisory Board conducted a further review. All reviews confirmed the Management Board's final declaration that, with regard to the business relationships of KUKA Group with Midea companies in the 2020 fiscal year, appropriate compensation was received and KUKA companies did not suffer any disadvantages therefrom.

The audit opinion on the dependency report for fiscal 2020 reads verbatim as follows:

Audit results and audit opinion

In accordance with our mandate and section 313 of the German Stock Corporation Act (AktG), we have audited the report of the Management Board on relations with affiliated companies pursuant to section 312 AktG for the 2020 fiscal year. Since the final results of our audit do not give rise to any objections, we issue the following audit opinion in accordance with section 313 para. 3 sentence 1 AktG:

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

- 1. the factual statements made in the report are correct,
- 2. the payment made by the company for the legal transactions listed in the report was not unreasonably high,
- 3. there are no circumstances that would indicate a materially different assessment of the measures listed in the report than that of the Management Board.

Munich, March 10, 2021

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

Adoption of 2020 financial statements

After completing its own review of the financial statements for 2020 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 24, 2021. In the opinion of the Supervisory Board, the auditors' reports comply with the legal requirements stipulated in sections 317 and 321 of the German Commercial Code (HGB).

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

In its financial statements meeting on March 24, 2021, the Supervisory Board therefore approved KUKA Aktiengesellschaft's financial statements for fiscal 2020 as prepared by the Management Board. The annual financial statements are thereby adopted. The Supervisory Board also approved KUKA Aktiengesellschaft's consolidated financial statements for the 2020 fiscal year as prepared by the Management Board.

The Management Board recommended payment of a dividend of €0.11 per no-par-value share with dividend entitlement from the balance sheet profit. The Supervisory Board reviewed this recommendation at its meeting on March 24, 2021 and endorsed it.

Thanks to the staff

The Supervisory Board would like to thank all employees of the KUKA companies for their great dedication and hard work, especially during the COVID-19 pandemic. The Supervisory Board once again extends its thanks to the members of the Management Board, the CEOs of the Group companies and the employee representatives.

Augsburg, March 24, 2021

The Supervisory Board

Dr. Yanmin (Andy) Gu

Chairman

KUKA and the capital market

KUKA share

After the global slump in the first half of 2020, the economy recovered in the summer months, mainly due to catch-up effects. However, with the renewed rise in coronavirus infection figures, countries lost their newly gained momentum. The economic expectations of companies in Germany deteriorated again at the end of the year. Easing of the coronavirus measures led to a slow upturn in May 2020, with the ifo Business Climate Index rising five times in succession. Since October 2020, however, companies have once again taken a much more skeptical view of developments in the coming months. In October 2020, the Business Climate Index fell to 92.7 points after 93.3 points in September. The ifo Business Climate Index is regarded as an important early indicator of the development of the German economy. Even though this leading economic indicator suggests that the worst economic downturns are behind us, the global economy will long continue to feel the effects of the coronavirus pandemic, which saw the economy at a standstill for weeks on end. The ifo institute estimates that the pre-crisis level could be reached by the end of 2021.

2020 was both an exceptional and an unpredictable trading year for stock markets. The coronavirus pandemic led to one of the most severe recessions since the end of the Great Depression in the 1930s. In March 2020, the stock markets plummeted. Within only about four weeks, several billions worth of global market capitalization was wiped out. Many companies backtracked on their profit forecasts issued at the beginning of the year and stock market volatility increased. Tracking the performance of the 30 largest German stocks in terms of market capitalization and trading volume, the DAX fell nearly 40% from 13,789 points on February 19, 2020, to 8,442 points on March 18, 2020. To mitigate the consequences of the global pandemic, international central banks flooded the markets with liquidity and governments took extensive measures. Although this action, together with the easing of the coronavirus measures in May, led to a slow upturn, the pandemic was not over and the risks in the global economy remained high. This made the rapid recovery in the summer months with new record highs on the markets all the more surprising. After all, there was little change in the fundamental economic environment. Fear of the impact that a second wave of the pandemic would have in the latter half of the year was high.

The MDAX, which reflects the performance of the 60 largest companies after the DAX30 in terms of market capitalization and stock exchange turnover, increased by 8.8% since the beginning of the year and closed at 30,796 points on December 30, 2020. The CDAX, which tracks the performance of all German stocks in the Prime Standard and General Standard, closed at 1,298 points on December 30, 2020. The CDAX thus rose by 4.8%. The KUKA share (WKN: 620440, ISIN: DE0006204407) quickly recovered from the initial losses at the start of the coronavirus crisis. By December 30, 2020, the last day of trading in the reporting period, the share had risen in value by as much as 12.6% to €41.10. The share prices of companies in the so-called peer group, i. e. companies that have a similar business profile and are of a comparable size, developed very inconsistently, with performance ranging from minus 31% to plus 23%. The average daily trading volume of KUKA stock amounted to around 4,000 KUKA shares. Due to the share's low free float of only about 5.5%, its attractiveness for investors has diminished.

At the first online Annual General Meeting on June 19, 2020, the shareholders voted to pay a dividend of €0.15 per eligible share for fiscal 2019.

According to the last voting rights notification dated December 21, 2018, 94.55% of KUKA shares remain allocated to Midea Group Co., Ltd., Foshan, China, the parent company of Midea Group, as in the previous year. These shares are held directly by Midea Electric Netherlands (I) B. V. (81.04%) and Midea Electric Netherlands (II) B. V. (13.51%), two wholly-owned subsidiaries of Midea Group. The remaining 5.45% of KUKA shares are in free float. The KUKA share is listed in the Prime Standard segment.

			2016	2017	2018	2019	2020
Weighted average number of shares outstanding	millions of shares	36.14	39.60	39.78	39.78	39.78	39.78
Earnings per share	€	2.39	2.19	2.22	0.32	0.24	–2.59
Dividend per share	€	0.50	0.50	0.50	0.30	0.15	0.11[1]
High for the year (Xetra closing price)	€	85.59	110.00	248.90	126.80	63.60	41.20
Lowest price (Xetra closing price)	€	56.86	68.10	87.38	46.80	36.15	22.50
Year-end price (Xetra closing price)	€	83.05	88.55	121.15	50.80	36.50	41.10
Change year-on-year	%	41.0	6.6	36.8	–58.1	–28.1	12.6
Market capitalization (Dec. 31)	€ millions	3,198	3,506	4,819	2,021	1,452	1,635
Average daily volume	No. of shares	156,000	83,000	14,000	6,000	3,500	4,000

[1] Subject to approval by shareholders at the Annual General Meeting on May 21, 2021

KUKA share price performance
January 1 – December 31, 2020[1]

[1] December 30, 2019 = 100, stock performance indexed, Xetra stock price

Consolidated management report

Consolidated management report

Fundamental information about the Group

Group structure and business activities

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

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

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

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

Systems division

In an age of e-mobility, intelligent vehicles and entirely new services, the automotive industry is undergoing changes in all areas – from development and production to logistics. The Systems division is a partner for the automotive sector in the fields of robotics, automation and intralogistics. With adaptable, modular and automated manufacturing and logistics processes, Systems supports the automotive industry in making its production processes more efficient. Systems has been a strategic partner for major manufacturers worldwide for decades and is already working with its customers today on flexible, scalable concepts and solutions for the factory of tomorrow. As an automation specialist for hardware and software solutions, Systems is providing the crucial impulses for transforming the vision of Industrie 4.0 into corporate reality. From engineering and testing to servicing, its expertise serves a single purpose: to give its customers a decisive edge at all times. Driven by this commitment, Systems sets new global standards time and again. The Systems portfolio covers the entire value chain of a system: from individual system components, tools and fixtures to complete turnkey systems.

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

Robotics division

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

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

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

Swisslog division

With its Swisslog division, KUKA is tapping the growth markets of e-commerce / retail and consumer goods in the field of intralogistics. Based in Buchs, Aarau, Switzerland, Swisslog serves customers in over 50 countries worldwide.

The division implements integrated automation solutions for forward-looking warehouses and distribution centers. As a general contractor, this division offers complete turnkey solutions, from planning through to implementation and service, employing data-driven and robot-based automation in particular. Swisslog offers smart technologies, innovative software and adapted support services to 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 and pharmacists can gain more time for personal care and consultation. At the same time, the use of automation solutions can reduce the incidence of medication errors.

China division

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

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 2020, 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.

The Asia region shows growth potential, particularly in the Chinese market. KUKA has strengthened its presence in China in recent years.

In 2020, the global economy was at a historic low. The difficult political and economic situation was compounded by the coronavirus pandemic, and customers were reluctant to invest. The International Federation of Robotics (IFR) has forecast a recovery for the automation market in 2021 but does not expect the pre-crisis level to be reached again until 2022 / 2023. In the medium term, KUKA anticipates increased demand – particularly for robotic and automation solutions – as a result of the experiences made during the coronavirus crisis. Furthermore, catch-up effects from deferred investments are expected.

Corporate strategy

Megatrends such as digitalization, the customization of products, demographic changes, and also greater regionalization due to global uncertainties necessitate increasingly flexible and at the same time more efficient solutions in production and logistics environments. In the medium term, these trends are set to further intensify, primarily as a result of the experience gained from the coronavirus crisis. This experience shows how important new business models are becoming which enable customers to flexibly adapt their processes to rapidly changing market needs. New business models will thus fundamentally and permanently transform not only production in the future, but also the value creation process as a whole. Ever more companies, especially in markets that have not yet been automated to a great extent, are thinking about automating their core processes. KUKA focuses on accompanying customers through these changes and supporting them in the holistic optimization of their value creation.

KUKA is therefore committed to continuously advancing its automation and digitalization expertise and driving its technology developments and innovations further forward. As an automation specialist, KUKA offers its customers tailor-made solutions to ensure that they remain competitive in the face of sharp changes in the business environment and global challenges.

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. Focus on leadership in technology and innovation

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

KUKA moves in a highly dynamic, innovation-driven market environment, which is being continuously redefined. Robot-based automation is a megatrend in this context. In order to benefit from global trends and to optimally leverage in-house expertise, the Group is concentrating on leadership in innovation and technology. New business models are in greater demand than ever 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. Together with customers and partners, KUKA is developing smart products and solutions for the intelligent factory of the future. The robot is a key component in these endeavors. 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 by mobility and autonomous navigation, robots are becoming ever more intelligent and transforming into flexible production assistants. The trend is also towards robots that are simple to program, flexible to deploy and easily integrated and networked. 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 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.

In the field of intralogistics, KUKA concentrates on data-driven and robot-controlled automated logistics solutions. Here, Swisslog sets new standards in warehouse automation based on future-proof products. In 2020 Swisslog won the German Innovation Award in the "Machines & Engineering" category for its fully automated palletizing solution ACPaQ. Standardized automation solutions for core industries enhance material flow capabilities, maximize throughput and optimize life-cycle costs while being just as important as Swisslog's SynQ warehouse management software for streamlining material flow processes. With growing research & development investments in its own products, Swisslog is increasingly becoming a one-stop provider of automated logistics solutions.

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

2. Business expansion: new markets, software & services

KUKA is continuously diversifying its business activities into high-growth, profitable business segments

KUKA concentrates on markets that are primarily characterized by high growth and profit potential and on regional growth opportunities, especially in fast-growing Asian countries. 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 digitization expertise. This enables processes to be designed for greater efficiency and flexibility. Additionally, it optimizes 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 2020, KUKA further intensified its focus on the following strategic market segments:

Automotive / Tier 1

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

General industry

Probably the greatest advantage of robot-based automation is its high flexibility. Robots are not only used for handling and welding tasks, but also find a diverse spectrum of applications in different markets due to their wide-ranging functionalities. This opens up new growth opportunities while simultaneously reducing dependence on a specific industry. General industry markets, in other words non-automotive markets, include, for example, the metal and plastics industries, the construction sector and also the aerospace industry.

Electronics

The electronics industry is one of the most diverse sectors in the present-day industrial landscape. It encompasses the production of electrical household appliances, cutting-edge technologies such as semiconductors, solar cells, precision medical equipment and 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). In the electronics industry, we are expecting 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 fulfillment is crucial for profitable operations and can only be achieved in the long term through automation. The e-commerce segment is therefore an important sales market for smart logistics concepts based on intelligent software combined with innovative, robot-based automation.

Consumer goods

Robots have been efficiently supporting the production of fast-moving consumer goods (FMCG) for many years, especially in the food and beverage industry, but also in the manufacture of footwear or textiles, cosmetics and pharmaceuticals. New generations of robots that are sensitive and mobile are able to work hand in hand with humans. Supported by the software at the heart of each system, new areas of application are opened up 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: the aim is to boost efficiency and increase patient safety. With the aid of process optimizations in the field of medication management during and after in-patient treatment, hospital staff can free up more time for patient care. At the same time, the use of automation solutions can reduce the incidence of medication errors.

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. Efficiency in practice – anchoring sustainable, efficient cost structures in day-to-day business

The past financial year was characterized by a general economic downturn, triggered by the coronavirus pandemic. However, even before the pandemic, political tensions between the USA and China, but also between the USA and Europe, were dampening economic developments. As a result of the difficult underlying conditions, the cost structure in all divisions was intensively scrutinized and numerous measures were implemented at short notice to adjust to the current business situation. Our focus for the following financial year continues to remain on increased efficiency in all divisions.

Financial management system

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

The most important KPIs for KUKA Group are orders received (included for the first time in 2020), revenues, EBIT margin and free cash flow. For the segments subject to reporting requirements, orders received, revenues and EBIT margin are among the most important KPIs. A forecast for orders received will therefore be given for the first time in fiscal 2021. The development of the financial targets is presented in the "Business performance" section and under "Financial position and performance". Operating earnings before interest and taxes (EBIT) are compared to sales revenues to determine the return on sales. This results in the EBIT margin. EBIT is determined for KUKA Group and the divisions. Free cash flow represents the funds available to pay the claims of equity and debt capital providers.

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

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

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

Key performance indicators for KUKA Group over 5-year period

in € millions	2016	2017	2018	2019	2020
Orders received	3,422.3	3,614.3	3,305.3	3,190.7	2,792.2
Sales revenues	2,948.9	3,479.1	3,242.1	3,192.6	2,573.5
EBIT margin	4.3%	3.0%	1.1%	1.5%	–4.4%
Free cash flow	–106.8	–135.7	–213.7	20.7	37.0

Achievement of targets

In March 2020, KUKA published its targets for the full year 2020. KUKA predicted sales revenues at the previous year's level and a slight year-on-year increase in the EBIT margin to a low single-digit percentage, but pointed out that this forecast did not take possible effects of the coronavirus crisis into account. KUKA's business development was significantly impacted by the coronavirus pandemic. On publication of the interim report on August 5, 2020, the effects of the coronavirus crisis that were already visible by that time were included in the forecast. Taking these assumptions into account, it was expected that both revenues and the EBIT margin would be clearly below the previous year's level. A negative EBIT margin was predicted for the full year.

For 2020 as a whole, KUKA Group expected the market environment to remain difficult. That was because the weak global economy and the continuing uncertainties meant that customers were still holding back on investments. This applied to both automotive customers and customers in general industry. At that time, it was not possible to assess the risks of the coronavirus pandemic. However, KUKA worked on the assumption that these developments would have a negative impact on the market environment and expected a fall in demand in fiscal 2020.

From a sector perspective, KUKA predicted a stable development of the sales markets in general industry compared with the previous year. A decline was expected for the automotive industry as a whole, but this was coupled with the warning that the situation could worsen due to the coronavirus crisis.

The target figures for sales revenues and EBIT margin published in March 2020 were not achieved due to the effects of the coronavirus pandemic, which were not foreseeable at that time. The Group generated sales revenues totaling €2,573.5 million (2019: €3,192.6 million). The EBIT margin was –4.4% compared with 1.5% in the previous year. Orders received were below expectations at €2,792.2 million (2019: €3,190.7 million). For detailed information on the development of the segments, please refer to "Business performance".

Earnings after taxes amounted to –€94.6 million and thus fell significantly below the previous year's level (2019: €17.8 million).

Free cash flow in fiscal 2020 was positive, amounting to €37.0 million. The forecast free cash flow, which was expected to be slightly higher than the previous year (2019: €20.7 million), was significantly exceeded. For detailed information, please refer to the chapter "Financial position and performance".

2020 target values

in € millions	ACTUAL 2019	Target 2020 (March 2020 forecast)	Target 2020 (1st quarter forecast)	Target 2020 (2nd quarter forecast)	Target 2020 (3rd quarter forecast)	Ad hoc announcement Dec. 22, 2020[3]
Sales revenues	3,192.6	At prior-year level[1]	At prior-year level[1]	Significantly below prior-year level[2]	Significantly below prior-year level[2]	Around €2.6 billion
EBIT margin	1.5%	Rising slightly[1]	Rising slightly[1]	Significantly below prior-year level[2]	Significantly below prior-year level[2]	–4.1% to –4.6%

[1] It was not yet possible to estimate the effects of the coronavirus crisis on the forecast results at the time of preparing the statement and they were therefore not taken into account in the forecast.

[2] Including the coronavirus crisis effects visible at this time

[3] Substantiation of the 2020 forecast

Research and development

The area of research and development (R&D) is of crucial importance for the sustainable and long-term success of KUKA. Research and development expenditure amounted to €178.0 million in 2020, higher than the value for the previous year (2019: €160.5 million).

KUKA's research and development activities are based on market needs, customer requirements and expected trends. KUKA's Corporate Research is active on a Group-wide scale and develops technologies for the Group companies. It collaborates closely with universities and institutes worldwide. Through its research and development activities, KUKA is able to open up new areas of application and further advance technological progress. In 2020, global R&D activities were reorganized. The R&D department in China was further expanded. Moreover, R&D activities were relocated from Austin (USA) to Germany and the Austin site was closed.

In the year under review, KUKA Group filed a total of 110 patent and utility model applications and 278 patents and utility models were granted. The focus was on innovations in the area of simplified use and on applications for current and future key technologies in industrial production, logistics, mobility and human-robot collaboration, as well as new products for focused growth markets such as Asia.

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

For top performance in production: KR SCARA*

As a robot of the latest generation, the compact KR SCARA is tailored in all parameters to flexible use in production. The two new KR SCARA robots make automation easier and more economical thanks to their flexibility. Both models are light and streamlined, yet offer outstanding speed and performance with a maximum payload of six kilograms. The KR SCARA robots feature an internally-routed media supply for air, power and data – a complete package for the smart integration of peripheral devices and fast adaptation of the KR SCARA robot to virtually any desired application. Whether for assembly of small parts, material handling or inspection – the KR SCARA robots are flexible in installation, highly precise in motion and modest in their maintenance requirements.

The new KR C5 controller generation*

The new KR C5 controller generation and the corresponding Micro variant will be replacing the KR C4 as the universal control system in the future. As the new standard platform, it forms the functional basis for the entire robot product range and all relevant software packages, offering companies more opportunities and delivering better results. The new generation can not only be seamlessly integrated into existing automation landscapes, but can also easily take on current KR C4 applications as a "functional twin". In addition, the KR C5 is significantly more compact and requires less energy than the previous generation.

Fast and precise treatment of tumors and metastases with robots*

The virtual knife, better known as the CyberKnife®, is an alternative to conventional radiotherapy. Equipped with a KUKA robot, the system is used in radiosurgery, i. e. treatment applying radiation with the utmost precision. Thanks to the integration of an image guidance system with robotic technology, accuracy within a millimeter is achieved. This means that high-precision robot- and image-guided radiotherapy can now be performed on tumors throughout the body.

In addition to the robotic component, several digital X-ray cameras and an infrared camera are integrated, which are required for tracking brain and spine treatments as well as organ movements. A breathing model can thus be computed, enabling radiation to be administered with pinpoint accuracy without damaging surrounding tissue. In addition, the integrated RoboCouch system – a robot-guided treatment table, also based on KUKA robotics – allows intelligent positioning of the patient in the planned treatment position from the control room without manual patient alignment. This shortens treatment times and ensures greater precision of radiosurgery. The treatment runs fully automatically with an accuracy of 0.5 millimeters – a degree of precision that no surgeon could match.

Maximum performance and flexibility in a streamlined design: the new KR CYBERTECH nano*

Whether as a handling robot, as a welding robot, for palletizing or for adhesive application: the wide range of models and equipment of the new KR CYBERTECH nano from KUKA ensures almost unlimited application possibilities. In the low payload category between six and ten kilograms, the cost-effective robot stands out for its speed and outstanding precision while keeping investment and maintenance costs low.

The new robot also excels in the handling of sensitive electronic components, being protected against uncontrolled electrostatic charge or discharge (ESD). Even humid or harsh environments are no problem for the KR CYBERTECH nano: the main axes are protected to IP 65 against dust and water, the wrist axes even to IP 67.

The KR CYBERTECH nano is optimized for use with the new-generation KR C5 robot controller from KUKA in combination with the latest KUKA. SystemSoftware KSS 8.7. The integrated 600 V technology ensures high performance, while the finely tuned Motion Modes allow the robot to work precisely, quickly and adaptably. Its high repeatability at any speed makes the KR CYBERTECH nano well suited for compact cells, complex tasks and challenging production chains. The further refined motion characteristics compared to the previous series guarantee precise continuous-path performance.

COVID-19 test robot in continuous action combating the virus*

The LBR iiwa test robot that has been in operation in the laboratory of Bulovka Hospital in Prague since mid-March 2020 adds a solution to nasopharyngeal swabs from patients in order to detect the genetic material of the coronavirus. A positive test result indicates that the patient is infected with coronavirus. The laboratory handles some 300 to 400 samples per day, with the laboratory staff examining up to 670 samples a day at peak times when the pandemic broke out. Use of the test robot has greatly simplified the test procedure: by means of a pipette, the KUKA laboratory robot adds a chemical to the samples one after the other, checking with its integrated industrial balance whether the correct amount of liquid has been added. The KUKA robot can pipette up to 700 samples per day in the coronavirus application. For the hospital, the test robot brings relief in two respects: the Czech Institute of Informatics, Robotics and Cybernetics (CIIRC) at the Czech Technical University in Prague (CTU) is providing the robot free of charge. In just 14 days, from the initial planning meeting to the first use in the laboratory, researchers and students at the university had designed the mechanical assistant, configured it with a pipette and computer-controlled balance, and programmed it to pipette the samples. The KUKA laboratory robot has now been working untiringly in the coronavirus application since the beginning of April.

Intelligent intralogistics in production*

The key factor for versatile production is the connectivity of industrial production processes and components. IIoT and autonomous material handling systems are important drivers enabling fully automated and versatile intralogistics concepts. Using artificial intelligence, the KUKA AIVI master control system controls the automated guided vehicles (AGVs), optimizing the flow of materials to the production line and ensuring perfect utilization of the AGVs at the same time. KUKA AIVI controls all intralogistics production processes for faster throughput times, a more efficient supply chain and thus greater cost-effectiveness of production. In addition, the software interacts with other (automated) vehicles, machines and employees, reacting flexibly and safely to the constantly changing production requirements.

Award for new ACPaQ solution concept from Swisslog*

The fully automated Swisslog palletizing solution ACPaQ won the German Innovation Award 2020 in the “Machines & Engineering” category. The award is presented for outstanding innovations and recognizes applications that differ from existing solutions, particularly in terms of their user-oriented development and added value for customers. The prize is awarded by the German Design Council and funded by the German parliament.

ACPaQ combines high-end robotics from KUKA with Swisslog’s many years of expertise in logistics. This solution creates mixed pallets fully automatically. The human operator is meanwhile relieved of a physical burden, as the robot takes over all lifting operations. Moreover, the modular system can be individually expanded and adapted and can handle up to 1,000 units per hour, no matter whether at room temperature or in the cooling zone.

The German Logistics Association (BVL) presented the German Logistics Award 2020 to the retail company dm-drogerie markt in recognition of the project “Integrative. Intelligent. Automated.”. Swisslog’s ACPaQ solution concept is used here as well.

Global Company of the Year Award 2020 for KUKA Medical Robots Division*

Unique, advanced, valuable: the consulting company Frost & Sullivan has analyzed the market for medical robots and praises the LBR Med from KUKA as one of the most advanced robots in the sector. Its flexibility and versatility, which are of great importance in the medical sector, were particularly highlighted. The robot system is suitable for a wide range of different applications in the field of medical technology. For these reasons, the KUKA Medical Robotics Division received the “Global Company of the Year Award 2020”.

KUKA Innovation Award 2020*

Each year, research teams and young talents from around the world compete for the KUKA Innovation Award with their innovative ideas. In the financial year under review, an international jury selected the five best robotics ideas on the topics of diagnostics, surgery, therapy and rehabilitation. This year’s winning team, HIFUS from the Italian Scuola Superiore Sant’Anna, developed a non-invasive surgical procedure based on a sensitive LBR Med and high-intensity focused ultrasound. It allows precise surgical treatment without incisions, anesthesia or ionization energy. This year, the Innovation Award, endowed with prize money of 20,000 euro, was presented during a live web session.

* Not verified by auditors

Procurement

Efficient purchasing and procurement management is essential for successful execution of customer orders. 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.

A close strategic partnership is maintained with key suppliers. Stable and reliably functioning customer-supplier relationships are of great importance to us. Particularly during the coronavirus pandemic outbreak, we were able to draw on our robust global network. In addition to dual and multiple sourcing strategies, supplies for production were secured with the aid of flexible delivery and warehousing concepts, as well as in-house production capacities in Hungary and Augsburg. During the lockdown in China, increased use was thus made of European suppliers, while Chinese vendors stepped in to help out when local or regional supply capabilities in Europe were limited due to rising infection rates. Under these difficult conditions, the robot production facilities in Augsburg and China were able to continue operating without interruption, not least thanks to the great commitment of the employees. However, individual production sites had to be temporarily closed due to official directives, for example in Italy and the USA.

The processes in the procurement departments within the segments are being increasingly standardized and regularly improved. This allows KUKA to further optimize its delivery capability. 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.

To improve quality, increase flexibility and achieve cost advantages, KUKA regularly reviews and optimizes its supplier base. The focus at Robotics was on expanding local suppliers.

Economic report

Macroeconomic and industry conditions

The pandemic is impacting the global economy

In the first half-year 2020, the global economy suffered a slump as a result of the coronavirus pandemic. Even though there were moderate signs of recovery in the summer months, new lockdowns in many parts of the world weighed on the economy towards the end of the year. The Organization for Economic Cooperation and Development (OECD) revised its original growth forecast of 2.9% for the year as a whole (OECD Economic Outlook November 2019) and in June 2020 predicted that the global economy would contract by as much as 7.6%. The outlook improved slightly at the end of the year and a decline of only 4.2% was expected (OECD Economic Outlook December 2020). In the OECD's view, governments must continue to provide aid in order to prevent insolvencies and a rise in unemployment. For the eurozone economy, a decline of 7.3% is expected for 2020. A downturn of 5.5% is forecast for the German economy and 3.7% for the USA. Only China is projected to develop positively, with growth of 1.8%. The International Monetary Fund (IMF) also expects the negative consequences for the economy to be serious and that the economy will recover more slowly than previously assumed in a somewhat optimistic scenario. According to the IMF, the world is facing the worst recession since the Great Depression. Poverty and unemployment will become more severe worldwide.

The pandemic has led to a worldwide increase in unemployment. Compared to February 2020, unemployment rose by 1.25 percentage points in September 2020 (median of OECD countries). Here, too, there were great regional differences. While unemployment rose sharply in the USA and Canada in particular, measures such as furlough schemes in the EU resulted in a comparatively moderate increase. The younger generation was hit especially hard. The corresponding unemployment rate even rose by three percentage points (median of OECD countries). Furthermore, the number of hours worked declined, especially in the low-wage sector. According to the OECD, this will further increase the already high level of inequality. The OECD appealed to governments not to discontinue their aid measures too early in order to maintain support for the economy and above all to help those who have been most severely affected by the crisis.

The economic and social consequences of the coronavirus pandemic posed a dilemma for many countries: strict curfew rules were imposed to combat the crisis, which led to costly fiscal relief measures. An easing of restrictions boosted the economy, but this in turn caused an increase in new infections and a renewed risk of economic setbacks. According to the OECD, it is now important to expedite the availability of vaccines and to cooperate effectively in their distribution in order to promote confidence and thus the economic recovery. A delay in vaccine supplies or difficulties in containing new outbreaks of infections, on the other hand, would again dampen hopes of improvement.

The recovery tendencies in the second half of the year are reflected in the Business Climate Index of the ifo Institute for Economic Research. This is regarded as an early indicator of economic development in Germany. The ifo index rose to 92.1 points in December 2020 after 90.7 points in November. Companies are more satisfied with the current business situation and have a less skeptical outlook on the coming six months. The lockdown is hitting some sectors hard, but the German economy as a whole is proving resilient.

The coronavirus shock and the fundamental structural transformation will occupy the automotive industry for some years to come

The coronavirus pandemic has led to a worldwide collapse of automotive markets. In Europe, new registrations fell by 24% to only around 12 million cars in 2020. All European markets experienced a double-digit percentage decline. New registrations were down 19% in Germany, 25% in France, 29% in the UK and even 32% in Spain. The light vehicle market in the USA, which includes passenger cars and light trucks, contracted by 15% to just under 14.5 million vehicles. This was the first time since 2012 that the figure fell below the 15 million mark. Sales declined by 28% in the passenger car market and by 10% in the light truck segment, which accounts for 76% of the light vehicle market. With a downturn of 6%, the passenger car market in China was only mildly affected compared to the above-mentioned countries. The Chinese automotive market recovered quickly from the severe consequences of the pandemic. The VDA expects the global car market to grow overall in 2021. However, most markets will not yet reach the levels seen before the coronavirus pandemic. Technological change and the effects of the coronavirus pandemic will continue to put pressure on the margins of automotive suppliers for some years to come. Suppliers will have to realign their business and cut costs significantly at the same time. They will have to make targeted investments in order to develop future growth segments profitably. According to the "Global Automotive Supplier Study 2020" conducted by Roland Berger in cooperation with the US investment bank Lazard, the peak of 94.3 million passenger cars sold worldwide in 2017 is unlikely to be reached again until 2026 at the earliest, following the severe slump caused by the coronavirus pandemic. It is expected to take even longer in Europe and North America, while China and South America are set to recover more quickly.

Mechanical and plant engineering industry anticipates slight recovery in 2021

The decline in German mechanical engineering production was markedly worsened by the coronavirus pandemic in 2020. The market had already contracted by 2.6% in 2019. For 2020, the German Mechanical Engineering Industry Association (VDMA) expects production to fall by 14%, thereby correcting its previous forecast, which had assumed a decline of 17%. The third quarter of 2020 in particular developed better than expected. For 2021, an increase of 4% to a total of 202 billion euro is expected again. The brighter economic expectations for 2021 and the acceleration of technological change give cause for optimism. But the pre-crisis level of 226 billion euro in 2019 will thus still not be reached. In its forecast, the VDMA points to the high degree of uncertainty in the global economy. The volatile state of the world economy is having a negative impact on the capital goods sector and thus affecting mechanical and plant engineering to a particular extent.

Despite the declines in 2020, companies were able to keep workforce reductions within limits. This was possible due to government measures such as short-time working. In the spring, the number of employees on short-time work in the mechanical engineering sector reached 300,000 at times. At the end of the year, the figure was only around 200,000 according to the Federal Employment Agency.

With an estimated 1.025 million employees at the end of 2020, the mechanical and plant engineering sector remains Germany's largest industrial employer. Europe is and remains the most important market, accounting for around 43% of all exports in the first half-year 2020. The VDMA regards the EU's ambitions to be a pioneer in climate protection as the right approach. This will create great opportunities for mechanical and plant engineering. In the USA, too, the envisaged restructuring of US industry towards a much more social and climate-oriented economy is opening up new opportunities for the European engineering sector. Nevertheless, politicians must also consider the time horizons that industry requires for planning.

Flexible production and logistics solutions are gaining in importance

In September 2020, the International Federation of Robotics (IFR) published the full-year figures for global robot sales in 2019. These figures indicated that around 373,000 robots were installed worldwide in 2019. This corresponds to a 12% decline on the previous year. Uncertainties such as the trade disputes between the USA and China, between the USA and Europe and also Brexit caused companies worldwide to hold back on investments. The 2019 figures did not yet include any coronavirus-related downturn. Of the robots sold in 2019, more than a third were installed in China. From a sector perspective, the automotive industry with 28% of all robots installed worldwide and the electronics industry with 24% were the largest customer segments. As a result of the global uncertainties, particularly in connection with the effects of the coronavirus pandemic, the IFR has for the first time refrained from making a specific forecast, presenting three possible scenarios for the coming years instead, as even basic assumptions are subject to a high degree of uncertainty. It sees different starting times for the anticipated recovery, depending on the market. A gradual recovery from 2021 onwards is regarded as most likely. According to this assessment, however, the pre-crisis level will not be reached again until 2022 or 2023.

Innovations, technologies and new solutions are opening up new fields of application. Automation enables companies of different sizes in a variety of sectors to organize 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. Automation is opening up potential in the logistics sector, among others. Here, the use of data-driven and robot-controlled logistics solutions is becoming increasingly attractive. Furthermore, automated production steps and so-called cobots – robots that collaborate directly with humans – can help to ensure that minimum distances are maintained in production. In this way, companies can produce safely and flexibly. In the medium term, global megatrends such as the increasing customization of products, digitalization, demographic changes and also progressive regionalization will grow continually stronger. This will necessitate increasingly flexible and at the same time more efficient solutions in production and logistics environments.

Business performance

KUKA Group

After a slight economic recovery in the third quarter, the increase in coronavirus cases at the end of the year led to renewed stricter government coronavirus measures, and curfew restrictions were tightened again in many countries. Although KUKA was able to further improve its cost structure by intensifying the ongoing efficiency program, the market environment deteriorated significantly as a consequence of the coronavirus crisis, and customers' willingness to invest diminished sharply. All segments were affected, with substantial declines in some cases.

In KUKA Group, the volume of orders received fell 12.5% from €3,190.7 million to €2,792.2 million in the year under review. The low order volume, but also project delays due partly to the restrictions imposed in connection with the coronavirus measures, led to a decline in revenues. Plant closures and travel restrictions placed severe constraints on project execution. Consequently, some orders could not be completed in the timeframe originally planned and revenues decreased by 19.4% to €2,573.5 million (2019: €3,192.6 million). The book-to-bill ratio was 1.08 in the 2020 financial year, a small increase on the previous year (2019: 1.00). The order backlog increased by 1.3% from €1,967.4 million as at December 31, 2019 to €1,992.6 million as at December 31, 2020. The market environment had already been difficult in previous years due to global uncertainties. The worldwide COVID-19 pandemic further worsened the underlying conditions considerably and weighed on KUKA's overall performance. Earnings were also impacted by the need for extensive reorganization measures, for which a low to mid double-digit million provision was recognized in December 2020. These effects cumulatively led to an EBIT of –€113.2 million (2019: €47.8 million). The EBIT margin declined from 1.5% to –4.4% in 2020.

Systems

The Systems business segment saw its volume of orders received fall from €858.0 million in 2019 to €715.3 million in the year under review. This corresponds to a substantial decline of 16.6% and reflects the massive global impact of the COVID-19 pandemic and the associated reluctance of customers in the automotive industry to invest. The sales revenues of €671.6 million were down on the previous year's level of €925.4 million. The sharp 27.4% drop in revenues was mainly due to the weak order situation and the coronavirus measures such as plant closures, which led to delays in order execution. The book-to-bill ratio increased, year on year, from 0.93 to 1.07 in 2020. The order backlog totaled €591.0 million as at December 31, 2020 (December 31, 2019: €614.3 million). EBIT amounted to –€37.4 million, significantly below the previous year's level of €27.7 million. Earnings were impacted by the difficult order situation and increased pressure on margins. In addition, deteriorations in individual projects in Europe also depressed earnings, especially in the first half-year. The EBIT margin fell from 3.0% to –5.6% in the financial year under review.

Robotics

In the 2020 financial year, the Robotics segment generated new orders worth €901.3 million. The general conditions deteriorated significantly once again as a result of the COVID-19 pandemic, leading to a year-on-year decline of 13.1% (2019: €1,037.1 million). With the lower order volume due to the substantial decline in customers' willingness to invest, sales revenues also fell by 22.4% from €1,159.2 million in 2019 to €899.2 million in the year under review. Customers from both the automotive industry and general industry held back on orders and postponed their planned investments and training courses for KUKA robots and support services. The book-to-bill ratio stood at 1.00 (2019: 0.89). The order backlog totaled €266.3 million as at December 31, 2020 (December 31, 2019: €275.8 million). Earnings were impacted by provisions for extensive necessary reorganization measures, especially for the Augsburg site. Moreover, the low revenue level also had a negative effect and resulted in EBIT of –€3.9 million, compared with €63.2 million in the previous year. The EBIT margin of –0.4% was down on the previous year's figure of 5.5%.

Swisslog

On account of a major order booked in the previous year, Swisslog recorded a 14.2% decrease in orders received to €643.9 million, after €750.2 million in the 2019 financial year. If this large order were to be factored out, the volume of orders received would even exceed the previous year's figure. Temporary closures of customer plants and travel restrictions due to the pandemic led to delays in order execution, which had an impact on revenues. Sales revenues dropped 12.1% to €527.7 million from €600.0 million in the previous year. The book-to-bill ratio fell to 1.22 (2019: 1.25). The order backlog stood at €726.6 million as at December 31, 2020, after €653.9 million as at December 31, 2019. EBIT fell sharply to €2.9 million after €18.2 million in the previous year. The decline resulted from the lower revenue volume but also from project deteriorations. The EBIT margin decreased to 0.5% from 3.0% in 2019.

