ANNUAL REPORT
2018

ZEPPELIN®
WE CREATE SOLUTIONS

ZEPPELIN AT A GLANCE

	IFRS		German Commercial Code ("HGB")		
	2018	2017	2017	2016	2015
Sales					
Construction Equipment EU SBU	1,315	1,210	1,308	1,205	1,123
Construction Equipment CIS SBU	482	412	430	299	307
Rental SBU	473	410	410	363	373
Power Systems SBU	360	341	351	307	283
Plant Engineering SBU	348	323	326	262	328
Z Lab SBU	1	0	0	0	-
Group total [1]	2,897	2,622	2,751	2,362	2,328
Employees (average for the year, including trainees)					
Construction Equipment EU SBU	2,775	2,687	2,687	2,594	2,679
Construction Equipment CIS SBU	1,792	1,673	1,673	1,605	1,662
Rental SBU	1,487	1,336	1,336	1,236	1,238
Power Systems SBU	849	823	823	793	788
Plant Engineering SBU	1,468	1,366	1,366	1,332	1,376
Z Lab SBU	57	39	39	22	-
Group total [1]	8,502	8,004	8,004	7,646	7,801
Fixed assets [2]					
Additions	396.0	373.3	236.9	170.2	184.7
Changes in the consolidated group	4.8	0.0	0.0	0.0	-5.8
Depreciation	192.9	181.6	103.6	90.9	88.5
in % of additions	48.7	48.6	43.7	53.4	47.9
of which rental assets					
Additions	303.4	283.8	169.5	109.0	133.0
Changes in the consolidated group	0.3	0.0	0.0	0.0	0.0
Depreciation	132.5	125.3	60.1	50.1	46.1
Net profit before tax	130.8	97.7	93.5	85.9	81.2
Consolidated net profit after taxes	90.0	63.0	57.6	59.1	56.1
Cash flow	256.9[3]	219.0[3]	195.5[4]	179.1[4]	181.4[4]
Equity	771.4	696.4	674.4	633.4	566.3
of which Share capital	100.0	100.0	100.0	100.0	100.0
Capital reserves	60.0	60.0	60.0	60.0	60.0
Retained earnings	614.8	536.7	508.7	468.7	404.0
Accumulated other comprehensive income	-10.8	-6.3	-	-	-
Non-controlling interests	7.3	6.0	5.7	4.7	2.3

SBU: Strategic Business Unit

Changeover of accounting standards to IFRS as of 2018

[1] including Zeppelin GmbH

[2] Financial assets, investments accounted for using the equity method, intangible assets, and property, plant and equipment

[3] Cash flow from operating activities (IFRS)

[4] Net cash flow (HGB)

CONTENTS

CHRISTIAN DUMMLER

Managing Director of Zeppelin GmbH / CFO

Finance, Controlling, Real Estate Management, Legal
Certified Banking Specialist
Member of the Management Board of Zeppelin GmbH since 2011

ALEXANDRA MEBUS

Managing Director of Zeppelin GmbH / Labor Director

HR and HR Development
Master of Business Administration, Graduate Diploma in Social Education
Member of the Management Board of Zeppelin GmbH since July 1, 2018

THE GROUP MANAGEMENT BOARD

MICHAEL HEIDEMANN
Vice Chairman of the Management Board of Zeppelin GmbH

Sales, Marketing, Service
Responsible for the Construction Equipment EU, Construction Equipment CIS and Rental strategic business units
Industrial Manager
Member of the Management Board of Zeppelin GmbH since 2000 and Vice Chairman of the Management Board of Zeppelin GmbH since 2010

PETER GERSTMANN
Chairman of the Management Board of Zeppelin GmbH

Compliance, Group Development, IT, Digital Business, Auditing, Corporate Communications
Responsible for the Plant Engineering, Power Systems and Z Lab strategic business units
MBA
Member of the Management Board of Zeppelin GmbH since 2007 and Chairman since 2010

MANAGEMENT BOARD REPORT

PETER GERSTMANN

Dear Customers, Partners, Employees, and Readers,

The Zeppelin Group ended an exceptionally successful 2018 fiscal year with revenue of 2.9 billion euros, and once again exceeded the results of the previous year – making this the best fiscal year in the company's history. All strategic business units (SBUs) posted considerable growth in revenue thanks to the generally positive market environment and good strategic positioning. Earnings before taxes rose to 131 million euros, a 34% improvement on the previous year, and the third successive increase. The number of employees at Zeppelin also grew. In 2018, around 9,000 employees, including trainees and apprentices, contributed to the company's success.

CONSTRUCTION EQUIPMENT EU STRATEGIC BUSINESS UNIT

In construction equipment markets in Germany, Austria, Czech Republic, and Slovak Republic, Zeppelin maintained its position at the same high level and even slightly extended it in some cases. We benefited from the continued positive trend in the construction industry and our long-term strategy to increase the machine population, achieving optimal service utilization capacity as a result.

Significantly contributing to the record revenues, we received a number of major orders from leading companies in the German and Austrian construction and construction material industry.

New products such as the Cat 320 GC, 320 and 323 tracked excavators, which are setting new benchmarks in the 20- to 25-metric-ton class with their innovative technology, revolutionary control technology, and extensive range of features, were unveiled to an industry audience at the Zeppelin Conference in Malaga. Considerable progress was also made in the digitization of our processes during 2018, especially with respect to networked construction sites.

CONSTRUCTION EQUIPMENT CIS SBU

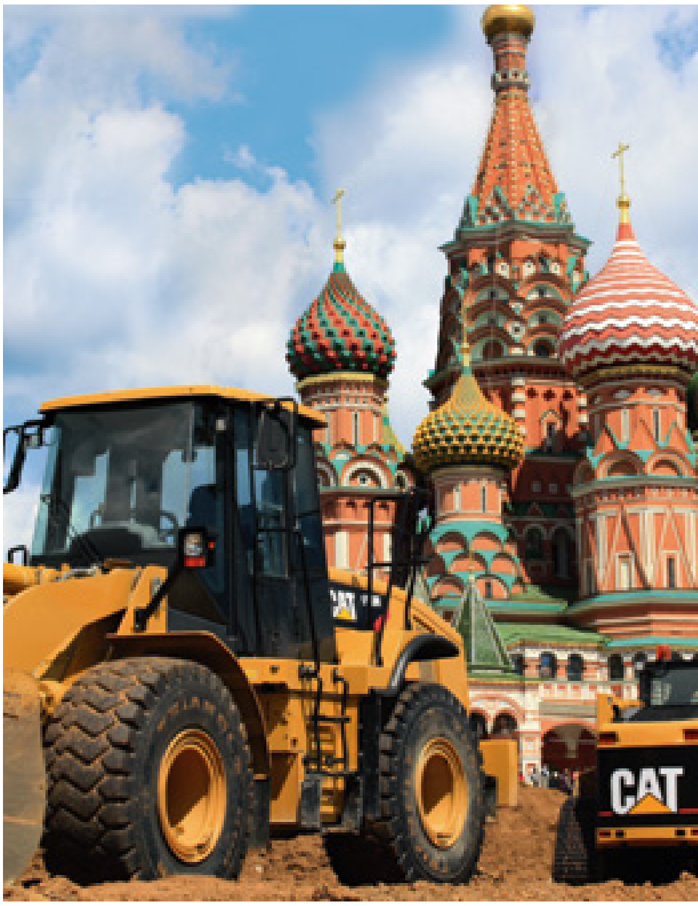
The Construction Equipment CIS SBU saw a significant increase in its revenue and ended the fiscal year on a high note – all this despite further economic constraints such as Russia's increased import tariffs. The positive trend was underpinned by the stable, positive economic cycle in the SBU's sales markets; the construction equipment industry is showing consistent growth in almost all markets. We managed to benefit from this trend, recording a double-digit percentage increase in sales of new machines.

However, Zeppelin decided to curtail a number of business activities where trends remained below expectations, including the agricultural machine business area in some regions of Russia; we have also closed our small Russian dealer network for sales of Mercedes-Benz commercial vehicles. Nonetheless, investment in our new branch in St. Petersburg, which will be officially opened in the middle of 2019, and the opening of a new branch in Kaluga, are clear signs of our commitment to the Russian market. In the 20 years during which we have had a presence in Russia – we celebrated the anniversary in 2018 – we have sold around 10,000 new machines.

RENTAL SBU

Thanks to the wide variety of services provided by our Rental SBU, Zeppelin is now increasingly seen by the public as a leading service provider in the construction industry. This is not only due to our handling of several prestige projects such as traffic safety during the complete closure of the Elbtunnel, but also because of our presence throughout Germany, Austria, Czech Republic, and the Slovak Republic. Effective from January 1, 2018, Zeppelin acquired 100% of shares in Baustellen-Verkehrs-Technik GmbH in order to expand our capacity in this segment.

The 2018 business results for the Rental SBU once again far exceeded the excellent results of the previous year; we enjoyed an above-average share of market growth in our specific rental markets.



POWER SYSTEMS SBU

We also continued to have a healthy order book for passenger ship engines throughout 2018. Zeppelin has equipped a cruise ship – the AIDAnova –with Caterpillar MaK dual fuel engines for the first time ever, reflecting the rising interest in liquefied natural gas (LNG).

Alternative gas applications are also being called for in combined heat and power plants (CHP), with rising demand for large-scale and complete plants. In this area, Zeppelin constructed a new combined heat and power plant as a general contractor for Stadtwerke Aachen, funded by an investment of around 8 million euros. We also achieved impressive results with new projects relating to dual power operation (electric/diesel-electric) of rail vehicles, and subsequently received a major order from Alstom/SBB.

The improved business results of the Power Systems SBU, compared with the previous year, were mainly down to excellent capacity utilization in the new engine, service and spare parts business, with the strongest results seen in sales and servicing of industrial engines.

PLANT ENGINEERING SBU

The Plant Engineering SBU can look back on very high order entries, as several major orders were acquired in the polyolefin plant sector in 2018, for construction of synthetic production plants in China. This is the result of a stronger sales organization and the Zeppelin global network.

Other key projects which demonstrate our innovative strength include the construction of the first tire recycling plant in the USA. The idea for this originated in a start-up, and Zeppelin recognized its potential at a very early stage. We could see that the idea was marketable – just as we now see the possibilities in the area of processing energy particles in batteries, and so are involved in the construction of a plant to do just that in Scandinavia.

With regard to food plants for the baking sector, we launched product innovations such as the CODOS NT kneading system and KROMix, and succeeded in strengthening our market position in the rubber and tire manufacturing sector through the acquisition in 2018 of Italian company Nuova Ciba S.p.A, which has proven to be an extremely useful addition to our portfolio.

Z LAB SBU

The Z Lab SBU is dedicated to developing digital solutions for the construction industry, and employs agile methods and innovative technologies to make the construction site of the future more efficient, networked and automated.

In 2018, a management solution was developed for inventory management and planning of construction equipment, and this is set for market launch in 2019, under the name zamics. Progress was also made on the development of klickcheck, a digitized and automated issuing and return process solution for rental equipment.

DIGITIZATION

Zeppelin continues to invest in digitization across the board, in terms of new digital business models, the transformation of existing business models, and the digitization of internal processes. Equipping employees with the skills to do their job is of great importance to us. As a result, the Group-wide Z CONNECT central communication platform has been further developed along the same lines as the Z IDEA online idea management tool. Our e-learning programs offer professional digital training for our employees. Data analytics is also enjoying increasing prominence at Zeppelin; in one example reflecting this, we conducted systematic analyses of large volumes of data to develop a model that can forecast the failure of spark plugs in combined heat and power stations, and thereby significantly reduce the failure risk.

REWORKING THE CORPORATE DESIGN

In this digital age, it is crucial for companies to adapt – not only to retain their competitive edge, but also to prepare for the future. As we are all deluged by an ever-growing stream of information, brand recognition is essential, and gaining clicks on your logo is a prerequisite for visibility in the digital world. Zeppelin took the decision to add a figurative mark to its wordmark, and to change the font color from gray to indigo blue. Although the new design reflects our innovative strength, we also sought to retain elements of our history in it. The Zeppelin lettering, which we have been using since the 1970s, and the corporate tagline "We Create Solutions" – an important expression of the Group's identity – remain unchanged.

COLLABORATION WITH CATERPILLAR

The strength of our years-long partnership with Caterpillar was evident in 2018, for example in Zeppelin receiving the 2018 Caterpillar Global Dealer Excellence Award as the best dealer in Europe, as services in Czech Republic and Slovakia were singled out for special praise. Zeppelin was also named as the best Caterpillar Marine Dealer worldwide for the third time, following a three-day audit that resulted in the company being awarded the Platinum Certificate for Marine Service Assessment. Zeppelin Rental is the first company in Europe, the Middle East and Africa (EMEA) to be awarded Gold status in the Caterpillar Rental Services Excellence Program.

WE ARE ZEPPELIN

Our identity, our common values, and the feeling of belonging within our Group lie at the heart of our WE are Zeppelin initiative and its many related projects. This campaign has helped us to further enhance teamwork, global networking, information flow, and the unity within our company. Our employees can now keep in touch beyond national borders and business units via Z CONNECT, our digital communication platform. This is crucial for exchanging information, equips us to work with digital technologies, and makes an important contribution to the products and services that we provide for the benefit of our customers.

We place enormous value on our employees' ideas. The Group-wide idea management tool Z IDEA creates a platform which can be used to submit feedback and suggestions for improvement online. We continued to expand Z IDEA in 2018, adding new regions, with the result that almost 90% of employees from 13 countries can now give their feedback and suggestions for improvement online. We are proud of the fact that more than 1,900 ideas had been submitted by the end of 2018.

We are also proud that Zeppelin's commitment to its employees and our company values won us a place among the three finalists in the 2018 Corporate Culture Award. This was the first year that the award was presented, to honor outstanding companies across Germany that maintain a strong corporate culture.

ZEPPELIN AS AN EMPLOYER

The dedication and ability of our employees, make Zeppelin the success story it is today. We want to further enhance our attractiveness as an employer, for example by supporting a better work-life balance. The "berufundfamilie audit" (work and family) certificate which was presented to the management holding company, as well as to its Construction Equipment EU SBU, Rental SBU, Power Systems SBU, and Plant Engineering SBU in Germany show that we are on the right path. We are also investing in employee training through our own programs such as Z Talent and Z Academy. Recruitment of new employees is supported by the Z MATCH employee recommendation program.

We continue to press ahead with pursuing our goal of increasing the proportion of women in the company to 25% by 2025, and were delighted to welcome Alexandra Mebus as new Group Managing Director and Labor Director to our ranks as of July 1, 2018. The Supervisory Board also saw changes, with the retirement of Dipl.-Ing. Werner Baier. His place was taken on July 20, 2018 by Prof. Dr. Yasmin Mei-Yee Weiß, who brings her valuable international outlook and experience to the Board's profile.

FINANCES

2018 was marked by the changeover to the international IFRS (International Financial Reporting Standards) accounting standard; this Zeppelin GmbH Group Financial Statement for 2018 is the first to be prepared in accordance with these principles. The decision by Zeppelin to opt for the IFRS as a Group accounting standard takes account of its growing international importance and prepares the company for the future. Financial statements prepared according to IFRS are accepted internationally and can be reconciled with other statements. This will allow Zeppelin's financial performance and creditworthiness to be quickly and accurately assessed by national and international business partners and institutions. The switch to IFRS will run in tandem with the Group-wide introduction of SAP.

Creditreform Rating AG again confirmed the Zeppelin Group's creditworthiness in 2018, with a quality A-rating for the third time in succession, and a stable outlook indicated. In doing this, the rating agency again attests to the Zeppelin Group's creditworthiness, with a rating that is significantly above average in the industry and overall economy. The rating agency's positive assessment is based on stable and solid financial ratios, sufficient cash flows from operating activities, good capital market capabilities, prudent financial management and Zeppelin's leading market position. A stringent future focus, demonstrated by investment in expanding digitization of our business areas, also played a considerable role.

Zeppelin GmbH added to its pool of core banks, going from five to six in 2018, and increased the syndicated loan to 605 million euros, extended in full until 2022. At the same time, covenant agreements with bonded lenders were amended following the changeover of Group accounting standards to IFRS.

SUSTAINABILITY

As a foundation-owned company, Zeppelin is aware of its corporate responsibility, and is committed to developing sustainable product ideas such as the construction of the largest tire recycling plant worldwide, on behalf of a customer. Responsible use of resources is equally important, with Zeppelin continuing to pursue the target of reducing energy consumption Group-wide by 10% by 2020. We have introduced an energy management system in accordance with DIN ISO 50001 in all German and Austrian companies; this was once again certified by GUTcert in 2018.

INVESTMENTS

Along with the acquisition of Nuova Ciba S.p.A. and the takeover of Baustellen-Verkehrs-Technik GmbH, a significant part of the investment was plowed into replacing and expanding our rental fleet, the ongoing SAP project, and construction projects in St. Petersburg, Esslingen, Quickborn, and Linz. The total investment volume for the 2018 fiscal year was 279 million euros.

One highlight of 2018 was the return to Friedrichshafen of the Gaylord Gladiator, an innovative luxury sports car built in 1957. When we were offered this unique vehicle, which was manufactured back in the heyday of the Friedrichshafen workshops, we had no hesitation in purchasing this reminder of a golden era in the company's history. The vehicle formed part of the special "Innovations! Destination: Future" exhibition at the Zeppelin Museum in Friedrichshafen, and will reside there on permanent loan for the foreseeable future.

OUTLOOK

From a global perspective, 2019 is expected to signal the end of the ongoing boom, and as such a reduction in growth. We expect general economic conditions to essentially remain stable in 2019, even though growth in individual market sectors may slow.

We anticipate that bauma 2019, taking place in April, will provide vital stimulus to our construction equipment business, as well as to machine and equipment rental, temporary infrastructure, and construction logistics.

The high demand for raw materials and the related demand for mining equipment led to long lead times for machines, vehicles, and spare parts in 2018. This situation is expected to improve in 2019, as we can assume that the supply capacity of our manufacturing partner Caterpillar will increase. This will enable us to react more quickly and more flexibly to market requirements.

