# FORECAST, OPPORTUNITIES AND RISK REPORT

# Opportunities and risk report

# **General principles**

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

#### **Risk management**

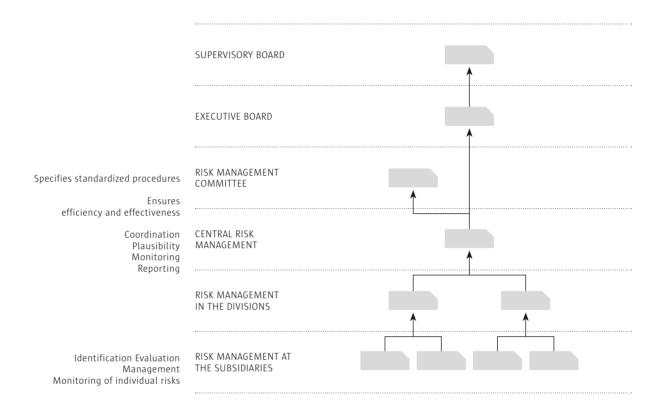
To achieve this objective, the Executive Board has implemented a comprehensive corporate risk management system to systematically and consistently identify, evaluate, manage, monitor and report the internal and external risks to which its divisions and subsidiaries are exposed. Group management regularly assesses the likelihood that identified risks will occur and their potential impact on expected profits. Risks are categorized according to worst, medium and best case scenarios, including the expected impact of the occurrence of an event. Accruals and write-downs associated with these risks are recognized in the financial statements in accordance with applicable accounting principles. The monthly risk report includes the top ten risks for the divisions and the holding company KUKA Aktiengesellschaft, as well as an overview of the Group's risk exposure. The top ten risks are a fixed part of monthly reporting. The risk report is also reviewed during Executive and Supervisory Board meetings, especially by the Audit Committee. The identified risks are 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. These plenums also assess the plausibility of the reported risks and determine how to avoid similar risks in future.

The managers of the divisions and subsidiaries are directly responsible for the early identification, control and communication of risks. Risk managers in the central and decentralized business units ensure that the reporting process is uniform, with clearly defined reporting channels and reporting thresholds that are in line with the size of the company. Internal ad hoc announcements are mandatory whenever risks exceed the Group's defined reporting thresholds. The standard risk management procedures applied throughout the Group are efficient and effective. The head of risk management coordinates the risk management systems. He compiles, communicates and monitors the individual risks identified and determines the Group's risk exposure. The head of risk management resides within KUKA Aktiengesellschaft's Group controlling department, which reports directly to KUKA Aktiengesellschaft's CFO. This ensures that risk management is an integral component of the KUKA Group's overall planning, control, and reporting process.

The Group's risk management system enables the Executive Board to identify material risks at an early stage, initiate appropriate steps to counter such risk, and monitor implementation of the steps. The internal audit department regularly monitors whether KUKA Group's employees adhere to the risk management guidelines and 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.

The Group's risk exposure, based upon evaluating operating risks according to the aforementioned procedures, is described below. The report includes the total aggregated maximum risk (worst case) and expected risk value, which is calculated on the basis of the various weighted scenarios and their respective likelihood of occurrence. Opportunities are evaluated by the individual divisions and are not further aggregated.

## RISK MANAGEMENT ORGANIZATION



Internal and external auditors check the risk management system and the risk early detection system

#### **GROUP RISK EXPOSURE**

in€millions	Worst case	Expected risk value
Legal risks	16.0	4.7
Economic risks	11.8	1.2
Total for the Group	27.8	5.9

	Maximum loss	Likelihood of occurrence
Low	to €5 million	to 10%
Medium	€5 to 10 million	10 to 25%
High	€10 to 20 million	25 to 40%
Very high	over€20 million	over 40%

Legal and economic risks occur primarily as a result of the activities of the Robotics and Systems divisions (from page 108). Further details regarding this risk exposure are outlined in the following sections under the individual risk categories. We also evaluate the potential worst-case damage that could be caused by the individual risks and the likelihood that they will occur, categorized as follows: Please refer to the notes for details regarding the precautionary balance sheet measures for the identified risks.

KUKA Group's opportunities and risk-related controlling process ensures that the company's managers take both opportunities and risks into consideration. Further details regarding associated opportunities are provided in the description of the various risk categories. The opportunities and risks managed at the divisional level are primarily performancerelated. Cross-segment opportunities and risks such as financing, personnel and IT are analyzed and managed at the Group level, not by the individual operating divisions, which is why said risks are only addressed from the Group perspective in the opportunities and risk report.