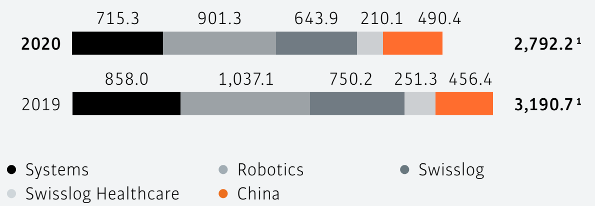
Swisslog Healthcare

At €210.1 million, orders received at Swisslog Healthcare in 2020 were 16.4% below the previous year's figure of €251.3 million. Due to the coronavirus pandemic, investment decisions were postponed, which also affected sales revenues as a consequence. The situation has been compounded by restricted access to hospitals since the beginning of the pandemic. The revenues of €217.0 million achieved in the reporting period were 2.4% below the previous year's level of €222.3 million. The book-to-bill ratio deteriorated from 1.13 in 2019 to 0.97 in 2020. The order backlog of €199.7 million as at December 31, 2020, showed a decrease, year on year (December 31, 2019: €231.4 million). EBIT rose to €3.1 million, after −€9.2 million in the previous year. This corresponds to an EBIT margin of 1.4% (2019: −4.1%). This improvement is attributable to the successful implementation of measures from the efficiency program with optimizations in process and project management.

China

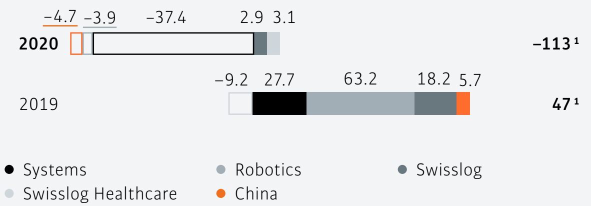
In 2020, the China segment posted orders received amounting to €490.4 million. This represents an increase of 7.4% on the previous year (2019: €456.4 million). The massive impact of the coronavirus crisis in the first six months was offset by the appreciable recovery in the second half of the year. Customers increasingly invested in robot-based automation solutions again. However, the sharp declines in orders at the beginning of the year and delays in project execution due to curfew-related restrictions led to a 13.3% drop in revenues from €458.2 million to €397.1 million. The book-to-bill ratio rose to 1.23 in 2020 (2019: 1.00). The order backlog grew from €229.2 million as at December 31, 2019 to €270.6 million as at December 31, 2020. EBIT amounted to −€4.7 million in the past year (2019: €5.7 million). This corresponds to an EBIT margin of −1.2% (2019: 1.2%). The fiscal year was heavily influenced by the coronavirus pandemic. Positive effects came from the measures introduced to optimize working capital and from grants for R&D activities.

Orders received
in € millions



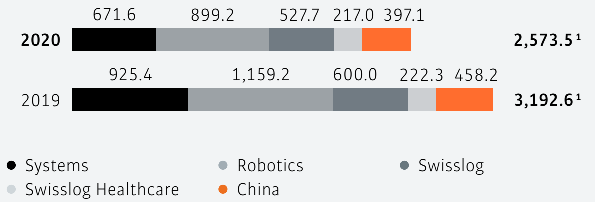
1 Group incl. consolidation and Corporate Functions

EBIT
in € millions



1 Group incl. consolidation and Corporate Functions

Sales revenues
in € millions



1 Group incl. consolidation and Corporate Functions

Financial position and performance

Summary

The market environment, which was already difficult, worsened significantly with the outbreak of the coronavirus pandemic, and customers' willingness to invest declined further. Already at the start of the financial year, the high coronavirus infection rates in many regions of China led to major constraints on public and business life as a result of official restrictions. The subsequent worldwide spread of the virus along with the associated curfews and production shutdowns had a negative impact on KUKA Group. The third quarter saw the economy recover slightly. Due to the renewed increase in cases worldwide, wide-reaching government measures were once again put into effect in many countries to contain the pandemic. KUKA Group immediately implemented measures and intensified its ongoing efficiency program at the beginning of the year in order to mitigate the impact on business development. One important measure was the introduction of short-time working at the German locations. Similar models were also adopted in other countries. The difficult market environment rendered further measures necessary, however.

In the fourth quarter of 2020, KUKA Group introduced far-reaching and necessary restructuring measures, particularly at the Augsburg location, which also include a total of 270 full-time job cuts. This affects the Robotics, Systems and Corporate Functions business segments. The costs in the low to mid double-digit million euro range and the considerable impact of the coronavirus pandemic led to an adjustment of the forecast. Instead of sales revenues of around €3.2 billion and an EBIT margin higher than 1.5%, KUKA Group now forecast revenues of around €2.6 billion and an EBIT margin of –4.1% to –4.6%.

For the second year in a row, KUKA Group was able to generate a positive free cash flow. Capital expenditure was down on the previous year, but numerous investments were nevertheless upheld. Thanks to the consistent implementation of optimization measures in the operating business, it was possible to improve trade working capital significantly.

The order backlog rose slightly and was unchanged on the previous year at around €2.0 billion. This indicates good capacity utilization in fiscal 2021.

The effects of the worldwide pandemic and the associated difficult market environment caused KUKA Group's earnings before interest and taxes (EBIT) to fall to –€113.2 million (2019: €47.8 million). This corresponds to an EBIT margin of –4.4% after 1.5% in the previous year. EBIT of the Systems business segment decreased from €27.7 million in 2019 to –€37.4 million in 2020. The EBIT margin thus stood at –5.6% after 3.0% in the previous year. In addition to the general economic conditions, the burdens from the reorganization had a negative impact on earnings in the Robotics segment. EBIT fell from €63.2 million in 2019 to –€3.9 million in 2020, corresponding to an EBIT margin of 5.5% and –0.4% respectively. The Swisslog business segment reported a decrease in EBIT from €18.2 million (EBIT margin 3.0%) in 2019 to €2.9 million (EBIT margin: 0.5%) in 2020. By contrast, the Swisslog Healthcare segment recorded a significant increase in EBIT. This rose from –€9.2 million in 2019 to €3.1 million in 2020. The EBIT margin improved from –4.1% to 1.4%. The EBIT of –€4.7 million in 2020 in the China segment was significantly down on the previous year (2019: €5.7 million). This corresponds to an EBIT margin of –1.2% compared with 1.2% in the previous year. Fiscal 2020 as a whole was not satisfactory due to the difficult market environment.

Earnings

At €2,792.2 million, orders received in fiscal 2020 were down €398.5 million on the previous year (2019: €3,190.7 million), reflecting the currently tense overall economic situation and the resulting reluctance of customers to invest. This also impacted sales revenues in the past fiscal year, which fell by €619.1 million year on year to €2,573.5 million (2019: €3,192.6 million). The order backlog rose slightly by €25.2 million from €1,967.4 million as at December 31, 2019 to €1,992.6 million as at December 31, 2020. With a volume of around €2 billion, our order backlog remains at a high level.

in € millions	2016	2017	2018	2019	2020
Orders received	3,422.3	3,614.3	3,305.3	3,190.7	2,792.2
Order backlog	2,048.9	2,157.9	2,055.7	1,967.4	1,992.6
Sales revenues	2,948.9	3,479.1	3,242.1	3,192.6	2,573.5
EBIT	127.2	102.7	34.3	47.8	–113.2
in % of revenues	4.3	3.0	1.1	1.5	–4.4
in % of capital employed (ROCE)	16.2	10.9	2.9	3.5	–8.6
EBITDA	205.3	180.2	121.2	176.5	33.2
in % of revenues	7.0	5.2	3.7	5.5	1.3
(Average) capital employed	783.0	950.4	1,185.0	1,374.3	1,321.1
Employees (Dec. 31) [1]	13,188	14,256	14,235	14,014	13,700

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

At the start of fiscal 2020, KUKA Group intensified measures to optimize working capital, to focus on sales potential and to integrate business units acquired in the past. This results in changes to some key performance indicators in the individual segments, but has no effect on the Group figures, as there is an offsetting effect in the reconciliation column. In order to ensure comparability with the previous year, the comparative figures for fiscal 2019 have been adjusted. The improved segment structure introduced in the previous year – KUKA Business Organization (KBO) – remained unchanged, including double reporting for certain Chinese companies both in the China business segment and at Swisslog or Swisslog Healthcare. A description of the segment structure can be found in the section “Fundamental information about the Group”.

The sales revenues of €671.6 million generated in the Systems business segment were €253.8 million or 27.4% lower than in the previous year (2019: €925.4 million). Orders received fell by 16.6% from €858.0 million in 2019 to €715.3 million in 2020. The order backlog as at December 31, 2020 was down slightly by 3.8% to €591.0 million (December 31, 2019: €614.3 million). EBIT fell from €27.7 million in 2019 to –€37.4 million in 2020, resulting in an EBIT margin of 3.0% in 2019 and –5.6% in 2020. Earnings were impacted by the difficult order situation and increased pressure on margins. In addition, deteriorations in individual projects in Europe also depressed earnings.

The Robotics business unit achieved sales revenues of €899.2 million in 2020. This represents a decline of €260.0 million or 22.4%. Orders received fell by €135.8 million or 13.1% in fiscal 2020. This corresponds to orders received totaling €901.3 million after €1,037.1 million in 2019. The order backlog remains virtually unchanged at €266.3 million as at December 31, 2020 after €275.8 million as at December 31, 2019. EBIT fell from €63.2 million (EBIT margin: 5.5%) in 2019 to –€3.9 million (EBIT margin: –0.4%) in 2020. Earnings were impacted by necessary reorganization measures and the lower revenue level.

In the Swisslog segment, sales revenues decreased in 2020 by 12.1% to €527.7 million (2019: €600.0 million). Swisslog also recorded a drop of 14.2% or €106,3 million in orders received (2020: €643.9 million; 2019: €750.2 million). Swisslog received a major order in the previous year. If this were eliminated, orders received would be higher than in the previous year. By contrast, the order backlog rose by €72.7 million or 11.1% to €726.6 million as at December 31, 2020 (December 31, 2019: €653.9 million). EBIT fell from €18.2 million in 2019 to €2.9 million in 2020, corresponding to an EBIT margin of 3.0% and 0.5% respectively. The decline was due to the lower revenue volume and project deteriorations.

Sales revenues in the Swisslog Healthcare business segment were around the previous year’s level at €217.0 million (2019: €222.3 million). Orders received fell from €251.3 million in 2019 to €210.1 million in 2020, corresponding to a decline of 16.4% or €41.2 million. The order backlog was also down, totaling €199.7 million at the end of fiscal 2020 (December 31, 2019: €231.4 million). EBIT, on the other hand, rose significantly from –€9.2 million in 2019 to €3.1 million in 2020. This resulted in an EBIT margin of 1.4% after –4.1% in the previous year. The improvement was attributable to optimizations in process and project management and the successful implementation of the measures from the efficiency program.

In the China business segment, sales revenues fell by €61.1 million or 13.3% in fiscal 2020 from €458.2 million to €397.1 million. It was not possible to compensate fully for the effects of the coronavirus pandemic at the beginning of the fiscal year and delays in project execution. By contrast, orders received rose by 7.4% to €490.4 million (2019: €456.4 million). A slight recovery was observed here. Due to the increased order volume, the order backlog also grew. As at December 31, 2020, this totaled €270.6 million – a plus of €41.4 million or 18.1% on the previous year (December 31, 2019: €229.2 million). EBIT fell to –€4.7 million (2019: €5.7 million). The EBIT margin was –1.2% after 1.2% in the previous year. The measures introduced to optimize working capital, and grants for R&D activities had a positive effect on EBIT.

The gross profit of €504.1 million generated by KUKA Group in fiscal 2020 was down 25.5% or €172.9 million on the previous year (2019: €677.0 million). This corresponds to a gross margin of 19.6% after 21.2% in fiscal 2019. The lower revenue volume, project deteriorations and the coronavirus-related measures such as plant closures, which led to delays in order processing, had a significant impact on gross profit. Within the business segments, the gross margin developed very differently. It fell in the business segments Systems (2020: 2.9%; 2019: 10.6%) and Swisslog (2020: 17.8%; 2019: 18.6%), whereas an increase was recorded in the segments Robotics (2020: 31.7%; 2019: 31.2%), Swisslog Healthcare (2020: 34.1%; 2019: 32.9%) and China (2020: 11.7%; 2019: 8.3%).

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

Key figures – Systems

in € millions	2019	2020
Orders received	858.0	715.3
Order backlog	614.3	591.0
Sales revenues	925.4	671.6
EBIT	27.7	–37.4
in % of revenues	3.0%	–5.6%
in % of capital employed (ROCE)	9.3%	–13.2%
EBITDA	44.2	–18.1
in % of revenues	4.8%	–2.7%
Capital employed	299.1	284.3
Employees (Dec. 31)	3,208	3,033

Key figures – Robotics

in € millions	2019	2020
Orders received	1,037.1	901.3
Order backlog	275.8	266.3
Sales revenues	1,159.2	899.2
EBIT	63.2	–3.9
in % of revenues	5.5%	–0.4%
in % of capital employed (ROCE)	14.8%	–1.0%
EBITDA	105.6	46.4
in % of revenues	9.1%	5.2%
Capital employed	428.3	407.7
Employees (Dec. 31)	5,502	5,197

Key figures – Swisslog

in € millions	2019	2020
Orders received	750.2	643.9
Order backlog	653.9	726.6
Sales revenues	600.0	527.7
EBIT	18.2	2.9
in % of revenues	3.0%	0.5%
in % of capital employed (ROCE)	14.9%	2.1%
EBITDA	35.9	21.1
in % of revenues	6.0%	4.0%
Capital employed	122.2	137.2
Employees (Dec. 31)	2,168	2,209

Key figures – Swisslog Healthcare

in € millions	2019	2020
Orders received	251.3	210.1
Order backlog	231.4	199.7
Sales revenues	222.3	217.0
EBIT	–9.2	3.1
in % of revenues	–4.1%	1.4%
in % of capital employed (ROCE)	–6.2%	1.8%
EBITDA	1.9	17.1
in % of revenues	0.9%	7.9%
Capital employed	149.1	168.1
Employees (Dec. 31)	1,159	1,155

Key figures – China

in € millions	2019	2020
Orders received	456.4	490.4
Order backlog	229.2	270.6
Sales revenues	458.2	397.1
EBIT	5.7	–4.7
in % of revenues	1.2%	–1.2%
in % of capital employed (ROCE)	3.7%	–3.1%
EBITDA	16.5	7.8
in % of revenues	3.6%	2.0%
Capital employed	153.9	151.4
Employees (Dec. 31)	1,382	1,516

KUKA Group's functional costs, which are calculated from the costs for administration, sales and research & development, fell by €31.1 million in fiscal 2020 to €611.4 million (2019: €642.5 million). Due to the lower revenue volume, the ratio of functional costs to revenues increased to 23.8% in 2020 after 20.1% in 2019. Cost savings were achieved in the areas of sales and administration; they were also related to the efficiency program and savings in conjunction with the pandemic. On the other hand, research & development expenditure increased, aimed at securing the long-term success of KUKA Group through innovative strength and new developments.

In fiscal 2020, selling expenses decreased by a further €34.7 million or 11.9% on the previous year and now totaled €256.9 million (2019: €291.6 million). The cost reduction is due in part to the lower number of sales personnel. As at the 2020 balance sheet date, 1,509 people were employed in sales – a decrease of 105 employees on the previous year (2019: 1,614 employees). Nevertheless, customer orientation is and will remain a central element of the KUKA Business Organization and is subject to ongoing review and optimization. The selling expenses ratio rose from 9.1% in 2019 to 10.0% in 2020.

At €176.5 million, administrative costs were €13.9 million lower than the previous year's figure of €190.4 million. The process optimizations of the previous years had a sustainable impact on the cost structure. Moreover, the measures taken in conjunction with the coronavirus pandemic helped to reduce costs. The ratio of administrative costs to revenues increased from 6.0% in 2019 to 6.9% in 2020.

Research & development costs rose to €178.0 million in fiscal 2020 after €160.5 million in the previous year. This is primarily due to the higher amortization of R&D expenditure capitalized in the previous year. Compared with the previous year, personnel expenditure remained virtually constant. KUKA places high priority on research & development activities. As at December 31, 2020, 1,251 employees were working in research & development (December 31, 2019: 1,264 employees), corresponding to 9.1% of the total workforce (2019: 9.0%).

The capitalized costs for new developments in the year under review totaled €30.1 million (2019: €30.2 million). Scheduled amortization arising in subsequent periods, and primarily attributable to the functional area of research & development, amounted to €27.9 million after €17.2 million in 2019. The capitalization ratio fell from 17.4% in 2019 to 16.7% in 2020. Please refer to the research and development section of this management report for further information and details.

Other operating expenses exceeded other operating income by €4.3 million in fiscal 2020. In the previous year, income exceeded expenditure by €16.9 million. Other operating income was down from €30.7 million in the previous year to €10.0 million. The decline was mainly related to the income from the change in consolidation method in the Swisslog segment included in the previous year. One subsidiary was deconsolidated and then accounted for at equity. Within other income, grants increased from €0.7 million in 2019 to €1.6 million in 2020. Other operating expenses were up slightly by €0.5 million from €13.8 million to €14.3 million and include expenditure for other taxes (2020: €4.7 million; 2019: €8.2 million).

EBIT in KUKA Group

in € millions	2016	2017	2018	2019	2020
Group	127.2	102.7	34.3	47.8	–113.2
in % of sales revenues	4.3%	3.0%	1.1%	1.5%	–4.4%

Depreciation and amortization increased by €17.7 million in fiscal 2020 to €146.4 million (2019: €128.7 million). Amortization of capitalized leases in accordance with IFRS 16 remained virtually unchanged at €36.4 million after €36.8 million in the previous year. In the reporting year, impairment losses of €16.1 million (2019: €0.0 million) were recognized for an IT project, among other things, and on company-produced and capitalized assets. The depreciation and amortization of €146.4 million breaks down into €19.3 million (2019: €16.5 million) for the Systems business segment, €50.3 million (2019: €42.4 million) for Robotics, €18.2 million (2019: €17.8 million) for Swisslog, €14.0 million (2019: €11.1 million) for Swisslog Healthcare, and €12.5 million (2019: €10.8 million) for the China segment.

This led to earnings before interest, taxes, depreciation and amortization (EBITDA) of €33.2 million, corresponding to a decline of €143.3 million or 81.2% (2019: €176.5 million). This significant decline is attributable to the lower EBIT in particular.

EBITDA in KUKA Group

in € millions	2016	2017	2018	2019	2020
Group	205.3	180.2	121.2	176.5	33.2
in % of sales revenues	7.0%	5.2%	3.7%	5.5%	1.3%

Financial result remains positive

The net expenses and income in the financial result equated to an income of €3.0 million for fiscal 2020. Compared with the previous year, this represents a decrease of €3.6 million (2019: €6.6 million income).

The interest income of €26.8 million no longer included foreign currency effects in this fiscal year. To ensure comparability of the figures, the previous year's figure was adjusted and the foreign currency effects eliminated (2019: €27.6 million), which are now reported separately within the financial result. Overall, interest income fell slightly by €0.8 million. Interest income from leases of KUKA Toledo Production Operations LLC, Toledo, USA (KTPO) as the lessor was up on the previous year. By contrast, interest income on bank balances at a joint venture controlled by KUKA in the China business segment was down year on year.

After a foreign currency gain of €1.0 million in the previous year, the year under review saw a foreign currency loss of €1.0 million. The financial result was further impacted by impairment losses on financial assets totaling €2.9 million (2019: €2.1 million).

Interest expense was unchanged on the previous year at €19.9 million. At €5.5 million (2019: €5.6 million), interest expenses in connection with leases according to IFRS 16 accounted for a significant proportion of this figure. Interest expenses of €7.6 million were incurred for the promissory note and assignable loans placed by KUKA AG and KTPO (2019: €8.7 million). Net interest expense for pensions decreased from €2.0 million in 2019 to €1.0 million in 2020. Expenditure for sureties and guarantees amounted to €1.4 million (2019: €1.7 million).

EBT (earnings before taxes) fell to −€110.2 million, down considerably on the previous year (2019: €54.4 million). The tax income of €15.6 million corresponds to a tax rate of 14.2% (2019: 67.3%). The tax rate was mainly attributable to the revaluation of deferred tax assets, increased non-deductible operating expenses, and the offsetting effects of tax subsidies in North America and China.

Proposed dividend of €0.11 per share

KUKA Group's earnings after taxes amounted to −€94.6 million and were thus significantly lower than the figure for fiscal 2019 (2019: €17.8 million). The positive trend from fiscal 2019 did not continue due to the global coronavirus pandemic, which had a negative impact on KUKA Group. The resulting earnings per share stood at −€2.59 in 2020 (2019: €0.24).

The Executive Board will propose to the Annual General Meeting that a dividend of €0.11 per share be paid for fiscal 2020.

Group income statement (condensed)

in € millions	2016	2017	2018	2019	2020
Sales revenues	2,948.9	3,479.1	3,242.1	3,192.6	2,573.5
EBIT	127.2	102.7	34.3	47.8	−113.2
EBITDA	205.3	180.2	121.2	176.5	33.2
Financial result	−4.9	−9.2	0.6	6.6	3.0
Taxes on income	−36.1	−5.3	−18.3	−36.6	15.6
Earnings after taxes	86.2	88.2	16.6	17.8	−94.6

Financial position

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

Assessment by rating agencies

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

Condensed Group cash flow statement

in € millions	2016	2017	2018	2019	2020
Cash earnings	203.9	184.6	129.0	167.1	40.9
Cash flow from operating activities	−9.6	92.0	−48.2	214.5	77.4
Cash flow from investment activities	−97.2	−227.7	−165.5	−193.8	−40.4
Free cash flow	−106.8	−135.7	−213.7	20.7	37.0

The cash earnings are an indicator derived from the earnings after taxes, adjusted for income taxes (excluding deferred taxes), net interest, cash-neutral depreciation on tangible assets, intangible assets, investments in financial assets, and right-of-use assets pursuant to IFRS 16, together with other non-cash income and expenses (including deferred taxes). Cash earnings in fiscal 2020 totaled €40.9 million, corresponding to a decrease of €126.2 million on the previous year (2019: €167.1 million). The decline was due primarily to the negative earnings. Cash flow from operating activities of KUKA Group fell by €137.1 million from €214.5 million in 2019 to €77.4 million in 2020. The decline is attributable in particular to the lower cash earnings as compared to the previous year. Furthermore, changes in provisions and income taxes paid had a negative impact on cash flow from current business operations.

The successful implementation of the measures for monitoring and optimizing trade working capital, which KUKA Group put into place in fiscal 2019, led to a further reduction in trade working capital. At the end of fiscal 2020, it totaled €394.6 million and was thus down €115.5 million or 22.6% on the previous year's figure (2019: €510.1 million). Inventories were down slightly by €36.6 million to €307.9 million (2019: €344.5 million), reflecting further improvements in procurement measures. The greatest reduction was achieved in trade receivables and receivables from contract assets.

These fell by €148.7 million from €905.0 million to €756.3 million in the year under review. The measures introduced in the receivables management process showed further success. Trade payables and contract liabilities were also down. They fell by €69.8 million from €739.4 million to €669.6 million.

Overall, trade working capital has developed as follows:

Trade working capital

in € millions	2016	2017	2018	2019	2020
Inventories[1]	318.8	387.4	466.8	344.5	307.9
Trade receivables and contract assets	888.9	923.8	909.0	905.0	756.3
Trade payables and contract liabilities[1]	778.6	857.3	809.5	739.4	669.6
Trade working capital	**429.1**	**453.9**	**566.3**	**510.1**	**394.6**

[1] For reasons of better comparability, the trade working capital KPI has been adjusted for the prior-year figures (2016 / 2017) and the advance payments received are shown under contract liabilities.

Capital expenditure in KUKA Group

The volume of investments in intangible and tangible assets totaled €80.7 million in fiscal 2020 (2019: €151.1 million). In previous years, numerous investments were made, for example, in production facilities in Augsburg and in Shunde, China or in the KTPO production plant. This was completed last year. The education center at the Augsburg location was completed and opened in fiscal 2020. Additionally, further expansion and renovation work was carried out both at the Augsburg location and in China.

The carrying amount of the company's own development work and internally generated intangible assets totaled €104.6 million (2019: €103.1 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	2016	2017	2018	2019	2020
Group	99.6	138.8	295.4	151.1	80.7

Investments in intangible assets in fiscal 2020 totaled €34.6 million (2019: €39.6 million), including €3.0 million (2019: €8.0 million) for licenses and other rights, €30.1 million (2019: €30.2 million) for internally generated software and development costs, and €1.5 million (2019: €1.3 million) for advance payments.

At €46.1 million, investments in tangible assets were well below the previous year (2019: €111.5 million). Investments in land, leasehold rights and construction, including buildings on third-party land, amounted to €11.4 million (2019: €24.9 million). At €13.5 million (2019: €20.3 million) in technical plant and machinery, €12.9 million (2019: €20.6 million) in other plant and office equipment, and €8.3 million (2019: €45.7 million) in advance payments made and assets under construction, investments were down on the previous year in all areas. The decline in investments in property, plant and equipment was directly related to the completion of projects started in previous years. In the past fiscal year, the education center at the Augsburg location was completed and opened.

Of the total investments of €80.7 million (2019: €151.1 million), €7.3 million (2019: €24.3 million) was accounted for by the Systems business segment. In the year under review, smaller projects such as the relocation to a new building at a subsidiary in Romania were carried out. €28.2 million (2019: €40.1 million) was invested in the Robotics business segment, distributed over numerous R&D projects, among other things. Investments of €10.8 million (2019: €12.0 million) in the Swisslog division and of €12.8 million (2019: €12.6 million) in the Swisslog Healthcare division are predominantly attributable to internally generated intangible assets. In the China segment, investments of €9.1 million (2019: €13.8 million) were made, among other things, in the expansion of a building in Shunde, China. In the Corporate Functions segment, investments in fiscal 2020 totaled €13.4 million after €48.4 million in 2019. These relate primarily to the completion of the education center and investments in a production building.

The investment volume by segment is presented below:

Investments in intangible assets and property, plant and equipment

in € millions	2019	2020
of which Systems	24.3	7.3
of which Robotics	40.1	28.2
of which Swisslog	12.0	10.8
of which Swisslog Healthcare	12.6	12.8
of which China	13.8	9.1
of which Corporate Functions	48.4	13.4

In fiscal 2020, subsequent payments were made for acquisitions of consolidated companies and other shareholdings carried out in previous years. They came to a total of €6.5 million (2019: €39.1 million) and were subdivided as follows:

Company acquisitions

in € millions	2019	2020
Company acquisitions		
Visual Components	1.9	–
Device Insight GmbH	18.2	–
UTICA Enterprises, Shelby Township, Michigan,USA	6.2	1.9
Other	0.3	0.1
Total	**26.6**	**2.0**
Other participations		
Pharmony	1.2	–
Servotronix	11.3	4.5
Total	**12.5**	**4.5**
Total payments	**39.1**	**6.5**

Cash inflows from financial investments mainly comprise the proceeds from the sale of shares in Pipeline Health Holdings LLC, San Francisco, USA.

Positive free cash flow for the second year running

After €20.7 million in 2019, a positive free cash flow of €37.0 million was also generated in fiscal 2020, comprising cash flow from operating activities (2020: €77.4 million; 2019: €214.5 million) and cash flow from investment activities (2020: –€40.4 million; 2019: –€193.8 million).

Negative cash flow from financing activities

The cash flow from financing activities amounted to –€42.7 million in 2020 after €87.8 million in 2019. Dividend payments decreased from €11.9 million in 2019 to €6.0 million in 2020, representing a dividend of €0.15 per share (2019: €0.30 per share) paid for fiscal 2019. The reduction in cash flow from financing activities was related, among other things, to the disbursement of the first tranche of the USD assignable loan. Interest paid (2020: –€19.3 million; 2019: –€18.6 million) and repayments of leases (2020: –€34.1 million; 2019:

–€33.4 million) also had a negative impact. Payments from grants received totaling €14.4 million after €4.1 million in the previous year had a positive effect.

Group net liquidity

in € millions	2019	2020
Cash and cash equivalents	584.8	554.6
Current financial liabilities	152.6	154.6
Non-current financial liabilities	382.0	370.0
Group net liquidity	**50.2**	**30.0**
Cash and guarantee facilities from syndicated senior facilities agreement	520.0	520.0
Guarantee facility from banks and surety companies	153.0	170.3

As at the end of fiscal 2020, net liquidity had fallen to €30.0 million (2019: €50.2 million). Cash and cash equivalents decreased from €584.8 million in 2019 to €554.6 million in 2020. Additionally, current financial liabilities increased due to drawdowns on the syndicated loan. By contrast, non-current financial liabilities decreased slightly due to foreign currency changes within the assignable loan at KTPO.

Net worth

Non-current assets fell by €87.7 million from €1,384.4 million as at December 31, 2019 to €1,296.7 million as at December 31, 2020, spread across almost all balance sheet items. Only income tax receivables (2020: €1.0 million; 2019: €0.0 million) and deferred taxes (2020: €127.8 million; 2019: €86.7 million) rose by €1.0 million and €41.1 million, respectively. Losses carried forward accounted for €35.7 million (2019: €41.9 million) of deferred taxes. Intangible assets of €533.3 million (December 31, 2019: €565.5 million) included goodwill of €313.2 million (December 31, 2019: €315.3 million). Scheduled and unscheduled amortization totaling €63.1 million (2019: €47.0 million) reduced intangible assets. Tangible assets fell from €366.6 million as at December 31, 2019 to €353.1 million as at December 31, 2020.

Financial investments also decreased, amounting to €17.1 million as at the balance sheet date (December 31, 2019: €24.1 million). Investments accounted for using the equity method totaled €26.4 million after the sale of Pipeline Health Holdings LLC, San Francisco, USA (December 31, 2019: €34.0 million).

As a result of the scheduled amortization of right-of-use assets from leases, the value fell to €115.5 million as at December 31, 2020 (December 31, 2019: €135.0 million).

The non-current finance lease receivable at KTPO decreased by €32.9 million to €119.6 million as at December 31, 2020 (December 31, 2019: €152.5 million).

Other non-current receivables fell from €20.0 million at the end of fiscal 2019 to €2.9 million as at December 31, 2020. The decline was partly related to payouts from a deferred compensation plan at a subsidiary in the USA.

As at the balance sheet date of the year under review, current assets amounted to €1,819.8 million and were thus down €222.4 on the previous year's figure (December 31, 2019: €2,042.2 million). A negative development can be observed in all balance sheet items with the exception of income tax receivables (December 31, 2020: €30.2 million; December 31, 2019: €26.1 million). For example, inventories decreased by €36.6 million (December 31, 2020: €307.9 million; December 31, 2019: €344.5 million), trade receivables by €48.1 million (December 31, 2020: €395.4 million; December 31, 2019: €443.5 million) and contract assets by €100.6 million (December 31, 2020: €360.9 million; December 31, 2019: €461.5 million). This is primarily attributable to the optimizations in conjunction with working capital management.

The current portion of the finance lease receivable remained almost unchanged at €28.4 million as at December 31, 2020, compared with €29.4 million as at December 31, 2019.

Other current receivables and other assets fell by €10.0 million to €142.4 million as at December 31, 2020 (December 31, 2019: €152.4 million). As in the previous year, other assets included short-term securities with a term of considerably less than one year.

Cash and cash equivalents were down from €584.8 million as at December 31, 2019 to €554.6 million as at December 31, 2020.

Group net assets

in € millions	2016	2017	2018	2019	2020
Balance sheet total	2,543.9	2,640.1	3,218.5	3,426.6	3,116.5
Equity	840.2	866.6	1,339.6	1,348.6	1,203.7
in % of balance sheet total	33.0%	32.8%	41.6%	39.4%	38.6%
Net liquidity / debt	113	–45.2	92.9	50.2	30.0

Overall, the balance sheet total of KUKA Group decreased by €310.1 million from €3,426.6 million as at December 31, 2019 to €3,116.5 million as at December 31, 2020.

Equity ratio of 38.6%

At €1,203.7 million as at the 2020 balance sheet date, equity was €144.9 million below the previous year's figure (December 31, 2019: €1,348.6 million), influenced in part by the negative Group result. Both the subscribed capital of €103.4 million and the capital reserve of €306.6 million remained unchanged in the year under review. The adjustment item for minority interests rose slightly from €278.8 million as at December 31, 2019 to €280.5 million as at December 31, 2020. Retained earnings and other reserves fell from €659.8 million as at December 31, 2019 to €513.2 million as at December 31, 2020. Dividend payments totaling €6.0 million for the 2019 financial year had the effect of reducing equity (2019: €11.9 million). The change in actuarial gains from pension accounting (including related deferred taxes) amounted to €1.1 million (2019: loss of €18.2 million). Currency effects also had a negative impact on equity to the amount of €40.4 million, following a positive effect of €10.9 million in the previous year. The currencies with the greatest impact were the Chinese renminbi, the US dollar and the Swiss franc. All these effects together reduced the equity ratio from 39.4% as at December 31, 2019 to 38.6% as at December 31, 2020.

Total financial liabilities decreased from €534.6 million (December 31, 2019) to €524.6 million (December 31, 2020). Current financial liabilities amounted to €154.6 million (December 31, 2019: €152.6 million) and included drawdowns on the syndicated loan. The short-term tranches of the euro promissory note loan and USD assignable loan, which were settled in the 2020 financial year, were reported in the previous year. The long-term portion of €221.6 million as at December 31, 2020 was €10.4 million lower than the previous year's figure (December 31, 2019: €232.0 million) as a result of foreign currency effects. The loan in the amount of €148.4 million from Midea Group Ltd. is reported under accounts payable to affiliated companies.

Lease liabilities decreased in line with the right-of-use assets on the assets side and amounted to €121.6 million as at the reporting date on December 31, 2020 (December 31, 2019: €138.3 million). Of this amount, €28.7 million (December 31, 2019: €32.5 million) was accounted for by current lease liabilities and €92.9 million (December 31, 2019: €105.8 million) by non-current lease liabilities. Overall, non-current liabilities totaled €634.6 million as at the 2020 balance sheet date (December 31, 2019: €690.2 million).

Total current liabilities also decreased and stood at €1,278.2 million as at December 31, 2020 (December 31, 2019: €1,387.8 million). This corresponds to a decline of €109.6 million. Trade payables fell most sharply, with a drop of €49.0 million to €353.3 million (December 31, 2019: €402.3 million). Contract liabilities decreased by €20.8 million from €337.1 million as at December 31, 2019 to €316.3 million as at December 31, 2020. At €213.1 million as at December 31, 2020, other liabilities and prepaid expenses were down €16.8 million on the previous year (December 31, 2019: €229.9 million). The decline was mainly attributable to the lower level of liabilities for personnel matters (December 31, 2020: €109.2 million; December 31, 2019: €125.4 million). Other provisions were also down on the previous year (December 31, 2020: €168.6 million; December 31, 2019: €187.2 million). On the one hand, provisions for guarantees and provisions for outstanding invoices decreased, while on the other hand provisions for impending losses and reorganization increased.

Liabilities to affiliated companies remained unchanged compared with the previous year (December 31, 2020: €0.1 million; December 31, 2019: €0.1 million). Current income tax liabilities were down slightly (December 31, 2020: €43.5 million; December 31, 2019: €46.1 million).

Group assets and financial structure

in € millions	2019	2020
Current assets	2,042.2	1,819.8
Non-current assets	1,384.4	1,296.7
Assets	**3,426.6**	**3,116.5**
Current liabilities	1,387.8	1,278.2
Non-current liabilities	690.2	634.6
Equity	1,348.6	1,203.7
Liabilities	**3,426.6**	**3,116.5**

Reduction in working capital and capital employed

At €123.7 million in 2020, working capital was down by €53.6 million year on year (2019: €177.3 million). Continuous, systematic monitoring of the individual items within trade working capital and working capital led to improvements, some of which were considerable. In the Systems segment, working capital deteriorated year on year. Working capital in the Swisslog segment was negative once again.

in € millions	2019	2020
Systems	9.4	47.9
Robotics	169.5	134.8
Swisslog	–93.1	–97.4
Swisslog Healthcare	36.0	27.3
China	33.7	14.3
Total	**177.3**	**123.7**

Return on capital employed (ROCE)

ROCE (return on capital employed) is the ratio of earnings before interest and taxes to net capital employed. To calculate ROCE the capital employed is based on an average value. ROCE illustrates the effectiveness and profitability of the capital employed. Capital employed includes working capital as well as intangible assets and tangible assets. Capital employed thus represents the difference between operating assets and non-interest-bearing debt capital.

The capital employed is calculated as the average of capital employed at the beginning and end of a given fiscal year. Due to the effects of the coronavirus pandemic and the related consequences, as well as through active trade working capital management, average capital employed decreased by €53.2 million from €1,374.3 million in 2019 to €1,321.1 million in 2020. The negative EBIT of –€113.2 million (2019: €47.8 million) divided by average capital employed resulted in a ROCE of –8.6% (2019: 3.5%).