Macro-economic uncertainty is evident in the growing protectionist trend in world trade, sanctions, and current tariff disputes. Compounding the situation, the unresolved detail surrounding the United Kingdom's exit from the EU, and the eurozone crisis alongside other geopolitical risks, may cloud prospects for the global economy.

Our generally positive expectations regarding earnings for 2019 will allow us to continue investing in vital digitization measures, and to press ahead with digital transformation. The changeover to accounting based on IFRS, the Group-wide introduction of SAP, and investment in sustainable product innovations will turn Zeppelin into a sustainable, future-proof, and competitive company going forward.

On behalf of the entire Management Board of Zeppelin GmbH, I would like to thank our customers for their confidence in our solutions and also to thank our employees for their tireless commitment, dedication and loyalty. Our thanks also to the works councils for their support, and our shareholders and Supervisory Boards for their trust.

On behalf of the Management Board

Peter Gerstmann
Chairman of the Management Board of Zeppelin GmbH

THE SUPERVISORY BOARD

THE SUPERVISORY BOARD, CONSTITUTED IN ACCORDANCE WITH ARTICLE 7 OF THE GERMAN CODETERMINATION ACT (MITBESTIMMUNGSGESETZ), COMPRISES THE FOLLOWING MEMBERS:

SHAREHOLDER REPRESENTATIVES

Andreas Brand
Chairman, Mayor of the City of Friedrichshafen

Dipl.-Ing. Werner Baier (until July 20, 2018)
Chairman of the Supervisory Board of Webasto SE

Dr. Reinhold Festge
Partner in HAVER & BOECKER OHG

Dr. Werner Pöhlmann
Lawyer, Tax Adviser, Certified Public Accountant

Univ.-Prof. Dr.-Ing. Dr.-Ing. E.h. Dr. h.c. Dieter Spath
Head of the Institute for Ergonomics and Technology Management at the University of Stuttgart, Head of the Fraunhofer Institute for Industrial Engineering, Stuttgart, President of acatech, the German Academy of Science and Engineering

Prof. Dr. Yasmin Mei-Yee Weiß (since July 20, 2018)
Professor at the Nuremberg Institute of Technology, Member of the Foreign Trade Council of the Federal Ministry for Economic Affairs, Member of the Advisory Council of the BLG Logistics Group

Univ.-Prof. Dr. Dr. h.c. mult. Horst Wildemann
Chair for Corporate Management, Logistics and Production at Technische Universität München (TUM)

EMPLOYEE REPRESENTATIVES

Heribert Hierholzer
Vice Chairman, Production Foreman and Chairman of the General Employee Council of Zeppelin Systems GmbH

Roswita Feineis
Project Manager for Group-wide strategic HR issues at Zeppelin GmbH, Management Representative

Thomas Mann
Head of Time Management and HR Officer at Zeppelin Baumaschinen GmbH

Ralph Misselwitz
Senior Field Service Representative, Chairman of the General Employee Council of Zeppelin Baumaschinen GmbH, Chairman of the Group Employee Council of Zeppelin GmbH

Vincenzo Savarino
Primary Authorized Representative of the Friedrichshafen-Upper Swabia and Singen Chapters of the IG Metall Trade Union

Marita Weber
Primary Authorized Representative of the Offenbach Chapter of the IG Metall Trade Union

SUPERVISORY BOARD REPORT

ANDREAS BRAND

The Zeppelin Group can look back on a highly successful 2018 fiscal year. Order entry, revenue and earnings rose significantly, and profitability increased. At the same time, investment in digitization, strategic acquisitions, expansion of the site network, and Group infrastructure also went up considerably. Good progress was made in implementing the 2025 Strategy and achieving objectives relating to it. Markets relevant to Zeppelin maintained their high growth.

The Supervisory Board monitored the work of the Management Board on a regular basis and supported it in management tasks, the strategic development of the Company, and on a number of important individual matters. The Supervisory Board continued to perform all its duties pursuant to the law, the articles of incorporation, and the rules of procedure with great diligence in 2018. In addition, the Chairman of the Supervisory Board was also informed about current developments and relevant events during regular talks with the Chairman of the Management Board outside of the board meetings. All members of the Supervisory Board were promptly and extensively informed on a monthly basis about the performance of the Zeppelin Group. The prime objective is to ensure long-term successful development of the Zeppelin Group in collaboration with the Management Board. Cooperation between the Supervisory Board and the Management Board is always open, responsible and constructive.

The focal points of the reporting and consulting were the strategic development of the Zeppelin Group, Group-wide personnel projects, tapping into new growth areas, and planned strategic acquisitions. In addition to these, key Group projects in the finance division, the changeover of Group accounting standards to the International Financial Reporting Standards (IFRS), investment projects, and amendment of the Zeppelin GmbH articles of incorporation were addressed.

The Supervisory Board monitored and scrutinized the development and performance of the company and the activities of the Management Board by way of three ordinary meetings and a circular resolution on the basis of documents, reports and presentations regarding the company's strategy, plans, profitability, assets, and finances, as well as quarterly risk, compliance and data protection reports, the Group Auditing department's report and the reporting related to integrating acquisitions. The corporate, investment and financial plans for 2019 were discussed in detail, along with forecasts for 2020 and 2021.

Following detailed consideration and consultation with the Management Board, decisions were made on a number of projects and measures that required the approval of the Supervisory Board. These consisted mainly of capital measures at Group companies, financial and investment plans for the 2019 fiscal year, revision of the rules of procedure for the Management Board of Zeppelin GmbH, and setting of target quotas for appointing women to the Management Board and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Supervisory Board. Ms. Alexandra Mebus joined the Management Board of Zeppelin GmbH as of July 1, 2018, and took over the role of Human Resources and Labor Director from Peter Gerstmann.

Within this context, the Supervisory Board revised the rules of procedure and the allocation of responsibilities of the Management Board of Zeppelin GmbH. The Supervisory Board also resolved to revise the rules of procedure for the Supervisory Board of Zeppelin GmbH.

Decisions were also taken concerning the appointment and re-appointment of managing directors at affiliated companies based on relevant recommendations of the HR committee. The HR committee held four meetings to discuss key issues of corporate development and corporate strategy, as well as underlying questions, HR matters and succession planning, and also to look at the role of the audit committee.

The Supervisory Board advised on strategies and measures for the development and expansion of new business areas, employee recruitment and training, the development of the Group's finance, risk and compliance management system, and the status of other important strategic projects. The work of the Supervisory Board in general and its scrutiny of the Management Board in particular did not give rise to any complaints.

The financial statements of Zeppelin GmbH prepared pursuant to the provisions of the German Commercial Code (Handelsgesetzbuch, "HGB") and the Group Financial Statements prepared in accordance with the basic principles of the IFRS pursuant to Section 315e HGB for the year ending December 31, 2018, and the relevant management reports, were audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), who issued an unqualified Auditor's Statement. The Supervisory Board engaged with the documents in detail and also reviewed them itself. To this end, the audit reports were provided to all members of the Supervisory Board in a timely manner. In due time before the Supervisory Board's accounts review meeting, PwC and members of the Supervisory Board met twice to discuss the details, focal points and findings of the year-end audits. During the accounts review meeting of the Supervisory Board on Thursday, March 28, 2019, PwC explained the key results of the audit, which were discussed in detail. The Supervisory Board did not raise any objections. It approved the results of the audit and thereby approved the financial statements of Zeppelin GmbH and the Group Financial Statements. The financial statements are thereby adopted. The Supervisory Board approved the Management Board's proposal concerning the appropriation of profit.

In the middle of 2018, long-time member of the Supervisory Board and HR committee, Werner Baier, retired as a Board member. His place on the Supervisory Board was taken by Prof. Dr. Yasmin Mei-Yee Weiß. Dr. Reinhold Festge, a long-standing member of the Supervisory Board, replaced him on the HR committee. The Supervisory Board thanks Mr. Baier for his outstanding service, and looks forward to working with Prof. Dr. Weiß.

The Supervisory Board also wishes to thank the Management Board, the employee representatives, and all employees worldwide for a great performance and for their outstanding commitment during the 2018 fiscal year.

Friedrichshafen, Thursday, March 28, 2019

On behalf of the Supervisory Board

Andreas Brand
Chairman

ZEPPELIN WORLDWIDE

A total of 9,000 employees at 200 sites in 34 countries help customers to increase their competitiveness by means of our extensive portfolio of products and services.

CONSTRUCTION EQUIPMENT EU

Germany / Austria / Poland [1)] / Slovakia / Czech Republic

CONSTRUCTION EQUIPMENT CIS

Armenia / Northwest, Central and Southwest Russia / Tajikistan / Turkmenistan / Ukraine / Uzbekistan / Belarus

RENTAL

Germany / Austria / Slovakia / Czech Republic

POWER SYSTEMS

Armenia / Azerbaijan [3)] / Bulgaria [2)/3)] / Germany / Georgia [3)] / Kazakhstan [2)/3)] / Kyrgyzstan [3)] / Moldavia [3)] / Mongolia [3)] / Austria / Poland [2)/3)] / Romania [2)/3)] / Russia [2)] / Switzerland [2)/3)] / Slovakia / Tajikistan / Czech Republic / Turkmenistan / Ukraine / Hungary [2)/3)] / Uzbekistan / Belarus / Cyprus [2)/3)]

PLANT ENGINEERING

Belgium / Brazil / China / Germany / France / UK / India / Italy / Russia / Saudi Arabia / Singapore / South Korea / USA

Z LAB

Germany

[1)] Hyster forklifts / Manitou conveyor systems only
[2] MaK engines only
[3] Sales and services segment only

OVERVIEW OF THE ZEPPELIN GROUP

ZEPPELIN GROUP IS A FOUNDATION-OWNED COMPANY.
Its roots can be traced back to the establishment of the Zeppelin Foundation by Count Zeppelin in 1908. The Zeppelin Foundation still owns a direct stake in Zeppelin GmbH, as well as an indirect stake via Luftschiffbau Zeppelin GmbH.

ZEPPELIN FOUNDATION
under the management of the City of Friedrichshafen

90 %

LUFTSCHIFFBAU ZEPPELIN GMBH
in Friedrichshafen
Management Board: Jörg Bischof (since 1/1/2018, previously Gabriele Freund until 12/31/2017), Thomas Brandt

96.25 %

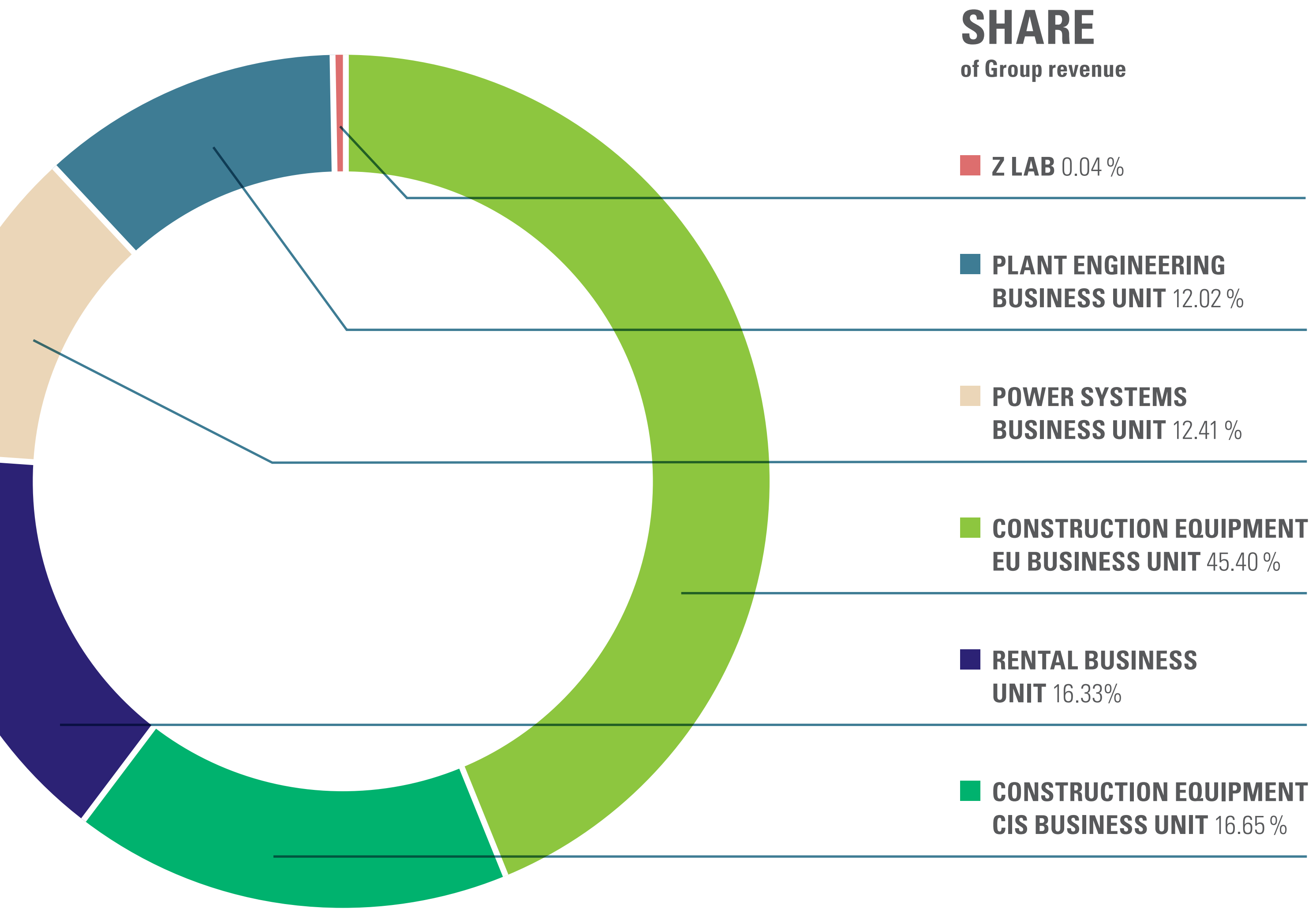
10 %

3.75 %

ZEPPELIN GMBH
in Friedrichshafen/Garching
Management Board: Peter Gerstmann (Chairman), Michael Heidemann (Vice Chairman), Christian Dummler (CFO), Alexandra Mebus (Labor Director)

> 200 SITES
34 COUNTRIES
2.9 BILLION EUROS IN REVENUE
< 9,000 EMPLOYEES

The Zeppelin Group is represented at more **THAN 200 SITES** in **34 COUNTRIES**. Zeppelin provides solutions in the following areas: construction machinery, mining machinery, agricultural machinery, rental machinery, construction logistics, construction site management, drive, propulsion, traction and energy, engineering, and plant engineering. It also develops new digital business models for the construction sector. Zeppelin generated revenue of around



2.9 BILLION EUROS in the 2018 fiscal year; a total of **9,000 EMPLOYEES** (including trainees) contributed to this success. For Group-wide collaboration, Zeppelin is arranged as a management holding company and six strategic business units (SBUs): Construction Equipment EU, Construction Equipment CIS, Rental, Power Systems, Plant Engineering and Z Lab. This structure makes it possible to centralize operations and gear our business models towards various markets and customers. The Group's management holding company is Zeppelin GmbH. The company is legally domiciled in Friedrichshafen, with its headquarters located in Garching near Munich.

CORPORATE CULTURE

INTEGRITY AND EXCELLENCE: THE FOUNDATION OF OUR VALUES THAT WE PUT INTO PRACTICE

The corporate culture of the Zeppelin Group is shaped by its identity as a foundation-owned company, and its history. The activities of Count Zeppelin in the early 20th century and the values he embodies still influence the company today. The foundation of this value system is the integrity and excellence of our employees. As ambassadors for our culture, our employees epitomize values such as fairness, respect, and transparency when it comes to compliance, and put those values into practice in their day-to-day work. As reliable, dynamic partners, our employees recognize the needs of our customers and use their wide-ranging knowledge of our products and services to deliver outstanding solutions.

At the heart of this Zeppelin system of values are ten "Grafensätze". They form a link between the Group's current corporate culture and its unique company history, along with values actively embodied by Graf von Zeppelin – such as the ability to work in a team and willingness to learn. Our Grafensätze are the principles we follow in dealing responsibly with our colleagues, customers, service providers and partners, and they are a benchmark for the day-to-day activities of all Zeppelin employees. We live our values.

The Zeppelin Group's unique values system earned Zeppelin a place among the three finalists in the Corporate Culture Awards 2018. This was the first year that the award was presented, to honor outstanding companies across Germany that maintain a strong corporate culture. Ultimately, the Group narrowly missed out on victory in the Best Story category. A total of 153 German companies were nominated for the Corporate Culture Award.

WE ARE ZEPPELIN

At the end of 2017, we launched the WE are Zeppelin global initiative, which is designed to further improve information flow, collaboration, global networking, and the strong unity within the Zeppelin Group. The fact that all employees have a deep understanding of our values – regardless of the region or SBU in which they work – is a powerful unifying element and brings together all Zeppelin employees worldwide. A host of Group-wide projects enable information and ideas to be exchanged across national borders and SBUs. As a central hub to these projects is our communication platform, Z CONNECT, which can be used as a communication tool by all employees worldwide, and allows information to be exchanged between different groups. The Group-wide Z IDEA idea management tool provides a means for almost 90% of employees from 13 countries to offer feedback and suggestions for improvement online. During the 2018 Soccer World Cup for example, employees from around the world took part in the WE are Fans betting game, sharing their passion for soccer while getting to grips with the new communication tool in the process.