In addition to the risk management system, KUKA Group has an internal controlling system (see page 116, IKS-System) above and beyond the risk management system, which it uses to continuously monitor the appropriateness of the corporation's business and accounting processes and identify potential improvements.

## Strategic risks and opportunities

KUKA's business divisions 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. The risk of developing non-marketable products and systems is reduced through applicationoriented development, partnerships with systems integrators, and alliances and cooperative research projects with, for example, the German Aerospace Center (DLR) in Wessling near Munich, the RWTH technical college in Aachen, and several institutes of the Fraunhofer Society. Strategic risks and opportunities are not quantified.

#### Legal risks

Since KUKA conducts business around the world, it is obliged to comply with many international and country-specific laws and regulations issued by, for example, tax authorities. The company employs specialists familiar with the respective countries' laws on a case-by-case basis. Opportunities and risks arise as a result of changes to legal frameworks. For example, tax audits discovering non-compliance issues could negatively impact the Group in the form of payment of interest charges, penalties and back taxes. At the present time, 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. For further details please see page 146 and following of the notes. Standard general contracts are used whenever possible to cap legal risks. 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 addition, Group-wide Directors' and Officers' (D&O) liability insurance policies are in place that cover the managing bodies (Executive Board and managing directors) and supervisory bodies (Supervisory Board, administrative and advisory boards) of the German and foreign Group subsidiaries. Existing insurance policies are reviewed annually in order to weigh the relationship between the insurance protection and deductible amount versus the risk premium.

#### Performance risks and opportunities in the divisions

KUKA is exposed to the cyclic investment behavior of its customers in the various market subsectors. A major portion of the Systems and Robotics divisions' business volume is in the automotive sector, where oligopolitical structures and constant price pressure are ongoing concerns. Fluctuations in the industry's capital spending plans are also considered in the respective strategic and operative 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.

KUKA benefited from high investment activities in both the automotive industry and in the general machinery and plant engineering sector throughout 2013. Additional opportunities arose because KUKA Group's key automotive customers enjoy an excellent competitive position in their markets. In comparison to its own competitors, KUKA Group sees business growth opportunities due to its customer portfolio, particularly with respect to the growth of its customers' market shares. Further opportunities arise due to the general trend toward greater automation in non-industrial sectors, such as the long-term prospects associated with assisting an aging society.

KUKA works with suppliers that focus on quality, innovation strength, continuous improvement, and reliability so that it can supply its own customers with products of the highest possible quality. Generally, KUKA sources product components from several suppliers in order to minimize the risk of sharp price rises for key raw materials, but in a few cases, due to lack of alternate sources, is dependent on single suppliers that dominate their markets.

#### **KUKA Robotics**

Demands for continuous product innovation from international customers and unrelenting cost consciousness are the key challenges for this division's product portfolio; especially when it comes to the automotive industry and its sub-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 manage such risks or avoid them altogether.

KUKA sees an opportunity to continuously expand its customer base into general industry. One of the corporation's key strategic thrusts is to penetrate new, non-automotive markets. The aim is to penetrate the health care sector and other consumer related markets in which human-machine collaboration will in future be essential. Systems used for human-machine collaboration can operate without protective barriers or similar safety measures. One of the division's sections, KUKA Laboratories, focuses on developing the technology for such innovative products and applications. The company is also further prioritizing sales in the Americas region and the BRIC nations. The company's profitability will become less and less dependent on exchange-rate fluctuations as it increasingly spreads its value added across different local currencies.

## **ROBOTICS RISK EXPOSURE**

in€millions	Worst case	Expected risk value
Legal risks	6.6	2.5
Economic risks	2.0	0.8
Total for Robotics	8.6	3.3

The assessed potential damage associated with all individual risks is low (to  $\in$  5.0 million) and the likelihood of occurrence is medium to high (to 40.0 percent). Please refer to the notes for details regarding the precautionary balance sheet measures for the identified risks.