Return on capital employed (ROCE)

in % of capital employed	2016	2017	2018	2019	2020
Group	16.2%	10.9%	2.9%	3.5%	–8.6%

In almost all business segments, average capital employed was down year on year. In the Systems business segment, the average capital employed of €284.3 million resulted in a ROCE of –13.2% (2019: 9.3%). In the Robotics business segment, capital employed fell from €428.3 million in 2019 to €407.7 million in 2020. This led to a ROCE of –1.0% in 2020 after 14.8% in the previous year and is attributable to the negative EBIT and costs resulting from the reorganization measures. The Swisslog segment reported an increase in average capital employed to €137.2 million (2019: €122.2 million). Due to the considerably lower EBIT, the ROCE fell from 14.9% to 2.2%. In the Swisslog Healthcare segment, both capital employed (2020: €168.1 million; 2019: €149.1 million) and the resulting ROCE (2020: 1.8%; 2019: –6.8%) increased. This was due to the substantial year-on-year improvement in EBIT. In the China segment, the ROCE was down from 3.7% in 2019 to –3.1% in 2020. The average capital employed was €151.4 million, following on from €153.9 million in the previous year.

Return on capital employed (ROCE)

in % of capital employed	2019	2020
of which Systems	9.3%	–13.2%
of which Robotics	14.8%	–1.0%
of which Swisslog	14.9%	2.2%
of which Swisslog Healthcare	–6.2%	1.8%
of which China	3.7%	–3.1%

Events after the balance sheet date

Effective January 17, 2021, Dr. Chengmao Xu resigned as a member of the Supervisory Board and took on an operational management position within KUKA Group. With effect from February 26, 2021, Lin (Avant) Bai was appointed as a new member of the Supervisory Board by court order.

Notes to the annual financial statements of KUKA Aktiengesellschaft

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

The annual financial statements of KUKA Aktiengesellschaft are prepared in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG). The financial statements of KUKA Aktiengesellschaft are published in the electronic Federal Gazette (Bundesanzeiger) and on the KUKA Group website (www.kuka.com).

Income statement of KUKA Aktiengesellschaft (HGB)

in € millions	2019	2020
Sales revenues	142.3	115.6
Other company-produced and capitalized assets	1.3	1.3
Other operating income	18.3	152.5
Cost of materials	–72.5	–54.1
Personnel expenses	–61.2	–51.2
Depreciation and amortization of tangible and intangible assets	–15.9	–22.6
Other operating expenses	–31.6	–89.5
Income / expenses from equity investments	37.2	–9.7
Other interest and similar income	12.5	12.6
Depreciation of financial assets	–	–10.0
Interest and similar expenses	–8.3	–8.5
Taxes on income	0.3	–10.7
Net profit for the year	**22.4**	**25.6**
Profit carryforward from the previous year	30.4	35.6
Transfer to retained earnings	–11.2	–12.8
Balance sheet profit	**41.6**	**48.4**

Balance sheet of KUKA Aktiengesellschaft (HGB)

Assets in € millions	2019	2020
Fixed assets		
Intangible assets	28.9	15.9
Tangible assets	147.3	8.8
Financial assets	484.8	495.7
	661.0	**520.5**
Current assets		
Receivables from affiliated companies	716.3	946.9
Other receivables and assets	1.5	1.0
Securities	41.0	25.0
	758.8	**972.9**
Cash and cash equivalents	**67.5**	**19.9**
	826.3	992.8
Prepaid expenses	**2.6**	**2.5**
	1,489.9	**1,515.7**

Liabilities in € millions	2019	2020
Equity		
Subscribed capital	103.4	103.4
Capital reserve	305.8	305.8
Other retained earnings	298.6	311.4
Balance sheet profit	41.6	48.4
	749.4	**769.0**
Provisions		
Pension provisions	11.6	11.7
Provisions for taxes	7.7	15.4
Other provisions	29.8	25.4
	49.1	**52.6**
Liabilities		
Liabilities due to banks	250.8	258.6
Trade payables	7.3	5.7
Accounts payable to affiliated companies	419.9	422.3
Liabilities to provident funds	2.4	2.5
Other liabilities	11.0	5.1
	691.4	**694.1**
	1,489.9	**1,515.7**

Results of operations of KUKA Aktiengesellschaft

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

Sales revenues decreased from €142.3 million in 2019 to €115.6 million in 2020. KUKA Aktiengesellschaft mainly generates its sales revenues from cost allocations and cost transfers to subsidiaries. They fell by 22.3% to €99.5 million in the past fiscal year (2019: €128.0 million). KUKA Aktiengesellschaft generated €16.1 million (2019: €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 €54.1 million during the financial year (2019: €72.5 million).

Other operating income of €152.5 million (2019: €18.3 million) includes income of €115.4 million from the transfer of land and buildings to KUKA Real Estate GmbH & Co. KG. The company was newly founded in fiscal 2020 and is wholly owned by KUKA Aktiengesellschaft. In the course of the founding of the company, the majority of the land and buildings at the Augsburg location were contributed to the new company. Income from the disposal of tangible fixed assets is reported under other operating income. Other operating income also includes higher foreign exchange gains compared with the previous year, primarily from the US dollar, Swiss franc and Swedish krona.

Other operating expenses rose from €31.6 million to €89.5 million. The increase is the result of higher currency losses as well as value adjustments made on receivables from affiliated companies.

Personnel expenditure decreased significantly by 16.3% compared to the previous year to €51.2 million (2019: €61.2 million). The average number of employees decreased from 617 in the previous year to 571 in fiscal 2020. As an important measure for safeguarding jobs, KUKA introduced short-time working in April 2020. With the help of this furlough scheme, temporary relief was achieved for operations in Augsburg.

Income from investments totaled –€9.7 million (2019: €37.2 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 a slight increase in other income from investments in related companies totaling €78.6 million (2019: €71.3 million).

The depreciation of long-term investments in the amount of –€10 million (2019: €0 million) relates to shares in a non-operating domestic subsidiary that are expected to be permanently impaired.

Net interest decreased slightly by €0.2 million to €4.0 million (2019: €4.2 million). Compared with 2019, there were lower expenses for bank loans and interest expenses to banks in particular. This is offset by higher interest expenses from a loan from Midea Group in 2019. The interest result with consolidated affiliated companies increased by €0.2 million year on year to €11.1 million.

The reported taxes on income and earnings amounting to €10.7 million (2019: €0.3 million) mainly include tax expenses of the tax group of KUKA Aktiengesellschaft and foreign withholding taxes.

KUKA Aktiengesellschaft’s net income amounted to €25.6 million in fiscal 2020 (2019: €22.4 million), exceeding the previous year’s forecast of a slight increase on account of the significant growth in other operating income. Taking into account the profit of €35.6 million carried forward from the previous year and the transfer of €12.8 million to retained earnings, this results in a balance sheet profit of €48.4 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 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 €524.6 million (2019: €296.4 million). The change in receivables results primarily from the transfer of land and buildings to KUKA Real Estate GmbH & Co. KG. The cash flow was impacted by the income from investments, which declined compared with the previous year.

The liquid assets of KUKA Aktiengesellschaft fell from €67.5 million to €19.9 million. Financial liabilities increased year on year by €7.9 million to €258.6 million (2019: €250.8 million). This includes liabilities from the promissory note loan and the short-term drawdown of the working capital facility under the syndicated loan agreement.

Net assets of KUKA Aktiengesellschaft

The net assets of KUKA Aktiengesellschaft are impacted by the management of its equity investments as well as the way in which it executes its management function for the companies in KUKA Group. The receivables from affiliated companies rose from €716.3 million in the previous year to €946.9 million. As mentioned previously, the increase results in particular from the transfer of land and buildings to KUKA Real Estate GmbH & Co. KG. 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.

The significant decrease in property, plant and equipment from €147.3 million in the previous year to €8.8 million is also attributable to the transfer of land and buildings. Depreciation and amortization of intangible and tangible fixed assets increased from €15.9 million in 2019 to €22.6 million in 2020. This is partly due to the valuation adjustment of an IT project.

Investments totaling €35.1 million (2019: €48.5 million) were made in fiscal 2020. The investments include construction work at the Augsburg site and investments in the IT infrastructure.

KUKA Aktiengesellschaft’s direct equity investments in its subsidiaries are reported under financial assets. The increase of €10.9 million to €495.7 million (2019: €484.8 million) results from investments in Swisslog Group as well as from the establishment of KUKA Real Estate GmbH & Co. KG and KUKA Real Estate GmbH. The disposals in the financial year are also associated with the establishment of the KUKA Real Estate companies and relate to a holding at the Augsburg location.

Other assets decreased slightly to €1.0 million in 2020 (2019: €1.5 million).

The short-term securities totaling €25.0 million (2019: €41.0 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 €19.6 million on the previous year and thus reflects the positive result for the fiscal year. Additionally, a dividend of €6.0 million for fiscal 2019 was paid out in the 2020 fiscal year. The equity ratio of KUKA Aktiengesellschaft amounts to 50.7% as at the balance sheet date December 31, 2020 (2019: 50.3%).

As at December 31, 2020, other provisions totaled €25.4 million (2019: €29.8 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 €11.0 million to €5.1 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 €25.8 million to €1,515.7 million (December 31, 2019: €1,489.9 million).

Dependency report

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

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

Sustainability at KUKA

Ecological responsibility

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

Resource-saving production and environmental protection

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

Focus on emissions and water consumption*

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

At KUKA, water is only used to a limited extent in the paint shop and in cooling processes. At our largest production locations, the total water consumption in 2020 amounted to 93,354 m³ (2019: 104,217 m³).

CO_2 emissions at our largest production locations totaled 27,569 tonnes in 2020 (2019: 31,923 tonnes). KUKA reduced its total energy consumption in 2020. This was achieved through the increasingly energy-efficient use of buildings and the introduction of energy-saving measures, but was also due to the coronavirus pandemic, which led to production volumes declining and office employees working from home. KUKA is investing in an environmentally-friendly and future-proof energy supply. By means of a project launched globally in 2019 for collecting all energy data, KUKA is pursuing strategic environmental and energy goals. In the 2020 financial year, a new software solution was implemented that enables evaluation, analysis and reporting for accounting purposes. This provides KUKA with a powerful tool for improving the efficiency of buildings and processes.

Reducing energy consumption*

In the 2020 reporting year, a general overhaul and partial renewal of the continuous painting line in Augsburg was carried out, among other measures. Swisslog in the UK also invested in energy efficiency by changing the lighting throughout the facility. In Switzerland, the basis for the use of district heating was established. Other environmentally-friendly and energy-saving influences that have an impact on the purchase of new components are also evaluated at all sites. At an increasing number of locations, KUKA is using environmentally-friendly green sources to cover a significant share of electricity requirements. As of 2021, the Augsburg, Bremen and Obernburg sites will be supplied entirely with green electricity. The Swisslog site in Dortmund has already been supplied entirely with green electricity for several years.

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

* Not verified by auditors

Employees

Employees in KUKA Group

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

Challenges in the coronavirus crisis year

The global health crisis triggered by the coronavirus pandemic posed challenges for companies worldwide. KUKA immediately took precautionary action both to protect the health of employees and their families and to cushion the impact on business development. To this end, a coronavirus task force was set up as early as January to prepare a hygiene and safety concept, implement precautionary measures and keep employees regularly informed about current developments. Where possible, employees also switched to working from home and additional contingency workplaces were created in production to maintain safety distances. Thanks to the existing technological equipment and many years of experience with teleworking, it was possible to increase the proportion of employees working from home significantly within a very short time. As an important measure for safeguarding jobs, KUKA introduced short-time working in April 2020. With the help of this furlough scheme, temporary relief was achieved for operations in Augsburg to counter the difficult order situation. Similar models were also adopted in other countries. As at December 31, 2020 KUKA Group employed 13,700 people. The headcount was thus 2.2% lower than in the previous year (2019: 14,014). The Systems division employed 3,033 staff as at December 31, 2020. The number of employees showed a decline of 5.5% on the previous year (2019: 3,208). In the Robotics division, the workforce likewise decreased by 5.5% to 5,197 employees (2019: 5,502). The headcount at Swisslog rose by 1.9% to 2,209 (2019: 2,168). At Swisslog Healthcare, the number of employees fell slightly by 0.3% to 1,155 from 1,159 in the previous year. The workforce in China comprised 1,516 employees at the end of the financial year, 9.7% above the headcount of 1,382 in the previous year.

High standard of training and further education

When it comes to the vocational training of young people, KUKA has for decades been offering apprentices not only specialist know-how, but also an opportunity to learn in an intercultural setting and to think and act globally on a Group-wide scale. The company trains in line with requirements and maintains a high standard in the quality of apprentice training and the level of performance. This is why KUKA apprentice graduates finish best in class in their respective training occupation time and again and are then qualified specialists immediately ready for their jobs. Professional training is offered at the German sites in Augsburg, Obernburg and Bremen. The Group offers apprenticeships ranging from technical professions such as industrial mechanic, lathe / milling machine operator, mechatronics technician, electronics technician for automation technology, warehouse logistics specialist and specialist for forwarding and logistics services to occupations such as industrial clerk, IT specialist and technical product designer.

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

As part of our continuing education programs at KUKA Academy, we accompany and support our employees in their personal and professional development. At KUKA Academy, we offer all our employees an extensive and varied range of technical / methodical and personal further education courses. These include standard courses, such as 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.

With the construction of the new education center at the Augsburg site, KUKA has centralized its training portfolio. Not only KUKA College, for the in-house training of employees, and KUKA Academy, offering language courses, PC courses and other professional development topics, but also the training workshop for classic apprenticeships or dual study courses will be located here on two stories.

Diversity and tolerance are the order of the day*

At KUKA, diversity involves promoting and leveraging the diversity of our employees as a source of creativity, innovation and business success. KUKA benefits from various experiences and talents, because living and promoting diversity is part of the corporate culture. At many locations, the company offers employees flexible working times in order to better combine work and private life. Accepting and encouraging diversity to benefit from different experiences and talents is part of the corporate culture at KUKA. As a signatory to the Diversity Charter, KUKA has also anchored the topic within the structure of the company.

Promoting networks*

KUKA supports the internal women's network orangeWIN, which helps to identify and promote female talent. Due to the coronavirus pandemic, it was only possible to hold four events (two of them virtual) in the year under review. An in-house mentoring program initiated by orangeWIN for the exchange of experience and targeted further development was only able to accommodate two tandems from different hierarchical levels in 2020.

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.

Social engagement*

Orange Care e. V., a non-profit association in Augsburg founded by KUKA employees, is primarily committed to promoting youth and family welfare and supporting people in need. Orange Care has also sponsored a children's daycare center since 2013 with the goal of improving the work-life balance. Due to the coronavirus pandemic, maintaining regular services at the daycare center in 2020 was particularly challenging. With the implementation of a strict hygiene plan and the great commitment of the staff, it proved possible to keep the restrictions for the children and their parents to a minimum. In 2020, as in previous years, the association Kinderweihnachtswunsch (Christmas wish association for children) was again supported with a donation in kind. Kinderweihnachtswunsch e. V. supports children and young people who live in social institutions in the Augsburg area and are cared for by them. The donation was used to fulfill two group wishes. One group had the wish to visit Legoland in Günzburg. Another group wanted to spend a day together at a spa.

As a long-standing sponsor, KUKA also supports the youth research center "Herrenberg-Gäu Aerospace Lab e. V." as a premium sponsor. The aim of the association is to familiarize children, and especially girls, with applied robotics and programming at an early age. They are introduced to technical topics and research not through isolated activities, but via long-term and individual support in group work addressing STEM subjects.

Bringing robotics and automation closer to the public*

In November 2020, KUKA took part in European Robotics Week – initiated by the European robotics association euRobotics – for the tenth 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. On account of the coronavirus pandemic, it was not possible to organize as many in-person events as usual in 2020. An art competition for children was launched on the theme of "How can robots help us when we are ill?". The pandemic has intensified discussion of issues such as digitalization and automation in the healthcare sector, and related digital presentations on robotics in medicine were made available to schools.

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

* Not verified by auditors

Forecast, opportunity and risk report

Opportunity and risk report

Basic principles

KUKA Group is a global enterprise with international operations. Any entrepreneurial activity provides new business opportunities, but also involves many potential risks. The 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 business segments and subsidiaries are exposed.

Group management regularly assesses the likelihood that identified risks will occur and their potential impact on expected earnings (EBIT). Worst, medium and best case scenarios are considered and serve as the basis for determining a weighted expected risk value. Accruals and write-downs associated with these risks are recognized in the annual financial statements in accordance with applicable accounting principles. The unsecured residual risks, 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. These risks are reported if they exceed the threshold defined in the Group's risk management policy. Risks that remain below the threshold are left at segment level and evaluated at "0" in the Group, as the sum of these risks is immaterial for the Group even on a cumulative basis. The information collected in this way is summarized in a risk report that is also prepared each month and addressed to the 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.

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

In principle, the Group's risk management system enables the 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 policy of KUKA Group and therefore whether existing procedures and tools are effective. It also audits those responsible for the risks if this is relevant. The internal audit department also regularly audits the risk management process to ensure efficiency and continuous improvement. Furthermore, external auditors check that the early risk identification system is suitable for early identification of risks that could threaten the existence of the company as a going concern.

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

Risks and opportunities in KUKA Group

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

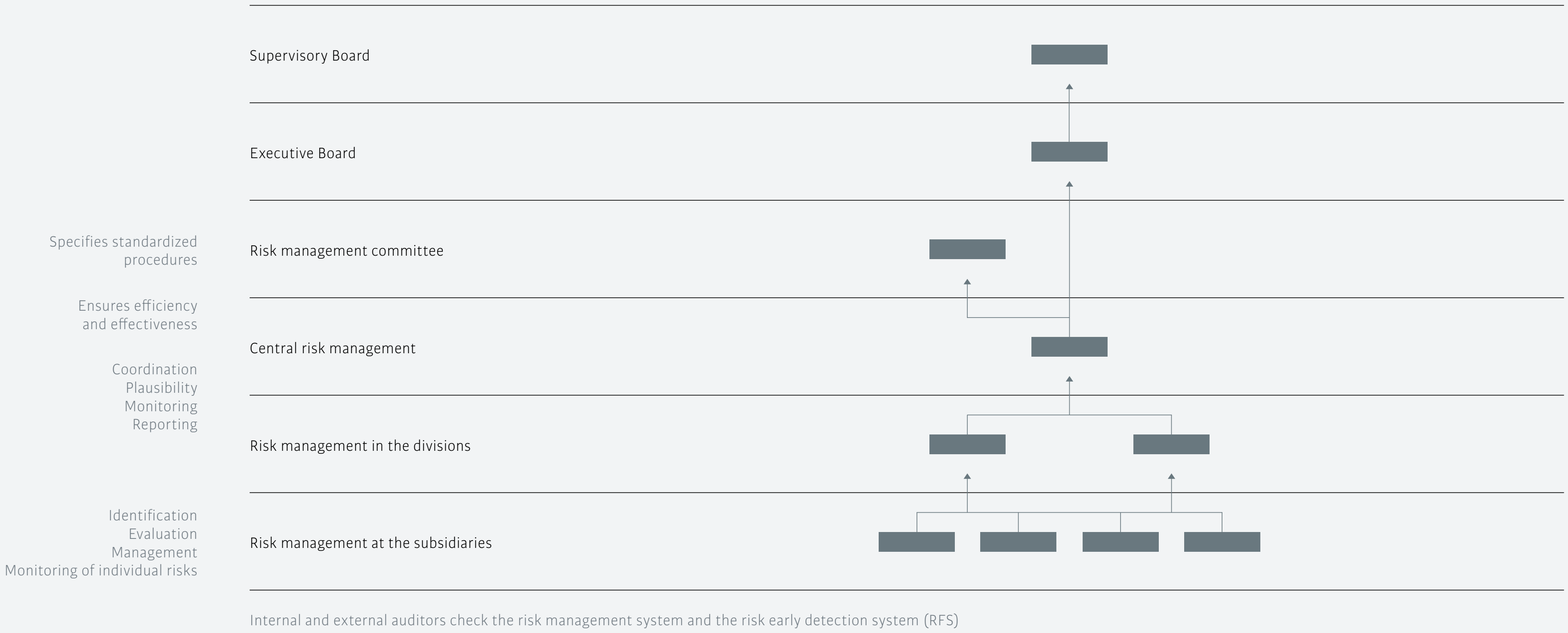
No aggregation is carried out for the opportunities at Group level. For this reason, the opportunities are dealt with in greater detail in the following sections on the divisions.

Group risk exposure

in € millions	2019	2020
Legal risks	7.7	11.2
Economic risks	2.7	43.1
Financial risks	21.8	24.4
Other risks	Not quantified	7.0
Total for the Group	**32.2**	**85.6**

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

Risk management organization



Operating risks and opportunities of the business segments and KUKA AG

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

In fiscal 2020, KUKA Group was heavily burdened by the global effects of the coronavirus pandemic and the related further decline in customers' willingness to invest, both in the automotive industry and in general industry. The global economic slump had a negative impact on the company's business development. This essentially affected all regions. One consequence of the pandemic was that the coronavirus-related restrictions caused project postponements and meant that orders could not be finalized within the planned timeframe. Furthermore, deteriorations in some customer projects weighed on business performance. Restructuring costs and risks were incurred, particularly in the Robotics and Systems business segments.

KUKA Group has implemented damage limitation measures in connection with the coronavirus pandemic. If regulatory interventions to contain the pandemic are introduced without advance notice or are extended indefinitely, the measures taken by KUKA Group may not be sufficient. The operating business would be adversely affected, for example, by temporary site closures, supply chain disruptions or even production stoppages. One of the main uncertainties of the coronavirus pandemic is the unpredictable duration (e. g. mutations or new waves of infection), as well as the economic impacts of the interventions.

KUKA succeeded in preventing and mitigating disruptions to the supply chain through proactive risk management. This ensured that customer orders could be processed in their entirety. Nevertheless, there are inherent risks due to insolvencies of suppliers and / or customers, as well as production disruptions caused by COVID-19 cases. The pandemic has also shown, however, that the trend towards automation remains intact, offering opportunities especially in logistics / e-commerce, healthcare, alternative drive systems, but also in non-industrial sectors. KUKA works with suppliers that focus on quality, innovative strength, continuous improvement and reliability so that it can supply its own customers with products of the highest possible quality and ensure timely delivery. Generally, KUKA sources product components from several suppliers in order to minimize the risk of sharp price increases for key raw materials, but in a few cases, due to a lack of alternative sources, is dependent on single suppliers that dominate their markets. Continuous monitoring of supplier risks is conducted as part of the risk management process.

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

KUKA Systems

This division's revenues and profits are subject to general business risks due to the length in time it takes to process project orders, the revisions to the specifications that are often necessary during processing, the infrequency of the orders received, and the price and competitive pressures. Other risks associated with these projects include inaccurate prediction of the actual costs as well as penalties for late deliveries. The division therefore uses appropriate risk checklists for individual orders in order to assess the associated legal, economic and technological risks prior to preparing a quotation or accepting a contract. One of the components of project execution, for example, is to monitor and track solvency risks and mitigate them using a strict project and receivables management process. Other risks are continuously monitored and if necessary accounted for by way of accruals or write-downs. Opportunities exist, for example, if unplanned customer change requests have to be implemented during the term of the project or if KUKA can benefit from lower purchase prices for outsourced parts compared to the cost estimate. In 2020, several projects in Europe and the USA were subject to significant additional costs as a result of coronavirus-related delays, but also due to the high complexity of these projects. These effects were taken into account in the amended project calculation and are already included in earnings for 2020 through provisions for impending losses.

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

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

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

Thorough market analyses have shown that KUKA Systems also has long-term business opportunities outside the automotive industry; namely, in general industry. The main risks here when tapping into new market potential relate to technical requirements, since customers in these sectors often have no experience with automated systems. The aforementioned checklists to review the technical risks associated with applying new automation techniques are therefore an especially important tool for identifying and mitigating risks. The achievement of targets for 2021 depends largely on the further course of the coronavirus pandemic and the associated economic recovery. These factors were therefore included in the risk assessment, and scenarios were presented that evaluate the threat of shutdowns in the USA, for example. These risks caused by the pandemic are the major part of the economic risks and the main reason for the increased risk exposure compared to the previous year.

Systems risk exposure

in € millions	2019	2020
Legal risks	0.0	0.2
Economic risks	0.4	9.9
Financial risks	0.0	0.0
Other risks	Not quantified	0.0
Total for Systems	**0.4**	**10.1**

KUKA Robotics

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

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

Due to the coronavirus crisis, the Robotics business will remain subject to uncertainties in 2021, particularly in KUKA's traditional focus industries. Possible effects and impacts such as production stoppages, supply chain disruptions and delayed customer call-offs are included in the risk assessment. These represent the main part of the economic risks and are largely responsible for the increase compared to the previous year. The return to pre-crisis levels may potentially take longer than anticipated in earlier forecasts, as also in many other sectors. However, in some of the market segments described, there are opportunities for a faster increase in the demand for automation – such as in the pharmaceutical industry.

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

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

Robotics risk exposure

in € millions	2019	2020
Legal risks	0.0	1.7
Economic risks	0.5	23.7
Financial risks	0.1	1.2
Other risks	Not quantified	0.0
Total for Robotics	**0.6**	**26.6**

Swisslog

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

It is expected that both the coronavirus-related restrictions at the end of the fiscal year and possible further negative influences in connection with the pandemic will have a significant impact on current and planned projects in the first and second quarters. Different scenarios were considered in this respect and included in the risk exposure. The exposure is a significant part of the economic risks. In the second half of the year, implementation of the planned projects is expected to return to normal. The risk position is therefore at the previous year's level.

Swisslog risk exposure

in € millions	2019	2020
Legal risks	0.0	0.0
Economic risks	1.8	7.0
Financial risks	13.6	6.3
Other risks	Not quantified	0.0
Total for Swisslog	**15.3**	**13.3**

Swisslog Healthcare

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

Risks arise from delayed and postponed investments by customers due to shifts in priorities as a result of the crisis. The overall risk position is at the level of the previous year.

Swisslog Healthcare risk exposure

in € millions	2019	2020
Legal risks	0.2	0.6
Economic risks	0.1	0.1
Financial risks	3.0	1.7
Other risks	Not quantified	0.0
Total for Swisslog Healthcare	**3.3**	**2.4**

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.

Fundamentally, risks continue to exist due to the current geopolitical situation and the effects of the coronavirus pandemic, such as travel restrictions or supply chain disruptions. 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 existing uncertainties in the economic environment have increased the overall risk position.

China risk exposure

in € millions	2019	2020
Legal risks	0.0	0.0
Economic risks	–0.2	1.4
Financial risks	0.9	2.3
Other risks	Not quantified	0.0
Total for China	**0.7**	**3.7**

Risks and opportunities managed at holding level (KUKA AG)

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

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

KUKA AG risk exposure

in € millions	2019	2020
Legal risks	7.6	8.7
Economic risks	0.0	1.1
Financial risks	4.3	12.9
Other risks	Not quantified	7.0
Total for KUKA AG	**11.9**	**29.6**

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

Standard general contracts are used whenever possible to cap risks from contractual relationships. The Group's legal department supports the operating companies to help limit risks associated with in-house contracts, warranty obligations and guarantees as well as country-specific risks such as 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 and transportation 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 an inter-company loan concluded with Midea in December 2019 with a term until 2025, and on a syndicated loan refinanced in 2018 with a term until 2025 and providing cash credit facilities and guarantee lines. Two standard financial covenants (leverage and interest coverage ratio) have been agreed for the syndicated loan. KUKA monitors adherence to these covenants based both on the current figures and on planning. The covenants were complied with throughout fiscal 2020. As at December 31, 2020, 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".

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.

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

Political risks

The general political conditions, such as the trade war between the USA and China, the US election and Brexit, also have an impact on KUKA's business success. The associated risks were identified, analyzed and evaluated. For the business activities in the Robotics segment, these were specifically quantified with a weighted expected risk value of €0.2 million. In the other segments, the risks are also relevant, but were only assessed qualitatively and are subject to ongoing observation as abstract risks. Risks due to Brexit were partially mitigated through contractual measures.

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 owing to the importance of IT to business processes. These risks relate to both the frequency of virus attacks or hacking and the damage they could potentially cause. The existing IT security and business continuity management systems as well as guidelines and organizational structures are continuously 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 2020 due to the active countermeasures taken by KUKA to mitigate risk at an early stage and to eliminate risk sources, for example, by realigning processes and adapting training to specific target groups.

Other risks

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

Summary

In the overall assessment of risks, KUKA Group is primarily exposed to (performance-)related risks from the divisions and to legal and financial risks controlled at Group level. Despite a significant increase in potential risks, such as those arising from the effects of the coronavirus pandemic, which have 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

In its December 2020 economic outlook, the Organization for Economic Cooperation and Development (OECD) anticipates a gradual recovery of the global economy following the economic slump in the first half of 2020. It thus expects the global economy to grow by 4.2% this year, after a decline of 4.2% in 2020. According to the latest OECD forecast, however, the recovery will vary greatly from country to country. For the European economy, which suffered a 7.5% decline in 2020, only a weak upturn of 3.6% is expected this year. The growth forecast for the German economy is 2.8% after a decline of 5.5% in 2020. In September 2020, growth of 4.6% had still been expected for 2021. Although incoming orders picked up in the second half of the year, the coronavirus cases increased again towards the end of the year and there were prolonged lockdown periods. For the US market, a milder decline is expected in 2020, with a drop of 3.7%. Growth of 3.2% is forecast for 2021. While the Chinese economy is also losing momentum, it should nevertheless still develop positively with a plus of 1.8% in 2020. China's economic output is expected to increase by 8.0% in 2021.

According to the OECD, the world is experiencing a health and social crisis with a dramatic economic downturn, which has so far been at least partially mitigated by state support schemes. However, it warns that discontinuing economic aid too soon could derail the anticipated recovery in 2021.

Automation & digitalization

Global megatrends such as the increasing customization of products, digitalization, demographic changes, and also greater regionalization due to global uncertainties necessitate increasingly flexible and at the same time more efficient solutions in production and logistics environments. These trends will intensify in the medium term, mainly as a result of the experience gained from the coronavirus crisis and the trade disputes. This experience shows how important new business models are becoming which enable customers to flexibly adapt their processes to rapidly changing market needs. At the outbreak of the pandemic, for example, global supply chains were partially disrupted at very short notice. As a result, production lines at many companies were shut down due to a lack of parts. This experience is prompting companies to rethink their worldwide supply chains and they are increasingly inclined to manufacture parts – particularly critical items – locally. Logistical and political risks could thus be minimized. With increasing regionalization, local capacities are being built up and the demand for intelligent automation solutions is growing. Especially in high-wage countries, companies are compelled to produce at high efficiency levels in order to remain internationally competitive. In addition, the growing demand for customized products will further increase the degree of automation. This calls for new business models that will fundamentally and lastingly transform not only production in the future, but also the value creation process as a whole.

In the long term, robot installations will increase worldwide. This development is being driven by robots which can perform tasks around the clock that are dangerous or harmful to humans, by the increasing digitalization of production, and by a greater focus on energy efficiency. With technological advancements such as human-robot collaboration and easy programming, additional new applications and markets will emerge. So-called cobots can work safely alongside humans by stopping automatically as soon as an obstacle enters their workspace. The further development of sensor and vision technologies allows robots to react to changes in their environment in real time. Whereas traditional industrial robots operate quickly and are primarily important for increasing productivity, cobots will assist humans in their work. In addition, the use of easily programmable robots will expand the spectrum of applications, especially in the case of frequent changes in the production process. Combined with mobile platforms, this will open up a whole new range of possibilities in automation.

As a result of the global uncertainties, the number of robots installed worldwide decreased by 12% in 2019 according to the IFR, marking the first decline after six consecutive years of growth (IFR report published in September 2020). The 2019 figures did not yet include any coronavirus-related downturn. The coronavirus crisis has further depressed the global robotics market since 2020. Economic performance from 2021 onward will depend heavily on how states deal with the waves of infections in the coming months, but also on state support schemes to revive the economy and save jobs. For this reason, the IFR has for the first time refrained from making a specific forecast, presenting three possible scenarios for the coming years instead. In this context, the IFR referred to the high degree of uncertainty underlying even basic assumptions. It sees different starting times for the anticipated recovery, depending on the market. A gradual recovery commencing in 2021 is regarded as most likely. According to this assessment, however, the pre-crisis level will not be reached again until 2022 or 2023.

Automotive

Even before the coronavirus crisis, car manufacturers found themselves caught between the high investment levels required for fundamental structural change and a downturn in the global automotive market. The coronavirus pandemic further aggravated the situation and also had an impact on the manufacturers' business development in 2020. Due to plummeting demand, numerous manufacturers and suppliers cut back on production and introduced short-time working or comparable cost-cutting measures. Investments that were not absolutely essential were postponed.

The automotive industry is facing a fundamental structural transformation that offers opportunities but poses enormous challenges at the same time. Many people wish that individual mobility will continue to be an indispensable feature of our society in the future. In this context, electric propulsion, digital networking and autonomous vehicle control will create entirely new possibilities. Manufacturers will have to adjust to a growing number of variants and models, more frequent model changes, but also fluctuations in production volumes. With the greater degree of individualization in the automotive industry, vehicles and thus also production processes are becoming more and more complex. In increasingly volatile markets, there is a growing need to manufacture small batches in an economically viable manner. This can only be achieved with the help of automated, versatile and flexible production solutions. Suppliers too will have to adjust to this situation. Flexible automation solutions with quickly adaptable production cells will replace rigid systems. This involves the use of new technologies, such as automated guided vehicles (AGVs) and software solutions based on artificial intelligence.

In order to remain internationally competitive and also to meet the demand for climate-neutral mobility, new technologies and intelligent solutions will be increasingly used, forming the basis for a successful transformation.

The automotive industry is still the world's largest market for industrial robots. However, the degree of automation varies according to the stage of production. For example, hardly any manual work is carried out any more in body-in-white construction, while final assembly has so far been automated to a limited extent only, offering potential for growth, especially for sensitive robots, the cobots.

Non-automotive

Automated solutions can help make processes more flexible, faster and more efficient. Growth opportunities in this respect are offered above all by the markets outside the automotive industry, the so-called general industry markets. Here, the robot density (number of robots per 10,000 workers) is still low. The worldwide robot installations in general industry have increased continuously in recent years. Average growth rates between 2014 and 2019 even reached double digits in countries such as China (+21%), Korea (+18%) and Italy (+11%). In China, robot density rose in line with the increasing automation of the electronics industry. Manufacturers of electronic equipment are now the largest group of customers there. In Germany, the robot density in general industry was equivalent to 199 robots per 10,000 workers according to the October 2020 IFR report. By comparison, the automotive industry had a robot density of 1,311 robots. In the USA, the robot density rose to 139 in general industry and 1,287 in the automotive industry. In China, the world's largest robot market, the robot density in general industry was only 95 and in the automotive industry 939 per 10,000 workers.

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

China

According to the IFR, a total of around 373,000 industrial robots were installed worldwide by the end of 2019, some 38% of them in China. This means that since 2016, no other country has installed more robots than China. This rapid development is unprecedented in the history of robotics. Since 2014, the robot density has increased by an average of 39% every year. The enormous growth in China was achieved primarily due to the high level of investment by automotive manufacturers. Most of the world's cars are now manufactured in China. But the electronics industry has also invested massively. This sector is meanwhile the largest customer for industrial robots in China.

However, the difficult global environment has dampened the robotics market in China. Installations of articulated robots decreased by 7% in 2019 and those of SCARA robots by as much as 16%. The IFR is not able to provide a reliable outlook for 2020 and beyond. The market development depends on many factors, such as the global handling of the pandemic, the further course of the trade disputes between the USA and China as well as between the USA and Europe, and also Brexit. But the long-term outlook remains positive. The Chinese government plans to develop the country into a leading global high-tech manufacturing landscape. However, the increase in automation over the last few years is not attributable to government support alone, but also to increased wages, higher quality standards and more environmentally-friendly production processes. Existing factories are being modernized and new factories are being built to take advantage of the rapidly growing market. China has a population of 1.4 billion with a growing middle class. As a result, the demand for consumer goods, better medical care and a more opulent lifestyle is on the rise.

Due to its high growth potential, the Chinese robot and automation market is a core element of KUKA's growth strategy. KUKA is planning to expand its market shares in China and expects a boost to growth as soon as the underlying 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.

Summary

It is difficult to predict at this stage how countries will combat the pandemic in the coming months, how long state support schemes will last and how this will affect the labor market and society. The current market environment thus remains difficult, as a result of which customers are holding back on investments. Current economic forecasts, by the OECD and others, assume a gradual recovery of the global economy. This presupposes that the forecast growth is not undermined again by further waves of the coronavirus, leading to site closures. Based on these expectations and also weighing up the current potential risks and opportunities, KUKA anticipates a slight increase in demand in 2021. From a sector perspective, KUKA expects the sales markets outside the automotive industry to recover moderately and show increasing demand. In the automotive industry too, demand should improve slightly compared with 2020.

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

Anticipated business development in KUKA Group

in € millions	2020	2021 expectations
Orders received	2,792.2	above prior-year level[1]
Sales revenues	2,573.5	slightly above prior-year level[1]
EBIT margin	−4.4%	positive / rising
Earnings after taxes	−94.6	positive / above prior-year level[1]
Free cash flow	37.0	positive / below prior-year level[1]

[1] Definitions:
slightly above / below prior-year level: absolute change compared to prior year < ±10%
above / below prior-year level: absolute change compared to prior year ≥ ±10%
at prior-year level: absolute change compared to prior year: ≤ ±3%

Orders received, sales revenues and EBIT margin

Based on current economic forecasts, which currently assume a gradual recovery of the global economy, and weighing up the opportunities and risks, KUKA's expectations for the full year 2021 are for orders received to be above the prior-year level. Sales revenues are expected to be slightly above the prior-year level. EBIT margin is predicted to increase and to be in the positive zone. The EBIT margin should be in the positive low single-digit percentage range.