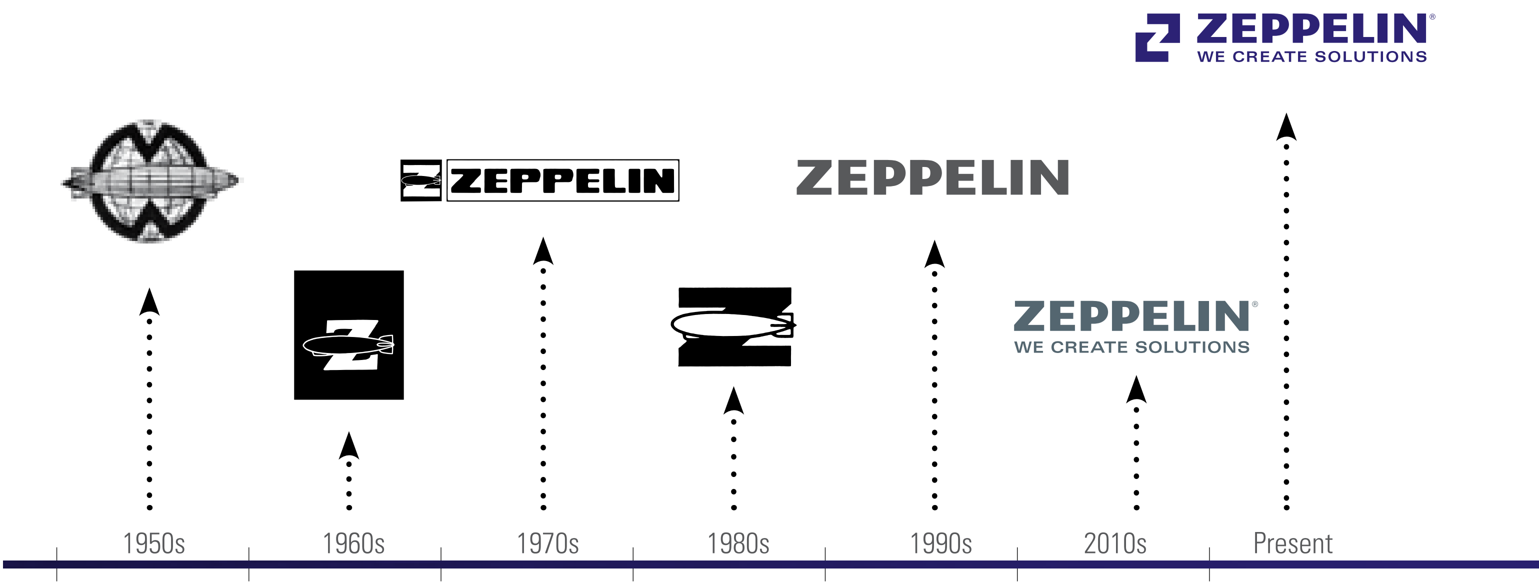
UNMISTAKABLY IMMERSED IN THE DIGITAL AGE

The Zeppelin Group launched a new figurative mark and new Corporate Design in December 2018. A figurative mark was added to our Group logo, which previously consisted of our Group name and the "We Create Solutions" service promise. The figurative mark comprises two enclosing elements that together form a "Z" for Zeppelin, and represent interlinkedness, unity, and the diverse solutions provided by the company. Alongside this addition, we changed the color of the Group logo, which is now indigo blue, a color that blends red and blue. The entire Group color scheme was also altered, and now combines indigo blue with sand and metallic steel as main colors. Sand reflects Zeppelin's competence in the construction industry, while metallic steel underlines Zeppelin's technical and digital expertise.

By adding a figurative mark to the logo and altering the color scheme, the Zeppelin Group's corporate image is also in better shape for the challenges of the future. In this age of increasing digitization, the figurative mark greatly enhances the Group's brand recognition, The new colors help set Zeppelin apart from its competitors, and give the company a distinctive corporate image. The new logo symbolizes the diversity of solutions, sites, and companies within the Zeppelin Group, and unites them under a standard, multi-company Corporate Design umbrella.

Zeppelin has always placed equal importance on looking ahead to the future and respecting tradition. Zeppelin also looked to the Group's roots when redesigning its brand image. The "Zeppelin" lettering, which the company has been using almost unchanged since the 1970s, and the "We Create Solutions" corporate tagline – an important part of the Group's identity – remain unchanged.

The only exception in the new Corporate Design application relates to Zeppelin's status as a partner to Caterpillar: The long years of strategic partnership between the two companies will continue to be reflected in the long-established dealer logos.



NEW ZEPPELIN CORPORATE DESIGN

GROUP MANAGEMENT BOARD

From left to right

FRED CORDES
Head of the Construction Equipment EU strategic business unit

AXEL KIEFER
Head of the Plant Engineering strategic business unit

MICHAEL HEIDEMANN
Vice Chairman of the Management Board of Zeppelin GmbH

ARNE SEVERIN
Head of the Rental strategic business unit

VOLKER POSSÖGEL
Head of the Power Systems strategic business unit

ALEXANDRA MEBUS
Managing Director of Zeppelin GmbH/ Labor Director

FRANK JANAS
Head of the Construction Equipment CIS strategic business unit

CHRISTIAN DUMMLER
Managing Director of Zeppelin GmbH / CFO

WOLFGANG HAHNENBERG
Head of the Z Lab strategic business unit

PETER GERSTMANN
Chairman of the Management Board of Zeppelin GmbH

STRATEGIC BUSINESS UNITS

CONSTRUCTION EQUIPMENT EU

Sales and servicing of construction machines

The Construction Equipment EU SBU is a European leader for the sales and servicing of construction machines. Its portfolio includes over 200 different types of machine from market leader Caterpillar. The SBU provides customers with powerful earthmoving, excavation, demolition, recycling, and road construction equipment, and also offers gardening and landscaping, agricultural, and industrial machinery. The product range is rounded off with special equipment for surface and underground mining, and fleet management and machine control systems. A dense branch network with central spare parts warehouses ensures customers get fast responses and quick delivery. The general overhaul of used construction machines also offers a cost-effective and resource-conserving alternative to buying new. Special focus is on providing a comprehensive customer care service to the construction and construction materials industry, with the offering encompassing everything from seismographic soil testing and drone flights, to all-inclusive contracts.

CONSTRUCTION EQUIPMENT CIS

Sales and servicing of construction and agricultural equipment

The Construction Equipment CIS SBU is very well positioned in Eastern Europe and Central Asia. Its portfolio includes Caterpillar construction machines, special equipment for surface and underground mining, and large or special equipment for mines and quarries, and the oil and gas industry. It also extends to agricultural and forestry machinery from leading international manufacturers. The extensive product range is rounded off by fleet management and machine control systems for improving work processes and enhancing efficiency. Zeppelin's Component Rebuild Centers lead the way when it comes to overhauling components used in mining.

RENTAL

From rental equipment to project solutions

With tailored solutions in the rental machines and equipment sector, temporary infrastructure and construction logistics, the Rental SBU offers a portfolio that is unique in its markets, and which ensures that its customers can work efficiently and reliably throughout the project. Construction logistics includes the planning and coordination of all construction logistics processes, including access control, supply and disposal logistics, operator models and construction management. Temporary infrastructure ranges from site and traffic guidance, electrical construction site facilities and energy supply, to modular space solutions. In the machine and equipment rental division, quality products from the market leader Caterpillar and a whole range of other reputable manufacturers offer top-class efficiency and cost-effectiveness.

POWER SYSTEMS

Drive, propulsion, traction and energy systems

The Power Systems SBU portfolio provides sales and services for drive, propulsion, traction, and energy systems based on Caterpillar engines from the Cat, MaK and EMD brands. The Power Systems business unit is a leading provider of systems for industrial and marine applications, rail vehicles, the oil and gas industry, and power generation. Complete system solutions and turnkey projects including plant and building installation are also on offer, alongside diesel,

gas, and dual fuel engines. Turbocharger servicing and systems for ballast water treatment complete the portfolio. The SBU supports customers right from the initial idea, through project planning and development, to commissioning. When it comes to aftersales, we offer a comprehensive 24-hour service, covering all maintenance and repair work and including fast availability of spare parts anywhere in the world.

PLANT ENGINEERING

Development and production of plants, components, and systems

The Plant Engineering SBU specializes in the development, production and construction of components and systems for handling (storing, conveying, mixing, dosing and weighing) and managing high-quality bulk materials. The business unit supports customers every step of the way, from project development, engineering, production, automation, control technology, start-up, site installation and commissioning, through to after-sales service. The relevant industry sectors include manufacturers and distributors of plastics, rubber and tires, chemicals, and foodstuffs. The Zeppelin Plant Engineering business unit conducts a wide variety of industrial-scale testing for these target groups in three technology centers in Germany. In addition, the Aviation & Industrial Service division provides technical services to the aerospace and automotive industries, the mechanical and plant engineering industry, rail technology, and medical technology sectors.

Z LAB

New digital business models

The Z Lab SBU is handling the digital transformation of the Zeppelin Group and the construction industry. This involves development of new digital solutions and innovative technologies to create a construction site of the future that is more efficient, networked, and automated. Ongoing digitization of existing business models and internal processes is showing good progress thanks to close collaboration with other SBUs. Z Lab combines the industry expertise of the Zeppelin Group with the digital expertise of experienced start-up employees. Work is under way to develop digital B2B solutions within a dynamic environment; the work centers upon our customers' needs.

REVIEW OF 2018

The Construction Equipment EU SBU has enjoyed solid growth for several years and 2018 kept that trend going. The unit remains a market leader in all markets – Germany, Austria, Czech Republic, Poland, and Slovakia – and was able to increase its market shares slightly. The robust state of the construction industry in Germany fueled sales of new machines, which hit the 5,000-unit mark, resulting in very high service capacity utilization. This continuing high demand did, however, at times lead to problems with availability of machines and spare parts.

Major orders from leading companies in the German construction and construction materials industry worth around 60 million euros, and a 6.5-million-euro service project involving a rebuild of 142 roof supports in the underground mining segment, have contributed hugely towards a successful fiscal year.

Trade fair presentations, for instance at NordBau, generated record revenues of more than 16 million euros, and were more widely used to present a broad spectrum of high-tech machines and innovative solutions. With the launch of the three new excavators in the 20- to 25-metric-ton class, Caterpillar ushered in a new era of construction equipment with innovative technology, unrivaled control technology, and wide-ranging features. A new Cat two-way excavator for use in rail and road transport was approved by the Federal Railway Agency in 2018. The results of the unit's collaboration with Wacker Neuson were also revealed for the first time: Two mobile excavators branded with the Zeppelin design have been on the market since the start of 2018. The two companies have also extended their collaboration into hand-guided compacting technology.

Digital customer services have also been expanded, making it possible, for example, to request a service technician online on a specific date, or to configure a new machine in line with a specific budget. The steady increase in revenue generated via the customer portal and rising user numbers confirm that Zeppelin is on track with its digitization strategy.

Zeppelin won the Caterpillar Global Dealer Excellence Award 2018 for the third time in succession, establishing the company as the best Caterpillar sales and service partner in Europe, with a special mention for services in the Czech Republic and Slovakia. There was also cause to celebrate for branches in Paderborn and Hamburg, as they marked their 25th and 50th anniversaries respectively.

OUTLOOK FOR 2019

Even though the general economic forecast for 2019 had to be adjusted slightly downward, the Construction Equipment EU SBU still anticipates high demand from the construction industry, primarily to support engineering projects such as bridges and roads: Deutsche Bahn alone is investing billions of euros into its rail network. The new Cat M323F railroad wheeled excavator is the perfect tool for rail construction.

To date, the driving force behind the construction boom in Europe has been residential construction. However, according to forecasts by the ifo Institute, civil engineering is poised to replace residential construction in this respect, with the focus on major projects addressing increased demand for broadband coverage. Zeppelin is prepared for the challenge, for example with their introduction of a reduced tail-swing concept on various Caterpillar mobile and tracked excavators, and with compact Zeppelin mobile excavators.

"Orders for the Construction Equipment EU business unit in Germany, Austria and Czech Republic rose to record levels in 2018. The construction boom fueled investment in Cat construction equipment and helped accelerate our unit's growth. This not only meant high capacity utilization, for example in our service organization and our customers' machine fleet, but it also revealed capacity bottlenecks affecting supply capacity, and highlighted the emerging skills shortage."

Fred Cordes,
Head of the Construction Equipment EU SBU

CONSTRUCTION EQUIPMENT EU

At bauma 2019, Zeppelin will showcase a series of technical innovations, with the expectation being that these will generate increased revenue. These innovations include a new generation of mini-excavators from Caterpillar, which will use a standardized development and production platform as is currently the case for larger tracked excavators. The intention of this move is to reduce production and repair time and complexity, as well as storage costs for spare parts. The mini-excavator's new features do not just extend to its design, but also its compliance with the new EU Stage V emissions limits, which have been defined to address the critical issue of fine particulate matter in city centers. Finally, we have added new features to enhance the operator-friendliness of construction equipment; these are of growing importance as we move into an era where specialist skills are hard to come by.

Alternative drive systems are in demand, and we aim to address this at bauma 2019 with alternative drive concepts on show, as well as new technologies such as assistance systems.

Integrated assistance systems and machine controls will take networking between construction machinery and construction sites to the next level. The main focus in this field is on the expansion of fleet management, and its roll-out to older and smaller Cat equipment and even machines from other suppliers.

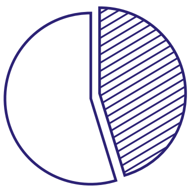
New digital business models, which help optimize processes for Zeppelin customers through new technologies such as the online configurator, continue to be the focus of attention.

2017	2018
1,210	**1,315**

REVENUE in millions of euros*

2017	2018
2,687	**2,775**

EMPLOYEES
Year's average, including trainees



45.40 %

SHARE
of Group revenue

* based on IFRS

REVIEW OF 2018

Despite the difficult economic situation, and given the growing drift towards protectionism, the Construction Equipment CIS SBU enjoyed a highly successful 2018, and posted a significantly improved result compared with the previous year. In Russia and Ukraine specifically, market growth was recorded alongside rising market shares.

Driving this trend is the stable, positive economic climate which persists in the SBU's sales markets, with the construction equipment industry showing considerable growth in Russia, Ukraine and Belarus, as well as in Uzbekistan. Zeppelin was able to benefit from this trend, recording a double-digit percentage increase in sales of new machines.

In the Uzbek market, the SBU was faced with a currency depreciation and shortage of foreign exchange. Nonetheless, even here a number of large infrastructure and mining projects were successfully launched. An impressive milestone was reported in the Ukrainian mining sector, with Cat dumper trucks reaching the 1,000,000 km mark for the first time; this is not only testament to outstanding Caterpillar technology, but also to the excellent Zeppelin servicing, especially when it comes to machine maintenance.

The Mercedes-Benz commercial vehicle sales and Precision Farming strategic initiatives were suspended at the end of 2018, since the financial prospects for both of these appeared poor.

2018 marked a whole series of anniversaries. Zeppelin Russia celebrated its 20th anniversary and welcomed more than 500 guests to its site to mark 45 years of its partner Caterpillar in Moscow; celebrations included the launch of the new generation of Cat excavators. The opening of the new branch in Kaluga underlines Zeppelin's commitment to the CIS markets, as does ongoing construction work on the St. Petersburg branch which will open its doors in the middle of 2019.

OUTLOOK FOR 2019

Economic growth in the Eurasian region is forecast at 2 percentage points lower than in the previous year for 2019. Turbulence in the political landscape due to the unresolved conflicts between Russia and Ukraine, and a further tightening of sanctions against Russia coupled with countermeasures from Russia, are dampening expectations of economic growth and investment in the region. Nevertheless, forecasts of stable world market prices for raw materials are positive signs, and may help compensate for the difficulties experienced in the Eurasian region.

Steady, positive growth has been recorded in Russia during the last two years, despite the sanctions. Ukraine also continues its upward trend and there are positive signs from most other CIS countries in which Zeppelin is represented. Encouraged by a largely unchanged economic climate, the SBU heads into 2019 with some optimism, and expects the construction equipment market in the Zeppelin sales territories to remain steady. A rise in sales of new machines of up to 5% seems probable.

"All in all, 2018 was an eventful and successful year for the Construction Equipment CIS business unit. Having gained the trust of our customers and through the dedication of our teams in all companies, we were able to achieve the planned targets in the CIS despite the unconducive political and economic situation. Our ability to adapt to rapidly changing market trends and our responsible approach to risk management meant that both market shares and earnings rose."

Frank Janas,
Head of the Construction Equipment CIS SBU

CONSTRUCTION EQUIPMENT CIS

Zeppelin will continue to bolster its market position and generate additional revenues through consistent implementation of its strategic objectives. The emphasis remains on our commitment to underground mining, and on forging ahead with the retail strategy for Caterpillar machines in the small and mid-range segment and for the Caterpillar SEM brand.

Sales and servicing of Fendt/Valtra agricultural machines in Ukraine continue to grow. New sales territories in Ukraine, which have been acquired by Zeppelin over the past two years, will boost earnings in 2019.

The multi-brand spare part business is proving to be another successful business area in line with expectations. An online platform for this sector, which is being developed in collaboration with the Z Lab SBU, is in preparation as part of the digital strategy.

The expectation is that Zeppelin customer service and spare part sales will continue to be a key stabilizing factor in markets in future. With growth in production headcount and intensive qualification programs for customer service, as well as further optimization of the spare parts supply to 45 sites in the CIS, Zeppelin continues to strengthen its position in these markets. Investment in new sites such as the new St. Petersburg branch, and the expansion of component repair centers into Russia, Armenia, and Ukraine show Zeppelin's commitment to these markets, and create long-term confidence among customers.

2017
412

2018
482

REVENUE in millions of euros*

2017
1,673

2018
1,792

EMPLOYEES
Year's average, including trainees

16.65 %

SHARE
of Group revenue

***** based on IFRS

REVIEW OF 2018

The Rental SBU significantly increased its earnings compared with the previous year. Growth was seen in all relevant markets in Germany, Austria, Czech Republic, and Slovakia, thanks to a largely booming construction sector and Zeppelin's status as a leading construction service provider.

With effect from January 1, 2018, the Rental SBU acquired 100% of shares in Baustellen-Verkehrs-Technik GmbH, to further expand our capacity in the site and traffic guidance segment and to increase the area covered.

The Rental SBU was also successful in acquiring a series of interesting and challenging major projects in 2018, for example responsibility for all traffic safety work during the complete closure of the Elbtunnel. Zeppelin supplies electrical construction site facilities and power throughout all construction phases – from demolition to interior design – of a residential development project in Frankfurt.