#### **KUKA Systems**

This division's sales and profits are subject to general business risks due to the length of time it takes to process project orders, the revisions to the specifications that are often necessary while already processing the orders, the infrequency of the orders received and the price and competitive pressures. Other risks associated with these projects include inaccurate prediction of the actual costs as well as penalties for late deliveries. The division thus uses appropriate risk checklists for individual orders in order to assess the associated legal, economic and technical risks prior to preparing a quotation or accepting a contract. One of the components of project execution is to monitor and track insolvency risks and mitigate them using a strict project and receivables management process. Other risks are continuously monitored and if necessary accounted for by way of accruals or write-downs. Opportunities associated with the project business arise mainly when parts can be purchased at a lower cost than originally estimated, and by invoicing the customer for any change orders received over the course of the project.

Major automakers throughout the world are currently feverishly expanding their global manufacturing capacities. KUKA increasingly works jointly with internal partners, whereby several of the division's regional subsidiaries collaborate on a project, especially in South America and Asia. In these situations, risks involve information exchange, the valueadded process, and the IT-based master project management system. There are also organizational risks associated with extraordinarily rapid and strong growth in business volume, particularly in emerging markets. KUKA mitigates these risks by harmonizing its global IT systems and deploying experienced internal and contract employees when establishing and expanding the local organizations.

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

Pay-on-production contracts such as KTPO's (KUKA Toledo Productions Operations) offer additional opportunities, but also risks. The Jeep Wrangler brand continues to promise above-average growth prospects compared with other American car models. KUKA participated in this growth again in 2013. Here risks involve greater dependence on the volumes produced for the global car market. Thorough market analyses have shown that KUKA Systems also has longterm business opportunities outside the automotive industry; namely, in general industry. A current example is the aerospace industry, from which new orders were again received in 2013. Although this presents an opportunity to penetrate new markets, it also entails risk, above all in relation 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 thus an especially important tool for mitigating risks.

## SYSTEMS RISK EXPOSURE

in€millions	Worst case	Expected risk value
Legal risks	9.4	2.2
Economic risks	9.8	0.4
Total for Systems	19.2	2.6

TThe assessed potential damage associated with all individual risks is medium (to  $\leq 10.0$  million) and the likelihood of occurrence is low to high (to 40.0 percent). Please refer to the notes for details regarding the precautionary balance sheet measures for the identified risks.

## **Financial risks**

One of KUKA AG's primary tasks is to coordinate and control the Group's financing requirements and to ensure that KUKA remains financially independent. With this goal in mind, the holding company optimizes the Group's financing and limits its financial risk via the Group's standard treasury reporting system. In addition, liquidity risk is reduced for the Group as a whole by closely monitoring the Group's companies and their management of payment flows.

Over the course of the past few years, several measures have been implemented to strengthen KUKA Group's solvency. One of these was to restructure the company's debt with respect to time to maturity and the type of financing instruments used. In 2013, this included issuing two convertible bond tranches, one in February and one in July, and signing an unsecured syndicated senior facilities agreement in December. Please refer to the financing section on page 162 and following for further details. The syndicated senior facilities agreement, which runs until December 2018, contains the usual covenants. A fundamental risk associated with this type of covenant-based financing exists when business performance is significantly below plan and the resulting earnings and financing situation precludes adherence to the defined limits. KUKA monitors adherence to these covenants monthly. The company complied with all covenants during the course of fiscal 2013. As of December 31, 2013, all ratios regulated by covenants were well within the contractually defined limits. Please see page 163 for comprehensive details about the syndicated senior facilities agreement and the extent to which the agreed credit lines have been utilized.

One risk that will also impact business performance after 2013 is the increasing fluctuation in currency exchange rates, especially as relates to the Japanese yen, the US dollar, the Chinese yuan and the Hungarian forint; for example, the apparent devaluation of the yen in relation to the euro gives Japanese competitors an advantage. Transaction-related currency exchange risks are hedged using forward foreign exchange contracts. Internal guidelines govern the use of derivatives, which are subject to continuous internal risk monitoring. Details on the central currency management process are provided under "Financial Instruments" starting on page 165 of the notes to the financial statements. Currency translation risks; i.e., measurement risks associated with balance sheet items whose value has been converted from a foreign currency, are not hedged, but are continuously monitored. The risk associated with the volatility of leading currencies and the resulting economic exchange risk (competitive risk) is mitigated by having production facilities in several countries (natural hedging).