Earnings after taxes

In the 2020 financial year, KUKA Group reported earnings after taxes of −€94.3 million. For 2021, KUKA expects positive earnings after taxes at Group level.

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 expected to be positive in 2021, but below the prior-year level due to the resurgence of investment activities as the economy recovers. Fluctuations may occur due to the uncertain framework conditions, especially in connection with the fight against the pandemic, as well as continuing geopolitical tensions.

KUKA AG

KUKA AG's result in the separate financial statements depends mainly on the profit transfers of the German subsidiaries and on dividends from subsidiaries. KUKA Aktiengesellschaft also forecasts a slight year-on-year improvement in earnings. Net income for the year is the most important performance indicator.

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). The internal control system is an integral part of the risk management system.

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

The objective of the ICS is to obtain sufficient certainty using the implemented controls to monitor and manage risks so that the company's goals can be achieved. Various monitoring measures – both integrated into and independent of the processes – contribute to the preparation of annual and consolidated financial statements that are in conformity with the legal provisions.

Regardless of its specific form, an ICS is unable to provide absolute certainty as to whether it will achieve its objectives. Taking this into account, the accounting-related ICS can only provide relative certainty rather than absolute certainty that material misstatements in accounting will be avoided or detected.

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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.

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

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

The principles, organizational structures and processes of the (Group) accounting-related internal control and risk management system are defined in 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 consolidated management report. At KUKA Group, these include, in particular:

› Identifying the main areas of risk (see the opportunity and risk report) and control that affect the (Group) accounting process;

› Quality controls to monitor the (Group) accounting process and the accounting results at the level of the Group 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 consolidated management report, including a separation of functions of predefined approval processes in relevant areas;

› Process-integrated monitoring measures such as the principle of dual control for which each material business transaction must be signed or otherwise approved by at least two authorized persons;

› Measures to ensure proper, IT-supported processing of (Group) accounting-related facts and data. These include, for example, central management of access rights to the bookkeeping systems and automated plausibility checks when data are recorded in the reporting and consolidation system;

› 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,

In its meetings, the Audit Committee of the Supervisory Board regularly reviews the effectiveness of the accounting-related internal control system and obtains an appropriate view of the Group's risk situation. In so doing, the 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.

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 at December 31, 2020 and explained in the following.

Composition of subscribed capital

As at December 31, 2020, the total share capital of KUKA Aktiengesellschaft amounted to €103,416,222.00 and consisted of 39,775,470 no-par-value bearer shares with pro rata share capital of €2.60 per share. The share capital is fully paid up. All shares have equal rights and each share guarantees its holder one vote at the Annual General Meeting. Shareholders are not entitled to have share certificates issued for their shares (section 4 para. 1 of the Articles of Association). When new shares are issued, the start of profit sharing may be established at variance with section 60 para. 2 of the German Stock Corporation Act (AktG) (section 4 para. 3 of the Articles of Association).

Restrictions affecting voting rights or transfer of shares

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

Shareholdings that exceed 10% of the voting rights

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

As at December 31, 2020, 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 in multiple tranches (Authorized Capital 2019). The shareholders shall be granted subscription rights. The new shares may also be underwritten by one or more financial institutions or by enterprises operating according to section 53 para. 1 sentence 1 or section 53b para. 1 sentence 1 or para. 7 of the German Banking Act (KWG), as specified by the 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 cancelation. Cancelation leads to reduction of the share capital. However, the cancelation can also be effected by means of a simplified process without the reduction of share capital by adjusting the proportionate amount of share capital of the remaining shares according to section 8 para. 3 of the German Stock Corporation Act (AktG). The 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 cancelation of such shares, may be used once or several times, in whole or in part.

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

Employment contracts of Executive Board members

The employment contract of CEO Peter Mohnen contains a change-of-control clause. 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]), he is entitled to terminate the employment contract within three months of the change of control occurring, subject to a notice period of three months. In the event of a termination, he will be entitled to a severance payment, which is measured against the compensation due for the remainder of his contract, but is restricted to twice the annual compensation at most. The employment contract of Executive Board member Andreas Pabst does not contain a change-of-control clause.

Syndicated loan agreement

KUKA Aktiengesellschaft and its associated companies signed a new syndicated loan agreement on February 1, 2018 with a consortium of banks (comprising 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) and amended this agreement through an amendment and accession agreement on June 21, 2019. According to the terms of the loan agreement, the creditors provide working capital and guarantee lines of 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 had issued a promissory note loan with an overall volume of €250,000,000 and staggered terms to 2020 and 2022. On October 9, 2020, KUKA Aktiengesellschaft repaid the tranche of €142,500,000 due in 2020.

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

US assignable loans of KUKA Toledo Production Operations LLC

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

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

Corporate Governance Statement

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

Non-financial declaration

Please refer to the website at www.kuka.com for the non-financial declaration pursuant to sections 315b, 315c, 289b and 289c of the German Commercial Code (HGB). The declaration will be published on April 30, 2021.

Compensation report

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

The Executive Board and the Supervisory Board of KUKA Aktiengesellschaft will propose to the Annual General Meeting 2021 a remuneration system for the members of the Executive Board of KUKA Aktiengesellschaft that will take into account the principles of the new recommendations of the GCGC 2020, deviating from individual recommendations if necessary. In their declaration of compliance dated February 11, 2021, the Executive Board and the Supervisory Board declared a corresponding deviation from the recommendations pursuant to section G.1 of the GCGC 2020.

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 is thus geared towards sustainable corporate performance. The variable components take into consideration both positive and negative business developments. The ratio between the individual compensation components for the Executive Board members in office as at December 31, 2020 is as follows (based on 100% values of the compensation components):

Executive Board members	Fixed salary	Variable compensation (management bonus, company targets bonus)	Variable compensation (long-term)
Peter Mohnen (CEO)	43%	43%	14%
Andreas Pabst (Executive Board member, CFO)	44%	44%	12%

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.

Variable compensation (management bonus and company targets bonus)

The variable compensation paid to Executive Board members is dependent on the achievement of personal targets in the strategic and operative area ("management bonus" – one-year compensation component) and financial targets of KUKA Group ("company target bonus" – two-year compensation component). 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 for the Executive Board members in office as at December 31, 2020 is as follows:

Executive Board members	Share of personal targets (management bonus)	Share of financial targets (company targets bonus)
Peter Mohnen (CEO)	30%	70%
Andreas Pabst (Executive Board member, CFO)	33.33%	66.67%

The personal targets and the financial targets (targets for EBIT and free cash flow) are agreed separately each year. The basis of assessment, i.e. the amount of the annual variable compensation, is governed by the employment contracts of the Executive Board members. The variable compensation target achievement can range from 0% to 200%; achievement of the financial targets is linked to business performance over several years (two-year period). The calculation is made by averaging the target achievement of the relevant two fiscal years.

Variable compensation (long-term)

a) Long-term incentive plan

In the 2017 and 2018 financial years, CEO Peter Mohnen and Dr. Till Reuter (CEO in office until December 5, 2018) were entitled to participate in long-term incentive plans (hereinafter "LTIPs") with annual allocation volumes. 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 (strategic targets) 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. The performance factor and strategy factor are determined by means of interpolation after the end of the performance period.

Under specific conditions defined in the LTIP ("good and bad leaver" rule), entitlement to payment of the gross disbursement amount may be waived in full or limited pro rata temporis.

b) KUKA Added Value Incentive Plan (KAVI)

In fiscal years 2019 and 2020, Executive Board members were entitled to participate in the KUKA Added Value Incentive Plan (hereinafter “KAVI”) as a long-term compensation component. In contrast to the LTIP, the KAVI is 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 and 2020 – 2022 KAVI plans each have a term of three fiscal 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 targets were derived from EPS 2019 – 2021 and EPS 2020 – 2022, taking the average value in accordance with the medium-term planning in each case. The following applies for the individual KAVIs: EPS 2019 – 2021: €3.44 = factor 1 EPS 2020 – 2022: €2.74 = factor 1 The minimum target for EPS 2019 – 2021 was set at €2.06 and the minimum target for EPS 2020 – 2022 was set at €1.64. 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 relative to the benchmark group (80% weighting) and (ii) share price performance of Midea Group Co. Ltd. over the performance period (20% weighting). With regard to the price development of KUKA shares, a benchmark group of eleven companies was defined, representing the Robotics, Systems, Logistics Automation and 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 (comprising all compensation components).

The employment contract of Peter Mohnen also contains a change-of-control clause. 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)), he is entitled to terminate the employment contract within three months of the change of control occurring, subject to a notice period of three months. In the event of a termination, he will be entitled to a severance payment, which is measured against the compensation due for the remainder of his contract, but is restricted to twice the annual compensation at most (comprising all compensation components). The employment contract of Andreas 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 the 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. Prof. Dr. Peter Hofmann was paid the agreed fixed salary until October 31, 2020 on the basis of the termination agreement. In addition, the entitlement to the variable compensation (management bonus and company targets bonus) was settled with an amount of k€500 (of which k€84 relates to his time as an active member of the Executive Board and k€416 to his time as a former member of the Executive Board). No separate severance payment was granted.

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

2. Compensation for 2020

Executive Board compensation for the 2020 financial year is still disclosed for each individual member in accordance with the standardized reference tables recommended in the GCGC 2017. This applies until the revision of the compensation system for the Executive Board and facilitates comparability with previous years. 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 2020 – Overview of benefits

	Peter Mohnen CEO				Andreas Pabst CFO				Prof. Dr. Peter Hofmann CTO[1] from Nov. 1, 2019 until Feb. 20, 2020			
in € thousands	2019	2020	2020 (min)	2020 (max)	2019	2020	2020 (min)	2020 (max)	2019	2020	2020 (min)	2020 (max)
Fixed compensation (basic compensation)	1,000	1,000	1,000	1,000	600	600	600	600	75	631	631	63
Fringe benefits[2]	35	35	35	35	11	11	11	11	10	2	2	2
Other compensation[3]	73	–	–	–	–	–	–	–	–	–	–	–
Total	**1,108**	**1,035**	**1,035**	**1,035**	**611**	**611**	**611**	**611**	**85**	**65**	**65**	**65**
One-year variable compensation												
Management bonus for 2019[4]	300	–	–	–	200	–	–	–	25	–	–	–
Management bonus for 2020[4]		300	0	600		200	0	400	–	25	0	50
Multi-year variable compensation (two-year)												
Company targets bonus for 2019[5]	700	–	–	–	400	–	–	–	58	–	–	–
Company targets bonus for 2020[5]		700	0	1,400		400	0	800	–	59	0	118
Long-term variable compensation (three-year)												
KAVI 2019 – 2021[6]	300	–	–	–	150	–	–	–	17			
KAVI 2020 – 2022[6]		330	0	990		165	0	495	–	17	–	51
Total	**1,300**	**1,330**	**0**	**2,990**	**750**	**765**	**0**	**1,695**	**100**	**166**	**0**	**219**
Total	**2,408**	**2,365**	**1,035**	**4,025**	**1,361**	**1,376**	**611**	**2,306**	**185**	**166**	**65**	**284**
Pension cost	–	–	–	–	–	–	–	–	–			
Total compensation	**2,408**	**2,365**	**1,035**	**4,025**	**1,361**	**1,376**	**611**	**2,306**	**185**	**166**	**65**	**284**

[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 ended on October 31, 2020 on the basis of the termination agreement dated February 19, 2020 (the "Termination Agreement"). In fiscal 2019, Prof. Dr. Peter Hofmann received the fixed compensation, the management bonus and the company targets bonus, as well as the allocation value for the KAVI 2019 – 2021, on a pro rata temporis basis. On the basis of the termination agreement, Prof. Dr. Peter Hofmann received the agreed fixed compensation, the agreed variable compensation (management bonus and company targets bonus) and the KAVI 2020 – 2022 on a pro rata basis until February 20, 2020 in his capacity as a member of the Executive Board.

[2] The fringe benefits include expenses and non-cash benefits for the provision of company cars and insurance allowances.

[3] Compensation for activities as administrative board member of Swisslog Holding AG.

[4] Portion of variable compensation for achieving personal targets (with 100% target achievement) in the specified fiscal years (possible target achievement from 0 to 200%).

[5] Portion of variable compensation for achieving the company targets bonus (with 100% target achievement) for the specified fiscal years (possible target achievement from 0 to 200%).

[6] Fair value at the time of granting for the KAVI 2019 – 2021 and the KAVI 2020 – 2022 (possible target achievement from 0 to 300%).

Table 2: Executive Board compensation for 2020 – Overview of inflow

	Peter Mohnen CEO		Andreas Pabst CFO		Prof. Dr. Peter Hofmann CTO[1] from Nov. 1, 2019 until Feb. 20, 2020	
in € thousands	2019	2020	2019	2020	2019	2020
Fixed compensation (basic compensation)	1,000	1,000	600	600	75	63
Fringe benefits[2]	35	35	11	11	3	2
Other compensation[3]	73	0	–	–	–	–
Back payment of fixed compensation for 2018[4]	**62**	**0**	**40**	**–**	**–**	**–**
Total	1,170	1,035	655	611	78	65
One-year variable compensation						
Management bonus for 2018[5]	329		14			
Management bonus for 2019[5]		447		295		25
Multi-year variable compensation (two-year)						
Company targets bonus for 2017[6]	161	–	–	–	–	–
Company targets bonus for 2018[6]	–	164	–	28	–	–
Company targets bonus for 2019						59
Long-term variable compensation (three-year)						
PSP 2016 – 2018[7]	75	–	–	–	–	–
Long-term incentive plan 2017 – 2019[8]	–	30	–	–	–	–
Total	565	641	14	323	–	84
Total	**1,735**	**1,676**	**669**	**934**	**78**	**149**
Pension cost	–	–	–	–	–	–
Total compensation	**1,735**	**1,676**	**718**	**934**	**78**	**149**

[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 ended on October 31, 2020 on the basis of the termination agreement dated February 19, 2020 (the "Termination Agreement"). In fiscal 2019, Prof. Dr. Peter Hofmann was paid the fixed compensation and fringe benefits on a pro rata basis. In fiscal 2020, Prof. Dr. Hofmann was paid the agreed fixed compensation and the agreed variable compensation (management bonus and company targets bonus) on a pro rata basis up to February 20, 2020 on the basis of the termination agreement in his capacity as a member of the Executive Board. Compensation components received by Prof. Dr. Peter Hofmann after February 20, 2020 and up to the termination of his employment contract on October 31, 2020 did not accrue to him in his function as a member of the Executive Board. All claims arising from the KAVI 2019 – 2021 and the KAVI 2020 – 2022 lapsed with the termination agreement.

[2] The fringe benefits include expenses and non-cash benefits for the provision of company cars and insurance allowances. Prof. Dr. Peter Hofmann was 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 member of Swisslog Holding AG.

[4] For the period December 6 to December 31, 2018, Peter Mohnen was entitled to additional, pro rata fixed compensation amounting to k€62. For the period December 6, 2018 to December 31, 2018, Andreas Pabst was entitled to pro rata fixed compensation and fringe benefits amounting to k€40. These sums accrued to Peter Mohnen and Andreas Pabst in the form of a supplementary payment in fiscal 2019.

[5] Variable compensation paid out in fiscal 2019 for the achievement of personal targets for 2018 and variable compensation paid out in fiscal 2020 for the achievement of personal targets for 2019.

[6] Portions of variable compensation for company targets bonus for fiscal 2017, which were paid out in fiscal 2019, and portions of variable compensation from fiscal 2018, which were paid out in fiscal 2020.

[7] 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.

[8] Long-term incentive plan 2017 – 2019, paid out in fiscal 2020.

In accordance with the presentation of Executive Board compensation required by section 314 para. 1 no. 6a sentence 5 of the German Commercial Code (HGB), which deviates from the presentation of the allocation and accrual consideration in accordance with the GCGC 2017, the compensation of the Executive Board members and the Executive Board as a whole is presented as follows in the table below. Total compensation of all members of the Executive Board in office in fiscal 2020 in accordance with section 314 para. 1 no. 6a sentence 5 of the German Commercial Code (HGB) amounted to k€4,131 in fiscal 2020.

in € thousands	Peter Mohnen CEO	Andreas Pabst CFO	Prof. Dr. Peter Hofmann[1] CTO	Total
Fixed compensation + fringe benefits	1,035	611	65	1,711
Variable compensation[2] Management bonus for 2020	450	300	–	750
Company targets bonus for 2019[2]	700	400	–	1,100
Long-term incentive plan 2018 – 2020[2]	75	–	–	75
KAVI 2020 – 2022[3]	330	165	–	495
Total	**2,590**	**1,476**	**65**	**4,131**

[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 ended on October 31, 2020 on the basis of the termination agreement dated February 19, 2020 (the "Termination Agreement"). In fiscal 2019, Prof. Dr. Peter Hofmann was paid the fixed compensation and fringe benefits. In fiscal 2020, Prof. Dr. Peter Hofmann was paid the agreed fixed compensation and the agreed variable compensation (management bonus and company targets bonus) on a pro rata basis up to February 20, 2020 on the basis of the termination agreement in his capacity as a member of the Executive Board. Compensation components received by Prof. Dr. Peter Hofmann after February 20, 2020 and up to the termination of his employment contract on October 31, 2020 did not accrue to him in his function as a member of the Executive Board. All claims arising from the KAVI 2019 – 2021 and the KAVI 2020 – 2022 lapsed with the termination agreement.

[2] Value of the provision as at December 31, 2020.

[3] Fair value at the time of granting

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 2020 for current pensions and expected pension benefits for this group of persons totaled k€9,964 (German Commercial Code) (previous year: k€9,966). Furthermore, former members of the Executive Board received a lump-sum payment of k€416 for variable compensation components in fiscal 2020.

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 fiscal 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 2019 and 2020

The following table compares the compensation paid to members of the Supervisory Board in the 2019 and 2020 financial years:

Table 3: Supervisory Board compensation in 2020

in € thousands	Payment in 2020 for 2019	Payment in 2021 for 2020
Dr. Andy Gu Chairman of the Supervisory Board Chairman of the Personnel, Mediation and Nomination Committees	225	225
Michael Leppek [1] Deputy Chairman of the Supervisory Board	150	150
Wilfried Eberhardt	30	30
Hongbo (Paul) Fang (until May 31, 2019)	12	–
Manfred Hüttenhofer [1]	60	60
Prof. Dr. Henning Kagermann Chairman of the Strategy and Technology Committee	75	75
Armin Kolb [1]	90	90
Carola Leitmeir [1]	90	90
Min (Francoise) Liu	90	90
Dr. Myriam Meyer	90	90
Tanja Smolenski [1]	60	60
Alexander Liong Hauw Tan Chairman of the Audit Committee (until December 31, 2019)	105	–
Dr. Chengmao Xu (from June 12, 2019 to January 17, 2021)	17	60
Helmut Zodl Chairman of the Audit Committee (since January 24, 2020)	–	69

[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.

Group financial statements

Group financial statements

Group income statement

of KUKA Aktiengesellschaft for the period January 1 to December 31, 2020

in € millions	Notes	2019	2020
Sales revenues	**1**	**3,192.6**	**2,573.5**
Cost of sales	2	–2,515.6	–2,069.4
Gross earnings from sales		**677.0**	**504.1**
Selling expenses	2	–291.6	–256.9
(of which, impairment losses including reversal of impairment losses on trade receivables and contract assets)		(1.9)	(–2.3)
Research and development costs	2	–160.5	–178.0
General and administrative expenses	2	–190.4	–176.5
Other operating income	3	30.7	10.0
Other operating expenses	3	–13.8	–14.5
Loss from companies consolidated at equity		–3.6	–1.4
Earnings before interest and taxes (EBIT)		**47.8**	**–113.2**
Amortization		128.7	146.4
Earnings before interest, taxes, depreciation and amortization (EBITDA)		**176.5**	**33.2**
Changes in value of financial investments	4	–2.1	–2.9
Interest income	4	27.6	26.9
Interest expense		–19.9	–20.0
Foreign currency gains / losses		1.0	–1.0
Financial result		**6.6**	**3.0**
Earnings before taxes		**54.4**	**–110.2**
Taxes on income	5	–36.6	15.6
Earnings after taxes		**17.8**	**–94.6**
(of which, attributable to minority interests)		(8.1)	(8.5)
(of which, attributable to shareholders of KUKA AG)	6	(9.7)	(–103.1)
Earnings per share (undiluted / diluted) in €		**0.24**	**–2.59**

Group statement of comprehensive income

of KUKA Aktiengesellschaft for the period January 1 to December 31, 2020

in € millions	Notes	2019	2020
Earnings after taxes		**17.8**	**–94.6**
Items that may potentially be reclassified to profit or loss			
Translation adjustments		10.9	–40.3
Third-party translation adjustments		2.2	–7.9
Items that are not reclassified to profit or loss			
Changes in equity instruments (FVOCI)		–0.2	–1.2
Changes of actuarial gains and losses	23	–19.5	–7.3
Deferred taxes on changes of actuarial gains and losses		1.3	6.2
Changes recognized directly in equity		**–5.3**	**–50.5**
Comprehensive income		**12.5**	**–145.1**
(of which, attributable to minority interests)		(10.3)	(0.6)
(of which, attributable to shareholders of KUKA AG)		(2.2)	(–145.7)

Group cash flow statement [1]

of KUKA Aktiengesellschaft for the financial year 2020

in € millions	2019	2020
Earnings after taxes	**17.8**	**−94.6**
Income taxes	34.0	26.4
Net interest	−8.6	−7.0
Amortization of intangible assets	47.0	63.1
Depreciation of tangible assets	44.9	46.9
Depreciation of financial investments	2.1	2.6
Depreciation of right-of-use assets	36.8	37.2
Other non-payment-related income	−23.3	−48.6
Other non-payment-related expenses	16.4	14.9
Cash earnings	**167.1**	**40.9**
Losses from the disposal of assets	1.2	2.7
Changes in provisions	4.5	−25.2
Changes in current assets and liabilities		
Changes in inventories	121.5	32.8
Changes in receivables and deferred charges	8.1	88.4
Changes in liabilities and deferred income (excl. financial debt)	−70.3	−15.8
Income taxes paid	−13.3	−32.0
Investments / financing matters affecting cash flow	−4.3	−14.4
Cash flow from operating activities	**214.5**	**77.4**
Payments from disposals of fixed assets	3.3	5.9
Payments for capital expenditures on intangible assets	−39.6	−34.7
Payments for capital expenditures on tangible assets	−111.5	−46.1
Proceeds from financial investments and at-equity investments	15.8	3.2
Payments for financial investments	−12.7	−4.5
Payments for / proceeds from financial assets related to short-term financial management	−50.0	11.1
Payments for the acquisition of consolidated companies and other business units	−26.5	−2.0
Interest received	27.4	26.7
Cash flow from investment activities	**−193.8**	**−40.4**

in € millions	2019	2020
Free cash flow	**20.7**	**37.0**
Dividend payments	−11.9	−6.0
Proceeds from the raising of bank loans, promissory note loans and financial liabilities to affiliated companies	147.6	2.3
Payments from grants received	4.1	14.4
Interest paid	−18.6	−19.3
Repayment of leases	−33.4	−34.1
Cash flow from financing activities	**87.8**	**−42.7**
Payment-related changes in cash and cash equivalents	**108.5**	**−5.7**
Changes in cash and cash equivalents related to the scope of consolidation	−1.6	–
Exchange-rate-related and other changes in cash and cash equivalents	−0.7	−24.5
Changes in cash and cash equivalents	**106.2**	**−30.2**
(of which, net increase / decrease in restricted cash)	(0.0)	(−0.5)
Cash and cash equivalents at the beginning of the period	478.6	584.8
(of which, restricted cash)	(0.5)	(0.5)
Cash and cash equivalents at the end of the period	**584.8**	**554.6**
(of which, restricted cash)	(0.5)	(0.0)

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

Group balance sheet

of KUKA Aktiengesellschaft as at December 31, 2020

Assets

in € millions	Notes	Dec. 31, 2019	Dec. 31, 2020
Non-current assets			
Intangible assets	(7)	565.5	533.3
Property, plant and equipment	(8)	366.6	353.1
Financial investments	(9)	24.1	17.1
Investments accounted for at equity	(10)	34.0	26.4
Right-of-use assets	(11)	135.0	115.5
		1,125.2	**1,045.4**
Finance lease receivables	(11)	152.5	119.6
Income tax receivables	(5)	–	1.0
Other long-term receivables and other assets	(15)	20.0	2.9
Deferred taxes	(5)	86.7	127.8
		1,384.4	**1,296.7**
Current assets			
Inventories	(12)	344.5	307.9
Receivables and other assets			
Trade receivables	(13)	443.5	395.4
Contract assets	(14)	461.5	360.9
Finance lease receivables	(11)	29.4	28.4
Income tax receivables		26.1	30.2
Other long-term receivables and other assets	(15)	152.4	142.4
		1,112.9	**957.3**
Cash and cash equivalents	**(16)**	**584.8**	**554.6**
		2,042.2	**1,819.8**
		3,426.6	**3,116.5**

Equity and liabilities

in € millions	Notes	Dec. 31, 2019	Dec. 31, 2020
Equity	**(17)**		
Subscribed capital	(18)	103.4	103.4
Capital reserve	(19)	306.6	306.6
Revenue reserve	(20)	650.1	546.1
Other reserves	(22)	9.7	–32.9
Minority interests	(21)	278.8	280.5
		1,348.6	**1,203.7**
Non-current liabilities			
Financial liabilities	(25+26)	232.0	221.6
Financial liabilities to affiliated companies		150.0	148.4
Lease liabilities	(11)	105.8	92.9
Other liabilities	(27)	43.7	20.0
Pension provisions and similar obligations	(23)	116.9	117.6
Deferred taxes	(5)	41.8	34.1
		690.2	**634.6**
Current liabilities			
Financial liabilities	(25+26)	152.6	154.6
Lease liabilities	(11)	32.5	28.7
Trade payables		402.3	353.3
Contract liabilities	(14)	337.1	316.3
Accounts payable to affiliated companies		0.1	0.1
Income tax liabilities		46.1	43.5
Other liabilities and deferred income	(27)	229.9	213.1
Other provisions	(24)	187.2	168.6
		1,387.8	**1,278.2**
		3,426.6	**3,116.5**

Development of Group equity

of KUKA Aktiengesellschaft for the financial year 2020

Notes	18	18	19	22			20		21	
				Other reserves						
in € millions	Number of shares outstanding	Subscribed capital	Capital reserve	Translation gains / losses	FVOCI measure-ment	Actuarial gains and losses	Annual net income and other revenue reserves	Equity to share-holders	Minority interests	Total
Jan. 1, 2019	**39,775,470**	**103.4**	**306.6**	**45.5**	**–**	**–28.3**	**652.7**	**1,079.9**	**259.7**	**1,339.6**
Earnings after taxes	–	–	–	–	–	–	9.7	9.7	8.1	17.8
Other income	–	–	–	10.9	–0.2	–18.2	–	–7.5	2.2	–5.3
Comprehensive income	**–**	**–**	**–**	**10.9**	**–0.2**	**–18.2**	**9.7**	**2.2**	**10.3**	**12.5**
Dividend of KUKA AG	–	–	–	–	–	–	–11.9	–11.9	–	–11.9
Change in scope of consolidation / other changes	–	–	–	–	–	–	–0.4	–0.4	8.8	8.4
Dec. 31, 2019 / Jan. 1, 2020	**39,775,470**	**103.4**	**306.6**	**56.4**	**–0.2**	**–46.5**	**650.1**	**1,069.8**	**278.8**	**1,348.6**
Earnings after taxes	–	–	–	–	–	–	–103.1	–103.1	8.5	–94.6
Other income	–	–	–	–40.3	–1.2	–1.1	–	–42.6	–7.9	–50.5
Comprehensive income	**–**	**–**	**–**	**–40.3**	**–1.2**	**–1.1**	**–103.1**	**–145.7**	**0.6**	**–145.1**
Dividend of KUKA AG	–	–	–	–	–	–	–6.0	–6.0	–	–6.0
Change in scope of consolidation / other changes	–	–	–	–	–	–	5.1	5.1	1.1	6.2
Dec. 31, 2020	**39,775,470**	**103.4**	**306.6**	**16.1**	**–1.4**	**–47.6**	**546.1**	**923.2**	**280.5**	**1,203.7**

Group notes

Group segment reporting[1]

of KUKA Aktiengesellschaft for the financial year 2020

	Systems		Robotics		Swisslog	
in € millions	2019	2020	2019	2020	2019	2020
Orders received	858.0	715.3	1,037.1	901.3	750.2	643.9
Order backlog	614.3	591.0	275.8	266.3	653.9	726.6
Group external sales revenues	911.9	661.2	1,034.0	806.0	594.1	522.6
in % of Group sales revenues	28.6%	25.7%	32.4%	31.3%	18.6%	20.3%
Intra-Group sales revenues	13.5	10.4	125.2	93.2	5.9	5.1
Sales revenues	**925.4**	**671.6**	**1,159.2**	**899.2**	**600.0**	**527.7**
Gross earnings from sales	**97.8**	**19.7**	**361.1**	**285.0**	**111.3**	**93.9**
in % of sales revenues of the segment	10.6%	2.9%	31.2%	31.7%	18.6%	17.8%
Earnings before interest and taxes (EBIT)	**27.7**	**–37.4**	**63.2**	**–3.9**	**18.2**	**2.9**
in % of sales revenues of the segment	3.0%	–5.6%	5.5%	–0.4%	3.0%	0.5%
in % of average capital employed (ROCE)	9.3%	–13.2%	14.8%	–1.0%	14.9%	2.1%
Earnings before interest, taxes, depreciation and amortization (EBITDA)	**44.2**	**–18.1**	**105.6**	**46.4**	**35.9**	**21.1**
in % of sales revenues of the segment	4.8%	–2.7%	9.1%	5.2%	6.0%	4.0%
Earnings before taxes (EBT)	**30.1**	**–18.5**	**57.1**	**–10.2**	**13.7**	**–4.9**
in % of sales revenues of the segment	3.3	–2.8%	4.9%	–1.1%	2.3%	–0.9%
Capital employed (annual average)	299.1	284.3	428.3	407.7	122.2	137.2
Capital employed (end of financial year)	283.7	284.9	438.7	376.7	150.6	123.8
Segment assets	718.7	608.5	761.3	647.3	473.5	432.9
Segment liabilities	449.9	328.1	311.2	262.0	328.1	315.7
Investments accounted for at equity	–	–	4.7	5.0	23.3	22.5
Earnings of investments accounted for at equity	–	–	0.3	0.3	–0.3	1.1
Capital expenditure	24.3	7.3	40.1	28.2	12.0	10.8
Scheduled depreciation / amortization of intangible and tangible assets	8.6	9.9	36.1	39.1	11.5	27.3
Unscheduled depreciation / amortization of intangible and tangible assets	–	2.0	–	7.0	–	–
Depreciation / amortization of interest capitalized under intangible and tangible assets	–	0.1	0.1	0.2	–	–
Number of employees (Dec. 31)	3,208	3,033	5,502	5,197	2,168	2,209

	Swisslog Healthcare		China		Corporate Functions		Reconciliation and consolidation		Group	
in € millions	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Orders received	251.3	210.1	456.4	490.4	0.5	0.1	–162.8	–168.9	3,190.7	2,792.2
Order backlog	231.4	199.7	229.2	270.6	0.0	0.0	–37.2	–61.6	1,967.4	1,992.6
Group external sales revenues	222.4	216.8	440.1	386.0	0.4	0.2	–10.3	–19.3	3,192.6	2,573.5
in % of Group sales revenues	7.0%	8.4%	13.8%	15.0%	0.0%	0.0%	–	–	100.0%	100%
Intra-Group sales revenues	–0.1	0.2	18.1	11.1	123.8	100.2	–286.4	–220.2	–	–
Sales revenues	**222.3**	**217.0**	**458.2**	**397.1**	**124.2**	**100.4**	**–296.7**	**–239.5**	**3,192.6**	**2,573.5**
Gross earnings from sales	**73.1**	**73.9**	**37.9**	**46.3**	**123.8**	**100.2**	**–128.0**	**–114.9**	**677.0**	**504.1**
in % of sales revenues of the segment	32.9%	34.1%	8.3%	11.7%	–	–	–	–	21.2%	19.6%
Earnings before interest and taxes (EBIT)	**–9.2**	**3.1**	**5.7**	**–4.7**	**–22.5**	**–22.7**	**–35.3**	**–50.5**	**47.8**	**–113.2**
in % of sales revenues of the segment	–4.1%	1.4%	1.2%	–1.2%	–	–	–	–	1.5%	–4.4%
in % of average capital employed (ROCE)	–6.2%	1.8%	3.7%	–3.1%	–	–	–	–	3.5%	–8.6%
Earnings before interest, taxes, depreciation and amortization (EBITDA)	**1.9**	**17.1**	**16.5**	**7.8**	**–4.2**	**1.7**	**–23.4**	**–42.8**	**176.5**	**33.2**
in % of sales revenues of the segment	0.9%	7.9%	3.6%	2.0%	–	–	–	–	5.5%	1.3%
Earnings before taxes (EBT)	**–14.5**	**–3.7**	**18.9**	**5.4**	**–43.4**	**–46.8**	**–7.5**	**–31.5**	**54.4**	**–110.2**
in % of sales revenues of the segment	–6.5%	–1.7%	4.1%	1.4%	–	–	–	–	1.7%	–4.3%
Capital employed (annual average)	149.1	168.1	153.9	151.4	244.0	186.4	–22.3	–14.0	1,374.3	1,321.1
Capital employed (end of financial year)	175.4	160.8	164.5	138.4	196.4	176.4	–12.4	–15.8	1,396.9	1,245.2
Segment assets	324.5	280.6	392.4	417.6	771.5	778.6	–686.7	–731.4	2,755.2	2,434.1
Segment liabilities	111.6	89.8	204.6	256.8	90.1	72.6	–53.4	–31.0	1,442.1	1,294.0
Investments accounted for at equity	6.0	–	23.3	22.5	–	–	–23.3	–23.6	34.0	26.4
Earnings of investments accounted for at equity	–3.6	–1.7	–0.1	1.1	–	–	0.1	–2.2	–3.6	–1.4
Capital expenditure	12.6	12.8	13.8	9.1	48.4	13.4	–0.1	–0.9	151.1	80.7
Scheduled depreciation / amortization of intangible and tangible assets	8.9	16.3	7.3	8.9	16.0	16.7	3.4	–24.6	91.8	93.6
Unscheduled depreciation / amortization of intangible and tangible assets	–	0.9	–	–	–	6.2	–	–	–	16.1
Depreciation / amortization of interest capitalized under intangible and tangible assets	–	–	–	–	–	–	–	–	0.1	0.3
Number of employees (Dec. 31)	1,159	1,155	1,382	1,516	697	676	–102	–86	14,014	13,700

[1] For more information on Group segment reporting, see explanations of Group segment reporting in the notes. In order to ensure comparability with the previous year, the comparative figures for fiscal 2019 have been adjusted, as measures were introduced in 2020, for example, to optimize working capital.

General comments

Accounting principles

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. KUKA Aktiengesellschaft, registered at the district court of Augsburg under HRB 22709 and headquartered in Augsburg has prepared its consolidated financial statements for the period ending December 31, 2020 according to the International Financial Reporting Standards (IFRS) of the International Accounting Standards Board (IASB) applicable and endorsed by the European Union as at the balance sheet date. The term IFRS also includes all valid international accounting standards (IAS). The interpretations of the Standing Interpretations Committee (SIC) and the International Financial Reporting Standards Interpretations Committee (IFRS IC) – supplemented by the guidelines stipulated in section 315e para. 1 of the German Commercial Code (HGB) – are also taken into consideration.

The accounting policies used conform to the methods applied in the previous year. Exceptions from this are the standards and interpretations for which application is mandatory for the first time in the 2020 fiscal year and the other reporting changes described under "Changes in accounting and valuation methods". The currency reported in the consolidated financial statements is the euro. Unless otherwise noted, all amounts in the notes to the accounts are stated in millions of euros (€ million). The key performance indicators in the entire annual report have been rounded in accordance with standard commercial practice. In individual cases, it is therefore possible that figures in this report do not add up exactly to the total stated and that percentages do not precisely correspond to the values indicated.

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

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

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

The identically worded declarations of compliance with the German Corporate Governance Code pursuant to section 161 of the German Stock Corporation Act (AktG) made by the Executive Board and Supervisory Board on February 11, 2021 can be accessed on the Internet through the Company's website (www.kuka.com).

KUKA Aktiengesellschaft is a 94.55 percent indirect subsidiary of Midea Group Co. Ltd., Foshan City, Guangdong Province, China and is included in its consolidated financial statements. These statements are available on the website www.cninfo.com.cn or directly on the website of Midea Group Co. Ltd. at https://www.midea-group.com / Investors / financial-reports. Mr. Xiangjian He can exercise significant influence over Midea Group Co. Ltd., Foshan City, Guangdong Province, China, which means that from the perspective of KUKA Group, Mr. He is to be regarded as the ultimate controlling party, represented in this case by a natural person.

Scope of consolidation

KUKA Group's scope of consolidation changed in the course of the fiscal year due to newly established companies, liquidations, spin-offs and other changes. One sale took place in the at equity category.