The expansion of digital services continued to gather pace. Since the start of 2018, the Zeppelin Rental business unit has been represented on the cloud-based BIMobject database with its ZECon container series. This database gives planners access to manufacturer-specific, digital images of real components that can be integrated into BIM software. With these containers' "digital twins", temporary infrastructure objects can now be used in the software for the first time. The Rental business unit's ZECon sanitary container digital model was nominated for a BIMobject Award in the "Developers' Choice of BIM Object 2018". The product's uniqueness within the context of the platform, and the effort spent on development were key criteria for nomination in this category.

Recognition also came in the form of Gold status in the Caterpillar Rental Services Excellence Program; Zeppelin in Germany was the first company in the EMEA region (Europe, Africa, Middle East) to receive the top status following an audit lasting several weeks, during which 65 separate points were assessed. Construction industry trade journal SOLID asks its readers each year to vote on Austria's top suppliers to the construction industry. Zeppelin also performed well here, courtesy of its focus on customers and solutions. Zeppelin Rental Austria reprized its victory of the previous year, with first place in the construction machine category.

OUTLOOK FOR 2019

The Rental SBU has good prospects for growth in its markets for 2019. In Germany, the general business climate, construction order books, and rental demand all remain healthy. In Austria, Czech Republic, and Slovakia, the economic trend continues to be positive, and as such slight growth in the rental market is again expected.

The SBU will actively pursue structured collaboration between all business areas to boost its market position as an integrated service provider and preferred partner, and to offer its customers in all countries tailored solutions to the same high quality standards they enjoy today. Strategic partnerships and networking with technology leaders reaffirm our status as a leading innovator.

"Once again we are on course for a successful year, and are setting new records in all markets. Our team has been strengthened following the recruitment of many new highly qualified employees. It is crucial to our future growth that we properly integrate the former Streif Baulogistik business areas that merged in 2017, and I'm happy to say that this is progressing well. Our solutions competence means that we are a highly valued partner to our customers; we continue to work on providing them with the best possible value.

Arne Severin,
Head of the Rental SBU

The SBU will attend the bauma international trade fair in 2019, where it intends to set new benchmarks with its exceptional, industry-wide solutions competence in the areas of machine and equipment rental, temporary infrastructure and construction logistics. It will also celebrate its 15th anniversary with customers during the fair.

The development of data-driven business processes represents another strategic factor for success, with the objective for 2019 being to create the necessary foundation for these processes throughout the organization. Looking beyond this, customer-centric applications will be systematically identified and implemented.

Zeppelin sees its employees as the key to long-term success and believes that they can make the crucial difference in standing out from our competitors. We also place great value on enhancing our attractiveness as an employer and on employee retention.

The drive to increase efficiency and customer focus in core and supporting processes is a continuous process, which aims to take some of the pressure away from our employees and to offer the best possible value to customers. Broadly structured programs and training should help to foster a culture of continuous process optimization and consistency at all levels, with a medium-term objective of sustainably anchoring this culture within the Group.

2017
410

2018
473

REVENUE in millions of euros*

2017
1,336

2018
1,487

EMPLOYEES
Year's average, including trainees

16.33 %

SHARE
of Group revenue

* based on IFRS

REVIEW OF 2018

Due to excellent capacity utilization in the new engine division and especially in the service and spare parts division, the Power Systems SBU improved on the good results of the previous year in 2018. The service division saw an increase in earnings for the third time in a row.

2018 proved to be hugely successful, in particular for sales and servicing of industrial engines. As emissions requirements in the industrial engines market will continue to escalate in 2019, engines which meet the Stage IV emissions standard have been discontinued, meaning that Stage V Cat engines will now be supplied as standard. The SBU has also focused on new projects in small engine production, gaining a foothold in the alternative drive sector with its first small wheel loader with electric drive.

The continuing boom in cruises has had a positive impact on the marine engine sector, which has seen heightened interest in liquefied natural gas (LNG) engines. Zeppelin equipped the AIDAnova, flagship of AIDA Cruises, as the world's first cruise ship with four MaK dual fuel engines; these will be powered by environmentally friendly LNG both while in the harbor and at sea. A new crane was commissioned at the Duisburg site to allow remotorization with Caterpillar engines up to the 3500 series. This gives Zeppelin scope to expand its portfolio of services for inland shipping. Zeppelin was named as the best Caterpillar Marine Dealer worldwide for a third time, with the company receiving the Platinum Certificate in respect of the Marine Service Assessment.

The combined heat and power plants (CHP plants) division also had a share in the success with its alternative gas applications, with the division seeing increased demand for large-scale and complete plants. A prime example of this was a project awarded to Zeppelin as a general contractor to construct a new combined heat and power plant for Stadtwerke Aachen, a project funded by an investment of 8 million euros.

In the rail vehicle division, the focus was on new projects for dual power operation (electric/diesel-electric). A major order from Alstom/SBB with a project volume of 94 power packs with C18 T4i engines contributed to the positive growth of the SBU.

In the oil and gas segment, the container solution for flare gas utilization has been positively received, while remote surveillance and monitoring solutions, as well as data analysis and the "repair options" service package were also well positioned in the market.

OUTLOOK FOR 2019

The main issue for the SBU in 2019 will remain data analysis and digitization in the service sector, while fine tuning and customer-friendliness of applications are at the forefront with regard to digital business models that are already established in the market. The Power Systems SBU anticipates positive growth and increased demand in the new digital business and product areas thanks to online-based service solutions such as remote surveillance and monitoring.

The product lifecycle management landscape continues to expand with respect to increasing the efficiency of technical workflows; alternative hybrid and LNG drive solutions are on the rise, and the high demand is expected to last. More ships in the AIDA fleet are set to be fitted with dual fuel engines.

"We ended 2018 on an extremely positive note, having once again increased our revenue and earnings. Digitization had a major impact in all areas. Alternative drives and environmental considerations have a huge bearing on our future business – with regard to e-drive systems, we are working on an initial business case and are proud that our first LNG solution for cruise ships reached the top of the NABU rankings."

Volker Poßögel,
Head of the Power Systems SBU

POWER SYSTEMS

In industrial engines, the trend towards smaller engines continues apace, though in the CHP plant/gas engine sector large-scale systems from 20 MW upwards are increasingly important.

Demand for drivetrain solutions in the rail vehicle sector and diesel emergency power plants in the data center segment is expected to remain largely steady.

Due to the rising oil price, the SBU expects an upturn in its oil and gas business.

Overall, it anticipates that the uncertain geopolitical situation will continue to have a negative impact on demand in Russia and the CIS countries.

2017	2018
341	**360**

REVENUE in millions of euros*

2017	2018
823	**849**

EMPLOYEES
Year's average, including trainees

12.41 %

SHARE
of Group revenue

* based on IFRS

REVIEW OF 2018

The Plant Engineering SBU saw high demand in almost all markets in the 2018 fiscal year, resulting in high capacity utilization. Rapid changes in the economic and political climate led to problems in accessing individual local markets, and had a dampening effect on business in some regions.

The polyolefin plants business area (synthetic manufacturing plants) enjoyed huge success, a result attributed to the booming Chinese market. The Plant Engineering SBU has continued to expand sales and networks in China, leading to an increase in large orders for the construction of synthetic production plants in 2018. Other major projects were launched in Kazakhstan and the USA.

The tire industry continued to fuel growth in the plastic and rubber plants segment (processing plants for the plastics, rubber and tire industry) and created a healthy investment climate. However, the unit fell short of previous years' growth figures and faced much-increased competition. In 2018, the SBU focused on development in Engineered Plastics and on opening up new market segments such as recycling of plastics and processing of used batteries or paint.

The food processing plants division (food processing plants for the baking industry) was forced to contend with a stagnant market in 2018. The SBU concentrated on developing the Asian and Chinese markets. Product innovations such as the CODOS NT kneading system equipped with a new design and improved drive, as well as a completely new valve and diverters range were showcased at iba, the world's leading trade fair for the bakery and confectionery industry. The Group received the IBA Trophy in the Quality and Productivity category for KROMix, a product developed by Zeppelin in collaboration with WP Kemper.

The silos, components, and service product lines all performed well in that market. Incoming orders in this rather fast-moving business remained high, and perfectly complemented the system and plant business.

The Quality Service area (Quality Management services for the aviation and automotive industry as well as mechanical and plant engineering) was renamed "Aviation & Industrial Service". This step allows us to focus more keenly on the specific market and customer segments of this business sector and to highlight them.

Effective from January 1, 2018, the Zeppelin Group acquired Italian company Nuova Ciba S.p.A, a welcome addition to the Plant Engineering SBU, and one which further strengthens the Group's market position in the rubber and tire manufacturing sector. Integration into the Group ran according to plan.

"The Plant Engineering SBU can look back on a challenging 2018 overall. We were able to utilize the continuing positive market situation in all market segments to assert our position and expand it further within individual markets, in particular in the polyolefin industry sector in China. That said, the revenue from some individual projects fell below expectations."

Axel Kiefer,
Head of the Plant Engineering SBU

OUTLOOK FOR 2019

Even though the global economy shows signs of slowing, the general economic mood for the 2019 fiscal year remains optimistic for the markets relevant to the Plant Engineering SBU. Instability among eurozone member states, looming Brexit, ongoing tariff disputes and sanctions, make it very difficult to make forecasts about the next fiscal year.

The Plant Engineering SBU will continue to pursue the 2025 Strategy developed in 2016. No changes to the portfolio are planned at this stage. The SBU will continue to present itself as a plant engineering business and system supplier for the handling of high-quality bulk materials. Core markets in 2019 will essentially consist of the synthetics, rubber, tire, and baking industries.

The central issue concerning the Plant Engineering SBU is the restructuring of production at the Friedrichshafen site. Introduction of the new friction stir welding technology (FSW) and the related installation of the new portal welding system is a fundamental step towards long-term production development in Friedrichshafen.

The business unit will also focus on the further development and expansion of subsidiaries in the 2019 fiscal year. The central objective is the use of the same development systems, the exchange of resources and cross-site collaboration for customer projects.

The consistent pursuit of digital transformation will also be a central topic in 2019. This includes supporting, training and empowering employees in this area as well as developing and implementing digital business models.

2017	2018
323	**348**

REVENUE in millions of euros*

2017	2018
1,366	**1,468**

EMPLOYEES
Year's average, including trainees

12.02 %

SHARE
of Group revenue

* based on IFRS

REVIEW OF 2018

The Z Lab SBU focused on work relating to digital transformation of existing business and the development of new digital business models. This has allowed a comprehensive and coordinated Group-wide digital strategy to be created, enabled synergetic and scaling effects to be better utilized, and supported the development of individuals with expertise for the benefit of the organization as a whole. Z Lab sees itself as an innovator, specialist, and developer within the construction sector, reacting to trends and actively helping to design and shape the future. Z Lab works with new innovative technology and agile processing methods in all areas of construction. In order to develop trailblazing digital business models with speed and flexibility, the business unit will continue to pursue collaborations with start-ups and integrate effective digital benchmarks into its daily operations.

Z Lab focuses on three clearly defined areas: Digital transformation of established business, strategic venturing (i.e. development of products and services linked to existing business), and free venturing (development of products and services based on technology and market trends).

Following ongoing discussions with other SBUs, Z Lab also pressed ahead with digitization of internal processes in 2018. With regard to existing business, the focus in 2018 was on developing the online machine configurator and a range of applications for plant engineering. The klickrent online portal, a rental platform for construction equipment successfully launched in 2017, was further developed and scaled up.

The Z Lab methodology for developing solutions involves close collaboration with (potential) customers. Trade fair presentations in 2018, including those at Nordbau and GaLaBau, gave Z Lab the opportunity to meet and talk to an industry audience, in the process obtaining vital impetus and information for evaluating business ideas and their potential benefits. This led to the development of a management solution for inventory management and planning of construction equipment (zamics), and a solution regarding a digitized and automated issuing and return process for rental equipment (klickcheck).

"The restructuring of Z Lab into three clearly defined areas – digital transformation of existing business, strategic venturing and free venturing – has proven its worth. We are pleased to see that new and agile work methods and digitization are now integral to how we work here in the Zeppelin Group.However, we realize that this is only the start. True to the 'Grafen fail successfully' principle, we will continue to learn from our mistakes, but it's clear to see that talented people are joining our company in greater numbers and that recruiting was far easier during 2018."

Wolfgang Hahnenberg,
Head of the Z Lab SBU

OUTLOOK FOR 2019

Z Lab is preparing to launch zamics and klickcheck onto the market at the start of 2019. This move will primarily offer equipment management software for the construction industry, providing customers with an overview of their entire machine pool, manually operated equipment, and related service processes. klickcheck will also provide the market with a digital solution for easier issuing and return of rental machines with a photo-based damage documentation system. Other comprehensive e-commerce platforms are being developed, and will be launched onto the market in the new year. klickrent, the rental platform for construction machines and equipment, will again be in the spotlight for 2019.

Z Lab continues to pursue its core objective of creating a digital customer experience, and of supporting SBUs in designing and implementing digital products. One example of this is the new zeppelin.com website, designed to gradually optimize the online presence of all Zeppelin SBUs to reflect a more digital sales approach, while establishing a standardized, solid technological basis for the future. In the medium term, the platform will be expanded into a standalone data platform for linking any equipment, material or employee-related data.

Development of new digital products and services emphasizes data generation and automation on construction sites; the process involves continual piloting and testing of innovative technologies like blockchain or new Internet of Things (IoT) wireless standards. Developing business models that break new ground for speed and flexibility involves the consistent application of agile work methods, ongoing collaboration with start-ups, and analysis and integration of successful models used in digitization of other companies to improve our own approach to the problem.

2017
0

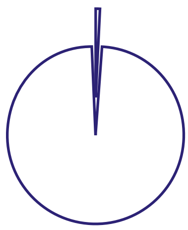
2018
1

REVENUE in millions of euros*

2017
39

2018
57

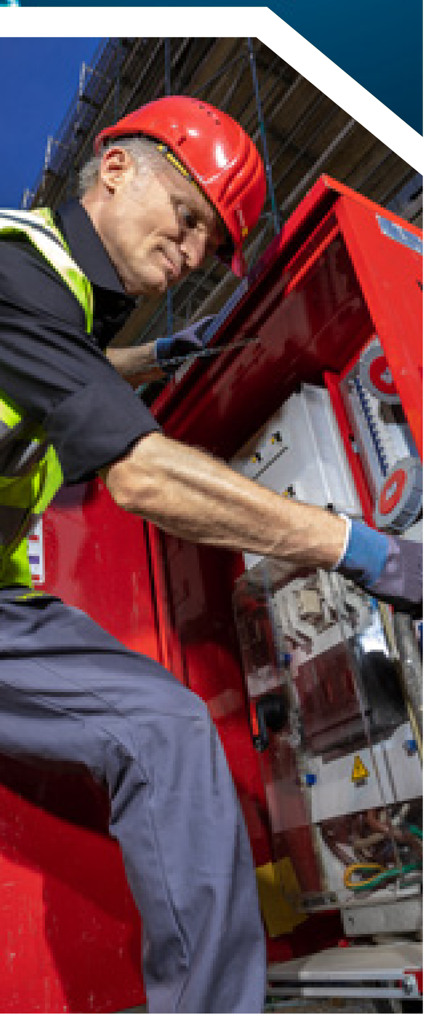
EMPLOYEES
Year's average, including trainees



0.04 %

SHARE
of Group revenue

* based on IFRS



ACQUISITIONS AND NAME CHANGES

During the 2018 fiscal year, the Zeppelin Group acquired a 100% share in two companies, and expanded its range of services in the Zeppelin Aviation & Industrial Service subsidiary within the Plant Engineering SBU.

GERMANY

ACQUISITION of Baustellen-Verkehrs-Technik GmbH, Rental SBU

The acquisition of Baustellen-Verkehrs-Technik GmbH as of January 1, 2018, strengthened Zeppelin's national presence in the site and traffic guidance sector.

ITALY

TAKEOVER of Nuova Ciba S.p.A., Plant Engineering SBU

With effect from January 1, 2018, the Zeppelin Group acquired 100% of shares in the Italian company Nuova Ciba S.p.A. This acquisition further expands Zeppelin's expertise as a global full-service provider for turnkey plants designed to produce rubber compounds. Nuova Ciba specializes in the construction of plants for handling and preparing raw materials used to produce rubber compounds for the tire industry or for the production of technical rubber products, and is a welcome addition to the Plant Engineering product portfolio.

GERMANY

NAME CHANGE of the Quality Service business area to Zeppelin Aviation & Industrial Service, Plant Engineering SBU

The Zeppelin Group continued to expand its Quality Service business area in the Zeppelin Plant Engineering SBU right across Germany, and renamed the area Zeppelin Aviation & Industrial Service during the course of the year. The change of name takes account of the steady expansion of our aviation expertise and our wider range of services.

ORDERS SECURED

A selection of the groundbreaking orders acquired by Zeppelin in 2018.

CHINA / PLANT ENGINEERING

China Petrochemical Co. Ltd.

Zeppelin was able to win a large order package for a new synthetic production plant for China Petrochemical Co. Ltd. in China. The complete package covers pneumatic conveyors and silos, including genuine Zeppelin components such as valves, diverters, sifters, cyclones, and filters. The order is valued at an eight-figure sum.

GERMANY / RENTAL

Elbtunnel – Deutsche Einheit Fernstraßenplanungs- und bau GmbH (DEGES)

The eight-lane expansion of the A7 south of the Elbtunnel required the complete closure of all four tunnels twice in 2018, in order to allow a new traffic computer to be tested. Deutsche Einheit Fernstraßenplanungs- und bau GmbH (DEGES, “German Highway Planning and Construction Unit”) entrusted organization of the closure to Zeppelin experts on site and traffic safety.

GERMANY / POWER SYSTEMS

Meyer Werft GmbH & Co. KG – Carnival Corporation

The Zeppelin Group will equip seven ships belonging to the Carnival Corporation with Cat dual fuel engines by 2021; the engines can be powered by environmentally friendly liquefied natural gas (LNG). Negotiations are ongoing to fit other ships with these engines.