## Personnel risks and opportunities

The success of KUKA Group, a high-tech enterprise, depends to a great degree on having qualified technical and management staff. Personnel risk arises mainly from employee turnover in key positions within the Group. Improvements in both business and economic prospects enable the company to strengthen the loyalty of its core personnel, train new, highly skilled employees, and entice new recruits to join the Group. This applies to the traditional markets in Europe and the United States, but especially to recruiting employees in growth markets, where the need for skilled employees is growing steadily. Last but not least, in-house continuing education programs such as those offered by KUKA Academy, or employee suggestion programs, generate opportunities resulting from the improved motivation and qualification of the workforce.

## IT risks and opportunities

IT risks have risen over the past number of years, not least because of the importance of IT to business processes. These risks relate to both the frequency of viruses or hacking and the damage they could potentially cause. The existing IT security and Business Continuity Management systems as well as guidelines and organizational structures are 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. Ongoing optimization of IT-supported processes generates long-term cost reduction potential and leads to continuous quality improvements. By systematically monitoring the associated processes, the company reduces the risks associated with an increasing number of external threats as well as dependence on the ever-expanding digitization of business processes.

#### **Compliance risks**

Compliance violations may lead to fines, sanctions, judicial orders regarding future conduct, forfeiture of profits, exclusion from certain transactions, loss of trade licenses or other restrictions. Furthermore, involvement in potential corruption proceedings could harm the overall reputation of KUKA Group and could have a negative impact on efforts to compete for business in both the public and private sectors. Such proceedings could also have a negative impact on the relationship KUKA Group has with business partners upon which it depends, as well as its ability to find new business partners. They could furthermore negatively impact the company's ability to pursue strategic projects and transactions of potential importance for the business, such as joint ventures or other forms of cooperation. Ongoing or future proceedings could lead to the suspension of some existing contracts, and third parties, including competitors, could initiate legal proceedings against KUKA Group for substantial sums of money.

KUKA therefore rolled out a Corporate Compliance Program in early 2008 to make such risks transparent and controllable. The Compliance Committee established through this program meets at regular intervals and ad hoc and reports to KUKA Aktiengesellschaft's CEO, who in turn reports directly to the Supervisory Board's Audit Committee. The CEO is ultimately responsible for the corporate compliance program, which is regularly updated and subject to strict internal controls. The program did not uncover any substantial risks in 2013 due to the active countermeasures taken to mitigate risk at an early stage and to eliminate risk sources; e.g., by realigning business processes.

# **Other risks**

KUKA Group continuously monitors other risks and mitigates these to the greatest extent possible. There is no evidence of environmental risks from operational activities, since the company does not use hazardous materials. The Group makes use of buildings and properties for its business operations, some of which it owns. 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 than any such situations, which could, for example, require costly cleanup operations to be undertaken, will occur in the future.

Please refer to page 121 and following about material agreements subject to conditions related to a change of control. The shareholder structure is periodically analyzed to assess the possibility of takeover of the company.

#### Summary

Overall, KUKA Group's named risks relate to the business performance of the divisions and financial risks associated with currency exchange rate fluctuations and corporate financing. 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

Over the past few years, the growth of the world's key economies was moderate and in some cases even negative. Still, according to the International Monetary Fund (IMF) the world's gross domestic product grew 3.0 percent in 2013. This compares to 3.1 percent in 2012 and 3.9 percent in 2011. The industrial nations suffered from financial and debt crises, and the emerging and developing countries' economies were also weaker. But their growth rates are significantly higher than in the developed industrial countries.

The IMF expects the world economies to grow more rapidly in 2014 and has forecast an increase in the global gross domestic product of 3.7 percent. Thanks to increasing stabilization after the debt crisis, Europe is expected to recover. The IMF expects Germany's growth rate for 2014 to come in at 1.6 percent. According to VDMA, the German engineering Federation, the mechanical engineering sector's orders received were down 2 percent year-over-year in 2013. A slight recovery is expected for 2014, with growth forecast at 3 percent. According to the IMF, the economic recovery in the United States should continue as consumer spending rises, supported by excellent job market growth. Economic performance in the emerging countries is also expected to improve again in 2014. However, in China, economic growth is expected to decline slightly compared to last year. The purchasing manager index, which forecasts economic outlook for the next six months, in January came in at 49.6, according to Markit and HSBC below the critical threshold of 50. One of the reasons given is the planned economic reforms in China, which aim to boost domestic demand. The Chinese government will therefore accept a short period of slower growth. Compared to the rest the world however, the forecast growth of 7.5 percent is still higher than the growth rates in the major industrial countries.