The following table shows the development of the scope of consolidation by region for the 2020 fiscal year:

	EMEA		Americas		APAC		Total	
Country	Consolidated companies	At equity companies	Consolidated companies	At equity companies	Consolidated companies	At equity companies	Consolidated companies	At equity companies
Jan. 1, 2020	**55**	**–**	**18**	**1**	**25**	**4**	**98**	**5**
Newly established companies	2	–	–	–	–	–	2	–
Spin-offs	1	–	–	–	–	–	1	–
Liquidations	−2	–	–	−1	–	–	−2	−1
Total changes	1	–	–	−1	–	–	1	−1
Dec. 31, 2020	**56**	**–**	**18**	**–**	**25**	**4**	**99**	**4**

In the year under review, no structural changes were made to the organizational structure (KBO) introduced in fiscal 2019. However, there were changes in the scope of consolidation due to internal company decisions. The Systems segment now comprises 15 fully consolidated entities (previous year: 14 entities). In the Robotics division, one entity was liquidated, resulting in 41 fully consolidated entities in the Robotics segment as at the balance sheet date (previous year: 42 entities). As in the previous year, the Robotics segment comprises two entities consolidated at equity (previous year: two entities). The number of fully consolidated entities in the Swisslog segment was unchanged from the previous year at 18 entities. The number of entities accounted for using the equity method also remained unchanged as at December 31, 2020. Based on a management approach, companies were reported both in Swisslog and in the China segment. This duplicate presentation in both segments was eliminated again via the reconciliation column in order to provide an accurate picture of the Group. The Swisslog Healthcare division reported an unchanged total of 14 fully consolidated entities as at December 31, 2020. The entity that was accounted for using the equity method was sold in the past fiscal year, as a result of which the Swisslog Healthcare segment no longer has any entities accounted for at equity. The management approach resulted in a double disclosure at Swisslog Healthcare and in the China segment, which was eliminated in the reconciliation column as described above. In addition to the companies with double reporting, the China business segment included a further six fully consolidated entities (previous year: six entities). In the Corporate Functions segment, two new companies were established and one was liquidated in the year under review, which means that five fully consolidated entities are now reported (previous year: four entities). Overall, the number of fully consolidated companies increased from 98 as at December 31, 2019 to 99 as at December 31, 2020. The number of entities accounted for at equity decreased from five entities to four.

Newly established companies

During the fiscal year, KUKA Group established KUKA Real Estate Management GmbH and KUKA Real Estate GmbH & Co. KG. Both companies were included in the consolidated financial statements for the first time in fiscal 2020 and were allocated to the Corporate Functions business segment.

Spin-off

At the beginning of the fiscal year, an operating unit of KUKA Systems GmbH, based in Augsburg, was spun off to the newly established Group company KUKA Assembly & Test GmbH, based in Bremen. KUKA Assembly & Test GmbH belongs to the Systems business segment and is concerned with the planning, development and manufacture of automated assembly systems, and test and inspection equipment for components of vehicle power trains.

Liquidations

Two companies were liquidated during fiscal 2020. One of them was Reis SCI i. L., Pontault Combault, France, which was allocated to the Corporate Functions segment. The second company to be liquidated was KUKA Industries Italia i. L., Bellusco, Italy, which was included in the Robotics business segment.

In addition, the at-equity investment in Pipeline Health Holdings LLC, San Francisco, USA was sold, for which KUKA Group received a low single-digit million amount and shares in CarepathRx Holding, Washington, USA.

Consolidation principles

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

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

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

Guarantees or warranties that KUKA AG issues on behalf of consolidated subsidiaries are eliminated if no external effect can be determined.

Currency translation

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

The annual financial statements of foreign companies included in the consolidated financial statements are translated from their functional currency into euro in accordance with IAS 21. These are the respective local currencies as the companies operate predominantly within their currency area. One exception is KUKA Robotics Hungária Ipari Kft., Taksony, Hungary, whose functional currency is the euro.

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

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

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

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

Country	Currency	Balance sheet date		Average rate	
		Dec. 31, 2019	Dec. 31, 2020	2019	2020
Australia	AUD	1.5995	1.5896	1.61059	1.65569
Brazil	BRL	4.5157	6.3735	4.41354	5.88968
Canada	CAD	1.4598	1.5633	1.48574	1.52953
China	CNY	7.8205	8.0225	7.73388	7.87092
China, Hong Kong	HKD	8.7473	9.5142	8.77243	8.85163
Czech Republic	CZK	25.4080	26.2420	25.66975	26.45617
Hungary	HUF	330.5300	363.8900	325.22967	351.22170
India	INR	80.1870	89.6605	78.85014	84.58470
Japan	JPY	121.9400	126.4900	122.05637	121.78027
Korea	KRW	1,296.2800	1,336.0000	1,304.89870	1,345.17504
Malaysia	MYR	4.5953	4.9340	4.63716	4.79373
Mexico	MXN	21.2202	24.4160	21.55728	24.51425
New Zealand	NZD	1.6653	1.6984	1.69927	1.75664
Norway	NOK	9.8638	10.4703	9.84967	10.72543
Poland	PLN	4.2568	4.5597	4.29753	4.44322
Romania	RON	4.7793	4.8694	4.74524	4.83706
Russia	RUB	69.9563	91.4671	72.45934	82.65357
Singapore	SGD	1.5111	1.6218	1.52721	1.57364
Sweden	SEK	10.4468	10.0343	10.58666	10.48910
Switzerland	CHF	1.0854	1.0802	1.11267	1.07030
Taiwan	TWD	32.4187	33.2194	33.33479	32.33600
Thailand	THB	33.4150	36.7270	34.76480	35.69431
Turkey	TRY	6.6843	9.1131	6.35735	8.04302
United Arab Emirates	AED	4.0715	4.4683	4.07950	4.15168
United Kingdom	GBP	0.8508	0.8990	0.87731	0.88924
USA	USD	1.1234	1.2271	1.11960	1.14128

Accounting and valuation principles

Orders received

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

Order backlog

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

Revenue recognition

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

Orders meeting the criteria of IFRS 15.35 are accounted for over time. Revenue is recognized on the basis of the percentage of completion of an order, which is determined for each project using the cost-to-cost method. The cost-to-cost method involves placing the costs already incurred for the project, based on an assessment of the progress already achieved, in relation to the anticipated total costs. If an order is accounted for over time, the profit from it is recognized on the basis of the calculated percentage of completion. If the advance payments received exceed the services already provided, the resulting negative balance will be disclosed under contract liabilities. A contract asset is recognized if the services rendered exceed the advance payments received. KUKA Group applies industry-standard payment terms when invoicing. For impending project losses, please refer to the "Provisions" section within this chapter.

Cost of sales

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

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

Business combinations

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

Investments in associates and joint ventures

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

Goodwill

Goodwill is tested for impairment in the fourth quarter of each fiscal year or whenever there are indications of impairment. For this, the carrying amount of the respective cash generating units (CGUs) is compared with the recoverable amount. As soon as the carrying amount of a CGU exceeds the recoverable amount, an impairment loss must be recognized for the goodwill allocated to the CGU. The recoverable amount is defined as the higher of the CGU's fair value less potential costs to sell and its value in use. KUKA Group normally uses a CGU's value in use to determine its recoverable amount. The data for the detailed planning phase from the business plan for the next three years are used for this purpose, supplemented by the strategic planning for the following two years.

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

Self-developed software and other development costs

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

From the beginning of the economic use of the asset, it is depreciated on a straight-line basis over a period of generally three to five years in accordance with the internal accounting manual. Additionally, development projects that have not yet been completed but have already been capitalized are tested for impairment once a year.

Research and development costs that are not eligible for recognition as an asset are recognized as expenses when they are incurred.

Other intangible assets

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

Property, plant and equipment

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

The following table shows the useful lives specified by the Group, unchanged from the previous year, on which scheduled depreciation is generally based: The actual useful lives may vary due to contractual, regional or time-related circumstances:

	Years
Land and buildings	25 – 50
Technical plant and equipment	2 – 15
Factory and office equipment	2 – 15

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

Borrowing costs and qualifying assets

In accordance with IAS 23, financing costs must be recognized for so-called qualifying assets. The borrowing costs relating to these qualifying assets are capitalized if material. In KUKA Group, a qualifying asset is defined as an asset for which a period longer than twelve months is required to make it ready for its intended use or sale (please refer to IAS 23.5). Examples here within KUKA Group in particular are manufacturing plants, internally-generated intangible assets and also long-term construction contracts. Since the 2016 fiscal year, KUKA Group has no longer recognized any borrowing costs for long-term contract manufacturing for the time being, as the values to be taken into account are negligible due to the decrease in interest rates.

Government grants

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

Leases

As a lessee, KUKA Group generally recognizes all leases in the balance sheet in accordance with IFRS 16, with the exception of the existing relief regarding short-term leases (maximum term 12 months) and leases of assets with a low original price (max. €5,000). The regular payments for leases subject to relief are recognized as an expense in the income statement. The right of use that is granted under the lease is recognized by the lessee at the present value of the future lease payments and an associated lease liability. Discounting is carried out using the interest rate on which the lease is based, insofar as this can be determined. If this is not possible, the incremental borrowing rate is applied. The incremental borrowing rate is calculated dependent on the lease term and the currency in which the lease is concluded, among other things.

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

If KUKA Group acts as lessor and the contract is classified as a finance lease, it is accounted for as a sale or financing transaction. A receivable is valued at the amount of the net investment in the lease and the resulting interest income is recognized as income.

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

Financial instruments

(i) Recognition and initial measurement

Trade receivables and debt instruments issued are recognized from the date on which they arose. All other financial assets and liabilities are initially recognized on the trading date on which the company becomes a party to the contract under the terms of the instrument.

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

(ii) Classification and subsequent measurement

Financial assets

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

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

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

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

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

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

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

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

KUKA Group assesses the objectives of the business model in which the financial asset is held at a portfolio level, as this best reflects the way in which the business is managed and information is provided to management. The information to be taken into consideration includes:

- the stated policies and objectives for the portfolio and the implementation of these policies in practice; this includes whether management's strategy is to collect contractual interest income, to maintain a particular interest rate profile, to match the maturity of a financial asset with the maturity of an associated liability or expected cash outflows, or to realize cash flows through the sale of the assets
- how the results of the portfolio are evaluated and reported to Group management
- the risks affecting the results of the business model (and the financial assets held in accordance with said business model) and how these risks are managed
- how managers are remunerated – for example, whether remuneration is based on the fair value of managed assets or on contractual cash flows received – and
- the frequency, scope and timing of sales of financial assets in prior periods and expectations regarding future sales activities.

Transfers of financial assets to third parties that do not result in derecognition are consistent with the Group continuing to account for the assets – no sales for the purpose of determining the business model. Financial assets that are held or managed for trading purposes and whose performance is assessed on the basis of fair value are measured at FVtPL. This relates to specific trade receivables.

For the purpose of assessing whether the contractual cash flows are solely repayments or interest payments, the principal amount is defined as the fair value of the financial asset at initial recognition. Interest is defined as a charge for the time value of money and for the default risk associated with the outstanding principal over a period of time, as well as for other basic credit risks, costs (for example, liquidity risk and administrative costs) and a profit margin.

In assessing whether the contractual cash flows are solely payments of interest and repayments of the principal, the Group considers the contractual terms of the instrument. This includes an assessment of whether the financial asset contains a contractual arrangement that could change the timing or amount of the contractual cash flows such that they no longer meet the conditions. In its assessment, the Group takes the following into account:

- specific events that would change the amount or timing of cash flows
- conditions that would adjust the interest rate, including variable interest rates
- early repayment and extension options, and
- conditions that restrict the Group's right to receive cash flows from a specific asset (for example, no recourse).

Financial assets in the FVtPL category are subsequently measured at fair value. Net profits and losses, including any interest or dividend income, are recognized in profit or loss.

Financial assets in the AC category are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, exchange rate effects, impairments and effects from derecognition are recognized in profit or loss.

Equity instruments in the FVOCI category are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the investment costs. Other net gains or losses are recognized in other comprehensive income and never reclassified to profit or loss.

For the value adjustments of financial assets and contract assets (exception: lease receivables and trade receivables), KUKA Group applies the general approach described in IFRS 9. The amount of the value adjustment is measured at initial recognition based on the expected 12-month credit loss, which corresponds to level 1. If there are indications as at the balance sheet date that the default risk has increased significantly since initial recognition, the value adjustment is calculated in the amount of the expected credit losses over the term of the loan (level 2).

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

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

Among other things, current data relating to rating classes or historical default rates (provision matrix) are used for determining credit risk. A review and update of the default risk is carried out once each year.

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

Financial liabilities

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

Financial liabilities at FVTPL are measured at fair value, and net gains or losses, including interest expenses, are recognized in profit or loss.

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

(iii) Derecognition

Financial assets

KUKA Group derecognizes a financial asset when

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

Financial liabilities

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

(iv) Balancing

KUKA Group only offsets financial assets and financial liabilities if this is covered by a binding legal claim as at the balance sheet date. Moreover, it must be intended that the adjustment be made on the basis of the net amount. If offsetting is excluded, the financial assets and liabilities are presented in the balance sheet at the gross amount. KUKA Group does not have any global netting agreements and therefore does not perform any netting, with the exception of contract assets and contract liabilities at project level.

(v) Derivative financial instruments

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

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

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

Cash and cash equivalents

Cash and cash equivalents reported in the balance sheet comprise liquid funds, namely cash on hand, checks and cash balances with financial institutions, and are measured at amortized cost. Their remaining term at the time of acquisition is no longer than three months. Securities that have an original remaining term of more than three months are reported under other assets.

Investments in non-consolidated companies and financial investments

In KUKA Group, investments in continuing business units that are not material to the net assets, financial position and performance of the Group are classified in the FVtPL or FVOCI category. However, the best estimate of fair value is the cost of acquisition.

Investments measured at equity

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

Inventories

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

Current and deferred taxes

Tax receivables and liabilities are assessed using the expected amount of the reimbursement from or payment to the tax authorities. The local tax laws are taken into consideration for the calculation.

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

Pension provisions and similar obligations

The measurement of pension provisions and similar obligations is performed in accordance with IAS 19 and includes pension liabilities of KUKA Group from performance-based pension systems. Company obligations from defined benefit plans are determined separately for each defined benefit plan according to actuarial principles. The first step involves the retirement benefits being estimated that employees have acquired in return for their service in the current period and prior periods. The next step involves these retirement benefits being discounted using the project unit credit method. Not only the pensions and vested benefits known at the balance sheet date are taken into account with this method, but also expected future increases in salaries and pensions. The calculation is based on actuarial reports that must be prepared annually based on biometric data. If actuarial gains or losses arise in a period, they are recognized in other comprehensive income. The company determines the net interest expense (net interest income) by multiplying the net liability (net asset value) at the beginning of the period with the underlying interest rate of the discount of the gross defined benefit pension obligation at the beginning of the period. If a past service cost is incurred due to changes in the plan, this is recognized directly in profit or loss in the period. The standard return on plan assets is recognized in the amount of the discount rate applied to pension obligations. Administrative expenses that are incurred for plan assets are recognized as part of the revaluation component in other comprehensive income, while other administrative costs are allocated to operating profit at the time the costs occur. Reinsurance policies with insurance companies are in place for obligation surpluses from pre-retirement schemes according to the block model, which are taken into account with a separate interest rate, like the corresponding obligation. The amount added for obligations from pre-retirement schemes is proportional to the amounts in the applicable collective bargaining agreements. For the defined contribution plans, KUKA pays contributions to a public or private pension insurance carrier. Upon payment of the contributions, KUKA has no further obligations.

Other provisions

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

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

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

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

Assets and liabilities held for sale

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

Share-based compensation

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

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

Effects of the coronavirus pandemic

In connection with the global spread of the COVID-19 virus, the management of KUKA Group has analyzed the resulting risks and effects on accounting in fiscal 2020. Higher default risks according to IFRS 9 for trade receivables and financial assets were taken into account for specific customers. Furthermore, effects on contract assets were also analyzed and taken into account.

The decline in sales revenues associated with the coronavirus crisis is an impairment indicator in accordance with IAS 36.12. This means that an impairment test must be carried out. In fiscal 2020, impairment tests were thus carried out at both mid-year and year-end for intangible assets including goodwill. The impairment tests did not result in any impairment of goodwill. For further details, please refer to note 7.

The measures taken to provide economic support or other bridging measures in conjunction with the coronavirus pandemic varied from country to country. Wherever possible and appropriate, KUKA Group has taken advantage of the available measures. Among other things, the instrument of short-time working with the reimbursement of social security contributions was used in Germany and also in other countries. This resulted in slightly positive liquidity effects for fiscal 2020.

Assumptions and estimates

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

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

Definition of the scope of consolidation

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

Development costs

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

Goodwill

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

Brand names with an indefinite useful life

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

Deferred tax assets on loss carryforwards

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

Trade receivables

Impairment of receivables involves making significant estimates and assessments regarding individual receivables based on the creditworthiness of the respective customer, the current economic trends and the analysis of historical bad debts on a portfolio basis. As far as the company derives the impairment on a portfolio basis using historical default rates, a decrease in the volume of receivables reduces such provisions accordingly and vice versa.

Contractual assets and liabilities

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

Pensions and other post-employment benefits

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

Provisions

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

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

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

The effects of the coronavirus pandemic on the assumptions and estimates are presented in the section “Effects of the coronavirus pandemic”.

Changes in accounting and valuation methods

In fiscal 2020, KUKA Group took the following revised standards into account in the consolidated financial statements for the first time:

- Amendments to the conceptual framework
- Amendments to IFRS 3 – Definition of a Business
- Amendments to IAS 1 and IAS 8 – Definition of Material
- Amendments to IFRS 9, IAS 39 and IFRS 7 – Interest Rate Benchmark Reform
- Amendments to IFRS 16 – COVID-19-Related Rent Concessions

Amendments to the conceptual framework

The amendments to the conceptual framework increased the significance of management's accountability or responsibility for the financial reporting objective. The principle of prudence, defined as the exercise of caution in making discretionary decisions in the face of an uncertain environment, as a contribution to neutrality, was also emphasized. A reportable company may, per definition, be a legal entity or part of a legal entity. The definition of an asset as a current economic resource controlled by the entity as a result of past events has been revised. The definition of a liability, which is described as a present obligation of an entity to transfer an economic resource as a result of past events, has also been revised. In the course of the revision, the probability thresholds for recognition were eliminated, and additional guidance on the disposal of assets and liabilities was included, as well as explanations on different valuation concepts and factors to be considered in their selection. Finally, the profit or loss was defined as the primary performance indicator and it was determined that income and expenses recognized in other comprehensive income should generally be reclassified to the income statement. A precondition for this is that the relevance or credible presentation of the financial statements is increased.

Amendments to IFRS 3 – Definition of a Business

A business is defined as an acquisition of resources and a substantive process that, in combination, contribute significantly to the ability to produce outputs. The new regulations establish a framework for assessing when a substantive process exists.

According to the amended definition, only goods and services for customers may be regarded as outputs.

It is no longer necessary, on the other hand, to assess whether market participants are able to replace non-acquired inputs and processes or to integrate the acquired activities and assets.

Entities may optionally perform a so-called concentration test. This essentially examines whether the total fair value of the acquired gross assets is concentrated in one asset or a group of similar assets. If this is the case, it is concluded that no business has been acquired, which means that no further assessment is necessary.

Amendments to IAS 1 and IAS 8 – Definition of Material

The definition of materiality in all IFRSs as well as in the conceptual framework has been standardized. Also included are clarifications relating to the definition of materiality and on the obscuring of material information with immaterial information. The amended definition now reads: "Information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity."

The amendment clarifies that the reference to obscuring information addresses situations in which the effect is similar to omitting or misstating that information. An entity must assess materiality in the context of the financial statements as a whole.

The meaning of "primary users of general-purpose financial statements" is also clarified. They are defined as "existing and potential investors, lenders and other creditors" who have to rely on general-purpose financial statements for much of the financial information they need.

Amendments to IFRS 9, IAS 39 and IFRS 7 – Interest Rate Benchmark Reform

The amendments include certain aspects of the relief related to hedge accounting, with the effect that the IBOR reform does not necessarily lead to the discontinuation of hedge accounting. If any ineffectiveness exists, it should continue to be recognized in the income statement.

The amendments to IFRS 7 require disclosure of the nominal amount of hedging instruments insofar as the relief is applied to them.

Amendments to IFRS 16 – COVID-19-Related Rent Concessions

As a result of the coronavirus pandemic, the IASB has approved relief for lessees. Lessees may elect whether or not to treat lease concessions as a modification and account for them accordingly. The relief can only be applied if the change in lease payments results in a change in consideration. This must be substantially equal to or less than the consideration in the lease prior to modification. Additionally, the reduction may only affect lease payments that were originally due by June 30, 2021. Furthermore, no other material changes may be made to the existing lease to qualify for the relief.

The amended standards described above had no material impact on the Group's consolidated financial statements.

The following standards, standard amendments and interpretations that were approved by the balance sheet date and have in part already been adopted into EU law, have not yet had an effect on the financial statements as at December 31, 2020.

Standard / Interpretation	Effective date	Planned application by KUKA AG
Amendments to IFRS 4 – Deferral of IFRS 9	Jan. 1, 2021	Fiscal 2021 [1]
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 – Interest Rate Benchmark Reform (Phase 2)	Jan. 1, 2021	Fiscal 2021 [1]
Amendments to IFRS 3, IAS 16, IAS 37 and Annual Improvements 2018 – 2020	Jan. 1, 2022	Fiscal 2022 [1]
Amendments to IAS 1: Classification of Liabilities	Jan. 1, 2023	Fiscal 2023 [1]
IFRS 17 – Insurance Contracts	Jan. 1, 2023	Fiscal 2023 [1]

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

Effects of new accounting standards to be applied as of the 2021 fiscal year

KUKA does not plan to apply at an early stage the new or amended standards and interpretations whose application is not mandatory until later fiscal years. The effects of these new standards are being continuously evaluated. Standards whose application is mandatory as of January 1, 2021 have no material impact on the consolidated financial statements.

Explanation of items in the financial statements

Notes to the Group income statement

1. Sales revenues

When a contractual obligation is fulfilled by transferring promised goods to a customer or performing a service, KUKA Group recognizes the associated sales revenues. With the sale of products such as industrial robots, the performance obligation is fulfilled at a specific point in time. KUKA Group also provides services in conjunction with construction contracts. In these, the performance obligations are fulfilled over a specific period of time. In the case of predominantly downstream services, performance takes place both over a period of time and at a specific point in time.

Of the Group's sales revenues of €2,573.5 million (2019: €3,192.6 million), €1,423.0 million (2019: €1,626.9 million) was attributable to the fulfillment of performance obligations over time and €1,150.5 million (2019: €1,565.7 million) to obligation fulfillment at a point in time. As in the previous year, the highest sales revenues were generated in the EMEA region (2020: €1,226.0 million; 2019: €1,646.2 million) followed by the Americas (2020: €830.0 million; 2019: €958.8 million). There was a decline in sales revenues in all regions. The breakdown of revenues by region, based on the regional allocation of the subsidiaries, is presented below.

	EMEA		Americas		APAC		Group	
in € millions	2019	2020	2019	2020	2019	2020	2019	2020
Services provided over a period of time	674.6	564.7	750.2	664.5	202.1	193.8	1,626.9	1,423.0
Services provided at a specific point in time	971.6	661.3	208.6	165.5	385.5	323.7	1,565.7	1,150.5
Total	**1,646.2**	**1,226.0**	**958.8**	**830.0**	**587.6**	**517.5**	**3,192.6**	**2,573.5**

Accounting for €899.2 million in fiscal 2020 (2019: €1,159.2 million), Robotics is the segment with the highest revenues, operating predominantly in the product business. Accordingly, revenues are mainly recognized at a point in time. The China segment also generates the greater share of its revenues with point-in-time performance. The Systems, Swisslog, and Swisslog Healthcare business segments, which are primarily active in the project business, present an opposite picture. This means that performance obligations are fulfilled over time.

	Systems		Robotics		Swisslog		Swisslog Healthcare		China		Corporate Functions / Consolidation		Group	
in € millions	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Services provided over a period of time	731.6	592.2	181.0	150.1	555.9	479.7	201.2	203.6	129.6	135.6	–172.4	–138.2	1,626.9	1,423.0
Services provided at a specific point in time	193.8	79.4	978.2	749.1	44.1	47.9	21.1	13.4	328.6	261.5	–0.1	–0.8	1,565.7	1,150.5
Total	**925.4**	**671.6**	**1,159.2**	**899.2**	**600.0**	**527.6**	**222.3**	**217.0**	**458.2**	**397.1**	**–172.5**	**–139.0**	**3,192.6**	**2,573.5**

The anticipated sales revenues from the existing order backlog of €1,992.6 million (2019: €1,967.4 million) are expected to be generated in the following timeframe:

in € millions	2019	2020
Anticipated sales revenues from the existing order backlog	1,967.4	1,992.6
(of which, not later than one year)	(1,318.2)	(1,372.9)
(of which, later than one year and not later than five years)	(628.2)	(564.3)
(of which, later than five years)	(21.0)	(55.4)

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

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

	Cost of sales		Selling expenses		Research and development expenses		General and administrative expenses		Total	
in € millions	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Cost of materials	1,626.1	1,297.2	8.5	6.1	31.4	29.5	7.6	8.2	1,673.6	1,341.0
Personnel expenses	649.0	584.9	164.7	150.4	107.9	106.6	147.2	140.3	1,068.8	982.2
Amortization	51.9	54.0	17.9	17.0	21.8	34.2	36.9	41.2	128.5	146.4
Other expenses and income	188.6	133.3	100.5	83.4	–0.6	7.7	–1.3	–13.2	287.2	211.2
Total	**2,515.6**	**2,069.4**	**291.6**	**256.9**	**160.5**	**178.0**	**190.4**	**176.5**	**3,158.1**	**2,680.8**

The cost of sales decreased from €2,515.6 million in 2019 to €2,069.4 million in 2020 due to the lower revenue volume. The lower use of materials resulted in a reduced cost of materials within the cost of sales. With the exception of selling expenses, amortization increased in all other functional areas. The increase is mainly attributable to expenses for impairment losses, such as for an IT project or in the R&D area. Other expenses and income decreased overall year on year. Within the cost of sales, foreign currency gains and losses from operational foreign currency transactions totaling €8.2 million (2019: €3.5 million) are also recognized under other expenses and income. Selling expenses decreased by €34.7 million year on year. Both the lower personnel expenditure and the other expenses had a reducing effect. Research and development costs increased overall, due primarily to higher depreciation and amortization, including impairment losses. The amortization of research and development costs also includes write-downs of interest on borrowings capitalized in prior years (2020: €0.3 million; 2019: €0.2 million). Administrative expenses were down year on year, helped by reduced personnel expenditure.

Total functional costs fell by 15.1% in fiscal 2020 (2019: decrease of 2.4%).

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

in € millions	2019	2020
Wages and salaries	883.6	812.4
Social security payments and contributions for retirement benefits and provident funds	185.2	169.8
(of which, for retirement benefits)	(26.7)	(24.3)
Personnel costs	**1,068.8**	**982.2**

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

Employees by functional areas	Annual average		Balance sheet date			
	2019	2020	Total 2019	Total 2020	of which, Germany	of which, abroad
Manufacturing	9,469	9,079	9,338	9,076	2,703	6,373
Sales	1,646	1,588	1,614	1,509	517	992
Administration	1,449	1,473	1,457	1,549	531	1,018
Research and development	1,259	1,234	1,264	1,251	600	651
	13,823	**13,374**	**13,673**	**13,385**	**4,351**	**9,034**
Apprentices	265	256	287	270	213	57
Student trainees	63	48	54	45	23	22
Total	**14,151**	**13,678**	**14,014**	**13,700**	**4,587**	**9,113**

3. Other operating income and expenses

If income or expenses cannot be allocated to any of the functional areas (cost of sales, selling expenses, research and development expenses, general and administrative expenses) or otherwise reported separately, they are recognized under other operating income or expenses. Other operating income fell by €20.7 million in fiscal 2020 to €10.0 million (2019: €30.7 million). The previous year included income from the change of consolidation method of a Chinese subsidiary, which has been accounted for at equity in KUKA Group since 2019. Furthermore, other operating income includes grants, special discounts and income from settlement agreements.

Other operating expenses, on the other hand, rose slightly by €0.5 million from €13.8 million in 2019 to €14.3 million in 2020. This includes losses from the disposal of financial assets (2020: €1.7 million; 2019: €0.1 million) and other taxes.

4. Financial result

The financial result, comprising net financial expenses and financial income, shows income of €3.0 million for fiscal 2020. This represents a year-on-year decline of €3.6 million, following income of €6.6 million in the previous year.

in € millions	2019	2020
Changes in value of financial investments	**2.1**	**2.9**
Interest income from finance leases	11.4	13.5
Remaining interest and similar income	16.2	13.4
Other interest and similar income	**27.6**	**26.9**
Interest component for allocations to pension provisions	2.0	1.0
Guarantee commissions	1.7	1.4
Interest expense for promissory note loans	8.7	7.6
Financing costs reclassified to operating results and capitalized	–0.7	–0.7
IFRS 16 interest expense	5.6	5.5
Remaining interest and similar expenses	2.6	5.2
Other interest and similar expenses	**19.9**	**20.0**
Foreign currency gains / losses	**1.0**	**–1.0**
Financial result	**6.6**	**3.0**

Changes in the value of financial investments increased to €2.9 million in fiscal 2020 (2019: €2.1 million) as a result of a change in the value of one other investment in the Swisslog Healthcare segment.

Interest income of €26.9 million in the year under review was down slightly by €0.7 million on the previous year (2019: €27.6 million). It consisted primarily of interest income from a finance lease (2020: €13.5 million; 2019: €11.4 million) at KTPO and interest income on bank balances, mainly in connection with a Chinese joint venture.

Until fiscal 2020, KUKA Group reported the balance of foreign currency gains and losses within interest income or interest expenses, depending on the balance arising. Since fiscal 2020, KUKA Group has reported the net amount from foreign currency gains and losses separately in the financial result. In the year under review, a loss of €1.0 million was incurred (2019: income of €1.0 million). The presentation for the previous year has been adjusted to ensure comparability.

Interest expenses decreased slightly by €0.1 million from €20.0 million in 2019 to €19.9 million in 2020. The net interest component of pension provisions, guarantee commissions and interest expenses for IFRS 16 was down year on year. Interest expenses for the promissory note loan of €7.6 million (2019: €8.7 million) were also lower, as one tranche was repaid in fiscal 2020. Other interest and similar expenses were up year on year, as they include the interest expenses for the inter-company loan from Midea Group. Please refer to note 26 for more detailed information on the promissory note loan, the guarantees and the inter-company loan.

5. Taxes on income

Tax expense

Income tax expense breaks down by origin as follows:

in € millions	2019	2020
Current taxes	33.9	26.4
(of which, relating to other periods)	(5.1)	(–1.6)
Deferred taxes	2.6	–42.0
(of which, from temporary differences)	(1.9)	(–27.7)
(of which, from loss carryforwards)	(0.7)	(–14.3)
Tax expense	**36.6**	**–15.6**

Of the current expenses for tax on earnings, €13.5 million is attributable to domestic expenditure (2019: €1.4 million) and €12.9 million to foreign expenditure (2019: €32.5 million). Non-period current tax income of €1.6 million (2019: expense of €5.1 million) arose in German and foreign operations.

Deferred tax income relates to Germany in the amount of €35.9 million (2019: expense of €7.0 million) and to other countries in the amount of €6.1 million (2019: income of €4.4 million). The deferred tax income from temporary valuation differences results primarily from the recognition of hidden reserves on land and buildings in Germany totaling €16.7 million, which arose due to their contribution to a property management company and from the recognition of deferred taxes from loss carryforwards totaling €14.3 million.

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

in € millions	2019	2020
Earnings before tax expense	**54.4**	**–110.2**
Expected tax expense	**17.4**	**–35.3**
Tax rate-related differences	–11.5	–11.2
Tax reductions due to tax-exempt income	–13.4	–11.7
Tax increases due to non-deductible expenses	8.7	16.5
Tax expenses (+) / tax income (-) for prior years	–4.3	0.6
Change in allowance on deferred taxes	39.9	26.4
First-time recognition of previously unrecognized deferred tax assets on tax loss carryforward	–0.4	–0.7
Change in permanent differences	–3.8	–5.4
Tax impact of investments accounted for by the equity method	0.9	0.5
Effects resulting from tax rate changes	1.6	–0.8
Tax effect due to non-creditable withholding taxes	1.8	6.0
Other differences	–0.3	–0.5
Taxes on income (actual tax expense)	**36.6**	**–15.6**

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

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

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

Deferred taxes

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

	Deferred tax assets		Deferred tax liabilities	
in € millions	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020
Non-current assets	56.6	74.7	132.3	98.9
Current assets	54.5	52.7	52.3	57.1
Provisions	81.9	82.4	10.5	14.6
Liabilities	67.8	65.0	42.3	28.7
Subtotal	**260.8**	**274.8**	**237.4**	**199.3**
Balancing item	–195.6	–165.2	–195.6	–165.2
Valuation allowance	–20.4	–37.7	–	–
Subtotal	**44.8**	**71.8**	**41.8**	**34.1**
Deferred taxes on temporary differences	**44.8**	**71.8**	**41.8**	**34.1**
Deferred taxes on tax loss carryforwards	41.9	55.9	–	–
Total	**86.7**	**127.8**	**41.8**	**34.1**
(of which, from items recognized in equity)	(4.8)	(10.9)	(0.2)	(0.2)

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

The recognized values on the balance sheet are written off in the event that the tax benefits that they represent are no longer expected to be realized.

In the loss carryforwards of €765.1 million (2019: €594.0 million), loss carryforwards amounting to €567.4 million (2019: €453.7 million) are not considered in the accounting of deferred taxes, which can for the most part be utilized indefinitely. An amount of €71.0 million from unrecognized loss carryforwards (2019: €75.5 million) will expire by 2026 if it is not utilized.

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

in € millions	Loss carryforwards for which deferred taxes were capitalized		Total existing loss carryforwards	
	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020
Swisslog (Deutschland) GmbH, Dortmund	–	–	41.8	59.9
KUKA Industries GmbH & Co. KG, Obernburg	–	–	74.9	102.4
KUKA Aktiengesellschaft, Augsburg	111.6	149.8	245.5	259.8
Other	28.6	47.9	231.8	343.0
Total	**140.2**	**197.7**	**594.0**	**765.1**

Existing loss carryforwards totaling €343.0 million (2019: €231.8 million) and summarized under "Other" originate in the amount of €57.3 million (2019: €35.2 million) from China and in the amount of €93.2 million (2019: €41.0 million) from Switzerland, of which loss carryforwards totaling €18.8 million (2019: €0.0 million) have been used for the recognition of deferred tax assets. The remaining loss carryforwards originate from different countries and are not material in each case.

Deferred tax income in the amount of €0.7 million (2019: €0.4 million) results from the recognition of deferred tax receivables on loss carryforwards from earlier periods which until now had not been included in or written down from the tax accrual / deferral. In the financial year, the valuation adjustment on deferred tax assets on loss carryforwards and on temporary differences totaling €26.4 million (2019: €39.9 million) had an effect on profit or loss.

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

As at the balance sheet date, the Group companies, some of which had generated a tax loss in 2019, reported a net surplus of deferred tax assets totaling €93.7 million (2019: €44.8 million), mainly resulting from the German tax group of KUKA AG.

The Group companies of the German tax group generated tax losses in previous years and, against the backdrop of the COVID-19 crisis, the revenue targets for 2020 could not be achieved. Further considerations are made accordingly for the impairment analysis, so that deferred tax assets are only recognized insofar as there are convincing indications of future taxable profits that will allow the loss carryforwards to be utilized and deferred tax assets to be recognized on deductible temporary differences. Substantial indications exist insofar as the losses incurred in the recent past result to a large extent from identifiable special effects, such as restructuring measures, one-off charges in connection with the coronavirus pandemic or the efficiency program in Germany, and are not expected to recur in the future. It has already been successfully demonstrated in the past that the losses incurred as a result of the existing economic cycles can be reduced and sufficient taxable income generated again. At present, a significant improvement in earnings is expected in the coming years, as KUKA operates with its automation solutions in a fast-growing market environment, which is why it is assumed with a high degree of certainty that it will prove possible for the deferred tax assets reported in the balance sheet to be realized through future taxable earnings.

Based on the impairment analyses, it is expected that the corporate income tax loss carryforwards will be used up by 2028 at the latest and the trade tax loss carryforwards by 2026 at the latest, even when applying substantial risk discounts to the planned tax results.

In accordance with IAS 12, deferred tax items must be recognized for the difference between the proportionate equity of a subsidiary recognized on the Group balance sheet and the investment carrying amount of this subsidiary on the tax balance sheet of the parent company (outside basis differences) if it is likely that this difference will be realized. Since both KUKA Aktiengesellschaft and the subsidiaries in question are corporations, these differences are predominantly tax-exempt under section 8b of the Corporation Tax Law (KStG) upon realization and thus are permanent in nature. According to IAS 12.39, no deferred tax liability should be recognized even for temporary differences (for example, those resulting from the 5 percent flat-rate allocation under section 8b KStG) if it is not likely, given control by the parent company, that these differences will reverse in the foreseeable future. Since no such reversal is expected, no deferred tax items had to be recognized on the balance sheet for this purpose. There are outside basis differences in the amount of €28.7 million (2019: €30.8 million).

Overall, the change to deferred tax assets and liabilities of €48.7 million (2019: –€3.3 million) came from amounts affecting net income totaling €42.0 million (2019: –€2.6 million) as well as changes in deferred taxes on pension obligations, for the most part not affecting net income, amounting to €6.2 million (2019: €1.5 million). There is no effect from deconsolidation (2019: –€1.3 million) or the initial accounting for newly acquired fully consolidated companies. There were also relevant foreign exchange effects amounting to €0.5 million (2019: –€0.9 million).