GERMANY / POWER SYSTEMS

Alstom / SBB

Zeppelin is supplying Alstom with 94 power packs with C18 T4i engines for locomotives as part of the H4 project for Swiss Federal Railways (SBB). Expected total revenue for 2019 to 2021 is around 13.7 million euros

GERMANY / CONSTRUCTION EQUIPMENT EU

Holcim WestZement GmbH

Zeppelin supplied a 6030 FS hydraulic excavator worth around 2.6 million euros.

GERMANY / PLANT ENGINEERING

Pagen AB

Zeppelin supplied Swedish customer Pagen AB with a completely new raw material handling process for two new lines. The order, valued at more than 9 million euros, was the largest single order in Northern Europe in 2018.

TAJIKISTAN / CONSTRUCTION EQUIPMENT CIS

Salini Impreglio S.p.A. and TGEM: Rogun Dam project

Zeppelin supplied construction machines, special earthmoving equipment and necessary spare parts to Italian design and construction firm Salini Impreglio and Tajik Group TGEM, for construction of the Rogun Dam in Tajikistan. The total order value in 2018 came to around US$25 million.

CZECH REPUBLIC / CONSTRUCTION EQUIPMENT EU

Bergerat Monnoyeur / Bogdanka

The company overhauled 142 roof supports weighing a total of 2,300 metric tons in its plant in Ostrava, Czech Republic, for French Caterpillar dealer Bergerat Monnoyeur – which has taken over sales of Cat underground and surface mining machines in Poland – on behalf of its customer Bogdanka. This was one of its largest-ever service projects, worth around 6.5 million euros.

GERMANY / POWER SYSTEMS

Stadtwerke Aachen AG (STAWAG)

As the general contractor, Zeppelin constructed a combined heat and power plant (CHP) with four Cat generator sets, and in the process concluded a ten-year service contract. Total investment came to around eight million euros.

THE GAYLORD GLADIATOR:
A LEGEND RETURNS

GROUP HIGHLIGHTS IN 2018

DIGITAL CONSTRUCTION SITE

As part of the special "Innovations! Destination: Future" exhibition at the Zeppelin Museum in Friedrichshafen, the Zeppelin Group presented its integrated service range, looking closely at the future of the construction industry. From May to November 2018, visitors had the chance to enjoy an exhibition showcasing past, current, and future innovation projects from the Zeppelin Group and other companies. Zeppelin used an innovative "digital construction site" to present its extensive portfolio and solutions-oriented approach. Three digital applications gave visitors an interactive insight into every stage of a construction site, from planning and setup to expansion and commissioning. The remaining aspects of the Group's rich history were highlighted by other interactive elements such as a "digital foodstuffs plant", and an "innovation gallery", a 3D showroom holding a vast stock of photos and background information on the Group.

GAYLORD GLADIATOR

Attractive as these innovative applications were, Zeppelin provided the real highlight in the historical part of the exhibition. At the exhibition's opening, the Group unveiled the Gaylord Gladiator, a perfectly preserved luxury-class sports car. An extremely complex and costly project in its day, the sports car was built in 1957 at the request of the wealthy American Gaylord brothers in the workshops of FIF (Fahrzeuginstandhaltung Friedrichshafen), which later became part of the Zeppelin Group. Only three chassis were produced in all, with the bodywork only being completed on one of them. They passed into the private ownership of the Gaylord family and for a long time were thought lost. The Zeppelin Group was fortunate enough to obtain a meticulously preserved model, historical proof of the sheer innovativeness of the company, and then generously presented it to the Zeppelin Museum for its "Innovations! Destination: Future" exhibition; the car will remain there on permanent loan following the event.

CATERPILLAR GLOBAL DEALER EXCELLENCE AWARD 2018

Zeppelin wins the Caterpillar Global Dealer Excellence Award 2018 for the third time in succession. There was special acknowledgment of the company's services in the Czech Republic and Slovakia. Zeppelin gained market share here, the result of excellent service. Caterpillar introduced the award in 2013, and presents it in recognition of its best sales and service partners worldwide. The winner is decided based on partners' performance in terms of market share, profitability and customer satisfaction. Zeppelin also received the coveted award in Mexico in 2013 and in Dubai in 2015.

SUSTAINABILITY IN PRACTICE

Zeppelin does not view social and environmental commitment as an obligation, but rather as a framework and prerequisite for ensuring sustainability, its appeal as an employer, and lasting business success. As a sign of its commitment to corporate responsibility, the Zeppelin Group joined the UN Global Compact in 2016. Zeppelin's commitment to sustainability focuses both on the development of innovative products and on responsible use of resources.

SUSTAINABLE PRODUCT INNOVATIONS

In collaboration with Pyrolyx AG, the Zeppelin Group has developed a process through which the main component of tires, Carbon Black, can be recovered from old tires. The world's first tire recycling plant is under construction in Terre Haute, USA, and will be commissioned in 2019.

Zeppelin has in fact already been supplying innovative technologies to the plastic recycling industry over the past few years to facilitate recycling of synthetic materials. Specially developed degassing silos are used to neutralize odors from recycling goods.

Zeppelin supports the process of establishing LNG (liquefied natural gas) as an environmentally friendly fuel. With MaK dual fuel engines from Caterpillar, ships can be powered by liquefied natural gas both while in the harbor and at sea. This gives rise to significantly lower emissions than heavy fuel oil and marine diesel. The use of liquefied natural gas prevents the release of fine particulates, with nitrogen oxide and CO_2 emissions reduced by up to 80% and 25% respectively.

Zeppelin is also extremely active in the electromobility sector: A joint project with a Finnish-American battery technology startup is busy addressing improvements in battery performance for the electromobility sector.

RESPONSIBLE USE OF RESOURCES

Zeppelin has recently rolled out a DIN EN ISO 50001 energy management system in all our German and Austrian companies that is compliant with the requirements set out in the EU Energy Efficiency Directive. Certification body GUTcert verified Zeppelin's certificate in 2018 following a verification audit. The intention is to extend the certificate's validity to the Czech Republic, Poland and Slovakia in 2019. Further to this, the German companies are set to introduce an environmental management system in accordance with ISO 14001.

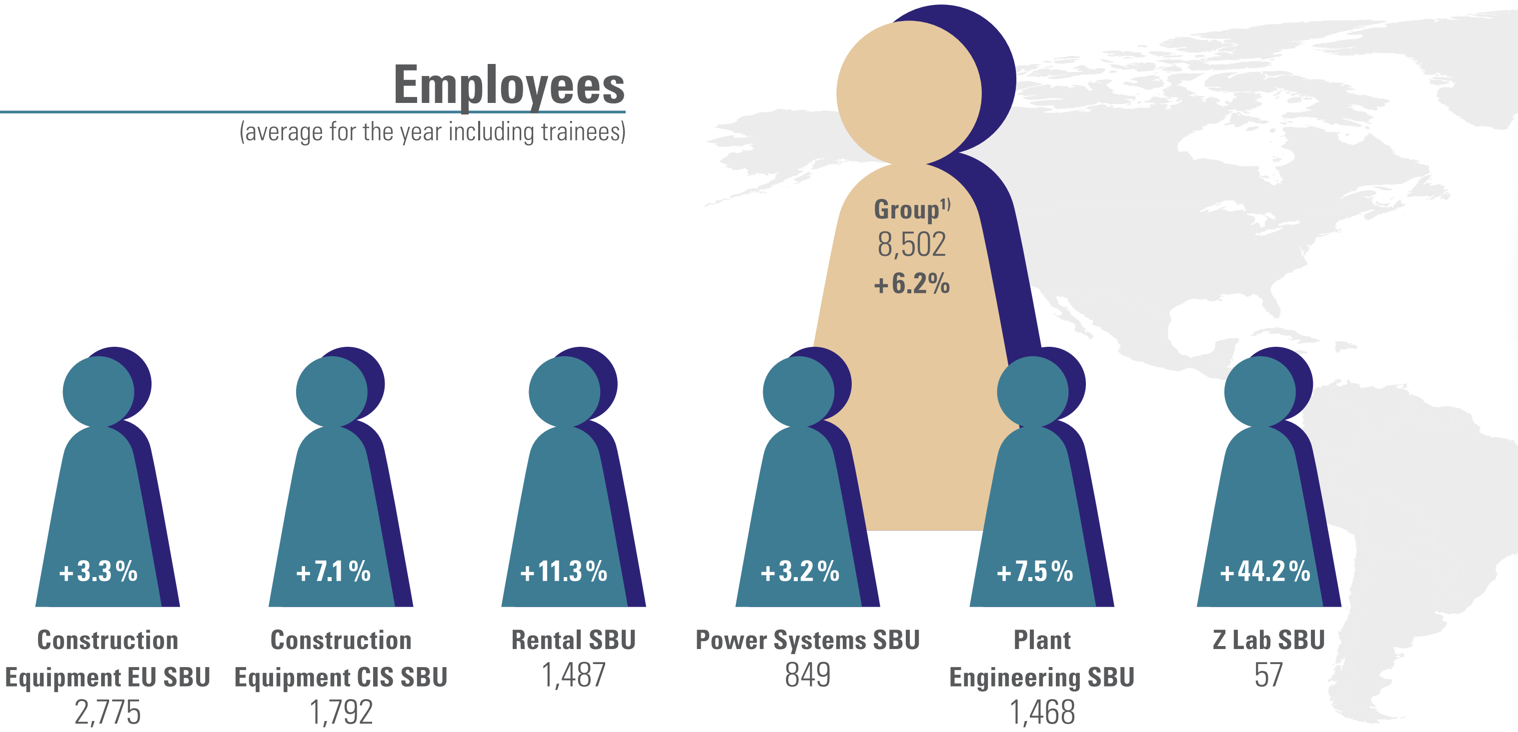
Energy savings were achieved through the implementation of numerous structural and organizational measures, such as switching new machines and devices to LEDs and developing a more efficient vehicle fleet. One example of this can be seen at the Achim site, where a photovoltaic system was installed for the warehouse halls in July 2018. The system will provide 15% of the site's annual electricity consumption.

The energy management system, plus various measures, have put Zeppelin on course to achieve its self-imposed target of reducing energy consumption throughout the Group by 10% between 2014 and 2020.

WORKFORCE FIGURES

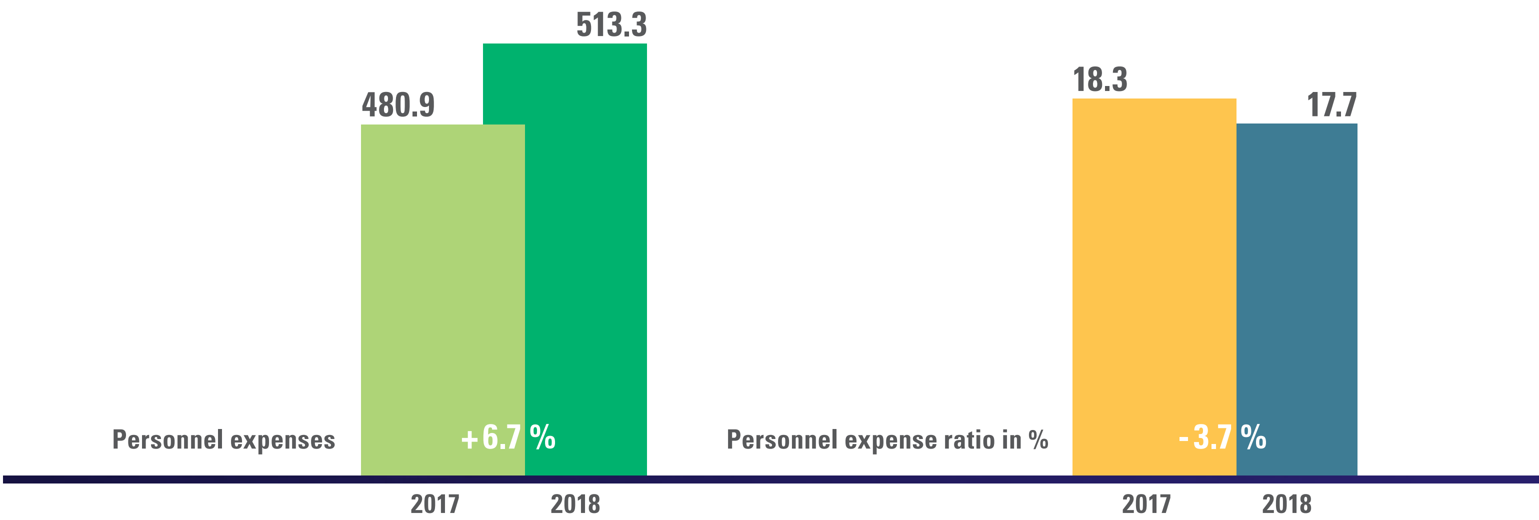
Employees

(average for the year including trainees)



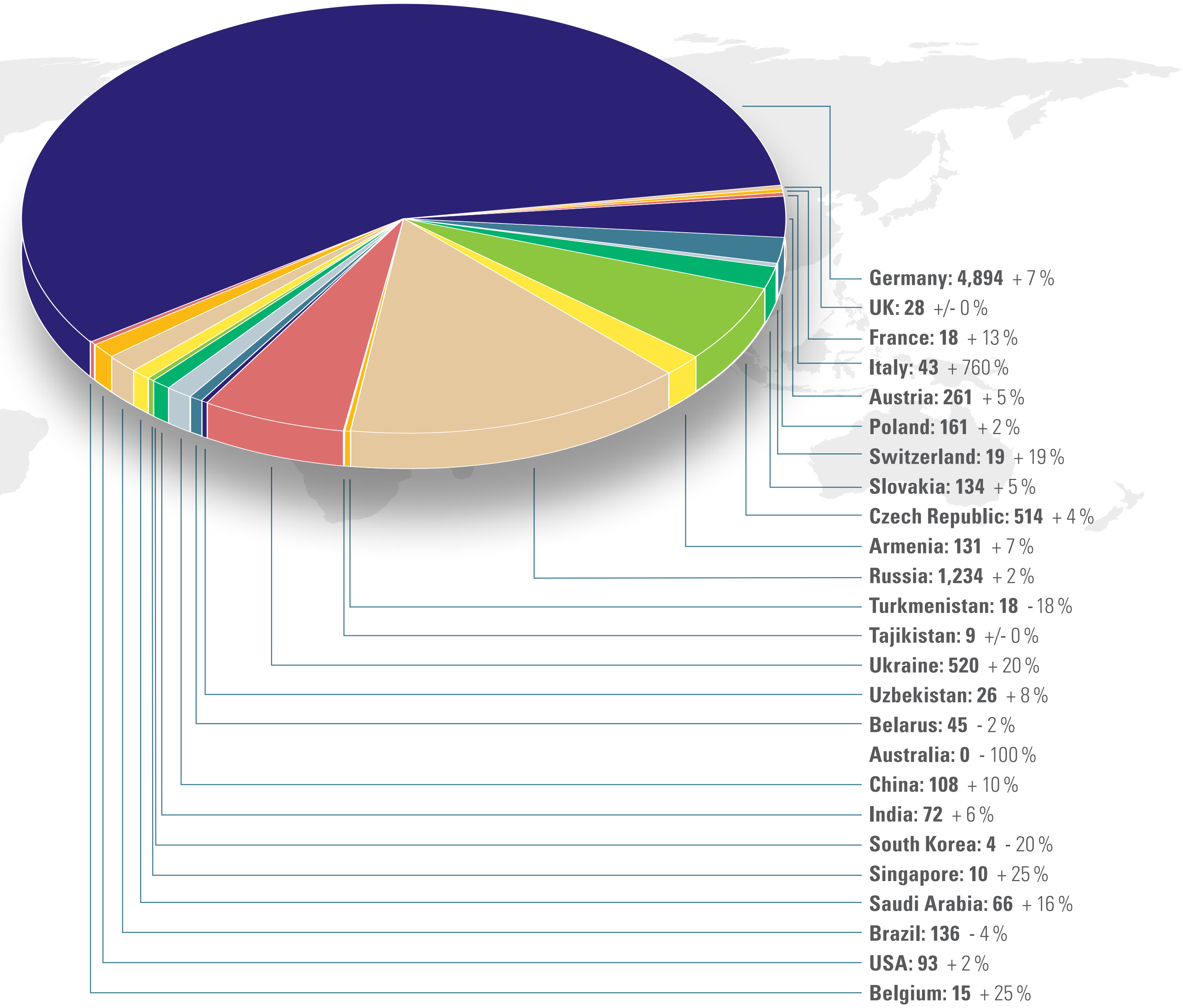
Personnel expenses

in millions of euros according to IFRS



1) including Zeppelin GmbH

Workforce by countries[2)]