The outlook for KUKA's key markets for fiscal 2014 shows rising growth rates.

## **GROSS DOMESTIC PRODUCT**

in %	2011	2012	2013	2014
World	3.9	3.1	3.0	3.7
Eurozone	1.5	-0.7	-0.4	1.0
USA	1.8	2.8	1.9	2.8
China	9.3	7.7	7.7	7.5
Germany	3.4	0.9	0.5	1.6
Developing/emerging countries	6.2	4.9	4.7	5.1

Source: IMF, January 2014

# Automation trend

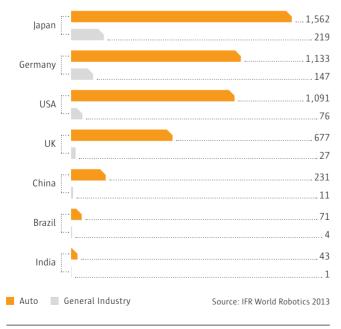
The trend towards automation continues. Companies around the world will increasingly automate their production plants and processes, especially using robots. In its most recent study, the International Federation of Robotics (IFR) forecast expansion of the global robot markets. Here the growth is driven primarily by the benefits for the manufacturing industries. This includes not only improved production process efficiencies and better product quality, but also higher output and product variety driven by flexible manufacturing systems.

The most important growth drivers for robot-based automation are:

- 1) General industry: Robot density (number of robots per 10,000 employees) is still relatively low compared to the automotive sector. See graph on page 113. On average, the automotive industry's robot density is eight times higher than in general industry. General industry companies are facing unrelenting cost pressures. This is why the potential for the automation sector is huge. The trend to automation is supported by the shortage of qualified skilled workers, rising wage costs and the increasing demand for high quality products. In addition, technology advances enable solutions to be found for production processes that in the past were unable to automate.
- 2) Automotive Industry: The international automotive industry has a decisive impact on growth, as it buys more than one-third of the robots sold annually. In the mature manufacturing regions such as Europe, the United States and Japan, the growth potential is driven mainly by the need to modernize or upgrade existing manufacturing plants to improve efficiencies. But the automotive sector also invests in the emerging countries' growth markets. In these areas, it meets the strong customer demand and takes advantage of favorable conditions created by governments seeking to increase the share of vehicles produced locally. Additional potential is created by the increasing number of local carmakers in the emerging countries. In order to improve production output and quality, manufacturers are investing in automating their processes.
- **3)** Technology / service robotics: The pace of development of various robot types, applications, controls and above all software solutions has risen dramatically in the past few years. New markets are being created by new technologies in the field of cooperation between humans and machines, safety, flexibility and user-friendliness. But new applications will also be created at existing customer sites, where solutions will now be available for production processes that could not be automated in the past.

4) Developing and emerging countries: Robot density, and thus the degree of automation, is still relatively low in the developing and emerging countries compared to industrial countries. Due to rising labor costs and international competition, more and more companies in these regions are investing in automation. It enables them to improve their product quality, increase the number of units produced in a given time and optimize their cost structures. China especially is investing very heavily in automation. Already today, China is the world's second-largest robot market.

Overall, the IFR expects the world's robot market to grow at an average rate of 6 percent annually from 2014 to 2016. Europe and the Americas are expected to grow at a below-average rate of 4 percent each and Asia at an above-average rate of 8 percent. According to the IFR, the growth will primarily come from the emerging countries and the United States. Moreover General industry in particular is also expected to be a growth driver. Automotive industry growth on the other hand will shrink in 2014 and 2015 according to IFR forecasts. This is due to the strong investments of the past few years. However, the IFR estimates that automotive will return to growth no later than 2016. By then, spending on modernizations and upgrades will again be required in the established markets.