6. Earnings per share

Undiluted / diluted earnings per share are as follows:

	2019	2020
Net income for the year attributable to the shareholders of KUKA AG (in € millions)	9.7	–103.1
Weighted average number of shares outstanding (no. of shares)	39,775,470	39,775,470
Diluted / undiluted earnings per share (in €)	**0.24**	**–2.59**

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

The weighted average number of shares in circulation remained unchanged at 39.8 million on the balance sheet date (December 31, 2019: 39.8 million shares).

Notes to the Group balance sheet: Assets

7. Intangible assets

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

Schedule of changes in intangible fixed assets in 2020

	Acquisition / manufacturing costs							Accumulated depreciation and impairment losses							Net carrying amount
in € millions	Status as of Jan. 1, 2020	Exchange rate differences	Additions	Disposals	Change due to business combinations / others	Reclassifications	Status as of Dec. 31, 2020	Status as of Jan. 1, 2020	Exchange rate differences	Additions	Disposals	Change due to business combinations / others	Reclassifications	Status as of Dec. 31, 2020	Status as of Dec. 31, 2020
1. Licenses and other rights	308.4	–2.8	3.0	6.8	–	1.3	303.1	170.7	–1.8	28.8	6.6	–	–	191.1	112.0
2. Self-developed software and other development costs	152.1	–0.4	30.1	22.1	–	–	159.7	49.0	–0.3	27.9	21.5	–	–	55.1	104.6
3. Goodwill	323.7	–1.9	–	–	–	–	321.8	8.4	–	0.2	–	–	–	8.6	313.2
4. Advances paid and construction in progress	9.4	0.1	1.5	–	–	–1.3	9.7	–	–	6.2	–	–	–	6.2	3.5
	793.6	**–5.0**	**34.6**	**28.9**	**–**	**–**	**794.3**	**228.1**	**–2.1**	**63.1**	**28.1**	**–**	**–**	**261.0**	**533.3**

Schedule of changes in intangible fixed assets in 2019

	Acquisition / manufacturing costs							Accumulated depreciation and impairment losses							Net carrying amount
in € millions	Status as of Jan. 1, 2019	Exchange rate differences	Additions	Disposals	Change due to business combinations / others	Reclassifications	Status as of Dec. 31, 2019	Status as of Jan. 1, 2019	Exchange rate differences	Additions	Disposals	Change due to business combinations / others	Reclassifications	Status as of Dec. 31, 2019	Status as of Dec. 31, 2019
1. Licenses and other rights	291.0	4.3	8.1	4.0	–0.1	9.1	308.4	141.2	2.0	29.8	2.3	–	–	170.7	137.7
2. Self-developed software and other development costs	128.4	3.3	30.2	3.8	–	–6.0	152.1	34.3	1.3	17.2	3.8	–	–	49.0	103.1
3. Goodwill	317.1	6.6	–	–	–	–	323.7	8.4	–	–	–	–	–	8.4	315.3
4. Advances paid and construction in progress	11.3	–0.1	1.3	–	–	–3.1	9.4	–	–	–	–	–	–	–	9.4
	747.8	**14.1**	**39.6**	**7.8**	**–0.1**	**0.0**	**793.6**	**183.9**	**3.3**	**47.0**	**6.1**	**–**	**–**	**228.1**	**565.5**

KUKA Group recognized brands in the amount of €24.0 million (2019: €24.4 million), which are always subject to an impairment test when a triggering event occurs, but at least once a year. The calculation is based on the value in use. The result of the impairment test for the 2020 fiscal year did not indicate any need for impairment, thus confirming the recoverability of the residual carrying amount.

Goodwill

The composition of the cash generating units (CGUs) was the same as in the previous year. The double disclosure of the Chinese companies carried out in the segment report is not taken into account in the impairment test. The Chinese units were therefore allocated to the Swisslog and Swisslog Healthcare business segments for the impairment test.

The following table shows the cash generating units (CGUs) with the respective goodwill and the corresponding pre-tax discount rate used (weighted average cost of capital (WACC)) for the 2019 and 2020 fiscal years:

in € millions	Dec 31, 2019		Dec 31, 2020	
	Goodwill	WACC (%)	Goodwill	WACC (%)
Systems	27.8	11.0	27.3	11.1
Robotics	69.4	12.6	69.0	12.8
Swisslog	126.8	11.4	126.2	10.2
Swisslog Healthcare	56.9	9.8	56.6	8.0
China	34.4	12.3	34.1	13.1
Total	**315.3**		**313.2**	

Goodwill as at December 31, 2020 amounted to €313.2 million, slightly below the prior-year figure (2019: €315.3 million). The decrease mainly relates to foreign exchange effects.

The impairment test was based on a three-year detailed planning period and a further period of two years in which strategic planning was applied. Together with the market-specific growth rate of 2.0%, these five years formed the basis for calculating the perpetuity.

The cost of equity capital and borrowing costs were determined on the basis of segment-specific peer groups made up of KUKA AG's most important national and international competitors. Accordingly, these companies had similar activity and product portfolios.

The market risk premium for the respective CGUs was one of the most important components in the WACC calculation. A market risk premium of 7.50% (2019: 7.00%) was applied in all business segments. The beta factor determined as a two-year average of the respective peer group was 1.142 (2019: 1.025) for the Systems CGU, 1.281 (2019: 1.187) for the Robotics CGU, 1.134 (2019: 1.158) for the Swisslog CGU, 0.826 (2019: 0.888) for the Swisslog Healthcare CGU and 1.096 (2019: 1.135) for the China CGU. The market risk premium showed an increase on the previous year. The beta factor, on the other hand, decreased year on year, with the exception of the Systems CGU. While observing the possible ranges of the market risk premium, a 1% higher WACC would only marginally influence the goodwill – as marginally as a reduction in sales revenues over the entire planning period by 10% with a correspondingly lower cash flow.

The ratios for the cost of equity capital and the cost of borrowed capital were determined by CGU based on the average leverage ratios of the respective peer group for the last two years. The tax rates used per segment ranged between 21.2% and 27.6% (Systems CGU: 27.0% (2019: 21.0%); Robotics CGU: 25.5% (2019: 27.6%); Swisslog CGU: 21.2% (2019: 22.0%); Swisslog Healthcare CGU: 27.6% (2019: 22.1%); China CGU: 25.0% (2019: 20.8%)).

Self-developed software and other product development costs

Research and development expenses increased from €160.5 million in 2019 to €178.0 million in 2020. IAS 38, stipulates that costs for self-developed software and other product developments must be capitalized. KUKA Group recognizes these expenses at production cost, which includes directly attributable costs and appropriate allocations for overheads and depreciation. Borrowing costs for qualifying assets are taken into account in the production costs based on the Group capitalization rate of 1.73% (2019: 1.8%).

The business segments are working – depending on their focus – on various projects relating to mechanical systems as well as power and control software for robots. In addition, applications for medical technology and automation solutions are being developed or improved. Borrowing costs of €0.7 million were recognized for the 2020 fiscal year (2019: €0.7 million).

As at December 31, 2020, development costs of €104.6 million (2019: €103.1 million) had been capitalized. This corresponds to an increase of €1.5 million compared with the end of fiscal 2019. At €30.1 million, the additions in the year under review were at the prior-year level (2019: €30.2 million) and included the KR Cybertech nano 2, iBot, Therapick, Pharmacy Manager and Nexus. Further information can be found in the research and development report.

In the 2020 fiscal year, impairment losses of €16.1 million (2019: €0.0 million) were recognized on intangible assets, mainly relating to an IT project and company-produced assets capitalized in the previous year. The IT project was discontinued. It has proved possible to reuse parts of it, which were reported within the item "Advances paid and construction in progress", in a new IT project.

8. Tangible assets

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

Schedule of changes in KUKA Group’s tangible assets 2020

	Acquisition / manufacturing costs							Accumulated depreciation and impairment losses							Net carrying amount
in € millions	Status as of Jan. 1, 2020	Exchange rate differences	Additions	Disposals	Change due to business combinations / others	Reclassifications	Status as of Dec. 31, 2020	Status as of Jan. 1, 2020	Exchange rate differences	Additions	Disposals	Change due to business combinations / others	Reclassifications	Status as of Dec. 31, 2020	Status as of Dec. 31, 2020
1. Land, similar rights and buildings including buildings on land owned by third parties	308.1	−4.6	11.4	10.3	–	30.9	335.5	97.6	−1.3	12.5	6.6	–	–	102.2	233.3
2. Technical plant and equipment	177.1	−3.6	13.5	7.6	–	−3.9	175.5	111.4	−2.2	14.3	6.3	–	–	117.2	58.3
3. Other equipment, factory and office equipment	174.2	−2.5	12.9	9.6	–	1.0	176.0	116.7	−1.6	20.1	8.1	–	–	127.1	48.9
4. Advances paid and construction in progress	32.9	−0.1	8.3	0.5	–	−28.0	12.6	–	–	–	–	–	–	–	12.6
	692.3	**−10.8**	**46.1**	**28.0**	**–**	**–**	**699.6**	**325.7**	**−5.1**	**46.9**	**21.0**	**–**	**–**	**346.5**	**353.1**

Schedule of changes in KUKA Group’s tangible assets 2019

	Acquisition / manufacturing costs							Accumulated depreciation and impairment losses							Net carrying amount
in € millions	Status as of Jan. 1, 2019	Exchange rate differences	Additions	Disposals	Change due to business combinations / others	Reclassifications	Status as of Dec. 31, 2019	Status as of Jan. 1, 2019	Exchange rate differences	Additions	Disposals	Change due to business combinations / others	Reclassifications	Status as of Dec. 31, 2019	Status as of Dec. 31, 2019
1. Land, similar rights and buildings including buildings on land owned by third parties	269.1	1.4	24.9	29.1	−0.2	42.0	308.1	87.9	0.2	10.0	0.3	−0.2	–	97.6	210.5
2. Technical plant and equipment	157.4	0.2	20.3	4.0	–	3.2	177.1	99.6	0.1	15.1	3.2	–	−0.2	111.4	65.7
3. Other equipment, factory and office equipment	161.0	0.9	20.6	9.3	−0.5	1.5	174.2	103.9	0.5	19.8	7.5	−0.2	0.2	116.7	57.5
4. Advances paid and construction in progress	197.6	2.8	45.7	166.5	–	−46.7	32.9	–	–	–	–	–	–	0.0	32.9
	785.1	**5.3**	**111.5**	**208.9**	**−0.7**	**–**	**692.3**	**291.4**	**0.8**	**44.9**	**11.0**	**−0.4**	**–**	**325.7**	**366.6**

As in the previous year, no impairment losses had to be recognized on tangible assets. Reclassifications mainly related to transfers from "Advances paid and construction in progress" to the category "Land, similar rights and buildings including buildings on land owned by third parties". The reclassification was attributable to the completion and commissioning of the education center at the Augsburg site.

Government grants

No or only negligible grants and allowances were deducted from the acquisition or production costs of the tangible assets, as in the previous year.

Government grants totaling €14.4 million (2019: €4.1 million) were received and directly released to income. There were no contingently repayable grants as of the balance sheet date.

9. Financial investments

In the year under review, no financial investments were made where the shareholding exceeded 10%. A shareholding of less than 1.0% in CarepathRX Holding, Washington, USA, was acquired as part of the consideration for the sale of the at-equity investment in Pipeline Health Holdings LLC, San Francisco, USA. The carrying amount of the financial investments declined to €17.1 million as at the balance sheet date (2019: €24.1 million). This was due to the full write-down of the investments in Nebbiolo Technologies Inc., Melpitas, USA in the low single-digit million range and Savioke Inc., San Jose, USA. The former was treated with no effect on income, as the Group became aware in the year under review of indications impacting the value in the previous year. If the value adjustment had already been carried out in the previous year, the financial result and the financial investments would have been burdened by €3.8 million. The financial investments would thus have amounted to €20.3 million as at December 31, 2019, and the financial result in 2019 would have been €2.8 million. Further disclosures in accordance with IFRS 13.93e have been omitted for reasons of materiality.

The investment in Servotronix Motion Control Ltd., Petach-Tikva, Israel was classified as FVOCI, as the contractual arrangement does not allow KUKA Group to generate either profits or losses. The carrying amount of €14.4 million (2019: €15.7 million) also represents the fair value. No dividends were received or reclassifications made during the reporting period.

No FVOCI-classified investments were derecognized during the reporting period.

10. Investments accounted for at equity

The number of investments accounted for at equity decreased by one entity from five investments in 2019 to four investments in 2020. The Group does not apply the disclosures in the notes pursuant to IFRS 12. B12 and B13, as the investments are of minor importance individually and for KUKA Group as a whole. This leads to a €7.6 million decrease in the balance sheet value from €34.0 million in 2019 to €26.4 million in 2020. IFRS 12.B16 requires disclosure of the aggregate amount of the shares in profit or loss across all investments accounted for using the equity method. The loss declined to €1.4 million in the 2020 fiscal year (2019: €3.6 million).

11. Leases

KUKA as a lessor

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

KUKA Toledo Production Operations LLC, Toledo, USA (KTPO) manufactures Jeep Gladiator bodies under the terms of a pay-on-production contract with Chrysler. The contract, which falls into the category of a finance lease, has a term until March 2025. As at the balance sheet date December 31, 2020, the non-current portion of the lease receivable amounted to €119.6 million (2019: €152.0 million) and the current portion to €27.0 million (2019: €28.9 million).

Translogic Corporation, Denver, USA

Translogic Corporation, Denver, USA has a finance lease relating to portioning systems for medicines, which was taken over in the course of the acquisition of Talyst Systems LLC, Delaware, USA in 2017. At the end of fiscal 2020, there was no longer a non-current lease receivable (2019: €0.5 million), but a current one of €1.4 million (2019: €0.5 million).

On account of their structure, the leases were full payout lease agreements. The future minimum lease payments thus correspond to the gross investment.

At the end of the fiscal year, there were non-current lease receivables of €119.6 million (2019: €152.5 million) and current lease receivables of €28.4 million (2019: €29.4 million). There was no capital gain or loss in either the year under review or the previous year. Nor do any of the leases contain income from variable lease payments. Financial income on the net investment in the lease amounted to €13.5 million in fiscal 2020 (2019: €11.4 million).

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

in € millions	2019	2020
Finance lease gross investments	222.0	174.4
(of which, not later than one year)	(42.3)	(41.5)
(of which, later than one year and not later than five years)	(169.1)	(132.9)
(of which, later than five years)	(10.5)	(0.0)
Unrealized financial income	–40.7	–26.3
Present value of outstanding minimum lease payments	**181.8**	**148.0**
(of which, not later than one year)	(29.4)	(28.4)
(of which, later than one year and not later than five years)	(142.0)	(119.6)
(of which, later than five years)	(10.5)	(0.0)

Impairment losses on lease receivables in accordance with IFRS 9 amounted to €1.2 million as at the balance sheet date (2019: €0.3 million). The reconciliation of the impairment losses is presented below:

in € millions	2019	2020
Impairment losses as of Jan. 1	**0.0**	**0.3**
Additions	0.3	1.0
Consumption and foreign currency effects	–	–0.1
Impairment losses as of Dec. 31	**0.3**	**1.2**

KUKA as a lessee

As a lessee, KUKA Group reports buildings, technical equipment, cars and IT hardware, among other items, in its balance sheet. As at the balance sheet date, right-of-use assets valued at €115.5 million (2019: €135.0 million) were capitalized and reported separately in the balance sheet. In the past fiscal year, right-of-use assets in the amount of €25.5 million (2019: €36.8 million) were capitalized. The right-of-use assets per existing asset class are shown below:

in € millions	2019	2020
Right-of-use assets for land and buildings	117.0	100.8
Right-of-use assets for technical equipment	14.0	11.7
Right-of-use assets for other factory and office equipment	2.2	1.5
Other right-of-use assets	1.8	1.5
Total	**135.0**	**115.5**

The right-of-use assets are depreciated over the shorter of the lease term and the useful economic life. The prevailing period within KUKA Group is between 1 and 25.5 years, with an average of 4 years. The depreciation recognized in the respective functional areas totaled €37.2 million in the 2020 fiscal year (2019: €36.8 million). The depreciation amount per asset class is shown in the following table:

in € millions	2019	2020
Depreciation of land and buildings	28.0	26.8
Depreciation of technical equipment	7.3	8.5
Depreciation of other factory and office equipment	0.9	1.0
Other depreciation	0.6	0.9
Total	**36.8**	**37.2**

Total cash outflows from leases recognized in the balance sheet amounted to €39.6 million in fiscal 2020 (2019: €38.5 million). Expenses for short-term leases with a term of less than one year totaled €2.5 million in fiscal 2020 (2019: €3.9 million). The amount incurred for leases for assets with an original price of less than €5,000 each amounted to €0.3 million (2019: €0.5 million).

Expenses for variable lease payments amounting to €16.7 million (2019: €16.2 million) were not included in the valuation of lease liabilities.

Income from subleases amounted to €0.3 million in the reporting period (2019: €0.2 million). There were no sale-and-leaseback agreements in the Group.

KUKA Group expects future cash outflows of €9.1 million (2019: €3.3 million) from agreements already concluded but not yet started.

12. Inventories

In fiscal 2020, write-downs of €57.5 million (2019: €60.5 million) were recognized, relative to the gross value. This represents a decrease of €3.0 million compared with fiscal 2019. Total reversals of impairment losses amounted to €1.0 million in the reporting year, a decrease of €0.4 million on the previous year (2019: €1.4 million). In fiscal 2020, inventories recognized as an expense under the cost of sales amounted to €1,297.2 million (2019: €1,626.1 million).

in € millions	Dec. 31, 2019	Dec. 31, 2020
Raw materials and supplies	152.4	144.1
Work in process	83.8	65.5
Finished goods	92.6	83.0
Advances paid	15.7	15.3
Inventories	**344.5**	**307.9**

13. Trade receivables

Trade receivables decreased by €48.0 million from €443.4 million in 2019 to €395.4 million in 2020. These receivables have a residual term of less than one year.

The following table shows the gross carrying amounts of the trade receivables, classified by the overdue period:

	Receivables subject to IFRS 9 at the balance sheet date						
in € millions	Not overdue	Less than 31 days	31 to 60 days	61 to 90 days	91 to 180 days	More than 180 days	Total of receivables subject to IFRS 9
As of Dec. 31, 2019	327.3	71.6	20.5	11.3	14.7	10.5	455.9
As of Dec. 31, 2020	314.9	52.6	24.5	5.3	5.9	5.3	408.5

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

The following table shows the development of the impairment losses on trade receivables in total as well as on the credit-impaired receivables and the non-credit-impaired receivables separately.

in € millions	Credit-impaired receivables	Non-credit-impaired receivables	Total
Impairment losses as of Jan. 1, 2019	**23.7**	**2.8**	**26.5**
Change in scope of consolidation	–0.2	–0.4	–0.6
Additions	5.1	0.5	5.6
Consumption and foreign currency effects	–3.8	–0.1	–3.9
Reversals	–13.6	–1.5	–15.1
Impairment losses as of Dec. 31, 2019 / Jan. 1, 2020	**11.2**	**1.3**	**12.5**
Change in scope of consolidation	–	–	–
Additions	2.9	1.4	4.3
Consumption and foreign currency effects	–0.5	–0.2	–0.7
Reversals	–2.4	–0.6	–3.0
Impairment losses as of Dec. 31, 2020	**11.2**	**1.9**	**13.1**

As part of working capital management, KUKA transferred trade receivables in the amount of €25.3 million (2019: €41.0 million) to several banks against liquid funds in December 2020. The KUKA Group receivables in question are held under the “sell” business model and are therefore measured at fair value through profit or loss.

14. Contract assets and contract liabilities

At the end of fiscal 2020, contract assets of €360.9 million were capitalized (December 31, 2019: €461.5 million), representing a decline of €100.6 million. Contract liabilities fell by €20.8 million in the reporting period, from €337.1 million in 2019 to €316.3 million in 2020. The majority of the contractual assets and contractual liabilities relate to services provided under long-term construction contracts. The services provided by KUKA Group and the payments made by the customer during the contract term may differ. Accordingly, the change in contractual assets and liabilities is mainly attributable to the fulfillment of performance obligations.

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

in € millions	Contract assets	Contract liabilities
Jan. 1, 2020	**461.5**	**337.1**
Sales revenues included in contractual liabilities at the beginning of the period	–	15.4
Increase due to customer payments received less the value recognized as revenue during the period	–	67.1
Sales revenues recognized during the period	–	20.6
Reclassification from contractual assets to trade receivables	–295.9	–
Changes due to adjustment of the progress	327.0	0.5
Changes due to business combinations	–	7.7
Other changes	–131.7	–132.1
Dec. 31, 2020	**360.9**	**316.3**

in € millions	Contract assets	Contract liabilities
Jan. 1, 2019	**493.9**	**406.8**
Sales revenues included in contractual liabilities at the beginning of the period		–1.5
Increase due to customer payments received less the value recognized as revenue during the period		250.9
Sales revenues recognized during the period		–108.7
Reclassification from contractual assets to trade receivables	–401.8	–
Changes due to adjustment of the progress	422.0	–127.6
Changes due to business combinations	1.4	3.8
Other changes	–54.0	–86.6
Dec. 31, 2019	**461.5**	**337.1**

In the 2020 fiscal year, €0.9 million (2019: €5.0 million) in revenue was recognized from performance obligations that had already been fulfilled or partially fulfilled in earlier periods. These payments are based on customers’ payment plans that are an integral part of the contract. As in fiscal 2019, no contract costs were capitalized in the 2020 fiscal year. A reconciliation of the risk provision for expected default risks arising from contractual assets is presented below:

in € millions	2019	2020
Impairment losses as of Jan. 1	**3.0**	**5.9**
Changes in scope of consolidation	–	–0.2
Additions	4.4	1.9
Consumption and foreign currency effects	–	0.2
Reversals	–1.5	–1.0
Impairment losses as of Dec. 31	**5.9**	**6.6**

15. Other long-term receivables and other assets

in € millions	2019	2020
Non-current other assets		
Non-current other receivables	18.5	1.9
Other	1.5	1.0
Total	**20.0**	**2.9**
Current other assets		
Claims on tax authorities	35.7	30.1
Other	116.7	112.3
Total	**152.4**	**142.4**
Other assets, prepaid expenses and deferred charges	**172.4**	**145.3**

Non-current other assets decreased from €20.0 million in 2019 to €2.9 million in 2020. The decline was mainly attributable to the termination of deferred compensation and the associated derecognition at a subsidiary in the USA. Current other assets decreased from €152.4 million in 2019 to €142.4 million in 2020. The claims on tax authorities were down by €5.6 million to €30.1 million in 2020 (2019: €35.7 million) and mainly include sales tax receivables.

The "Other" category within current other assets includes investments in short-term securities with a term of significantly less than one year. These are classified as amortized cost (AC) and impaired using the credit default swaps of the respective bank and the historical default rate of the respective segment. The cumulative impairment loss for this amounts to €0.1 million (2019: €0.1 million), resulting in a gross carrying amount of €44.7 million (2019: €63.0 million).

In addition, the "Other" category includes other advance payments made and prepaid expenses in an amount of €18.0 million (2019: €16.7 million).

There were no other assets that were past due but not yet impaired as at year-end 2020 or at year-end 2019.

16. Cash and cash equivalents

The liquid funds reported as cash and cash equivalents in KUKA Group's balance sheet have an original remaining term of no more than three months. This includes cash on hand, checks and cash balances with financial institutions.

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

As at December 31, 2020, cash and cash equivalents of less than €0.1 million are subject to a restriction on availability (2019: €0.5 million). For further details please refer to note 26.

The estimated allowance for cash and cash equivalents was calculated on the basis of expected losses and shows an insignificant default risk of less than €0.1 million.

in € millions	Dec. 31, 2019	Dec. 31, 2020
Cash on hand	0.2	0.2
Cash and bank balances	584.1	554.4
Cash with limited availability	0.5	0.0
Total	**584.8**	**554.6**

Notes to the Group balance sheet: Equity and liabilities

17. Equity

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

For more information on equity see the notes in the management report under "Disclosures in accordance with section 315 para. 4 of the German Commercial Code (HGB) including accompanying explanations".

18. Subscribed capital

As in the previous year, the company's share capital amounts to €103,416,222.00 (December 31, 2019: €103,416,222.00) and is subdivided into 39,775,470 no-par-value bearer shares outstanding (December 31, 2019: 39,775,470 shares). Each share carries one vote. The no-par-value bearer shares have a theoretical portion of the share capital amounting to €2.60.

19. Capital reserve

The capital reserve applies to KUKA Aktiengesellschaft.

20. Revenue reserves

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

In accordance with the resolution of the Annual General Meeting, a dividend of €0.15 per share for the 2019 fiscal year was distributed in the year under review, corresponding to a total of €6.0 million.

21. Minority interests

Minority interests relate to Swisslog Healthcare Trading MEA LLC, Dubai / United Arab Emirates, Swisslog Middle East LLC, Dubai / United Arab Emirates, Swisslog Healthcare Shanghai Co., Ltd., Shanghai / China, KUKA Robotics (China) Co., Ltd., Shanghai / China as well as KUKA Robotics Manufacturing China Co., Ltd., Shanghai City / China.

The adjustment item for minority interests in equity, which also includes foreign currency effects and the pro rata minority earnings, increased by €1.7 million from €278.8 million in 2019 to €280.5 million in 2020.

The table below shows information on non-controlling interests in total assets and total comprehensive income:

in € millions	2019	2020
Percentage of non-controlling interests	**50%**	**50%**
Non-current assets	485.7	483.1
Current assets	673.3	714.1
Non-current liabilities	–7.3	–4.7
Current liabilities	–184.9	–227.5
Net assets	**966.8**	**965.0**
Net assets of non-controlling interests	483.5	482.5
Sales revenues	496.7	539.7
Net income	16.0	10.7
Other income	5.6	–4.4
Total comprehensive income	**518.3**	**545.9**
Profit attributable to non-controlling interests	8.0	5.3
Other comprehensive income attributable to non-controlling interests	2.8	–2.2
Cash flow from operating activities	–14.9	8.3
Cash flow from investment activities	3.3	2.7
Cash flow from financing activities	13.6	6.0
Foreign currency effects	2.9	–11.2
Net increase in cash and cash equivalents	**4.9**	**5.8**

22. Other reserves

The other reserves, whose carrying amount at the balance sheet date was –€33.0 million (2019: €9.7 million), decreased due to exchange rate effects amounting to €40.4 million (2019: equity-increasing effect of €10.9 million). The investment measured at fair value through other comprehensive income had an equity-reducing effect of €1.2 million due to adverse foreign currency developments. The change in actuarial gains and losses of pension provisions and deferred taxes thereon in the amount of €1.1 million (2019: €18.2 million) also had a negative impact on the other reserves. Deferred taxes totaling €11.3 million (2019: €5.1 million) from transactions not recognized in profit or loss are included in the other reserves. These are primarily attributable to actuarial gains and losses from pensions.

23. Pension provisions and similar obligations

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

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

Defined benefit plans

Defined benefit plans in KUKA Group primarily concern plans in Germany, the United States, Switzerland, the United Kingdom and Sweden. The country-specific characteristics and legal regulations relating to defined benefit plans are presented in the following.

Germany

Obligations in Germany arise from agreements on company pension schemes concluded with various insurance institutions. The prerequisites regarding the type and amount of the entitlement depend on the employee's age and number of years with the company. The benefits include the components old-age pension, disability pension, widow's pension, death benefits and emergency assistance. New biometric actuarial assumptions (RT 2018G) were published in the 2018 fiscal year, which remain valid for the 2020 fiscal year. The average life expectancy continued to rise in Germany in the last few years, but not by as much as recently. It has not yet been possible to derive any long-term decline in the trend, but this circumstance has been taken into account in the new tables. Research results relating to observed mortality were also taken into account for the first time with a flat-rate discount. These indicate that employees with a higher income also have a greater life expectancy. Finally, the long-term decline in the probability of invalidity in the age range from 58 years onwards was taken into account in the new tables.

USA

The Systems division makes pension payments to its employees after they retire. Employees who entered the workers' union before September 14, 2004 are eligible to participate in the pension plan. The benefits are calculated on the basis of the rate applicable on the date they retire. This rate is composed of the years of service credited to the employee. Eligible employees are also provided with medical care. Owing to their benefit character, the obligations for post-employment medical benefits are also disclosed in this item according to IAS 19. These post-employment benefit provisions represent €0.5 million (2019: €0.6 million) of the total provisions and accruals. The Employee Retirement Income Security Act (ERISA) in the United States provides the legal and regulatory framework for these plans.

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

Switzerland

The plan is affiliated to a foundation (established in 2019), which is legally independent and exceeds the statutory minimum requirements in Switzerland (Occupational Old Age, Survivors' and Invalidity Pension Provision, BVG). All employees in this are insured for the financial consequences of age, invalidity and death. Contributions are made by the employer and employees. Responsibility for investing the assets is borne by the respective foundation board, whilst Swisslog Group is only able to define the investment style. In addition Swisslog Group sets the interest rate on the individual age tranches – subject to the statutory rules. In the event of a deficit for the Swisslog pension tranche within the foundations, various measures can be taken such as a reduced interest rate or additional pension contributions. The level of cover pursuant to BVG exceeds 100% as at the balance sheet date, as was the case at the balance sheet date of the previous year. The Swiss pension plan is based on the BVG 2015 generation tables (without risk sharing).

UK

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

Sweden

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

Defined contribution plans

For the defined contribution plans, the company pays contributions to a public or private pension insurance carrier. Upon payment of the contributions, the company has no further obligations. Total payments for pensions under defined contribution plans in the amount of €48.7 million compared to €54.8 million in 2019 are disclosed as expenses for the respective years. Under defined benefit plans, the company incurs an obligation to provide the benefits promised by the plan to current and former employees.

Deferred compensation

Pension provisions of €2.7 million (2019: €3.0 million) were recognized for fiscal 2020 for salary components converted into pension commitments by employees under the deferred compensation model. These provisions were netted against the asset values from the surrender values of the reinsurance. This resulted in a balance sheet amount after netting of €0.0 million (2019: €0.0 million).

Disclosures on actuarial assumptions

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

Dec. 31, 2020	Germany	Switzerland	UK	Sweden	USA	Other
Demographic assumptions	RT 2018G	BVG 2015 GT mod	S3PxA CMI 2019 [1.25%] Sk=7 & IA 0.25%	FFFS 2007:31	RP–2006 / MP–2018 Blue Collar MP2018	Diverse
Discount factor	0.5%	0.15%	1.40%	0.85%	2.20 – 2.25%	0.50 / 6.0%
Wage dynamics	0.50 / 2.50%	1.25%	2.80%	2.05%	n / a	1.0 / 5.5%
Pension dynamics	1.00 / 1.75 / 2.50%	n / a	3.65%	1.55%	n / a	0.00%
Changes in cost of medical services	n / a	n / a	n / a	n / a	6.50%	n / a

Dec. 31, 2019	Germany	Switzerland	UK	Sweden	USA	Other
Demographic assumptions	RT 2018G	BVG 2015 GT mod	PMA08 / PFA08, using the CMI 2018 projection model with a long term rate of improvement of 1.25%	FFFS 2007:31	RP-2014; Pri-2012 / MP-2019 / MP-2019 Blue Collar; Pri-2012(BC) / MP2019	Diverse
Discount factor	0.90%	0.25%	2.00%	1.67%	3.05 – 3.11%	0.75 – 7.10%
Wage dynamics	0.50%	1.25%	2.90%	2.30%	n / a	1.00 – 6.00%
Pension dynamics	1.00% / 1.75% / 2.50%	0.0%	3.65%	1.80%	n / a	0.00 – 2.25%
Changes in cost of medical services	n / a	n / a	n / a	n / a	6.75%	n / a

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

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

The expected return on assets corresponds to the discount factor and is determined independently of the actual asset classes.

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

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

The sensitivity analysis illustrates the extent to which changes in actuarial assumptions would impact defined benefit obligations recognized as at December 31, 2020:

:

Sensitivity analysis

Nature and degree of change in actuarial assumptions in € millions		Present value of the defined benefit obligation after change 2019	Change 2019[1]	Present value of the defined benefit obligation after change 2020	Change 2020[1]
Increase in the discount rate	by +0.25%	259.0	-8.9	259.2	-9.1
Decrease in the discount rate	by -0.25%	276.0	8.1	278.6	10.3
Pension increase	by +0.25%	274.2	6.3	274.5	6.2
Pension reduction	by -0.25%	264.4	-3.5	265.0	-3.3
Increase in life expectancy	by +1 year	277.1	9.2	277.6	9.3
Decrease in life expectancy	by -1 year	258.9	-9.0	259.3	-9.0
Increase in wages and salaries	by +0.25%	269.4	1.5	269.0	0.7
Decrease in wages and salaries	by -0.25%	266.6	-1.3	267.6	-0.7

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

Funding status of defined benefit pension obligations

	Germany		Switzerland		UK		Sweden		USA		Other		Total	
in € millions	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Present value of pension benefits covered by provisions	75.0	76.0	–	–	–	–	–	–	–	0.6	6.8	5.5	81.8	82.1
Present value of pension benefits based on plan assets	3.0	2.7	111.0	105.8	24.3	26.6	18.9	21.6	30.0	29.1	1.9	3.1	189.1	188.9
Defined benefit obligation	78.0	78.7	111.0	105.8	24.3	26.6	18.9	21.6	30.0	29.7	8.7	8.6	270.9	271.0
Fair value of plan assets	3.0	2.7	91.2	89.3	19.1	19.5	14.0	14.7	25.2	25.6	1.5	1.6	154.0	153.4
Net obligation as of Dec. 31	**75.0**	**76.0**	**19.8**	**16.5**	**5.2**	**7.1**	**4.9**	**6.9**	**4.8**	**4.1**	**7.2**	**7.0**	**116.9**	**117.6**

Reconciliation / Development of the defined benefit obligation

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

	Germany		Switzerland		UK		Sweden		USA		Other		Total	
in € millions	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Jan. 1	**73.5**	**78.0**	**141.0**	**111.0**	**20.0**	**24.3**	**17.4**	**18.9**	**26.0**	**30.0**	**8.0**	**8.7**	**285.9**	**270.9**
Other changes	–	–	-41.2	–	–	–	–	–	–	–	0.1	–	-41.1	–
Current service costs	0.5	0.6	3.5	4.5	0.1	0.2	0.4	0.4	–	–	0.4	0.7	4.9	6.4
Interest expense (+) / interest income (–)	1.2	0.7	1.2	0.3	0.6	0.5	0.4	0.3	1.1	0.8	0.1	0.1	4.6	2.7
Actuarial gains (–) / losses (+)	7.9	4.1	15.8	0.7	2.6	3.5	1.4	1.7	3.9	2.5	0.6	-0.5	32.2	12.0
(of which, changes from experience)	(0.8)	(0.5)	(8.2)	(-0.6)	–	(0.7)	(-0.1)	(-0.3)	(0.4)	(-0.1)	(-0.1)	(-0.5)	(9.2)	(-0.3)
(of which, changes in financial assumptions)	(7.1)	(3.6)	(7.6)	(1.3)	(3.2)	(2.9)	(1.5)	(2.0)	(3.5)	(3.2)	(0.7)	(0.1)	(23.6)	(13.1)
(of which changes in demographic assumptions)	–	–	–	–	(-0.6)	(-0.1)	–	–	–	(-0.6)	–	(-0.1)	(-0.6)	(-0.8)
Gains (–) / losses (+) on settlement	–	–	-10.0	–	–	–	–	–	–	–	–	–	-10.0	–
Past service cost	–	–	–	-3.1	0.1	–	–	–	–	–	–	–	0.1	-3.1
Payments made	-5.1	-4.7	-3.8	-8.3	-0.2	-0.3	-0.4	-0.5	-1.5	-1.0	-0.5	-0.4	-11.5	-15.2
(of which, employee contributions)	–	–	(2.9)	(2.8)	–	(0.1)	–	–	–	–	–	–	(2.9)	(2.9)
(of which, benefits paid)	(-5.1)	(-4.7)	(-6.7)	(-11.1)	(-0.2)	(-0.4)	(-0.4)	(-0.5)	(-1.5)	(-1.0)	(-0.5)	(-0.4)	(-14.4)	(-18.1)
(of which, payments for settlements)	(–)	(–)	(–)	(–)	(–)	(–)	(–)	(–)	(–)	(–)	(–)	(–)	(–)	(–)
Currency translation	–	–	4.5	0.7	1.1	-1.6	-0.3	0.8	0.5	-2.6	–	–	5.8	-2.7
Dec. 31	**78.0**	**78.7**	**111.0**	**105.8**	**24.3**	**26.6**	**18.9**	**21.6**	**30.0**	**29.7**	**8.7**	**8.6**	**270.9**	**271.0**
(of which, funded by provisions)	(75.0)	(76.0)	(–)	(–)	(–)	(–)	(–)	(–)	(–)	(0.6)	(6.8)	(5.5)	(81.8)	(82.1)
(of which, based on plan assets)	(3.0)	(2.7)	(111.0)	(105.8)	(24.3)	(26.6)	(18.9)	(21.6)	(30.0)	(29.1)	(1.9)	(3.1)	(189.1)	(188.9)

Current service costs and interest expenses totaling €9.1 million (2019: €9.5 million) compared to benefit payments of €15.3 million during the fiscal year (2019: €11.5 million). The exchange rate effects, mainly relating to the US dollar and the British pound, led to a decrease in the defined benefit obligation of €2.6 million (2019: €5.8 million increase). Altogether, the defined benefit obligation grew by €0.2 million compared with the previous year (2020: €271.1 million; 2019: €270.9 million).