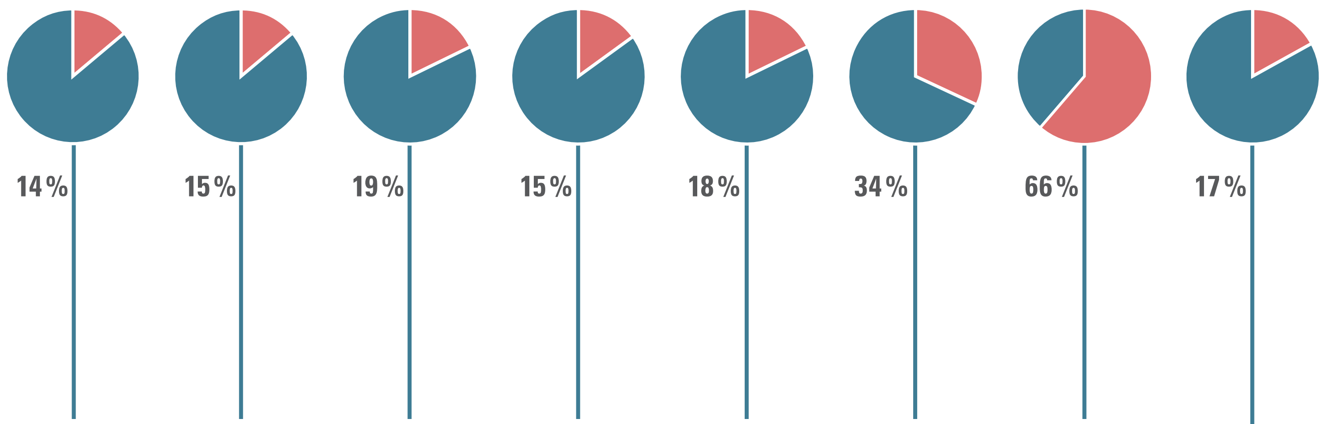


Dated 12/31/2018, percentage change compared to 12/31/2017

2) based on headcount

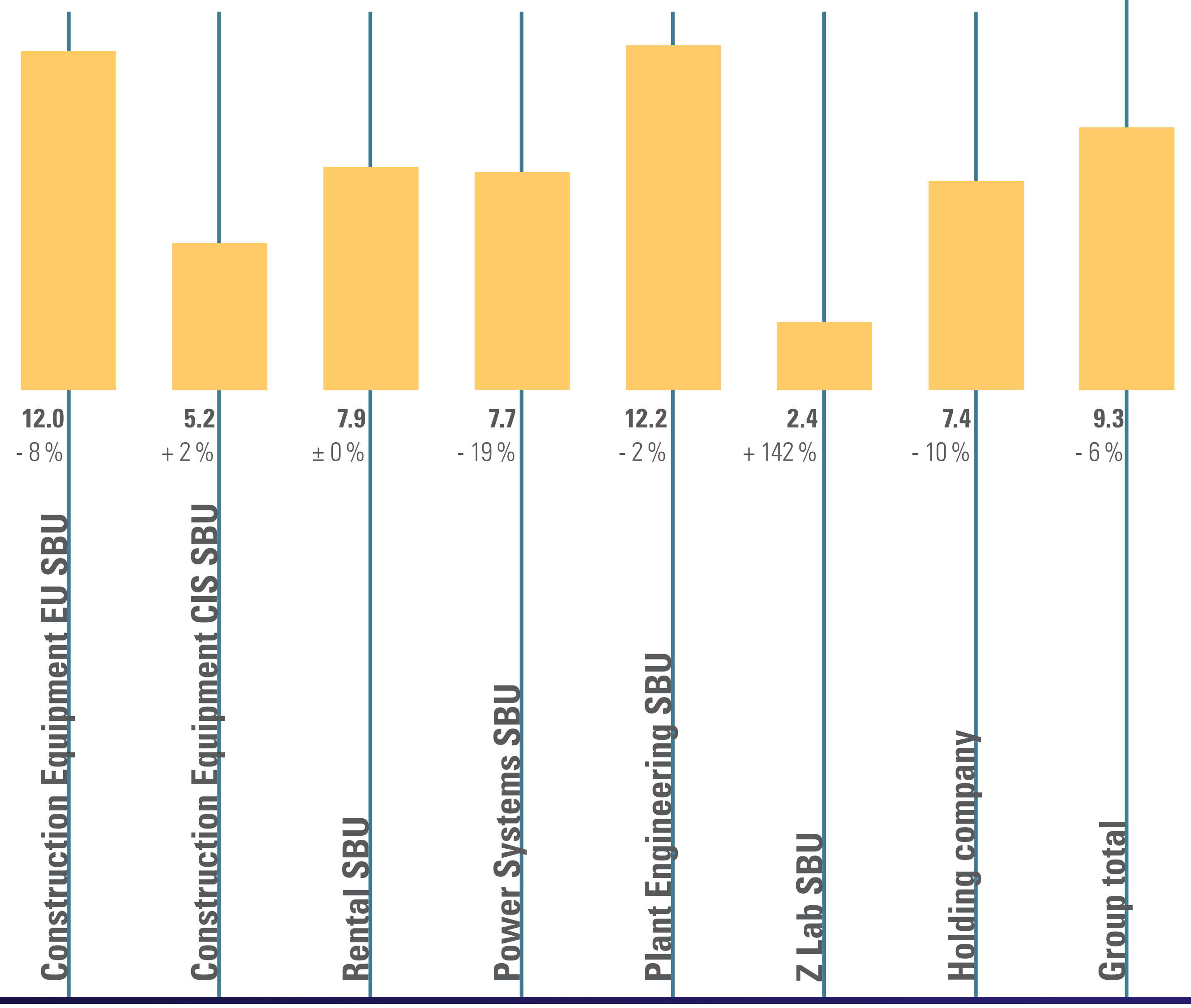
Proportion of women employees

in %



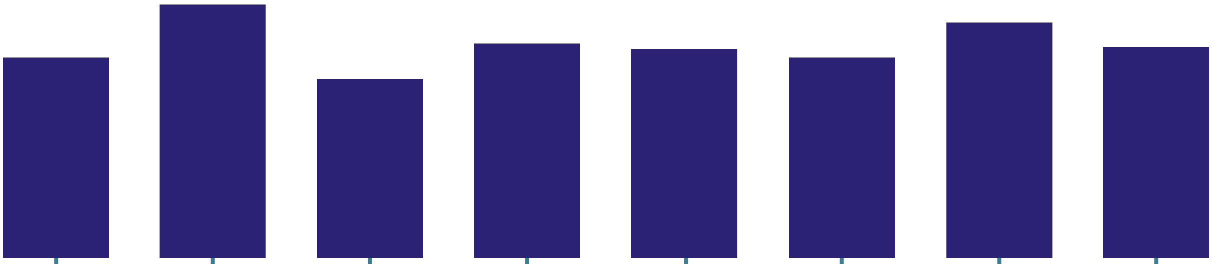
Average period of employment with the company

in years



Health rate

in %



	Construction Equipment EU SBU	Construction Equipment CIS SBU	Rental SBU	Power Systems SBU	Plant Engineering SBU	Z Lab SBU	Holding company	Group total
Health rate	95.7 %	98.7 %	94.5 %	96.5 %	96.2 %	95.7 %	97.7 %	96.3 %

Age structure

in %

	Construction Equipment EU SBU	Construction Equipment CIS SBU	Rental SBU	Power Systems SBU	Plant Engineering SBU	Z Lab SBU	Holding company	Group total
<= 25 Years	9 %	4 %	6 %	3 %	6 %	1 %	0 %	6 %
26-30 Years	11 %	15 %	11 %	9 %	11 %	24 %	11 %	12 %
31-35 Years	13 %	27 %	15 %	16 %	13 %	28 %	14 %	17 %
36-40 Years	13 %	25 %	14 %	18 %	13 %	25 %	12 %	16 %
41-45 Years	10 %	14 %	12 %	13 %	10 %	7 %	14 %	12 %
46-50 Years	13 %	8 %	14 %	15 %	12 %	11 %	20 %	12 %
51-55 Years	14 %	4 %	14 %	14 %	14 %	4 %	13 %	12 %
56-60 Years	12 %	2 %	9 %	9 %	12 %	0 %	6 %	9 %
> 60 Years	6 %	1 %	4 %	3 %	8 %	0 %	10 %	4 %

Dated 12/31/2018, percentage change compared to 12/31/2017

ZEPPELIN GROUP CORE ISSUES FOR 2018

EMPLOYER ATTRACTIVENESS

Zeppelin has set the goal of being a progressive employer, which has the best employees and efficient HR processes. As such, the three overarching goals of HR within the Group are to find talent, support employees, and motivate them to stay with Zeppelin for the long term.

Zeppelin employees benefit from the international nature of the company and the many opportunities provided by the Group to further their career; promotion and targeted development encourage employee retention. The Z Talent initiative was set up to create a central platform to assist in succession planning, and to fill most key positions with existing company employees. Opportunities for employee development will be made more transparent, and talent visibility will be increased across departments and on a Group-wide scale. Zeppelin offers a special modular training program for junior staff and managers.

The company is also committed to improving its employees' work-life balance. A Group-wide target agreement set out 50 steps to support this goal over the next three years. In March 2018, the "berufundfamilie audit" ("work and family") certificate was presented to the Group's management holding company, Zeppelin GmbH, as well as its Construction Equipment EU, Rental, Power Systems, and Plant Engineering SBUs in Germany in recognition of their efforts. The seal of quality is awarded by the German Federal Ministry for Family Affairs, Senior Citizens, Women and Youth and the German Federal Ministry for Economic Affairs and Energy, and recognizes existing standards with regard to a family-oriented HR policy as well as future goals and steps to improve work-life balance.

Other strategic measures include Z MATCH, an employee recommendation program launched in Germany, which looks to recruit to Zeppelin employees who are a good fit for the company and its values. The Z NOW (Zeppelin Network of Women) campaign launched back in 2016, continued in 2018. The campaign aims to promote female specialists and managers and to increase the proportion of women in the company.

Zeppelin is firmly committed to achieving recognized quality standards and implementing verifiable internship rules, and was for this it was awarded the Fair Company seal of approval in Germany in 2018.

CHANGEOVER TO IFRS – WELL-EQUIPPED FOR THE FUTURE

As of the 2018 fiscal year, the Zeppelin Group will use the IFRS (International Financial Reporting Standards) international accounting standard for Group Financial Statements. At the same time, we are also changing over from the nature-of-expense method (GKV) to cost-of-sales accounting (UKV). In an interview, Zeppelin Group CFO Christian Dummler explains the motivation behind this step and its impact on the Zeppelin Group.

Mr. Dummler, our decision to switch over to IFRS was completely voluntary, as so far the international standard has only been mandatory for capital-market-oriented companies. The Zeppelin Group is not listed on the stock exchange, so why did the Group decide to make the change?

We are very proactive when it comes to anticipating future trends. Financial statements prepared according to IFRS are accepted internationally and can be reconciled with other statements. They allow creditworthiness and financial performance to be assessed by all national and international business partners, investors, and institutions. The change is part of a transparent communication strategy in our financial reporting, and allows us even better access to international capital markets. It seems inevitable that sooner or later IFRS will become mandatory with regard to preparing Group Financial Statements for companies of our size and stature. As such, it was a matter of making our Group accounting, reporting, and financial controlling fit for the future. From 2018, all Group companies now prepare statements in accordance with national legislation for local financial statements, and based on IFRS for the Group Financial Statements.

What was the biggest challenge you faced in implementing the project?

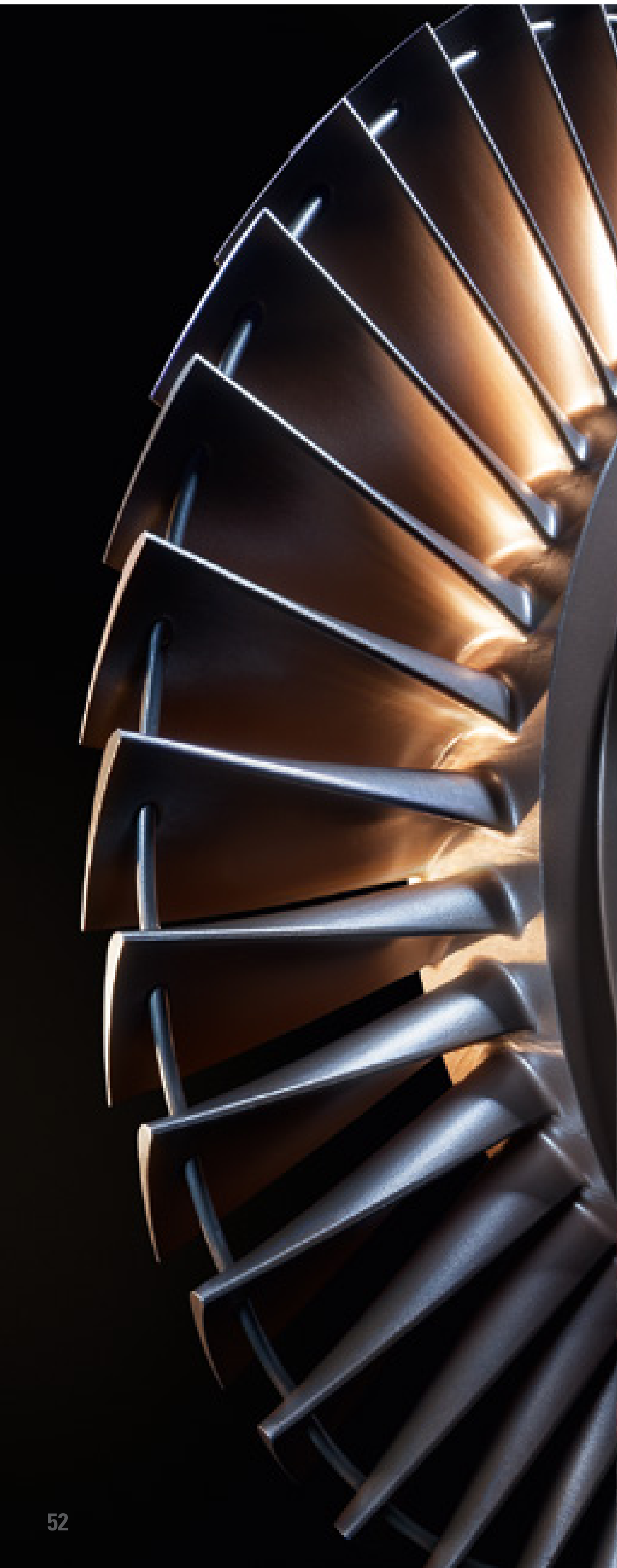
Alongside the changes made in line with IFRS, we also switched from the nature-of-expense method to (GKV) to the cost-of-sales accounting method (UKV), This is one the largest projects in the company's history, as all Group companies are affected right across the board and at the same time. When a system fundamentally changes after decades of use, and when you no longer have to think in terms of cost types but functional structures, it can be quite an uphill battle for employees from the start. Regardless of the major changes to accounting itself, it was the different mindset which took up a lot of additional capacity, in particular at the start. A straightforward example: With UKV, it is not a matter of which costs have been accrued, but where they have been accrued. Have they been incurred by Sales or by Administration? Before this change, we would look at personnel costs and depreciations for example, as a whole – so this is a big difference. Convincing the organization that this project was the right decision and was important for the future of our accounting system, reporting and financial controlling, was also one of the biggest hurdles in my opinion.

How much work does the changeover from HGB to IFRS require?

Tools and systems were implemented and developed during the process to make accounting based on IFRS as easy as possible. The launch of SAP in the Group was also a key factor in switching over to IFRS, as changing over an SAP system from HGB to IFRS involves a colossal amount of work. That is why it was clear to us that the introduction of SAP and IFRS must run in parallel to be as effective as possible in the long term, even if the process poses huge challenges for the organization.

In your view, what was the biggest success arising from the project?

The commitment shown by the Finance department, to reach out to all departments and sites worldwide – it impressed everyone. Whether in China, Brazil or Germany, we came together as a community, shared our concerns and problems, but also worked together creatively and developed some fantastic solutions together. Along with the outstanding ability and professionalism of all the Zeppelin employees involved, I value the team spirit fostered by Zeppelin. We are Zeppelin.

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GROUP MANAGEMENT REPORT AND GROUP FINANCIAL STATEMENTS

CONSOLIDATED MANAGEMENT REPORT

OF ZEPPELIN GMBH AND THE GROUP FOR THE 2018 FISCAL YEAR

A BUSINESS ACTIVITIES OF ZEPPELIN GMBH AND THE GROUP

The following management report is the consolidated management report and Group Management Report for Zeppelin GmbH ("ZEP"). It presents the business performance of the Zeppelin Group ("Zeppelin" or "Group") and Zeppelin GmbH, including the results for the fiscal year from January 1 to December 31, 2018 as well as the situation of the Group and Zeppelin GmbH as at December 31, 2018.

The Group Management Report is based on the figures according to IFRS. The section of the report relating specifically to Zeppelin GmbH is based on figures according to the German Commercial Code (HGB).

BUSINESS PURPOSE OF ZEPPELIN GMBH

The purpose of the company is the acquisition, holding and sale of participations in companies which, in particular, focus on the manufacture, processing, sale, rental, servicing and financing of construction machines and site equipment, engines and generator sets of all kinds as well as complementary components and services and of containers and plants for the handling and processing of powdery, granular and liquid materials and related engineering services.

The purpose of the company is also the acquisition, sale, rental and leasing of land and buildings and related transactions.

The shareholding structure of Zeppelin GmbH remained unchanged in fiscal year 2018. Luftschiffbau Zeppelin GmbH holds 96.25% and Zeppelin-Stiftung in administration of the city of Friedrichshafen holds 3.75% of the subscribed capital of Zeppelin GmbH of EUR 100.0 million.

At the end of 2018, Zeppelin GmbH had 79 employees (previous year: 84). The Supervisory Board consists of 12 members, who represent the shareholders and the employees in equal numbers in accordance with Section 7 of the German Codetermination Act.

STRATEGIC BUSINESS UNITS OF THE ZEPPELIN GROUP

The Group is operationally and strategically managed in six strategic business units ("SBUs"). This organizational structure ensures its ability to focus on individual markets, customer groups, and product segments while managing activities across multiple countries and companies. The SBUs are divided into Construction Equipment EU, Construction Equipment CIS, Rental, Power Systems, Plant Engineering, and Z Lab.

The business activities of the Construction Equipment EU and CIS SBUs comprise the sale and servicing of Caterpillar construction machines, mining equipment, components and agricultural and forestry machinery under the AGCO and Ponsse brands. In Germany and various countries of Central and Eastern Europe and Central Asia, Zeppelin is the sales partner of Caterpillar Inc. headquartered in Peoria, Illinois (USA). The other brands are sold in Central and Eastern European countries.

The Power Systems SBU sells Caterpillar diesel and gas engines as well as MaK brand marine engines and provides a wide range of engineering and other services for drive and power solutions.

The Rental SBU rents out construction machines as well as a wide range of construction equipment, modular room systems, construction site and traffic guidance systems, work platforms, forklifts and lifts, and vehicles. It also offers an extensive range of services.

The activities of the Plant Engineering business unit involve developing, producing, implementing, and selling systems for producing and processing high-quality bulk materials for plastics, rubber and tires, food, and fine chemicals. Zeppelin is the world market leader in the handling of high-quality bulk materials.

The Z Lab business unit was established in 2016 in order to develop new digital business models and expedite the digitalization of existing business models. The Group's digitalization initiatives are pooled in this business unit.