#### ROBOT DENSITY AUTO / GI + COUNTRIES ROBOTS PER 10,000 EMPLOYEES

# General conditions for KUKA General industry

Automation in general industry continues to increase. This includes sectors such as electronics, machine tools, foundries, aerospace and the food and beverage industry, all of which continue to exhibit a strong need to automate. Rising labor costs and high quality requirements increase the need to automate. KUKA responds with solutions especially tailored to meet the needs of these industries. For example, for the Robotics division, there is a huge potential in the machine tool sector. Robots can be used for both loading and unloading machines, as well as machining parts. According to KUKA's own estimates, only 2 percent of machine tools sold worldwide are equipped with robots. In order to benefit from the worldwide trend toward automation in general industry, KUKA is investing more heavily in the products required in these industries; for example, robots with low payloads such as the KR AGILUS. The success of KUKA Robotics is reflected in the orders received numbers of the past few years. Orders received are up 133 percent, from €142.1 million in 2009, to €330.9 million in 2013. The share of general industry business in the Robotics division in 2013 was just over 40 percent, slightly higher than the automotive sector share. For the Systems division, there is huge automation potential in the aerospace sector. The demand for guality and precision here is high, similar to the automotive sector. Aerospace customers are demanding innovative solutions for processing large components and new materials. Sales staff has been added by both divisions to expand the general industry business. Over the course of the next few years, KUKA Group is expecting increasing sales from general industry.

## Automotive Industry

Car manufacturing and sales numbers will continue to rise worldwide. According to estimates released in January 2014 by IHS Automotive (IHS), the number of cars manufactured across the globe will rise from 84 million vehicles in 2013 to about 103 million vehicles in 2019. Over 60 percent of these will be made in Asia. According to a PriceWaterhouseCoopers (PWC) estimate published in July 2013, about 28 million cars and light trucks will be sold in China alone in 2019. Sales in Europe in 2019 will be about 17 million cars and between 16 and 17 million in the Americas. According to IHS, the average number of units manufactured annually worldwide will grow at a rate of about 3.4 percent from 2013 to 2019. According to the forecast, growth in the Americas and Europe will be below average at about 3.0 and 2.4 percent respectively. The Chinese market is expected to grow at an above-average annual rate of about 6.1 percent. In order to meet the rising demand of these markets, automakers have spent heavily on manufacturing plants, especially in the last few years. As a result, KUKA expects that capital spending in 2014 will slow, as forecast by the IFR. But spending is expected to pick up again no later than 2016. The trend in the automotive industry to offer an increasing variety of models and falling lifecycles of existing vehicle types will spur the growth. To standardize the model platforms and improve efficiencies, assembly lines will need to be highly flexible and maintain high production quality, which can only be guaranteed by automation.

## Technology / service robotics

New technologies enable robot-based automation to be used in areas that have not or partially been automated until now. This includes professional service robotics, a relatively new technology segment. More and more manufacturers are interested in this segment and the pace of progress in development has been dramatic. Already today, service robots are being used for important farming, medical and logistics applications, as well as defense and security. The Fraunhofer Institute for Production Technology and Automation (IPA) defines a service robot as a freely programmable motion device that provides services semi or fully automatically. Services are defined as tasks that are not directly used to produce capital goods, but rather assist people and equipment. According to an IFR study, the number of service robots sold in 2012 rose 2 percent to 16,100. A subsegment, the medical robot market, grew at an above-average rate of 20 percent. The IFR expects a significant increase in sales in the professional segment, and is predicting that 23,000 service robots will be sold between 2013 and 2016 annually.

KUKA embraced new technologies and new markets very early. The LBR iiwa with its sensitivity features is not only useful in existing markets, but is also usable in sectors that to date have not been automated. KUKA Systems supplements this offering by acting as a systems integrator at customer sites. KUKA Robotics has already applied robots from its existing portfolio for health care applications. KUKA expects rising sales from this segment in the mid to long-term.

#### China

The Chinese market has seen strong growth in the past few years and today is one of the largest robot markets in the world. According to the IFR, the number of robots sold more than tripled from just under 8,000 in 2008 to about 25,000 in 2013. Compare this to Japan, the world's largest robot market, where it is estimated that 27,200 robots were sold in 2013. The robots installed in China were made almost exclusively by non-Chinese manufacturers. But according to IFR, Chinese robotmakers will become increasingly important and will produce more and more robots in the coming years. Market players are supported by government programs. KUKA responds to this challenge with research and development, in order to expand its technology leadership globally.

For China, the IFR is forecasting an average annual growth rate of about 15 percent between 2014 and 2016, reaching 38,000 sold robots in 2016. KUKA will benefit from this market growth and expanded its market presence in the region by adding a new KUKA Robotics factory in greater Shanghai at the end of 2013. KUKA Robotics is thus able to offer customers service, sales, and above all, manufacturing in close proximity to their sites. This will significantly reduce lead times and speed up service. KUKA will continue to treat China as a strategically important location in the coming years and assign appropriate resources to the market. In 2014, the company will have an additional location in this market following the acquisition of Reis Group. KUKA Group is forecasting rising sales numbers in China over the next few years, driven by the high demand for robot-based automation and its market presence in China.