Reconciliation / Development of plan assets

The reconciliation of plan assets and asset classes for the 2019 and 2020 fiscal years broke down as follows:

in € millions	2019	2020
Jan. 1	**175.5**	**154.0**
Interest income (+)	2.6	1.6
Other changes	–41.2	–0.1
Actuarial gains (+) / losses (–)	12.7	4.7
Employer contributions	8.9	9.0
Payments	–9.2	–13.5
Currency translation	4.7	–2.3
Fair value of plan assets as of Dec. 31	**154.0**	**153.4**
Cash and cash equivalents	5.5	15.9
Shares	51.0	58.5
Bonds	69.9	59.4
Fixed-interest securities	1.6	–
Real estate	17.6	9.8
Other	8.4	9.8
Total	**154.0**	**153.4**
(of which, active market)	(153.4)	(152.9)
(of which, non-active market)	(0.6)	(0.5)

Other changes in fiscal year 2019 included the derecognized portfolio of pensioners in Switzerland in the amount of €41.1 million.

Investment and risk strategy

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

Maturity profile of defined benefit obligations

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

in € millions	2019	2020
Not later than one year	10.1	10.1
Later than one year and not later than five years	44.4	43.9
Later than five years and not later than ten years	58.0	57.1

24. Other provisions

in € millions	Status as of Jan. 1, 2020	Exchange rate differences	Change in scope of consolidation	Consumption	Reversals	Additions	Status as of Dec. 31, 2020
Warranty commitments and risks from pending transactions	77.7	−0.6	–	−44.8	−6.9	49.7	75.1
Provisions for restructuring obligations	25.1	–	–	−10.6	−11.5	28.0	31.0
Miscellaneous provisions	84.4	−2.2	–	−51.5	−4.0	35.8	62.5
Total	**187.2**	**−2.8**	**–**	**−106.9**	**−22.4**	**113.5**	**168.6**

Provisions for warranty risks decreased to €45.0 million in 2020 (2019: €51.3 million), whereas risks from pending transactions increased to €30.1 million (2019: €26.4 million). Both are reported within provisions for warranty commitments and risks from pending transactions.

At the end of the fiscal year, provisions for restructuring obligations grew to €31.0 million (2019: €25.1 million). On the one hand, the previous year's provisions were used up or reversed, and on the other hand, a restructuring program had to be initiated in the Robotics, Systems and Corporate Functions segments, which also includes personnel measures.

The other provisions include provisions for costs still to be incurred for orders already invoiced (2020: €26.1 million; 2019: €41.2 million) and litigation risks (2020: €2.6 million; 2019: €2.5 million).

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

25. Liabilities

Please refer to note 14 for the detailed development of contract liabilities for the year under review and the previous year.

The carrying amounts of the liabilities are presented below:

in € millions	Remaining maturity		Dec. 31, 2020
	Up to one year	More than one year	Total
Liabilities due to banks	154.6	221.6	376.2
Accounts payable to affiliated companies	0.1	148.4	148.5
Financial liabilities	**154.7**	**370.0**	**524.7**
Trade payables	353.4	–	353.4
Lease liabilities	28.7	92.9	121.6
Contract liabilities	316.3	–	316.3
Income tax liabilities	43.5	–	43.5
Other liabilities and deferred income	213.1	20.0	233.1
(of which, for other taxes)	(57.8)	(–)	(57.8)
(of which, for social security payments)	(7.7)	(–)	(7.7)
(of which, liabilities relating to personnel)	(109.2)	(16.6)	(125.8)
(of which, for forward exchange transactions for currency hedging)	(3.8)	(0.1)	(3.9)
Total	**1,109.7**	**482.9**	**1,592.6**

in € millions	Remaining maturity		Dec. 31, 2019
	Up to one year	More than one year	Total
Liabilities due to banks	152.6	232.0	384.6
Accounts payable to affiliated companies	0.1	150.0	150.0
Financial liabilities	**152.7**	**382.0**	**534.6**
Trade payables	402.3	0.0	402.3
Lease liabilities	32.5	105.8	138.3
Contract liabilities	337.1	0.0	337.1
Income tax liabilities	46.1	0.0	46.1
Other liabilities and deferred income	229.9	43.7	273.6
(of which, for other taxes)	(60.2)	(0.0)	(60.2)
(of which, for social security payments)	(8.5)	(0.0)	(8.5)
(of which, liabilities relating to personnel)	(125.4)	(18.3)	(143.7)
(of which, for forward exchange transactions for currency hedging)	(6.8)	(0.1)	(6.9)
Total	**1,200.5**	**531.5**	**1,732.0**

26. Financial liabilities / Financing

The existing financial liabilities were mainly the promissory note loans issued in 2015 and 2018.

Fixed interest rate agreements

	Face value as of balance sheet date		Nominal interest rate	Maturity	Net carrying amount	
in € millions	Dec. 31, 2019	Dec. 31, 2020			2019	2020
EUR promissory note loan						
Tranche 1	142.5	–	1.15% p.a. (MS +80bps)	2015 – 2020	142.4	–
Tranche 2	107.5	107.5	1.61% p.a. (MS +100bps)	2015 – 2022	107.3	107.4
Total promissory note loan	**250.0**	**107.5**			**249.7**	**107.4**

EUR promissory note loan

KUKA AG issued an unsecured promissory note loan with a total volume of €250.0 million on October 9, 2015. After deducting the transaction costs, KUKA received a total of €248.9 million from this issue.

The total volume was placed in two separate maturity tranches. Tranche 1 had a volume of €142.5 million with an initial term to maturity of five years. It was due on October 9, 2020 and was repaid as contractually agreed. Tranche 2 has a volume of €107.5 million with an initial term to maturity of seven years (due in October 2022). Interest payments are made at yearly intervals on October 9. Interest of €0.4 million (2019: €0.8 million) was accrued as at the balance sheet date.

Variable interest rate liabilities

in € millions	Face value as of balance sheet date Dec. 31, 2019	Dec. 31, 2020	Nominal interest rate	Maturity	Net carrying amount 2019	2020
USD assignable loan						
Tranche 1	8.9	–	2.75% p.a. (3M USD-LIBOR + 85bps)	2018 – 2020	8.9	–
Tranche 2	80.1	73.3	1.2588% p.a. (3M USD-LIBOR + 105bps)	2018 – 2022	79.9	73.2
Tranche 3	44.5	40.7	1.60588% p.a. (3M USD-LIBOR + 140bps)	2018 – 2023	44.4	40.6
Total assignable loan	**133.5**	**114.0**			**133.2**	**113.8**

USD assignable loan

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 (KTPO), this company issued USD assignable loans with a total volume of USD 150.0 million in several maturity tranches, underwritten by KUKA AG: tranche 1 with a volume of USD 10.0 million had a term to maturity of two years and was repaid at maturity on August 10, 2020. Tranche 2 with a volume of USD 90.0 million has an original term to maturity of 3.5 years (maturing February 2022) and tranche 3 with a volume of USD 50.0 million has an original term to maturity of five years (maturing August 2023). The funds were received on August 10 / September 10, 2018.

The interest rate on both tranches is variable and based on the 3-month USD LIBOR rate plus a maturity-dependent margin in each case. Interest payments are made quarterly.

Current liabilities to banks

in € millions	Net carrying amount	Avg. nominal interest rate	Year of latest maturity
Liabilities due to banks as of Dec. 31, 2020	154.6	0.90% p.a.	2021
Liabilities due to banks as of Dec. 31, 2019	–		

Inter-company loan

In December 2019, KUKA AG concluded an inter-company loan agreement covering a loan volume of €150.0 million with Midea International Corporation Company Limited, Hong Kong, a wholly-owned subsidiary of Midea Group. 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, corresponding to a term of five and a half years. The inter-company loan bears interest at 0.85% p.a.; interest payments are made every six months.

Syndicated loan for KUKA Aktiengesellschaft

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

The initial term of the loan agreement was five years (until February 1, 2023) and contained two contractually agreed one-year extension options (5+1+1). With the approval of all banks for the first agreed extension option in 2018 and the second one in 2019, the term was extended in 2018 and 2019 by one year in each case. The loan agreement now terminates in February 2025. The syndicated loan agreement was concluded on an unsecured basis and contains only the customary equal treatment clauses and negative pledges.

The agreed financial covenants with regard to thresholds for leverage (net financial liabilities / EBITDA) and interest coverage (EBITDA / net interest expense) remain unchanged.

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 €329.3 million (2019: €185.6 million).

Guarantee facility lines from banks and surety companies

The guarantee facility lines pledged by banks and surety companies outside the syndicated loan agreement total €170.3 million as at December 31, 2020 (2019: €153.0 million) and can be utilized up to a total volume of €150.0 million in accordance with the provisions of the syndicated loan agreement. At the end of the reporting year, the company had utilized €52.1 million (2019: €62.8 million). None of these bilaterally agreed guarantee facility lines contains a change-of-control clause.

27. Other current / non-current liabilities and prepaid expenses / deferred charges

The other taxes included in the other liabilities primarily consist of sales, wage and church tax.

Personnel liabilities are reported within the other liabilities and mainly include obligations arising from vacation entitlements (2020: €19.5 million; 2019: €20.7 million), flex-time credits (2020: €18.1 million; 2019: €23.3 million), variable compensation components (2020: €37.0 million; 2019: €46.0 million) and pre-retirement ("Altersteilzeit") (2020: €15.8 million; 2019: €17.6 million). Pre-retirement obligations were reduced by the fair value of the corresponding fund assets (2020: €15.2 million; 2019: €16.7 million). The present value of entitlements from pre-retirement obligations (DBO) before offsetting was €34.0 million (2019: €34.3 million). Also reported under this item are, among other things, special payments, inventor's compensation, long-service awards and contributions to the employers' liability insurance association.

A small portion of the variable compensation components is accounted for by share-based compensation components which are settled in cash. Details on the structure of these compensation agreements can be found in the compensation report. The carrying amount of the obligation recognized in this respect amounted to €0.6 million as at December 31, 2020 (2019: €0.2 million).

28. Assets and liabilities held for sale

As at December 31, 2020, there were no plans to divest any (sub) divisions, meaning that there are no circumstances to report in accordance with IFRS 5.

29. Financial risk management and financial derivatives

a) Principles of risk management

As part of its general business activities, KUKA Group is exposed to various financial risks, in particular from movements in exchange rates and interest rates as well as counterparty risk and liquidity risk. The purpose of financial risk management is to identify, assess and manage these risks. The aim is to limit the potential negative impact on the financial position.

KUKA hedges the risks from operations, especially currency risks, and risks from financial transactions with financial derivatives. Transactions in financial derivatives are only entered into for hedging purposes, i. e. solely with reference to and for hedging underlying transactions. Whenever possible, KUKA AG is the central hedging partner of the Group companies, and it in turn hedges the Group's risks by concluding appropriate hedging transactions with banks. To reduce the credit risk, hedging transactions are only concluded with financial institutions with an excellent credit rating.

The fundamentals of financial policy and risk management are established by the Executive Board and implemented by Group Treasury in close cooperation with Group companies. The Executive Board is informed on a regular basis of the current risk positions and safeguards.

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

b) Currency risk

Risks arising from fluctuations in exchange rates that may affect the Group's cash flow – for example from investments, financing and already fixed or planned incoming and outgoing operational payments in foreign currencies – are hedged as they arise or become known through the use of derivative financial instruments with banks. Hedging may also cover future planned transactions such as planned purchases in foreign currencies.

These hedging activities ensured that KUKA was not exposed to any significant exchange rate risks from its operating and financing activities as at the balance sheet date.

Currency translation risks – measurement risks associated with balance sheet and income statement items in foreign currencies – are not hedged, but are continuously monitored.

Currency risk as defined by IFRS 7 arises on account of financial instruments that are denominated in a currency other than the functional currency and are of a monetary nature. Differences resulting from the translation of financial statements into the Group's presentation currency are not taken into consideration. Relevant risk variables are generally all non-functional currencies in which KUKA employs financial instruments.

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

Currency sensitivity analyses are based on the following assumptions:

Major non-derivative monetary financial instruments (liquid assets, receivables, liabilities) are either directly denominated in the functional currency or are transferred as far as possible into the functional currency through the use of derivatives.

Major interest income and interest expense from financial instruments are also either recorded directly in the functional currency or transferred into the functional currency by using derivatives. For this reason, there can be no material effect on the variables considered in this connection.

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

in € millions	Dec. 31, 2019	Dec. 31, 2020
EUR / USD		
EUR +10%	0.6	2.6
EUR –10%	–0.8	–3.2
EUR / JPY		
EUR +10%	–1.7	–1.7
EUR –10%	2.1	2.0
EUR / CNY		
EUR +10%	–0.3	–1.6
EUR –10%	0.3	2.0
EUR / HUF		
EUR +10%	–1.1	–1.1
EUR –10%	1.4	1.4
EUR / CHF		
EUR +10%	–2.4	5.1
EUR –10%	3.0	–6.3
EUR / SEK		
EUR +10%	–0.5	–1.5
EUR –10%	0.7	1.8
EUR / NOK		
EUR +10%	0.1	–1.1
EUR –10%	–0.1	1.4
CNY / JPY		
CNY +10%	–1.6	–0.4
CNY –10%	1.9	0.5
USD / SEK		
USD +10%	–0.3	–0.5
USD –10%	0.3	0.7

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

c) Interest rate risk

Risks from interest rate changes at KUKA are essentially the result of the USD assignable loan issued in 2018 and linked to a variable interest rate. These variable future interest payments were converted for the major part of the issue volume by concluding corresponding interest rate hedges in fixed interest rate agreements.

Interest rate risks from short-term investments / borrowings are not hedged as at the balance sheet date.

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

Changes in the market interest rates of non-derivative financial instruments with fixed interest rates only affect income if these are measured at their fair value. As such, all financial instruments with fixed interest rates that are carried at amortized cost (for example, the EUR promissory note loan) are not subject to interest rate risk as defined in IFRS 7.

Changes in market interest rates affect the interest income or expense of non-derivative variable-interest financial instruments, the interest payments of which are not designated as hedged items of cash flow hedges against interest rate risks.

An increase in market interest rates by 100 basis points across all currencies would have a positive effect on results of +€3.7 million based on positions at December 31, 2020 (2019: +€5.4 million). A decrease in market interest rates by 100 basis points across all currencies would have a negative effect on earnings of –€3.0 million (2018: –€4.6 million). The assumption was made for financial investments at the balance sheet date that the lower limit of the relevant interest rate amounts to –50 basis points. This hypothetical effect on the earnings results solely from short-term cash investments of €554.6 million and short-term borrowings of €154.6 million (2019: €584.5 million cash investments; €44.5 million borrowings) as at the balance sheet date as well as from the variable interest-bearing, unhedged part of the USD assignable loan.

d) Credit risk

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

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

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

e) Liquidity risk

One of KUKA AG's primary tasks is to coordinate and control the Group's financing requirements and to ensure the financial independence of KUKA and its ability to pay on time. With this goal in mind, KUKA Group optimizes the Group's financing and limits its financial risks. The treasury management and reporting system employed consistently throughout the Group is used for this purpose; it is continuously developed taking amendments to the Group structure and changes to market conditions and the regulatory environment into account. In addition, the Group's overall liquidity risk is reduced by closely monitoring Group companies and their control of payment flows.

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

The following figures show the commitments for undiscounted interest and redemption repayments for the financial instruments subsumed under IFRS 7:

Dec. 31, 2020 in € millions	Cash flows 2021	Cash flows 2022	Cash flows 2023 – 2025	Cash flows 2026 et seq.
Non-current financial liabilities	–	183.2	41.1	–
Non-current accounts payable to affiliated companies	–	1.3	153.2	–
Long-term derivatives	–	1.0	0.6	–
Current financial liabilities	157.6	–	–	–
Current accounts payable to affiliated companies	1.3	–	–	–
Trade payables	353.4	–	–	–
Non-current liabilities from leases	–	25.0	51.3	27.8
Current liabilities from leases	33.6	–	–	–
Other non-current liabilities and provisions	–	16.6	3.4	–
Other current liabilities and provisions	188.2	–	–	–
Short-term derivatives	204.9	–	–	–

Dec. 31, 2019 in € millions	Cash flows 2020	Cash flows 2021	Cash flows 2022 – 2024	Cash flows 2025 et seq.
Non-current financial liabilities	–	–	232.0	–
Non-current accounts payable to affiliated companies	–	–	–	150.0
Long-term derivatives	–	1.7	5.6	–
Current financial liabilities	152.6	–	–	–
Current accounts payable to affiliated companies	0.1	–	–	–
Trade payables	402.3	–	–	–
Non-current liabilities from leases	–	20.4	49.3	36.1
Current liabilities from leases	32.5	–	–	–
Other non-current liabilities and provisions	–	18.2	25.5	–
Other current liabilities and provisions	216.2	–	–	–
Short-term derivatives	386.6	–	–	–

All financial instruments are included which were held at the balance sheet dates and for which payments have already been contractually agreed. Foreign currency amounts are expressed at the spot rate on the key date. The variable interest payments from the financial instruments were determined on the basis of the interest rates last fixed prior to December 31, 2020. Financial liabilities repayable at any time are always allocated to the earliest period.

f) Hedges

Hedges are used by KUKA Group exclusively in the form of forward exchange transactions and interest rate swaps to secure existing balance sheet items as well as to hedge future payment flows. These are exclusively for the purpose of hedging currency and interest rate risks.

30. Other disclosures on financial instruments

KUKA Group classifies its financial instruments at amortized cost, at fair value through profit or loss and at fair value through other comprehensive income. The following table shows the development of financial assets and liabilities for the year under review and the previous year:

	Abbreviation	Dec. 31, 2019	Dec. 31, 2020
At amortized cost	AC	1,567.4	1,372.0
At fair value through profit or loss	FVtPL	14.8	15.9
At fair value through equity	FVOCI	15.7	14.4
Total financial instruments (assets)		**1,597.9**	**1,402.3**
At amortized cost	FLAC	846.1	928.4
At fair value through profit or loss	FVtPL	6.8	3.9
Total financial instruments (liabilities)		**852.9**	**932.3**

Carrying amounts and fair values by measurement categories for 2020

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

Assets

in € millions	IFRS 9 measurement category	Net carrying amount / Status as of Dec. 31, 2020	of which, other assets and liabilities not covered by IFRS 7	of which, other assets and liabilities covered by IFRS 16	Fair value / Status as of Dec. 31, 2020
Financial investments		17.1			17.1
(of which, loans)	AC	(–)			(–)
(of which, participations)	FVtPL	(2.7)			(2.7)
(of which, participations)	FVOCI	(14.4)			(14.4)
Investments accounted for by the equity method	n. a.	26.4	26.4		–
Long-term finance lease receivables	n. a.	119.6		119.6	89.7
Other long-term receivables and other assets		2.3	0.8		1.5
(of which, derivatives without a hedging relationship)	FVtPL	(0.8)			(0.8)
(of which, trade receivables)	AC	(–)			(–)
(of which, from the category AC)	AC	(0.7)			(0.7)
(of which, other)	n. a.	(0.8)	(0.8)		(–)
Trade receivables		395.4			395.4
(of which, from the category AC)	AC	(393.2)			(393.2)
(of which, from the category FVtPL)	FVtPL	(2.2)			(2.2)
Contract assets	n. a.	360.8			360.8
Receivables from affiliated companies	AC	–			–
Current finance lease receivables	n. a.	28.4		28.4	–
Other assets, prepaid expenses and deferred charges		142.4	69.4		73.0
(of which, derivatives without a hedging relationship)	FVtPL	(6.7)			(6.7)
(of which, other from the category AC)	AC	(62.8)			(62.8)
(of which, other from the category FVtPL)	FVtPL	(3.5)			(3.5)
(of which, other)	n. a.	(69.4)	(69.4)		(–)
Cash and cash equivalents	AC	554.5			554.6
Total financial instruments (assets)					**1,402.3**

Liabilities

in € millions	IFRS 9 measurement category	Net carrying amount / Status as of Dec. 31, 2020	of which, other assets and liabilities not covered by IFRS 7	of which, other assets and liabilities covered by IFRS 16	Fair value / Status as of Dec. 31, 2020
Non-current financial liabilities	FLAC	221.6			225.9
Accounts payable to affiliated companies	FLAC	148.4			154.2
Long-term finance lease receivables	n. a.	92.9		92.9	–
Other non-current liabilities and provisions		20.0	20.0		–
(of which, derivatives without a hedging relationship)	FVtPL	(0.1)			(0.1)
Current financial liabilities	FLAC	154.6			154.6
Trade payables	FLAC	353.4			353.4
Contract liabilities	n. a.	316.4	316.4		–
Current finance lease liabilities	n. a.	28.7		28.7	–
Other current liabilities, prepaid expenses and deferred charges		213.1	169.0		44.1
(of which, derivatives without a hedging relationship)	FVtPL	(3.8)			(3.8)
(of which, other from the category FLAC)	FLAC	(40.3)			(40.3)
(of which, other)	n. a.	(169.0)	(169.0)		(–)
Total financial instruments (liabilities)					**932.3**

Carrying amounts and fair values by measurement categories for 2019

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

Aktiva

in € millions	IFRS 9 measurement category	Net carrying amount / Status as of Dec. 31, 2019	of which, other assets and liabilities not covered by IFRS 7	of which, other assets and liabilities covered by IFRS 16	Fair value / Status as of Dec. 31, 2019
Financial investments		24.1	–	–	24.1
(of which, loans)	AC	(0.0)	(0.0)	(0.0)	(0.0)
(of which, participations)	FVtPL	(8.4)	(0.0)	(0.0)	(8.4)
(of which, participations)	FVOCI	(15.7)	(0.0)	(0.0)	(15.7)
Investments accounted for by the equity method	n. a.	34.0	34.0	–	–
Long-term finance lease receivables	n. a.	152.5	–	152.5	–
Other long-term receivables and other assets		20.0	19.1	–	0.9
(of which, derivatives without a hedging relationship)	FVtPL	(0.3)	(0.0)	(0.0)	(0.3)
(of which, trade receivables)	AC	(0.0)	(0.0)	(0.0)	(0.0)
(of which, from the category AC)	AC	(0.6)	(0.0)	(0.0)	(0.6)
(of which, other)	n. a.	(19.1)	(19.1)	(0.0)	(0.0)
Trade receivables	AC	443.5	–	–	443.5
Contract assets	n. a.	461.5	–	–	461.5
Receivables from affiliated companies	AC	–	–	–	–
Current finance lease receivables	n. a.	29.4	–	29.4	–
Other assets, prepaid expenses and deferred charges		152.4	69.3	–	83.1
(of which, derivatives without a hedging relationship)	FVtPL	(2.9)	(0.0)	(0.0)	(2.9)
(of which, other from the category AC)	AC	(77.0)	(0.0)	(0.0)	(77.0)
(of which, other from the category FVtPL)	FVtPL	(3.2)	(0.0)	(0.0)	(3.2)
(of which, other)	n. a.	(69.3)	(69.3)	(0.0)	(0.0)
Cash and cash equivalents	AC	584.8	–	–	584.8
Total financial instruments (assets)					**1,597.9**

Liabilities

in € millions	IFRS 9 measurement category	Net carrying amount / Status as of Dec. 31, 2019	of which, other assets and liabilities not covered by IFRS 7	of which, other assets and liabilities covered by IFRS 16	Fair value / Status as of Dec. 31, 2019
Non-current financial liabilities	FLAC	232.0	–	–	232.0
Accounts payable to affiliated companies	FLAC	150.0	–	–	150.0
Long-term finance lease receivables	n. a.	105.8	–	105.8	0.0
Other non-current liabilities and provisions		43.7	43.7	–	0.0
(of which, derivatives without a hedging relationship)	FVtPL	(0.1)	–	–	(0.1)
Current financial liabilities	FLAC	152.6	–	–	152.6
Trade payables	FLAC	402.3	–	–	402.3
Contract liabilities	n. a.	337.1	337.1	–	–
Accounts payable to affiliated companies	FLAC	0.0	–	–	0.0
Current finance lease liabilities	n. a.	32.5	–	32.5	0.0
Other current liabilities, prepaid expenses and deferred charges		229.9	163.9	–	66.0
(of which, derivatives without a hedging relationship)	FVtPL	(6.8)	–	–	(6.8)
(of which, other from the category FLAC)	FLAC	(59.2)	–	–	(59.2)
(of which, other)	n. a.	(163.9)	(163.9)	–	(0.0)
Total financial instruments (liabilities)					**852.9**

With the exception of financial investments and lease receivables, the assets have short remaining terms. For financial investments measured at fair value through profit or loss (FVtPL) as well as at fair value through other comprehensive income (FVOCI), cost is the best estimate of fair value. All financial investments are allocated to fair value hierarchy level 3.

Financial liabilities carried at amortized cost using the effective interest method are mainly liabilities from promissory note loans. Effects from exchange rate fluctuations are recognized in profit or loss. All financial liabilities are allocated to fair value hierarchy level 3. They are calculated as a present value by discounting future cash flows using term-specific risk-adjusted market interest rates. No fair value needs to be determined for the lease liabilities. The other non-current liabilities mainly include personnel-related items, which is why no fair value has to be recorded.

The derivative financial instruments recognized at the balance sheet date are forward exchange transactions or interest rate derivatives used to hedge exchange rate risks or interest rate risks, respectively. They are recognized in the balance sheet at the market value determined using standardized financial mathematical methods – depending on forward exchange rates, among other things. They are allocated to fair value hierarchy level 2.

Financial instruments measured at fair value

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

Level 1

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

Level 2

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

Level 3

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

The breakdown of the financial assets and liabilities measured at fair value is shown below:

2020 in € millions	Level 1	Level 2	Level 3	Total
Financial assets	–	7.5	20.6	28.1
Financial liabilities	–	3.9	–	3.9

2019 in € millions	Level 1	Level 2	Level 3	Total
Financial assets	–	3.2	27.3	30.5
Financial liabilities	–	6.9	–	6.9

There were no level 1 financial assets in fiscal 2020 or in the previous year. Level 2 mainly relates to forward exchange transactions carried as assets or liabilities. Financial assets increased compared to the previous year, whereas financial liabilities decreased. The second level contains the securities of the Group and the coverage of fluctuations in the exchange rates of major currencies such as USD, CNY or CHF. With the aid of standard financial mathematical techniques, the values are determined using current market parameters such as exchange rates and counterparty credit ratings (mark-to-market method) or quoted prices.

In the reporting year, as in the previous year, only financial assets were reported in level 3. Shares from equity holdings not traded on the market are assigned to this category. Compared to the previous year, there was a decrease due to changes in the fair value of Nebbiolo Technologies Inc., Milpitas, USA and Savioke Inc., San Jose, USA. If the adjustment had already been made in fiscal 2019, level 3 would have contained €23.4 million instead of €27.3 million. No reclassifications were made either in the year under review or in the previous year.

Gains and losses from financial instruments

Net results listed according to measurement categories are represented as follows for 2020:

in € millions	Net gains / losses	Total interest income	Total interest expenses
Financial Assets Measured at Amortized Cost (AC)	–7.8	24.6	–4.4
Fair Value through Profit and Loss (FVtPL)	–17.3	–	–
Fair Value through Other Comprehensive Income (FVOCI)	–1.2	–	–
Financial Liabilities Measured at Amortized Cost (FLAC)	–	–	–7.8
Total	**–26.3**	**24.6**	**–12.2**

Net results listed according to measurement categories are represented as follows for 2019:

in € millions	Net gains / losses	Total interest income	Total interest expenses
Financial Assets Measured at Amortized Cost (AC)	–2.7	17.9	–1.0
Fair Value through Profit and Loss (FVtPL)	–3.3	–	–
Fair Value through Other Comprehensive Income (FVOCI)	–0.2	–	–
Financial Liabilities Measured at Amortized Cost (FLAC)	11.5	0.7	–8.8
Total	**5.3**	**18.6**	**–9.8**

As was already the case in fiscal 2019, the Amortized Cost (AC) category shows a loss in the year under review. The Amortized Cost (AC) category comprises foreign exchange effects and the results of additions and releases of valuation allowances. Total interest income and expenses include interest income on bank balances, which developed favorably for KUKA Group in fiscal 2020 compared to fiscal 2019.

The Fair Value through Profit and Loss (FVtPL) category primarily relates to foreign currency effects relating to total interest income and expenses. In addition to foreign currency effects, net losses also include losses from the disposal of financial assets. The net losses increased in the year under view compared to fiscal 2019.

The Fair Value through Other Comprehensive Income (FVOCI) category comprises fair value changes attributable to equity instruments.

Financial Liabilities Measured at Amortized Cost (FLAC) include amounts from the release of liabilities. The total interest expense mainly relates to interest expense for banks in fiscal 2020, as it also did in fiscal 2019.

31. Contingent liabilities and other financial commitments

At the end of the fiscal year, the Group had obligations from guarantees of €1.4 million (2019: €0.0 million) and obligations from warranty agreements amounting to €1.3 million (2019: €4.5 million).

in € millions	2019	2020
Purchase commitments (discounted notes)	7.0	40.9
Rent / lease liabilities	21.8	25.2
Other financial commitments	12.5	13.2
Total	**41.3**	**79.3**

Purchase commitments increased from €7.0 million in 2019 to €40.9 million in 2020 due to a customer project at a subsidiary in the Swisslog business segment.

Rental expenses of €25.2 million were incurred in the year under review (2019: €21.8 million). Compared to the previous year, an increase of €3.4 million is observable.

32. Management of capital

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

To achieve the objectives, it is necessary to have appropriate and sufficient equity (equity ratio), liquidity (net liquidity) and an adequate return on capital employed (ROCE). These indicators are shown below:

		2019	2020
Equity	**€ millions**	**1,348.6**	**1,203.7**
/Total equity	€ millions	3,426.6	3,116.5
Equity ratio	%	39.4	38.6
EBIT	€ millions	47.8	–113.2
/Capital employed	€ millions	1,374.3	1,321.1
ROCE	**%**	**3.5**	**–8.6**
Cash and cash equivalents	€ millions	584.8	554.6
Non-current financial liabilities	€ millions	–382.0	–370.0
Current financial liabilities	€ millions	–152.6	–154.6
Net liquidity	**€ millions**	**50.2**	**30.0**

The equity ratio fell from 39.4% as at the end of fiscal 2019 to 38.6% as at year-end 2020. The current earnings had a negative impact on equity. Net liquidity also declined, falling from €50.2 million in 2019 to €30.0 million in 2020. Cash and cash equivalents as well as non-current financial liabilities decreased, whereas current financial liabilities showed a slight increase. Due to the negative EBIT, ROCE was –8.6% as against 3.5% in the previous year.

Notes to the Group cash flow statement

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

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

As at the end of the fiscal year, cash and cash equivalents of less than €0.1 million were subject to a restriction on availability (2019: €0.5 million).

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

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

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

Presented below is the reconciliation of the liabilities from financing activities for fiscal years 2019 and 2020:

in € millions	Financial liabilities	Accounts payable to affiliated companies	Lease liabilities	Total
Jan. 1, 2019	**−385.7**	**–**	**−134.0**	**−519.7**
Cash flows	15.5	−150.0	39.0	−95.5
New leases	–	–	−36.8	−36.8
Exchange rate changes	−2.5	–	−1.0	−3.5
Other changes	−11.9	–	−5.5	−17.4
Dec. 31, 2019 / Jan. 1, 2020	**−384.6**	**−150.0**	**−138.3**	**−672.9**
Cash flows	10.2	1.3	39.6	51.1
New leases	–	–	−28.4	−28.4
Exchange rate changes	10.6	–	6.2	16.8
Other changes	−12.4	0.3	−0.7	−12.8
Dec. 31, 2020	**−376.2**	**−148.4**	**−121.6**	**−646.2**

Notes to the Group segment reporting

The data presented in the annual financial statements have been segmented by business field and region. The structure follows internal reporting (management approach). The segmentation is intended to create transparency with regard to the earning power and the prospects, as well as the risks and rewards for the various business fields within the Group.

Segment reporting is based on the structure of KUKA Group. The KUKA Business Organization introduced in fiscal 2019 remained largely unchanged. In the 2020 reporting year, KUKA Group again comprised five main business segments – Systems, Robotics, Swisslog, Swisslog Healthcare and China – and also the Corporate Functions segment.

Systems

The Systems division is a partner for the automotive sector in the fields of robotics, automation and intralogistics. With adaptable, modular and automated manufacturing and logistics processes, Systems supports the automotive industry in making its production processes more efficient. Systems has been a strategic partner for major manufacturers worldwide for decades and is already working with its customers today on flexible, scalable concepts and solutions for the factory of tomorrow. As a pioneer in hardware and software solutions, Systems is providing impulses for transforming the vision of Industrie 4.0 into corporate reality. The Systems portfolio covers the entire value chain of a system: from individual system components, tools and fixtures to complete turnkey systems.

Robotics

The core component for automating production processes is supplied by the Robotics division: industrial, collaborative and mobile robots – together with robot controllers, software and digital services for the Industrial Internet of Things. The broad product portfolio – ranging from traditional 6-axis robots to SCARA robots – covers payload ranges from three to 1,300 kilograms. In addition, the Robotics portfolio includes robot-based, modular manufacturing cells for a wide range of applications. This enables KUKA to meet the various requirements of its customers optimally. Robotics also offers comprehensive support services.

Swisslog

With the Swisslog division, KUKA 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-driven and robot-based automation in particular. Swisslog offers 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

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 and pharmacists can gain more time for personal care, support and consultation. At the same time, the use of automation solutions can reduce the incidence of medication errors.

China

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 offered and sold in China.

Corporate Functions

KUKA Group's operating activities are supplemented by KUKA Aktiengesellschaft and other shareholdings, which is why these are aggregated in the Corporate Functions segment. Cross-divisional consolidation items are shown in a separate column. This includes, among other things, the elimination of duplicated companies, which are allocated to the Swisslog / Swisslog Healthcare and China business segments on account of the management approach. An overview of all Group companies, broken down by region, is shown in the schedule of shareholdings.

The following table presents a breakdown of sales revenues by region based on the customer's registered office / delivery location. It also shows non-current assets (consisting of tangible and intangible assets) determined according to the location of the companies.

	Revenues acc. to customer location		Non-current assets acc. to registered office of the company	
in € millions	**2019**	**2020**	**2019**	**2020**
Germany	738.3	582.2	385.0	300.0
Rest of Europe	748.6	462.8	145.2	126.0
North America	1,016.7	812.2	77.6	43.4
China	446.6	404.2	116.7	113.3
Other regions	222.4	312.1	207.6	303.7
Total	**3,192.6**	**2,573.5**	**932.1**	**886.4**

In contrast to the previous year, no customer accounted for more than 10% of total sales revenues in fiscal 2020 (2019: one customer with revenues of €339.1 million).

The calculations for segment reporting rely on the following principles:

- Group external sales revenues show the divisions' respective percentage of consolidated sales for the Group as presented in the Group income statement.
- Intra-Group sales revenues are sales transacted between segments. In principle, transfer prices for intra-Group sales are determined based on the market.
- Sales revenues for the segments include revenues from sales to third parties as well as sales to other Group segments.
- EBIT reflects operating earnings, i. e. the earnings from ordinary activities before financial results and taxes.
- Elimination of scheduled and unscheduled depreciation and amortization on tangible and intangible assets from EBIT produces EBITDA.
- ROCE (return on capital employed) is the ratio of EBIT to average capital employed, which is largely non-interest bearing. To calculate ROCE the capital employed is based on an average value.

The reconciliation of capital employed to segment assets and segment liabilities is shown in the following table:

in € millions		**2019**	**2020**
Capital employed			
	Intangible assets	565.5	533.3
+	Tangible assets	366.6	353.1
+	Long-term finance lease receivables	152.5	119.6
+	IFRS 16 right-of-use assets	135.0	115.5
+	**Asset-side working capital**	**1,477.6**	**1,269.1**
	Inventories	344.5	307.9
	Contract assets	461.5	360.9
	Trade receivables	443.5	395.4
	Other receivables and assets	228.1	204.9
=	**Asset items of capital employed**	**2,697.2**	**2,390.6**
./.	Other provisions	162.1	137.6
./.	Contract liabilities	337.1	316.3
./.	Trade payables	402.3	353.3
./.	Other liabilities except for liabilities similar to bonds (incl. deferred income)	398.8	338.2
=	**Liability-side working capital / Liability items of capital employed**	**1,300.3**	**1,145.4**
=	Capital employed	1,396.9	1,245.2
	Average capital employed	1,374.3	1,321.1
Segment assets			
	Asset items of capital employed	2,697.2	2,390.6
+	Other participations	24.1	17.1
+	Investments accounted for at equity	34.0	26.4
=	Segment assets	2,755.3	2,434.1
Segment liabilities			
	Liability items of capital employed	1,300.3	1,145.4
+	Pension provisions and similar obligations	116.9	117.6
+	Substantial restructuring provisions	25.1	31.0
=	Segment liabilities	1,442.3	1,294.0
Working capital			
	Asset-side working capital	1,477.6	1,269.1
./.	Liability-side working capital	1,300.3	1,145.4
=	**Working capital**	**177.3**	**123.7**

Additional elements of the segment reports are contained in the management report on the operating business divisions Robotics, Systems, Swisslog, Swisslog Healthcare and China, as well as in the tables at the beginning of the Group notes.