RESEARCH AND DEVELOPMENT

The Group's research and development activities relate primarily to the digitalization of new and existing business models. Research and development costs in the reporting year amounted to EUR 6.0 million (previous year: EUR 3.7 million).

B Business Report

1 Economic Conditions

Macroeconomic Environment

Increasing protectionist measures by individual countries and the accompanying trade conflicts, especially between the USA and China, the sanctions against Russia and Iran, as well as continuing uncertainty about the terms of the UK's exit from the EU, and the budget disputes with Italy, shaped the economic picture in 2018. At the same time, geopolitical risks and conflicts continue to increase worldwide and create additional uncertainty.

Notwithstanding these underlying conditions, the growth rate of global economic output remained stable in 2018 at 3.7% (previous year: 3.7%). With a forecast increase of 2.0%, the euro area failed to keep pace with global growth and also lagged behind the previous year's figure of 2.4%. Even Germany's economy recorded a slowdown and grew by only 1.9% (previous year: 2.5%). In contrast, the USA recorded a significant rise in the growth rate in 2018 to 2.9% (previous year: 2.2%). The tax reform initiated in 2017, historically low unemployment, and strong domestic demand boosted growth in the USA. The Russian economy was stable with growth of 1.7% (previous year: 1.6%) despite protectionist measures, sanctions, and in some cases significantly lower commodity prices. Ukraine showed dynamic growth of 3.5% (previous year: 2.5%) despite the uncertain political situation. Austria reported a downward trend with growth of 2.8% (previous year: 3.0%), as did Poland with 4.4% (previous year: 4.7%) and, evenly more markedly, the Czech Republic with 3.1% (previous year: 4.3%). Economic output in the Slovak Republic performed positively at 3.9% (previous year: 3.4%), while the economic momentum in China fell to 6.6% (previous year: 6.9%). The economies of India and Brazil showed increasing economic growth of 7.3% (previous year: 6.7%) and 1.4% (previous year: 1.0%), respectively.[1]

The European Central Bank (ECB) kept its key interest rate (unchanged since March 2016) for the euro area stable at 0% p.a. for 2018 and its deposit rate at -0.4% p.a. At the end of 2018, the European currency protectors discontinued its trillion euro bond purchase program. In contrast, a turnaround in interest rate policy is not expected until later in 2019. The USA tightened its monetary policy once again and, as expected, towards the end of the year raised its key interest rate for the fourth time in the year to a target range of 2.25 to 2.50% (previous year: 1.25 to 1.50%). Due to weakening economic forecasts, the US Federal Reserve expects only two interest rate hikes in 2019.

The main foreign currencies for the Group are the US dollar (USD), the Russian ruble (RUB), and the Ukrainian hryvnia (UAH). The US dollar started 2018 at an exchange rate of 1.20 USD/EUR and, following a depreciation of the euro over the course of the year, it ended at 1.15 USD/EUR. At the beginning of 2018, the ruble was still quoted at 69.39 RUB/EUR and had depreciated to 79.72 RUB/EUR by the end of the year. The exchange rate of the Ukrainian hryvnia was 33.50 UAH/EUR at the beginning of the year, before falling slightly to 31.71 UAH/EUR by the end of 2018.

Market Development

The development of the Group's key markets during the year under review was as follows:

The ifo Business Climate Index for trade and industry deteriorated from 102.0 points in November 2018 to 101.0 points in December 2018. By contrast, the business climate in the construction industry remained at the very high level of the previous month. Construction firms even rate their current situation somewhat better than recently, but expectations are falling slightly. The utilization rate for equipment capacity in December was 79.6%, significantly higher than in the previous year (December 2017: 77.0%). The order backlog fell from a very high level by 0.1 months, to 4.1 months. The average order backlog in the building divisions was 4.2 months (December 2017: 4.7 months). The average order backlog in the civil engineering divisions was sufficient for 4.0 months of production (December 2017: 4.3 months). Companies were again able to raise prices slightly more frequently than before. In addition, in many places they expect further price increases in the near future, with the results reaching a new all-time high in the scope of the ifo business survey.

Supported by the positive mood and economic situation in the construction industry, the German construction machine market was also in excellent shape in 2018. A total of 33,896 machines were sold on the German market from January to December 2018 (+8.5% year-on-year). This represents a market volume for 2018 of about EUR 2.7 billion (previous year: EUR 2.5 billion). Both the retail and the rental market were able to contribute to market growth with increases of 8.0% and 9.7% respectively. 71.8% of the machines sold went to end customers, 28.2% of construction machinery is used for the first time in the rental business. The market for compact machines grew by 10.7%, while the market for standard and large machines grew by 2.9%. Zeppelin's market share of 15.8% in the overall market and 19.5% in business with end customers was below the previous year's level (16.4% and 20.6% respectively).

[1] IMF World Economic Outlook Database, October 2018

In December 2018, the index providing as assessment of the current situation of the Austrian construction industry rose by around 6 points on the previous month, to 34.9 index points (December 2017: 29.7 points).

In the Czech Republic, construction work fell by 3.6% in real terms in November 2018 compared to the previous month. The previous year's figure from November 2017 could not be maintained either; it was down 1.3% in real terms. Production in building construction fell by 0.7% year-on-year in November, while construction output in civil engineering rose by 1.5%.

In the Slovak Republic, construction activity was on the rise in November 2018: compared to November 2017, domestic construction output rose significantly by 6.8%, to EUR 600.7 million. Production increased by 4.3% in building construction and by as much as 11.0% in civil engineering. In the period from January to November 2018, construction output rose by 8.1% year-on-year to EUR 5,011.5 million.

In Austria, the construction machine market grew by 11.3% in 2018, rising to 2,216 units (previous-year period: 1,991 units). The rental business was stable and the trend towards lease-purchase continued. Zeppelin's market share could not be maintained and at 14.4% was down year-on-year (previous-year period: 15.4%).

In the Czech Republic, momentum in the construction machine industry increased significantly in 2018. The market grew by 24.5% to 2,834 machines (previous-year period: 2,276 units). At 14.1%, Zeppelin's market share was slightly above the previous year's level (previous-year period: 13.8%). In the Slovak Republic, the construction machine market developed better than expected at the beginning of the year. In 2018, a total of 819 machines were sold on the Slovakian market, an increase of 7.3% (previous year: 763 units). Zeppelin's market share fell from 19.9% in the previous year to 19.0%. In the 2018 fiscal year, the Construction Equipment CIS SBU was exposed to an overall positive but still difficult market environment. Some of the main factors in this market environment were the ongoing conflict between Russia and Ukraine, the continuation of Western sanctions against Russia, and volatile oil and commodity prices. Gross domestic product (GDP) in Russia grew by 1.7% in real terms. The Ukrainian economy grew by 3.4% in 2018. In the other countries in which the Construction Equipment CIS SBU operates, GDP growth in 2018 was in the range of 5 to 6%.

The national currencies in the SBU's largest markets – Russia and Ukraine – remained largely stable in 2018, apart from minor fluctuations. To some extent this supported local currencies in other CIS countries. The construction industry in Russia grew by only 0.5% overall in 2018. In Ukraine, the construction and mining industries grew by 5.2% and 2.1% respectively.

In line with the general economic situation in the CIS countries in 2018, the market for new construction machines was largely positive in the territories served by the SBU. With the exception of Armenia and Turkmenistan, significant growth was recorded on the construction machine markets served by the Construction Equipment CIS SBU.

The Construction Equipment CIS SBU increased its market share in 2018.

The rental market and the retail and services business in Germany developed very positively in 2018. 30% of dealers and 40% of rental companies expect an increase in sales for the final quarter of 2018.

The current business situation of the entire construction industry continues to be at a very good level, although the outlook for the construction industry has been subdued for a while. Market researchers are slightly pessimistic for the first time since December 2012.

The Austrian National Bank (OeNB) expects the current boom phase in Austria to slowly fade again at the turn of 2018/2019. The rental market in Austria improved over the course of the year.

The Czech rental market continued to develop positively. In 2018, the Czech Republic recorded growth of approx. 25% and Slovakia of approx. 7%.

The Power Systems SBU operated in a predominantly positive market environment in 2018. Shipbuilding continued to develop unevenly worldwide. The high order intake and order volume for cruise liners, ferries, and special ships was offset by the low order intake and order volume for container and cargo ships worldwide. The trend in the locomotive business continued towards electrification in mainline locomotives and towards hybrid and multi-motor locomotives in shunting and mainline locomotives. The heavily regulated market for combined heat and power plants again developed slightly positively.

The Verband der deutschen Maschinen- und Anlagenbauer (Mechanical Engineering Industry Association, VDMA) reported real sales growth of 3.1% to October 2018 in its economic data. Accumulated machine exports achieved 5.8% growth, with the most successful target markets almost on a par with the USA and China. Similar success figures were achieved in incoming orders, which were up with a total growth rate of 6.0% both in foreign markets (5.0%) and domestically (8.0%). However, this trend flattened out in November (+/-0.0%).

According to the Verband der Chemischen Industrie e.V. (German Chemical Industry Association, VCI), 2018 was a good year for the chemical and pharmaceutical industry in Germany. At its annual press conference, the association announced sales for the industry increased by 4.5% to a record high of EUR 204 billion. Growth was recorded both in Germany (+3.5%) and abroad (+5.0%). This follows increases of 2.5% and 2.0% respectively in production and prices of chemicals. A barrel of crude oil (Brent as of January 1, 2018: 66.87 USD/barrel) rose during 2018 to the beginning of October by around 25%. By the end of 2018, the price had fallen back significantly to USD 54.15/barrel, equal to a 19% drop compared with the beginning of the year.

Year-on-year, the pace of economic development in the VDMA plastics and rubber machinery sector slowed considerably in some cases. This is reflected in particular in the merely moderate growth rates of 2% in incoming orders in the first half of 2018.

The segment for manufacturers of food processing and packaging machinery is currently reporting zero growth in incoming orders in the cumulative period to November 2018.

2 Development of the Group's Business

Key IFRS figures for the Group

EUR million	2018	2017
Sales	2.896,9	2.621,6
Gross margin[2]	15,2%	15,1%
EBT	130,8	97,7
Return on Sales[3]	4,5%	3,7%
Return on Capital Employed, YE[4]	7,6%	6,5%

Sales development and orders

Fiscal year 2018 was another very successful year for Zeppelin. Group sales rose by 10.5% to EUR 2,896.9 million (previous year: EUR 2,621.6 million).

The SBUs that rent, sell, and service construction machines and engines saw their sales increase in the 2018 fiscal year by EUR 257.8 million, or 10.9%. The increases in the Construction Equipment EU, Construction Equipment CIS and Rental SBUs are particularly noteworthy, with sales increases of up to 17.0%. The Plant Engineering SBU increased sales by EUR 24.8 million, or 7.7%.

Sales by SBU

EUR million	2018	2017	Change %
Construction Equipment EU	1.315,1	1.209,7	8,7%
Construction Equipment CIS	482,5	412,3	17,0%
Rental	473,1	410,0	15,4%
Power Systems	359,6	340,5	5,6%
Plant Engineering	348,2	323,4	7,7%
Z Lab	1,2	0,0	-
Group sales[5]	**2.896,9**	**2.621,6**	**10,5%**

In the 2018 fiscal year, a total of 15,957 machines, forklifts and engines were sold, corresponding to an increase of 3.5% year on year. While sales of new construction equipment and engines increased by 893 units (+13.8%) and 566 units (+25.0%) respectively, sales of new forklifts fell by 69 units (-16.4%) and sales of used machines fell by 307 units (-7.0%). At 782 units, the machines and forklift trucks brought to market for the first time for rental purpos-

2 Gross margin = Gross profit on sales / sales
3 Return on sales = profit before tax / sales
4 ROCE = EBIT / capital employed; capital employed = fixed assets + working capital
5 incl. ZEP

es were below the previous year's very high level (944 units).

Incoming orders for all Group companies rose to EUR 2,981.2 million (previous year: EUR 2,808.7 million). At EUR 891.7 million at year-end, the order backlog is also above the previous year (EUR 807.4 million). The Plant Engineering SBU accounted for EUR 244.4 million (previous year: EUR 238.7 million) of this total.

EMPLOYEES AND EMPLOYEE DEVELOPMENT

Changes to the number of employees in the Group as of the balance sheet date, broken down by SBU, are presented below:

	12/31/2018	12/31/2017	Change %
Construction Equipment EU	2.617	2.527	3,6%
Construction Equipment CIS	1.804	1.689	6,8%
Rental	1.487	1.316	13,0%
Power Systems	848	823	2,9%
Plant Engineering	1.477	1.368	8,0%
Z Lab	65	42	55,6%
Trainees in the Group	324	318	1,9%
Group[6]	**8.700**	**8.167**	**6,5%**

At the end of 2018, the foreign companies of the Group had 3,670 employees (previous year: 3,458), corresponding to 42.2% of the overall workforce (previous year: 42.3%)

The development programs for junior staff and managers were further expanded across the Group in the year under review. The realignment of the programs is based on the tried-and-tested Management Development Programs previously offered, to which will be added the newly conceived training programs **"LICENSE TO LEAD"** and **"FRESH UP AND DEEPER DIVE"**.

"LICENSE TO LEAD" is a program to train employees who have recently assumed management responsibility. **"FRESH UP AND DEEPER DIVE"** is about consolidating management training. In this way, experienced managers are effectively supported in their role across SBUs.

Since 2015, Zeppelin GmbH has borne the **"BERUFUNDFAMILIE"** quality mark, which is issued by berufundfamilie Service GmbH. The German companies – namely the Construction Equipment EU, Rental, Power Systems, and Plant Engineering SBUs – have now also been certified as of March 15, 2018, further increasing the compatibility between work and family life. The certification underlines what we have to offer in this area, making Zeppelin more attractive as an employer.

Since May 1, 2018, the Group has also been offering its employees in the German companies the famPlus GmbH portfolio of services in the areas of childcare, advice about nursing care and psychosocial counseling.

INFORMATION ABOUT THE PROPORTION OF WOMEN

In accordance with the "Equal Participation of Women and Men in Leadership Positions in the Private and Public Sector Act", Zeppelin GmbH has set targets for increasing the proportion of women on the Supervisory Board, on the Management Board and at the senior management level. Because of its holding function, there is only one management level below the Management Board at Zeppelin GmbH.[7] As of the balance sheet date of December 31, 2018, 25% of the Supervisory Board was comprised of women (target: 8.3%), while the Management Board had 25% (target: 0%) and 30.8% of department managers were women (target: 25%). The proportion of women and the deadline for achieving the target proportion for the Supervisory Board and Management Board were adopted at the Supervisory Board meeting of March 22, 2018.

6 incl. ZEP

7 The senior management level involves Zeppelin GmbH division managers.

3 Important Activities During the Year Under Review

Expansion of Banking Group and Increase in Syndicated Loan

Given the trend towards consolidation in the European banking market, the continued growth of the Group, and the desired international character of the banking group, Zeppelin expanded the banking group by a sixth core bank in autumn 2018. BNP Paribas S.A. Niederlassung Deutschland was included and the facility increased at the same time.

SAP Project of the Construction Equipment EU SBU

Zeppelin is introducing SAP throughout the Group as part of the Z ONE SAP project. The Construction Equipment EU SBU will be the first SBU to go live with this ERP solution in Austria in 2019. Germany, the Czech Republic and the Slovak Republic will follow.

A uniform software platform and a shared data repository based on SAP are the foundations for Group-wide optimization of our processes and IT systems. It will also facilitate cooperation between countries and between companies. Resources, competencies, new ideas, and innovative solutions can be shared. Customers benefit from the same high standards across countries.

Changes at ZEP Management Board and ZEP Supervisory Board

After almost 30 years, Werner Baier retired from the ZEP Supervisory Board as shareholder representative at his own request. Werner Baier played a decisive role in shaping Zeppelin's development in his role on the Supervisory Board. Prof. Yasmin Mei-Yee Weiß was appointed as the first female shareholder representative, and successor to Werner Baier, at the Supervisory Board meeting of July 20, 2018 by the shareholders and the Board of Trustees of the Zeppelin Foundation. Prof. Mei-Yee Weiß has worked in various international positions for renowned companies such as Accenture, E.ON and BMW Group. Parallel to her work in business, Prof. Mei-Yee Weiß holds a professorship for human resources and organization at the Technical College in Nuremberg.

The Group's Supervisory Board appointed Alexandra Mebus as Managing Director and Labor Director in its meeting on November 24, 2017. Ms. Mebus took over her new position with effect from July 1, 2018 and is responsible for Human Resources and Human Resources Development. Ms. Mebus has previously worked in various HR management roles for companies including foundation-owned company Robert Bosch GmbH and most recently, Voith Turbo GmbH & Co. KG, where she held a position as member of the management team at Voith Turbo GmbH.

Amendment to the Articles of Incorporation of ZEP

In order to take sufficient account of the significantly increased scope of Zeppelin's business activities in recent years and the new legal framework, both the Articles of Incorporation and the Internal Regulations for the Supervisory Board and Management Board of Zeppelin GmbH were revised and adapted accordingly in fiscal year 2018.

Capital Increase for ZRD

At its meeting on March 22, 2018, the Supervisory Board of ZEP approved the motion to increase the equity of Zeppelin Rental GmbH by EUR 17.4 million. The capital increase takes into account both the organic and inorganic growth of recent years and improves the equity base.

Other Important Events for the SBUs

At the beginning of the 2018 fiscal year, the **Construction Equipment EU SBU** issued invitations to its customer conference in Málaga, thus once again expressing the trusting and reliable partnership between Caterpillar and Zeppelin on the one hand and between Zeppelin and the construction firms on the other. The new CAT 320 GC, 320 and 323 crawler excavators took center stage. At the product presentation for the new excavator generation in the 20 to 25-ton class, Zeppelin presented a groundbreaking, efficient and innovative technology, new control technology, and comprehensive driver assistance systems. At the conference, the "future of the construction site" was also highlighted and visualized by means of a 3D video mapping show with a total of seven stations, from the equipment through to the possibilities of machine control and services.