## Company-specific factors Summary

Given the current economic forecasts from the IMF, KUKA expects increased demand in fiscal 2014, especially from North America and Asia, in particular from China. Overall, current economic trends should have a positive impact on earnings. From a sector perspective, general industry growth is expected to be strong. This is due in part to the high potential for automation solutions, as well as the positive economic prospects for general industry customers. Automotive customers invested heavily over the past few years. These high levels of spending are not expected to be repeated in 2014. Investments by this sector are therefore expected to decline slightly compared to last year. Please refer to the notes starting on page 165 for comments on currency effects. A weaker yen / EUR exchange rate will not impact the Systems division's results. However, it is expected to have a negative impact on Robotics' earnings. In contrast to Systems, Robotics' main competitors are located in Japan and will benefit from a weaker yen / EUR exchange rate.

#### EXPECTED GROWTH FOR KUKA GROUP

Summary	Earnings 2013	Outlook 2014*
Sales	€1,774.5 million	€1.9-2.0 billion
EBIT margin	6.8%	~6.0%
Net income for the fiscal year	€58.3 million	declining slightly
Investments	€74.7 million	rising slightly
Free cash flow	€95.4 million	mid-double-digit million range**
Dividend per share	€0.30	same as last year to slightly rising

\* incl. Reis Group

\*\* excl. financial investments

#### Definitions:

declining slightly/rising slightly: absolute change compared to prior year < 10% declining/rising: absolute change compared to prior year >10%

#### Sales and EBIT margin

Based on current general conditions, KUKA expects sales revenues between €1.9 and 2.0 billion, up from last year. Sales should rise both in general industry and automotive. The newly acquired Reis Group will contribute to the sales growth. This would make KUKA's growth stronger than that forecast by VDMA, the German Engineering Federation, which is expecting 3 percent growth for 2014.

Based on the current economic general conditions, KUKA Group is expecting an EBIT margin of about 6.0 percent for fiscal 2014. The main reason it is expected to be lower than last year is because of the firsttime consolidation of the Reis Group. We expect a one-time charge from the integration and planned restructuring of Reis. A positive contribution is expected in the following years.

#### Net income

In 2013, KUKA Group generated a net income of  $\in$  58.3 million. Because of investments in growing the business operations and the expenses associated with integrating Reis Group, KUKA expects net income to decline slightly. However, in the following years, the acquisition of Reis Groups is expected to have a positive impact on net income, driven by the significant potential incremental sales and cost synergies that will result from the acquisition.

KUKA Aktiengesellschaft's earnings are dependent on the results of subsidiaries due to profit and loss transfer agreements and, in turn, can be derived from the forecast for KUKA Group.

#### Research and development / investments

The total expenses in this area will be allocated almost exclusively to the Robotics division, since Systems conducts its research primarily in conjunction with customer projects. The demand for KUKA robots and solutions is based primarily on innovations and the quality of the products. To safeguard and expand these competitive advantages sustainably, KUKA Group plans to substantially boost spending on research and development. Spending by the Robotics division will mainly be on enhancing robot applications, new software solutions, and programs to improve existing products and boost their efficiencies. Overall, KUKA Group plans to spend about  $\in$  70 million on research and development in 2014. 20–25 percent of the investments will be capitalized and amortized over three to five years.

KUKA has budgeted for slightly rising total investments for 2014. The main investments will be in maintaining existing systems as well as constructing a new technology and innovation center in Augsburg. The new building is expected to be completed in mid-2015 and is being constructed to improve cooperation between research and development and other associated product areas, which are currently located at different sites.

## Free cash flow

KUKA Group's free cash flow is primarily generated from operating earnings and the growth of working capital in the Robotics and Systems divisions. Based on the current general conditions and the budgeted sales growth, KUKA Group expects a free cash flow excluding financial investments in the mid-double-digit million range in 2014.

## Dividend

The Executive and Supervisory Boards will recommend to shareholders at the Annual General Meeting in Augsburg on May 28, 2014 that a dividend of  $\in$  0.30 per share be paid for 2013. KUKA's dividend policy is to pay out between 25 and 30 percent of net income to shareholders provided business performance is good and general conditions are stable. For fiscal 2014, KUKA plans to maintain its dividend and possibly increase it slightly.