Other notes

Related party disclosures

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

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

Related parties that are not consolidated include:

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

Related parties that are joint ventures include:

- Chang'an Reis (Chongqing) Robotic Intelligent Equipment Co. Ltd, China
- Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., Yangzhou City, China

Related parties recognized as other investments include:

- RoboCeption GmbH, Munich

Companies attributable to Midea Group are also related parties, as is Mr. Xiangjian He as the ultimate controlling party.

The following table shows the receivables from and liabilities to related parties for the 2020 and 2019 fiscal years:

in € millions	Shares of KUKA AG in %	Group receivables from related parties		Group liabilities to related parties	
		Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2020	Dec. 31, 2020
Midea Group	–	21.5	9.3	155.9	153.2
Chang'an Reis (Chongqing) Robotic Intelligent Equipment Co. Ltd, China	50.0	0.1	–	–	–
Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., China	49.0	–	–	0.2	1.0
RoboCeption GmbH, Munich	26.9	–	0.5	–	–
Others / less than €1 million		–	–	0.1	0.1
Total		**21.6**	**9.8**	**156.2**	**154.3**

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

in € millions	Shares of KUKA AG in %	Goods and services provided by the Group to related parties		Goods and services provided to the Group by related parties	
		Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020
Midea Group	–	21.6	18.0	4.0	12.9
Chang'an Reis (Chongqing) Robotic Intelligent Equipment Co. Ltd, China	50.0	4.5	1.2	–	–
Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., China	49.0	1.4	1.8	5.5	5.9
RoboCeption GmbH, Munich	26.9	–	–	1.0	–
Total		**27.5**	**21.0**	**10.5**	**18.8**

Business with all related parties is transacted under the "dealing at arm's length" principle at transfer prices that correspond to market conditions.

The compensation of members of the management comprises salaries, benefits in kind and variable compensation. Details of the variable compensation can be found in the compensation report. Compensation includes benefits due in the short term amounting to €2.5 million (2019: €2.3 million), long-term variable compensation components of €2.1 million (2019: €1.5 million), and share-based payments of €0.1 million (2019: €0.1 million).

Events after the balance sheet date

Effective January 17, 2021, Dr. Chengmao Xu resigned as a member of the Supervisory Board and took on an operational management position within KUKA Group. With effect from February 26, 2021, Lin (Avant) Bai was appointed as a new member of the Supervisory Board by court order.

Executive Board and Supervisory Board compensation

Total compensation of the Executive Board of KUKA Aktiengesellschaft pursuant to section 314 para. 1 no. 6 of the German Commercial Code (HGB) amounted to €4.1 million for fiscal 2020 (2019: €3.1 million). The fixed non-performance-related compensation includes the fixed compensation including fringe benefits in the amount of €1.7 million (2019: €1.7 million) as well as performance-related short-term variable compensation in the amount of €0.8 million (2019: €0.5 million). In addition, the compensation includes components with a long-term incentive effect amounting to €1.1 million (2019: €0.4 million). Share-based compensation amounted to €0.5 million in the fiscal year (2019: €0.5 million).

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 2020 for current pensions and expected pension benefits for this group of persons totaled k€9,964 (German Commercial Code) (previous year: k€9,966). Furthermore, former members of the Executive Board received a lump-sum payment of k€416 for variable compensation components in fiscal 2020.

For the 2020 fiscal year, the members of the Supervisory Board received a total of €1.1 million (2019: €1.1 million) for their activities as members of this board.

For further information and details about the compensation of individual Executive Board and Supervisory Board members, please refer to the notes in the audited compensation report, which forms an integral part of this Group management report. It also describes the basic principles applied to establish the compensation of the members of the Executive Board and Supervisory Board of KUKA Aktiengesellschaft.

Audit fees

The fee for the auditors, PricewaterhouseCoopers GmbH, Wirtschaftsprüfungsgesellschaft, Munich, recognized as an expense in 2020 totals €2.4 million (2019: €0.6 million) for services provided in Germany. €0.8 million (2019: €0.6 million) was recognized for financial statement auditing services. Expenses of €0.4 million (2019: €0.0 million) were recognized for tax advisory services in the fiscal year and €1.2 million (2019: €0.0 million) for other services performed by the auditors. The other services performed by the auditors mainly relate to consulting services for specific long-term customer projects.

€0.8 million (2019: €1.3 million) was recognized as an expense for financial statement auditing services performed for foreign subsidiaries. Expenses of €0.2 million (2019: €0.0 million) were recognized for tax advisory services and €0.0 million (2019: €0.0 million) for other services performed by the auditors. The expenses for fiscal 2019 relate to the auditing firm KPMG AG, Wirtschaftsprüfungsgesellschaft, Augsburg.

Information on preparation and release

The Executive Board prepared the consolidated financial statements on March 2, 2021 and released them for submission to the Supervisory Board. The Supervisory Board is responsible for examining and approving the consolidated financial statements.

Augsburg, March 2, 2021

KUKA Aktiengesellschaft

The Executive Board

Peter Mohnen Andreas Pabst

Corporate bodies

Executive Board

Name	Date of birth	First appointed	Appointed until	Memberships in statutory supervisory boards and in comparable German and foreign controlling bodies of commercial enterprises	
Peter Mohnen Chief Executive Officer	Jun. 30, 1968	Aug. 1, 2012	Mar. 3, 2022		
Andreas Pabst Chief Financial Officer	Jul. 30, 1973	Dec. 6, 2018	Dec. 6, 2021		
Prof. Dr. Peter Hofmann	Sep. 14, 1964	Nov. 1, 2019	Feb. 20, 2020 left office		

Supervisory Board

Name	Current occupation	Year of birth	First appointed**	Appointed until	Membership in statutory supervisory boards and in comparable German and foreign controlling bodies of commercial enterprises As at Dec. 31, 2020
Dr. Yanmin (Andy) Gu Chairman of the Supervisory Board	Director Vice President Midea Group	1963	Feb. 10, 2017	AGM 2023	**International mandates:** › Midea Intelligent Technologies (Singapore) Pte. Ltd., Singapore, Singapore › Midea Electric Trading (Singapore) Co., Pte. Ltd., Singapore, Singapore › Midea Electric Trading (Thailand) Ltd., Bangkok, Thailand › Beautiland B. V., Amsterdam, Netherlands › Frylands B. V., Amsterdam, Netherlands › South American Holdco III, Amsterdam, Netherlands › South American Holdco II B. V., Amsterdam, Netherlands › Midea Electric Netherlands B. V., Amsterdam, Netherlands (strike off) › Midea Investment (Asia) Co. Ltd., Hong Kong, China › PT Midea Heating and Ventilating Air Conditioner Indonesia, Jakarta, Indonesia › Carrier Midea North America LLC, North America › Midea Heating and Ventilating Equipment Italia S. p. A., Italy › Guangdong Midea Intelligent Robotics Co. Ltd.
Michael Leppek* Deputy Chairman of the Supervisory Board	1st Authorized Representative and Managing Director IG Metall Augsburg	1970	Sep. 12, 2013	AGM 2023	**German mandates:** › MAN Energy Solutions SE › AIRBUS Helicopters Deutschland GmbH
Lin (Avant) Bai	President Midea Group Refrigerator Division	1970	Feb. 26, 2021	AGM 2023	
Wilfried Eberhardt*	Chief Marketing Officer KUKA Aktiengesellschaft	1959	May 15, 2008	AGM 2023	

Name	Current occupation	Year of birth	First appointed**	Appointed until	Membership in statutory supervisory boards and in comparable German and foreign controlling bodies of commercial enterprises As at Dec. 31, 2020
Prof. Dr. Henning Kagermann	Chairman of the acatech Board of Trustees acatech Senator	1947	May 31, 2017	AGM 2023	
Armin Kolb*	Chairman of the Works Council of the KUKA Plants at Augsburg	1963	Jun. 5, 2013	AGM 2023	
Carola Leitmeir*	Deputy Chairman of the Works Council of the KUKA Plants at Augsburg	1968	Jul. 1, 2009	AGM 2023	
Min (Francoise) Liu	Chairman of the Supervisory Committee CEO Assistant & HR Director Midea Group	1977	Feb. 10, 2017	AGM 2023	**International mandates:** › Guangdong Midea Smart Link Home Technology Co. Ltd., Foshan, China › Foshan Midea Zhihui Real Estate Development Co., Ltd., Foshan, China › Midea Group (Shanghai) Co. Ltd. Shanghai, China
Manfred Hüttenhofer*	Head of Motion Control Competence Center KUKA Deutschland GmbH	1964	Jun. 6, 2018	AGM 2023	
Dr. Myriam Meyer	Managing Director of mmtec	1962	Jun. 6, 2018	AGM 2023	**German mandates:** › Lufthansa Technik AG, Hamburg **International mandates:** › Wienerberger AG, Vienna, Austria
Tanja Smolenski*	Union Secretary to the Executive Committee of the IG Metall trade union, Fundamental Issues and Social Policy department, Berlin office	1973	Dec. 15, 2017	AGM 2023	
Dr. Chengmao Xu	President of Corporate Research Center Midea Group (until Jan. 17, 2021) Chief Development Officer KUKA AG (since Jan. 18, 2021)	1965	Jun. 17, 2019	Resigned as of Jan. 17, 2021	**International mandates:** › Midea Innovation Investment Co., Ltd., Shenzhen, China
Helmut Zodl	CFO Midea Group (until Jan. 31, 2021)	1972	Jan. 24, 2020	AGM 2023	

* Employee representative

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

Schedule of shareholdings of KUKA Aktiengesellschaft

As at December 31, 2020

	Name and registered office of the company	Currency	Method of consolidation	Share of equity in %
Germany				
1	Bopp & Reuther Anlagen-Verwaltungsgesellschaft mbH, Augsburg, Germany	EUR	k	100.00
2	Device Insight GmbH, Munich, Germany	EUR	k	100.00
3	Faude Automatisierungstechnik GmbH, Ehningen, Germany	EUR	k	100.00
4	KUKA Assembly & Test GmbH, Bremen, Germany *	EUR	k	100.00
5	KUKA Deutschland GmbH, Augsburg, Germany *	EUR	k	100.00
6	KUKA Industries GmbH & Co. KG, Obernburg, Germany *	EUR	k	100.00
7	KUKA Real Estate GmbH & Co. KG, Augsburg, Germany *	EUR	k	100.00
8	KUKA Real Estate Management GmbH, Augsburg, Germany	EUR	k	100.00
9	KUKA Systems GmbH, Augsburg, Germany *	EUR	k	100.00
10	Reis GmbH, Obernburg, Germany	EUR	k	100.00
11	Reis Group Holding GmbH & Co. KG, Obernburg, Germany *	EUR	k	100.00
12	Reis Holding GmbH, Obernburg, Germany	EUR	k	100.00
13	Swisslog (Deutschland) GmbH, Dortmund, Germany	EUR	k	100.00
14	Swisslog Augsburg GmbH, Augsburg, Germany	EUR	k	100.00
15	Swisslog GmbH, Dortmund, Germany	EUR	k	100.00
16	Swisslog Healthcare GmbH, Westerstede, Germany	EUR	k	100.00
17	Verwaltungsgesellschaft Walter Reis GmbH, Obernburg, Germany	EUR	k	100.00
18	Visual Components GmbH, Munich, Germany	EUR	k	100.00
19	Walter Reis GmbH & Co KG, Obernburg, Germany *	EUR	k	100.00
20	WR Vermögensverwaltungs GmbH, Obernburg, Germany	EUR	k	100.00
21	RoboCeption GmbH, Munich, Germany	EUR	b	26.74
22	IWK Unterstützungseinrichtung GmbH, Karlsruhe, Germany	EUR	nk	100.00
23	KUKA Unterstützungskasse GmbH, Augsburg, Germany	EUR	nk	100.00
Other Europe				
24	KUKA Automation ČR s. r. o. i. L., Chomutov, Czech Republic	CZK	k	100.00
25	KUKA Automatisering + Robots N. V., Houthalen, Belgium	EUR	k	100.00
26	KUKA AUTOMATISME + ROBOTIQUE S. A. S., Villebon-sur-Yvette, France	EUR	k	100.00
27	KUKA AUTOMATIZARE ROMANIA S. R. L., Sibiu, Romania	RON	k	100.00
28	KUKA CEE GmbH, Steyregg, Austria	EUR	k	100.00
29	KUKA Hungaria Kft., Taksony, Hungary	EUR	k	100.00
30	KUKA Iberia, S. A. U., Vilanova i la Geltrú, Spain	EUR	k	100.00

Name and registered office of the company		Currency	Method of consolidation	Share of equity in %
31	KUKA Nordic AB, Västra Frölunda, Sweden	SEK	k	100.00
32	KUKA Roboter Italia S. p. A., Rivoli, Italy	EUR	k	100.00
33	KUKA Robotics Ireland Ltd, Dundalk, Ireland	GBP	k	100.00
34	KUKA Robotics UK Limited, Wednesbury, UK	GBP	k	100.00
35	KUKA Russia OOO, Moscow, Russia	RUB	k	100.00
36	KUKA S-Base s. r. o. i. L., Roznov p. R., Czech Republic	CZK	k	100.00
37	KUKA Slovakia s. r. o., Dubnica nad Váhom, Slovakia	EUR	k	100.00
38	KUKA Systems Aerospace SAS, Bordeaux-Merignac, France	EUR	k	100.00
39	KUKA Systems France S. A., Montigny, France	EUR	k	99.99
40	KUKA Systems UK Limited, Halesowen, UK	GBP	k	100.00
41	Reis Espana S. L. i. L., Esplugues de Llobregat (Barcelona), Spain	EUR	k	100.00
42	Swisslog (UK) Ltd., Redditch, UK	GBP	k	100.00
43	Swisslog AB, Partille, Sweden	SEK	k	100.00
44	Swisslog AG, Buchs AG, Switzerland	CHF	k	100.00
45	Swisslog AS, Oslo, Norway	NOK	k	100.00
46	Swisslog B. V., Culemborg, Netherlands	EUR	k	100.00
47	Swisslog France SAS, Suresnes, France	EUR	k	100.00
48	Swisslog Healthcare AG, Buchs AG, Switzerland	CHF	k	100.00
49	Swisslog Healthcare Holding AG, Buchs AG, Switzerland	CHF	k	100.00
50	Swisslog Healthcare Italy SpA, Cuneo, Italy	EUR	k	100.00
51	Swisslog Holding AG, Buchs AG, Switzerland	CHF	k	100.00
52	Swisslog Italia S. r. l., Milan, Maranello, Italy	EUR	k	100.00
53	Swisslog N. V., Wilrijk, Belgium	EUR	k	100.00
54	Swisslog Technology Center Austria GmbH (until May 14, 2020 Swisslog Evomatic GmbH), Sipbachzell, Austria	EUR	k	100.00
55	Swisslog Technology Center Netherlands B. V. (until February 17, 2020 Easy Conveyors B. V.), Valkenswaard, Netherlands	EUR	k	100.00
56	Swisslog Technology Center Sweden AB (until April 14, 2020 Swisslog Accalon AB), Boxholm, Sweden	SEK	k	100.00
57	Swisslog Healthcare Netherlands B. V., Apeldoorn, Netherlands	EUR	k	100.00
58	Visual Components Oy, Espoo, Finland	EUR	k	100.00
North America				
59	KUKA Aerospace Holdings LLC, Sterling Heights, Michigan, USA	USD	k	100.00
60	KUKA Assembly and Test Corporation, Saginaw, Michigan, USA	USD	k	100.00
61	KUKA de Mexico S. de R.L.de C. V., Mexico City, Mexico	MXN	k	100.00
62	KUKA Recursos S. de R. L. de C. V., Toluca, Mexico	MXN	k	100.00
63	KUKA Robotics Canada Ltd., Mississauga, Canada	CAD	k	100.00

Name and registered office of the company		Currency	Method of consolidation	Share of equity in %
64	KUKA Robotics Corp., Shelby Township, Michigan, USA	USD	k	100.00
65	KUKA Systems de Mexico S. de R. L. de C. V., Toluca, Mexico	MXN	k	100.00
66	KUKA Systems North America LLC, Sterling Heights, Michigan, USA	USD	k	100.00
67	KUKA Toledo Production Operations, LLC, Toledo, Ohio, USA **	USD	k	100.00
68	KUKA U. S. Holdings Company LLC, Sterling Heights, Michigan, USA	USD	k	100.00
69	Reis Robotics USA Inc., Carpentersville, Illinois, USA	USD	k	100.00
70	Swisslog Logistics, Inc., Newport News, Virginia, USA	USD	k	100.00
71	Swisslog USA Inc., Dover, Delaware, USA	USD	k	100.00
72	Translogic CORPORATION, Dover, Delaware, USA	USD	k	100.00
73	Translogic Ltd. (Canada), Mississauga, Ontario, Canada	CAD	k	100.00
74	Visual Components North America Corporation, Lake Orion, Michigan, USA	USD	k	100.00
Latin America				
75	KUKA Roboter do Brasil Ltda., São Bernardo do Campo / São Paulo, Brazil	BRL	k	100.00
76	KUKA Systems do Brasil Ltda., São Bernardo do Campo / São Paulo, Brazil	BRL	k	100.00
Asia / Australia				
77	KUKA (Thailand) Co., Ltd., Bangkok, Thailand	THB	k	100.00
78	KUKA Automation Equipment (Shanghai) Co., Ltd., Shanghai, China	CNY	k	100.00
79	KUKA Automation Taiwan Ltd., Taipei, Taiwan	TWD	k	100.00
80	KUKA India Pvt. Ltd., Haryana, India	INR	k	100.00
81	KUKA Industries Automation (China) Co., Ltd., Kunshan, China	CNY	k	100.00
82	KUKA Industries Singapore Pte. Ltd., Singapore, Singapore	SGD	k	100.00
83	KUKA Japan K. K., Yokohama, Japan	JPY	k	100.00
84	KUKA Robot Automation Malaysia Sdn BhD, Puchong, Selangor, Malaysia	MYR	k	100.00
85	KUKA Robotics Australia Pty. Ltd., Port Melbourne, Australia	AUD	k	100.00
86	KUKA Robotics China Co. Ltd., Shanghai, China	CNY	k	50.00
87	KUKA Robotics Guangdong Co., Ltd., Foshan, Shunde, China	CNY	k	100.00
88	KUKA Robotics Korea Co. Ltd., Ansan, Korea	KRW	k	100.00
89	KUKA Robotics Manufacturing China Co. Ltd., Shanghai City, China	CNY	k	50.00
90	KUKA Systems (China) Co. Ltd., Shanghai, China	CNY	k	100.00
91	KUKA Systems (India) Pvt. Ltd., Maharashtra, Pune, India	INR	k	100.00
92	KUKA Vietnam Co., Ltd., Hanoi, Vietnam	VND	k	100.00
93	Swisslog (Malaysia) Sdn Bhd, Selangor, Malaysia	MYR	k	100.00
94	Swisslog Asia Ltd., Hong Kong, China	HKD	k	100.00
95	Swisslog Australia Pty Ltd., Sydney, Australia	AUD	k	100.00
96	Swisslog Healthcare Asia Pacific Pte. Ltd., Singapore, Singapore	SGD	k	100.00

Name and registered office of the company		Currency	Method of consolidation	Share of equity in %
97	Swisslog Healthcare Korea Co., Ltd., Bucheon si, Gyeonggi-do, Korea	KRW	k	100.00
98	Swisslog Healthcare Shanghai Co., Ltd., Shanghai, China	CNY	k	50.00
99	Swisslog Healthcare Trading MEA LLC., Emirate of Dubai, United Arab Emirates	AED	k	49.00
100	Swisslog Middle East LLC, Dubai, United Arab Emirates	AED	k	49.00
101	Swisslog Singapore Pte Ltd., Singapore, Singapore	SGD	k	100.00
102	Chang'an Reis (Chongqing) Robotic Intelligent Equipment Co. Ltd, Chongqing, China	CNY	at	50.00
103	Guangdong Swisslog Technology Co., Ltd., Shunde, China	CNY	at	50.00
104	Swisslog (Shanghai) Co. Ltd., Shanghai, China	CNY	at	50.00
105	Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., Yangzhou City, China	CNY	at	49.00
106	Servotronix Motion Control Ltd., Petach-Tikva, Israel	ILS	b	12.80

*Companies that have made use of the exemption pursuant to section 264 para. 3 or section 264b of the German Commercial Code (HGB)

**Principal place of business

Method of consolidation

k Fully consolidated companies

nk Non-consolidated companies

at Financial asset accounted for by the equity method

b Participating interest

Responsibility statement

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

Augsburg, March 2, 2021

KUKA Aktiengesellschaft

The Executive Board

Peter Mohnen Andreas Pabst

Independent auditor's report

To KUKA Aktiengesellschaft, Augsburg

The following copy of the auditor's report also includes a "Report on the audit of the electronic renderings of the financial statements and the management report prepared for disclosure purposes in accordance with § 317 Abs. 3b HGB" ("Separate report on ESEF conformity "). The subject matter (ESEF documents) to which the Separate report on ESEF conformity relates is not attached. The audited ESEF documents can be inspected in or retrieved from the Federal Gazette.

Report on the Audit of the Consolidated Financial Statements and of the Group Management Report

Audit Opinions

We have audited the consolidated financial statements of KUKA Aktiengesellschaft, Augsburg, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2020, and the consolidated statement of comprehensive income, consolidated statement of profit or loss, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from January 1 to December 31, 2020, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of KUKA Aktiengesellschaft, which is combined with the Company's management report, for the financial year from January 1 to December 31, 2020. In accordance with the German legal requirements, we have not audited the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

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

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at December 31, 2020, and of its financial performance for the financial year from January 1 to December 31, 2020, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

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

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). We performed the audit of the consolidated financial statements in supplementary compliance with the International Standards on Auditing (ISAs). Our responsibilities under those requirements, principles and standards are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from January 1 to December 31, 2020. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

1. Accounting treatment of deferred taxes

2. Recoverability of goodwill

3. Recognition of revenue from long-term construction contracts

Our presentation of these key audit matters has been structured in each case as follows:

1. Matter and issue
2. Audit approach and findings
3. Reference to further information

Hereinafter we present the key audit matters:

1. Accounting treatment of deferred taxes

1. In the consolidated financial statements of the Company deferred tax assets amounting to EUR 127.8 million after netting are reported. After netting with matching deferred tax liabilities and valuation allowances, deferred tax assets of EUR 71.8 million are recognized on deductible temporary differences and EUR 55.9 million on tax loss carryforwards. These items were recognized to the extent that the executive directors consider it probable that taxable profit will be available in the foreseeable future which will enable the deductible temporary differences and unused tax loss carryforwards to be utilized. For this purpose, insofar as sufficient deferred tax liabilities are not available, future taxable profits are projected on the basis of the adopted business

plan, including the expected impact of the ongoing coronavirus crisis. No deferred tax assets were recognized in respect of unused tax loss carryforwards amounting in total to EUR 567.4 million since it is not probable that they will be utilized for tax purposes by means of offset against future taxable profits.

From our point of view, the accounting treatment of deferred taxes was of particular significance in the context of our audit, as it depends to a large extent on the estimates and assumptions made by the executive directors and is therefore subject to uncertainties, including against the backdrop of the impacts of the coronavirus crisis.

2. As part of our audit, we assessed, among other things, the internal processes and controls for recording tax matters as well as the methodology used for the determination, accounting treatment and measurement of deferred taxes. We also assessed the recoverability of the deferred tax assets relating to deductible temporary differences and unused tax loss carryforwards on the basis of the Company's internal forecasts of its future earnings situation, and the appropriateness of the underlying estimates and assumptions. In doing so, we also assessed the executive directors' estimate as to the impact of the coronavirus pandemic on the Company's business and evaluated how this was taken into consideration in calculating future earnings.

   Based on our audit procedures, we were able to satisfy ourselves that the estimates and assumptions made by the executive directors are substantiated and sufficiently documented.

3. The Company's disclosures relating to deferred taxes are contained in number 5 "Income taxes/Deferred taxes" in the "Deferred taxes" section of the notes to the consolidated financial statements.

2. Recoverability of goodwill

1. In the Company's consolidated financial statements goodwill amounting in total to EUR 313.2 million (10.0% of total assets or 26.0% of equity) is reported under the "Intangible assets" balance sheet item. Goodwill is tested for impairment by the executive directors once a year or when there are indications of impairment to determine any possible need for write-downs. The impairment test is carried out at the level of the groups of cash-generating units to which the relevant goodwill is allocated. The carrying amount of the relevant cash-generating units, including goodwill, is compared with the corresponding recoverable amount in the context of the impairment test. The recoverable amount is generally determined using the value in use. The present value of the future cash flows from the respective group of cash-generating units normally serves as the basis of valuation. Present values are calculated using discounted cash flow models. For this purpose, the adopted medium-term business plan of the Group forms the starting point which is extrapolated based on the strategic planning and assumptions about long-term rates of growth. These projections also factor in expectations as to the future development of the market and assumptions as to the development of macroeconomic variables, as well as the expected impacts of the ongoing coronavirus crisis on the Group's business. The discount rate used is the weighted average cost of capital for the respective group of cash-generating units. The impairment test determined that no write-downs were necessary.

   The outcome of this valuation is dependent to a large extent not only on the estimates made by the executive directors with respect to the future cash inflows from the respective group of cash-generating units, the discount rate used, the rate of growth and other assumptions but also the impacts of the coronavirus pandemic, and is therefore subject to considerable uncertainty. Against this background and due to the complex nature of the valuation, this matter was of particular significance in the context of our audit.

2. As part of our audit, we assessed the methodology used for the purposes of performing the impairment test, among other things. After matching the future cash inflows used for the calculation against the business plan of the Group, adopted by the executive directors and approved by the Supervisory Board, we assessed the appropriateness of the calculation, in particular by reconciling it with general and sector-specific market expectations. In this context, we also assessed the executive directors' estimate as to the impact of the coronavirus pandemic on the Group's business and evaluated how this was taken into consideration in calculating the future cash flows. In addition, we assessed the appropriate consideration of the costs of Group functions. In the knowledge that even relatively small changes in the discount rate applied or the growth rate can have a material impact on the value of the entity calculated in this way, we focused our testing in particular on the parameters used to determine the discount rate applied, and assessed the calculation model. We performed our own sensitivity analyses in order to reflect the uncertainty inherent in the projections. Taking into account the information available, we determined that the carrying amounts of the cash-generating units, including the allocated goodwill, were adequately covered by the discounted future net cash flows.

   Overall, the valuation parameters and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

3. The Company's disclosures on goodwill are contained in number 7 "Intangible assets" in the "Goodwill" section of the notes to the consolidated financial statements.

3. Recognition of revenue from long-term construction contracts

1. In the Company's consolidated financial statements revenue amounting to EUR 2,573.5 million, of which EUR 1,423.0 million was recognized over time, is reported in the income statement. EUR 360.9 million in contract assets and EUR 316.3 million in contract liabilities were recognized in the consolidated balance sheet as of December 31, 2020. Revenue from contracts with customers is recognized over time if an asset is created that has no alternative use for the KUKA Group and the Group has an enforceable right to payment for performance completed to date. Revenue is recognized over time even if an asset is created or enhanced and the customer has since obtained control over that asset. When recognizing revenue over time, the revenue is generally recognized on the basis of the stage of completion, which is calculated as the ratio of the actual contract costs incurred to estimated total contract costs. With respect to the complex production processes, the recognition of revenue over time requires in particular an effective internal budgeting and reporting system, including concurrent project costing, as well as a functioning internal control system.

   Against this background, the proper application of the accounting standard on revenue recognition is considered to be complex and to a certain extent based on estimates and assumptions made by the executive directors. This matter was therefore of particular significance for our audit.

2. In light of the fact that the complexity and the need to make estimates and assumptions give rise to an increased risk of accounting misstatements, we assessed the Group's processes and controls for recognizing revenue from contracts with customers. Our specific audit approach included testing of the controls and substantive audit procedures. We primarily assessed the process for properly identifying and classifying performance obligations as being satisfied over time or at a specific point in time, as well as the cost accounting system and other relevant systems used

to account for contracts with customers. In addition, we verified the proper recognition and allocation of individual costs and assessed the amount and allocation of shared overheads. We also assessed the project calculations underlying the customer-specific contracts and the determination of the stage of completion.

We were able to satisfy ourselves that the systems, processes and controls in place are appropriate overall and that the estimates and assumptions made by the executive directors are sufficiently documented and substantiated to ensure that revenue from contracts with customers is properly accounted for.

3. The Company's disclosures relating to revenue recognition are contained in sections 1 "Revenue" and 14 "Contract assets and contract liabilities" of the notes to the financial statements.

Other Information

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the group management report, which we obtained prior to the date of our auditor's report:

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB included in the "Corporate Governance Report" section of the group management report
- the subsections marked (*) in the "Research and Development" and in the "Sustainability at KUKA" sections

The other information comprises further the remaining parts of the annual report, which we obtained prior to the date of our auditor's report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

The separate non-financial report pursuant to § 289b Abs. 3 HGB and § 315b Abs. 3 HGB is expected to be made available to us after the date of the auditor's report.

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

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

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

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

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

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

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

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

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) and supplementary compliance with the ISAs will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that

are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors’ use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor’s report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group’s position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

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

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 consolidated 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

Assurance Report in Accordance with § 317 Abs. 3b HGB on the Electronic Reproduction of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes

Reasonable Assurance Conclusion

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

In our opinion, the reproduction of the consolidated financial statements and the group management report contained in the above-mentioned attached electronic file and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format. We do not express any opinion on the information contained in this reproduction nor on any other information contained in the above-mentioned electronic file beyond this reasonable assurance conclusion and our audit opinion on the accompanying consolidated financial statements and the accompanying group management report for the financial year from January 1 to December 31, 2020 contained in the "Report on the Audit of the Consolidated Financial Statements and on the Group Management Report" above.

Basis for the Reasonable Assurance Conclusion

We conducted our assurance engagement on the reproduction of the consolidated financial statements and the group management report contained in the above-mentioned attached electronic file in accordance with § 317 Abs. 3b HGB and the Exposure Draft of IDW Assurance Standard: Assurance in Accordance with § 317 Abs. 3b HGB on the Electronic Reproduction of Financial Statements and Management Reports Prepared for Publication Purposes (ED IDW AsS 410) and the International Standard on Assurance Engagements 3000 (Revised).

Accordingly, our responsibilities are further described below in the "Group Auditor's Responsibilities for the Assurance Engagement on the ESEF Documents" section. Our audit firm has applied the IDW Standard on Quality Management: Requirements for Quality Management in the Audit Firm (IDW QS 1).

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

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic reproduction of the consolidated financial statements and the group management report in accordance with § 328 Abs. 1 Satz 4 Nr. 1 HGB and for the tagging of the consolidated financial statements in accordance with § 328 Abs. 1 Satz 4 Nr. 2 HGB

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

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

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

Group Auditor's Responsibilities for the Assurance Engagement on the ESEF Documents

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

- › Identify and assess the risks of material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance conclusion.
- › Obtain an understanding of internal control relevant to the assurance engagement on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance conclusion on the effectiveness of these controls.
- › Evaluate the technical validity of the ESEF documents, i.e., whether the electronic file containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815 in the version applicable as at the balance sheet date on the technical specification for this electronic file.
- › Evaluate whether the ESEF documents enables an XHTML reproduction with content equivalent to the audited consolidated financial statements and to the audited group management report.
- › Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) enables an appropriate and complete machine-readable XBRL copy of the XHTML reproduction.

Further Information pursuant to Article 10 of the EU Audit Regulation

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

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

German public auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Holger Graßnick.

Munich, March 10, 2021

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

(sgd. Holger Graßnick) Wirtschaftsprüfer (German Public Auditor)	(sgd. ppa. Stefan Postenrieder) Wirtschaftsprüfer (German Public Auditor)

Glossary

ABS
Asset-backed securities. Asset-backed securities are bonds or notes that are collateralized with assets (usually receivables). Receivables are purchased within the framework of an ABS program.

AC (at Amortized Cost)
Measurement at amortized cost.

AGV
Automated Guided Vehicle

At equity
Method of accounting for investments in and business relationships with associated companies or joint ventures in the financial statements.

Capital employed
Capital employed includes working capital as well as intangible assets and tangible fixed assets. Capital employed thus represents the difference between operating assets and non-interest-bearing debt capital.

Cash earnings
Cash earnings are a measurement for the inflow or outflow of cash from the operating profits (EBIT). They are the resulting balance from operating profits, interest, taxes, depreciation as well as other non-payment-related expenses and income.

Corporate compliance
Corporate compliance means that all employees conform to the company's legislative framework and internal guidelines and do not contravene any applicable laws. Proactive risk minimization is also part of a company's compliance management system.

Corporate governance
Common international term for responsible corporate management and control that aims at creating long-term value.

Declaration of compliance
Declaration of the Executive Board and the Supervisory Board in accordance with section 161 of the German Stock Corporation Act (AktG) regarding the implementation of the recommendations of the Government Commission in the German Corporate Governance Code.

Deferred taxes
Temporary differences between calculated taxes on the commercial and tax balance sheets designed to disclose the tax expense in line with the financial accounting income.

Derivatives
Financial instruments whose value is largely derived from a specified price and the price fluctuations / expectations of an underlying base value, e. g. exchange rates.

Earnings per share
Earnings per share are calculated on the basis of Group consolidated earnings after taxes and the average number of shares outstanding for the year.

EBIT
Earnings before interest and taxes.

EBIT margin
EBIT in relation to sales revenues.

Employees
All figures for employees in the annual report are based on the full-time equivalent. The term "employee" refers equally to persons of all gender identities.

Equity ratio
Ratio of equity to total assets.

Exposure
A key figure used to assess risk. This key figure includes all incoming payments in a 90-day period prior to the record date of the down payments, payments based on percentage of completion or compensation after acceptance of the work carried out. In addition, the key figure also comprises all customer payments made within 90 days and which have not yet been supplied with deliveries / services including the sum of unpaid invoices following delivery or service supplied to the customer, the POC receivables and any purchase commitments.

FLAC (Financial Liabilities Measured at Amortized Cost)
Financial liabilities measured at amortized cost.

Free cash flow
Cash flow from operating activities plus cash flow from investing activities. Free cash flow shows the extent of the funds generated by the company in the financial year.

FVtPL
Financial instruments measured at fair value through profit or loss.

FVOCI
Financial instruments measured at fair value through other comprehensive income.

GCGC
German Corporate Governance Code: the German Government Commission's list of requirements for German companies (since 2002).

General industry
General industrial markets not including the automotive industry.

Gross margin
Gross margin is determined by dividing gross profit by sales, expressed as a percentage.

Gross profit
Gross profit on sales is defined as total sales minus cost of goods sold. Cost of goods sold includes all direct costs associated with sales revenues generated. Other costs, such as research and development, marketing and administration, are not included.

HGB
German Commercial Code.

IAS
International Accounting Standards.

IBOR
Interbank offered rates (IBORs) are average interest rates at which banks can raise loans on the interbank market.

IFRIC / SIC
International Financial Reporting Interpretations Committee – interpreter of the international financial reporting standards IAS and IFRS, formerly also SIC. IFRIC is the new name for the Standing Interpretations Committee adopted by the trustees of the IASC foundation in March 2002. SIC was created in 1997 to improve the application and worldwide comparability of financial reports prepared in accordance with International Accounting Standards (IAS). It outlines financial statement practices that may be subject to controversy.

IFRS
International Financial Reporting Standards: the IFRS ensure international comparability of consolidated financial statements and help guarantee a higher degree of transparency.

IIoT
Industrial Internet of Things: networking of machines and technologies in industrial and manufacturing environments. Through connection of the IT world to physical systems, industrial processes and sequences can be made more efficient and flexible, and new business models can be developed.

Market capitalization
The market value of a company listed on the stock exchange. This is calculated by taking the share price and multiplying it by the number of shares outstanding.

Net liquidity / Net debt
Net liquidity / net debt is a financial control parameter consisting of cash, cash equivalents and securities minus current and non-current financial liabilities.

Percentage of completion method (POC)
Accounting method of revenue and profit recognition according to the stage of completion of an order. This method is used for customer-specific construction contracts.

Purchase commitments
Payment obligation from purchases.

Rating
Assessment of a company's creditworthiness (solvency) determined by a rating agency based on analyses of the company. The individual rating agencies use different assessment levels.

ROCE
ROCE (return on capital employed) is the ratio of earnings before interest and taxes to net capital employed. To calculate ROCE the capital employed is based on an average value.

R&D
Research and development.

SCARA
Selective Compliance Articulated Robot Arm.

Swisslog Group
Swisslog Group comprises Swisslog Holding AG and its subsidiaries.

Trade working capital
Trade working capital is defined as current assets minus current liabilities directly associated with everyday business operations; that is, inventories minus advance payments, trade receivables and receivables for manufacturing orders minus liabilities for trade receivables and manufacturing orders.

Volatility
Intensity of fluctuations in share prices and exchange rates or changes in prices for bulk goods compared to market developments.

Working capital
Working capital consists of the inventories, trade receivables, other receivables and assets, accrued items and the balance of receivables from and payables to affiliated companies, as far as these are not allocated to financial transactions, minus other provisions, trade payables, other payables with the exception of liabilities similar to bonds and deferred income.

Financial calendar 2021

First quarter interim report	April 29, 2021
Annual General Meeting, Augsburg / Germany	May 21, 2021
Interim report to mid-year	August 5, 2021
Interim report for the first nine months	October 28, 2021

This annual report was published on March 25, 2021 and is available in German and English from KUKA Aktiengesellschaft, Corporate Investor Relations department. The German version is legally binding in cases of doubt.

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.

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