The new two-way excavator with hydrostatic rail wheel drive, for which Zeppelin received the necessary approval from Germany's Federal Railway Authority this year, was another innovation in 2018. With the Cat M323F, Caterpillar and Zeppelin have succeeded in entering an innovative niche market, taking into account a large number of norms and regulations; at the same time, new standards have been set in track construction.

The Underground Mining product division was also very successful this year and won the largest rebuild order since beginning certified repairs in 2004. In line with Caterpillar's quality specifications, 142 roof supports with a total weight of 2,300 tons were brought up-to-date for a major customer in the Czech Republic and certified as a Caterpillar Accredited Rebuild in accordance with the standards. With an order volume of around EUR 6.5 million, this is one of the largest service projects within the Construction Equipment EU SBU.

Zeppelin was present at Austria's largest construction machine trade fair, the MAWEV Show, with nearly 60 machines from Caterpillar, Thwaites and Schäffer, including the above-mentioned new generation of tracked excavators. At GaLaBau in Nuremberg, Zeppelin set a new sales record this year with sales of around five million euros. The approximately 70,000 visitors to the trade fair were able to view a large selection of compact machines, including attachments and components typical of the industry, specially tailored to the sector. Zeppelin also set a new sales record at the NordBau trade fair in Neumünster with a focus on the "digital construction site". Zeppelin won over trade visitors with its wide range of modern machine technology and innovative solutions for the construction, mining, and agriculture industries.

The **Construction Equipment CIS SBU** continued construction of the new branch in St. Petersburg in fiscal year 2018. Completion and opening are expected by mid-2019. Zeppelin is investing around EUR 17.5 million in the new site, which will be shared with the Power Systems SBU.

Due to unsatisfactory earnings prospects, a decision was made in 2018 to discontinue Mercedes-Benz Trucks' dealerships in the Russian Republic of Karelia and the Arkhangelsk region as well as activities in the Precision Farming segment. In November 2017 the decision was taken to merge Zeppelin Russia OOO and Prime Machinery OOO; the merger was completed in May 2018.

The **Rental SBU** has again improved its market presence in 2018 and significantly increased the coverage of its comprehensive product range. In the year under review, the SBU was able to expand its position in the German market. The SBU divides its offering into three areas: machine and equipment rental, temporary infrastructure, and construction logistics. A major project was successfully completed in Austria. The consolidation of rental activities with logistics, energy, and construction site management in 2017 led to a very successful business performance in this country. In the Czech Republic, rental set new records in terms of sales and earnings and further improved the very good market positioning. In the Slovak Republic, the defined targets were achieved.

All shares in Baustellen-Verkehrs-Technik GmbH, Barleben, were acquired with retroactive effect from January 1, 2018. With this acquisition, the company's offering in the area of site and traffic guidance was expanded to include another 52 qualified employees in Brandenburg, Thuringia, Saxony and Saxony-Anhalt.

Fast Rent GmbH, a wholly-owned subsidiary of Zeppelin Rental GmbH, was merged with Zeppelin Rental GmbH with retroactive effect as of January 1, 2018 by way of the merger agreement dated August 21, 2018.

In 2018, the shareholder and the employees of Zeppelin Rental GmbH elected a tripartite Supervisory Board and nominated corresponding members. The constituent meeting of the Supervisory Board was held on March 14, 2018 in Garching. In accordance with legal regulations, women's quotas for the Board itself and for management levels n-1 and n-2 were defined and published.

The **Power Systems SBU** operated in a largely positive market environment in 2018. In the CIS countries this trend was only overshadowed by the overall political situation. Demand for flexible energy solutions, such as highly efficient combined heat and power plants (CHP) developed steadily in Germany; an increasing number of inquiries were received for large-scale and complete plants. The trend toward decentralized power supplies for industry and municipalities continued. In the Czech Republic, the Slovak Republic, Russia and Ukraine, increased project activity was recorded in the area of CHP plants based on natural gas and biogas. The company in Germany continues to function as a Center of Excellence and has already developed modular plants and control systems for a large number of pilot projects. In the areas of standby power supply systems and critical power applications, Zeppelin benefited from the trend towards comprehensive digitalization and the related expansion in emergency power supplies for data centers.

The oil and gas market developed moderately positively. The major project won by the companies in Germany and Turkmenistan, working in collaboration, involving gas flares on oil platforms in the Caspian Sea, was finalized.

The industrial engines market, which is highly influenced by exports, performed very positively in 2018. Unit sales of engines in this segment benefited from the domestic economy and exceeded expectations. Based on the tightening of emissions requirements in 2019 and the provision of new Cat engines that meet the V standard, work has already been carried out with major German original equipment manufacturers (OEMs) on equipping future product lines. The OEM market also developed positively in the Czech Republic, Belarus and Russia.

In the Marine division, the ongoing cruise boom with LNG engines led to dynamic demand and the first engine package with a gas system was invoiced. Overall, the global shipbuilding industry continued to be inconsistent.

The performance of the locomotive engines sector fell short of expectations. The OEM market in Germany and the Czech Republic experienced a downturn. Nearly all project developments are being provided by the major system vendors Bombardier, Alstom and Siemens. The trend involving the use of smaller, certified industrial engines with particle filters and hybrid propulsion systems is continuing.

The service business beat expectations and set new records for sales and earnings for the third time in a row. Increased market development, sales campaigns and a clear focus on maintenance contracts made this success possible. The new digital business and product fields with online-supported service solutions, such as remote surveillance and monitoring, are developing positively in the service business. There continues to be competitive pressure on margins in the service and spare parts business. A major project was successfully implemented in cooperation with the MWB Marine Services GmbH joint venture founded in 2017.

The initiatives developed jointly with the manufacturer partner Caterpillar as part of the "Leadership Table" were continued and successfully developed together with measures of the "Z1" project.[8] The Must-Win Battles (MWBs), which are focused on the topic of digitalization, in particular Technology Enabled Solutions, in order to be optimally prepared for changing market conditions, also recorded pleasing progress. The main focus is the data interface between new engines and the existing engine population in the market. An Operation Center is under construction in Hamburg to evaluate the data.

An additional Must-Win Battle People was added in order to meet the requirements of an attractive employer. At the same time, the first steps towards the introduction of SAP were taken in order to meet the need to replace the existing ERP system Navision in the medium term.

In the fiscal year 2018, the **Plant Engineering SBU** recorded positive demand in almost all market segments. The overall high utilization rate varied both regionally and in comparison with the individual product groups. Equipment orders for polyolefins (plastics production) and for the plastics and tire industries were characterized by high demand worldwide. The booming petrochemical market in China made a particularly strong contribution. In the food sector, on the other hand, the market was more settled. The components, spare parts and service business were stable in the long term.

In view of the emerging changes in underlying economic policy conditions, the assessments of future developments in these business areas are becoming somewhat gloomier.

In February 2018, the acquisition of the Italian company Nuova Ciba S.p.a. was successfully completed. The company is a specialized supplier in the market for rubber and tire production and thus ideally complements the product portfolio. Integration is proceeding according to schedule.

The same is true of the acquisitions made last year in the areas of digital information technologies (Smart Controls in India) and high-tech welding (acquisition of the assets and liabilities of Mauderer in Friedrichshafen).

The decision taken in the middle of the year to modernize silo production at the Friedrichshafen production site is currently being implemented. From May 2019 onwards, the high-tech friction stir welding process for various products will replace the previous conventional mechanical welding process. The resulting efficiency gains will lead to a significant cost reduction and strengthen competitiveness.

In product development, the business unit concentrated on opening up forward-looking markets in the year under review, including in the areas of plastics recycling and the processing of battery compounds and paints. Other product innovations include the new range of diverter valves and rotary feeders in the systems business and the CODOS NT kneading system for the food industry, with its new design and improved drive.

In 2018, the **Z Lab SBU** focused on expanding its business with digital platforms – working in particular on the rental platform klickrent – and also on intensively developing new digital products and testing them in the real world. The result is two new ventures, klickcheck and zamics, scheduled to enter the market in 2019. These are tools for documenting the condition of machines and equipment. In terms of the digital transformation of the existing business, the new zeppelin.com platform was further developed to such an extent that the first SBUs will shortly go live with their new presence. In addition, a number of apps to support internal processes were created and rolled out. In 2018, all areas of Z Lab were characterized by strong recruiting efforts, reflected in the nearly complete establishment of an effective and innovative team.

[8] The objective of the "Z1" project is essentially to achieve growth in attainable markets for all segments and countries.

4 RESULTS OF OPERATIONS, FINANCIAL POSITION AND NET ASSETS OF THE GROUP

Due to the first-time application of IFRS accounting principles and the change in the classification of the income statement according to the cost-of-sales method, the previous year's figures have been adjusted to the circumstances of the reporting year in order to compare the items explained.

RESULTS OF OPERATIONS

The condensed consolidated statement of profit and loss as of the balance sheet date is as follows:

EUR million	2018	2017	Change	Change %
Sales	2.896,9	2.621,6	275,3	10,5%
Cost of sales	-2.456,5	-2.224,5	-232,0	10,4%
Gross profit on sales	440,4	397,1	43,4	10,9%
Selling and administrative costs[9]	-315,4	-307,3	-8,1	2,6%
Other income and expenses[10]	19,9	22,0	-2,1	-9,5%
Earnings before financial result	144,9	111,7	33,2	29,7%
Net financial result	-14,1	-14,0	-0,1	0,6%
Net profit or loss before tax	130,8	97,7	33,1	33,9%
Income taxes	-40,8	-34,7	-6,1	17,6%
Net profit or loss after tax[11]	90,0	63,0	27,0	42,9%

Group sales increased by 10.5% (EUR 2,896.9 million; previous year: EUR 2,621.6 million) thanks to the positive business performance. The Group recorded growth in all SBUs. Particularly noteworthy are the relative and absolute growth rates of the Construction Equipment EU, Construction Equipment CIS, and Rental SBUs.

EUR million	2018	2017	Change %
Cost of materials	-1.996,8	-1.786,1	11,8%
Personnel expenses	-310,6	-283,3	9,6%
Depreciation	-44,8	-41,3	8,3%
Other expenses	-104,3	-113,8	-8,3%
Group cost of sales	**-2.456,5**	**-2.224,5**	**10,4%**

In the same period, cost of sales increased by 10.4% to EUR 2,456.5 million. The increase was due in particular to the volume-related increase in the cost of materials. Gross profit on sales rose by 10.9% to EUR 440.4 million. Year-on-year, the gross margin was almost constant at 15.2% (previous year: 15.1%).

At EUR 315.4 million, sales and administrative costs were EUR 8.1 million higher than in the previous year. This is due in particular to higher expenses for employee benefits.

At EUR 19.9 million, the balance of other operating income and expenses was almost on a par with the previous year (EUR 22.0 million).

9 including research and development expenses
10 including impairments on financial instruments and contractual assets (net) as well as the result from companies accounted for using the equity method
11 including non-controlling interests

The financial result went from EUR -14.0 million in the previous year to EUR -14.1 million in the reporting year. The interest result amounted to EUR -14.4 million, EUR 2.9 million more than the previous year's EUR -17.3 million. The primary reasons for this were lower interest expenses from interest rate swaps and the syndicated credit facility. The other financial result deteriorated by EUR 3.0 million to EUR 0.3 million (previous year: EUR 3.3 million), which is attributable in particular to the revaluation of interest rate derivatives.

Changes to net profits before taxes for the fiscal year, broken down into SBUs, are presented below:

EUR million	2018	2017	Change %
Construction Equipment EU	61,9	61,9	0,0%
Construction Equipment CIS	28,5	17,8	59,8%
Rental	43,0	27,3	57,8%
Power Systems	19,5	18,9	3,1%
Plant Engineering	-3,5	-1,4	-154,1%
Z Lab	-9,8	-5,6	-76,4%
Consolidated net profits before taxes[12]	**130,8**	**97,7**	**33,9%**

Consolidated net profits before taxes increased to EUR 130.8 million (previous year: EUR 97.7 million). The return on sales developed from 3.7% in the previous year to 4.5% in the fiscal year. The return on equity[13] before taxes was 17.8%; the comparable total return on capital[14] was 6.2%. The return on capital employed (ROCE) was 7.6% compared with 6.5% in the previous year.

Income tax expenses were EUR 40.8 million (previous year: EUR 34.7 million). This includes around EUR 8.5 million in provident expenses for the current tax audit. The tax rate for the year was 31.2%, or 24.7% adjusted for the provision for the current tax audit. Group earnings after taxes were EUR 90.0 million. At EUR 27.0 million, this was well above the previous year's result.

12 incl. ZEP

13 Return on equity = earnings before tax / (equity in previous year + equity in year under review) / 2

14 Total return on capital = Earnings before interest and tax / (balance sheet total of previous year + balance sheet total of year under review) / 2

Financial Position

Capital Structure

Changes to the Group's **capital structure** are presented below:

LIABILITIES Proportion in % of balance sheet total	**2018** IFRS	**2017** IFRS	 HGB
Balance sheet total in EUR million	**2.384**	**2.273**	**1.549**
Current liabilities			
Financial liabilities, trade payables, other liabilities	14,0%	13,0%	11,6%
Contract liabilities	5,0%	6,7%	2,5%
Employee benefits	3,5%	3,4%	4,6%
Miscellaneous	5,9%	5,4%	5,1%
Non-current liabilities			
Financial liabilities, trade payables, other liabilities	27,7%	28,7%	22,8%
Contract liabilities	0,6%	0,6%	0,0%
Employee benefits	5,8%	6,2%	7,3%
Miscellaneous	5,1%	5,3%	2,6%
Equity	32,4%	30,6%	43,5%

Current liabilities as of December 31, 2018 were EUR 678.3 million, an increase of EUR 30.2 million. They consist primarily of financial liabilities (EUR 82.1 million; previous year: EUR 93.0 million), trade payables (EUR 133.1 million; previous year: EUR 109.9 million), other financial liabilities (EUR 118.7 million; previous year: EUR 91.9 million) and contract liabilities (EUR 119.3 million; previous year: EUR 152.7 million). The decrease in financial liabilities results in particular from the termination of sale-and-lease-back ("SLB") agreements. The other liabilities reported under Miscellaneous increased by EUR 14.1 million compared with the previous year, which is attributable in particular to a change in other tax liabilities.

Non-current liabilities as of December 31, 2018 were EUR 934.0 million, an increase of EUR 5.1 million. They consist primarily of financial liabilities (EUR 512.1 million; previous year: EUR 496.3 million), other liabilities (EUR 148.3 million; previous year: EUR 155.6 million) and employee benefits (EUR 138.3 million; previous year: EUR 141.8 million). The increase in financial liabilities is attributable to increased leasing liabilities of EUR 31.4 million (in particular from the acquisition of construction machines in connection with SLB transactions). This is offset by a lower level of non-current liabilities to banks amounting to EUR 22.0 million, which are reported under current liabilities due to their partial maturity in 2019. Other liabilities include an income tax liability of EUR 10.3 million, which was formed as a precautionary measure to cover risks arising from the current tax audit.

Equity increased by EUR 75.0 million in the fiscal year, to EUR 771.4 million (taking into account negative currency translation differences of EUR 8.7 million; previous year EUR 6.1 million). The currency translation differences mainly resulted from exchange rate developments for the Russian ruble and US dollar. With total assets rising by 4.9% to EUR 2,383.6 million, the equity ratio[15] increased to 32.4% (previous year: 30.6%). The total non-current financial resources of EUR 1,705.3 million (previous year: EUR 1,625.2 million) exceed non-current assets by EUR 352.9 million (previous year: EUR 336.2 million), which corresponds to an asset coverage[16] of 126.1% (previous year: 126.1%). They therefore also cover 70.9% (previous year: 72.4%) of the inventories.

SIGNIFICANT FINANCING INSTRUMENTS

At the end of 2018, a syndicated credit facility that was originally taken out in 2011 and extended early in 2015 was available to the Group as a significant financing instrument. The term of the syndicated credit facility is five years and includes an option to extend it by one year on two occasions. ZEP exercised these options and extended the syndicated credit facility in full until 2022. In autumn 2018, BNP Paribas S.A. Niederlassung Deutschland was added to the group of syndicate banks as a further core bank. At the beginning of the 2018 reporting year, the lending volume was increased from EUR 500 million to EUR 550 million and expanded by a further EUR 55 million to EUR 605 million with the addition of the sixth core bank. The new credit facility is available for cash drawdowns (EUR 412.5 million) and for providing guarantees (EUR 192.5 million). As of the end of 2018, a total of EUR 265.0 million (including EUR 116.5 million for guarantees), or 43.8% (previous year: 54.7%) had been utilized. In addition, at the end of 2018 the Group had additional bank credit lines of around EUR 130 million, of which it had utilized EUR 5.9 million. At the end of 2018, ZEP also had USD bank loans equivalent to EUR 6.7 million to finance its operating business. In addition, the Group had cash and cash equivalents available. The ABS program (asset-backed securities) amounting to EUR 25 million expired in mid-2018 and was fully repaid on schedule.

Furthermore, the Group finances itself over the long term through the issuance of bonded loans. At year-end, the total volume of outstanding bonded loans was EUR 184.5 million. The Group again adhered to the financial covenants that were agreed and determined on the basis of its financial data in connection with the syndicated credit facility and bonded loans in 2018. In August 2018, Creditreform Rating AG confirmed the rating of the Group as "A-" with a stable outlook. The rating agency's positive assessment is based on stable and solid financial ratios, sufficient cash flows from operating activities, good capital market capabilities, prudent financial management and Zeppelin's leading market position. The companies of the Construction Equipment EU, Construction Equipment CIS and Power Systems SBUs continued to have access to extensive credit facilities at Caterpillar Financial Services and other sales financing and leasing companies in order to finance sales in Germany and abroad. In addition, it also uses asset leasing to finance vehicles as well as IT hardware and software. The extensive investments in the rental fleets in fiscal year 2018 were financed from current cash flow and debt recognized in the balance sheet as well as SLB transactions.

[15] Equity ratio = ratio of equity to total capital
[16] Asset coverage = non-current financial resources / non-current assets

LIQUIDITY

The development of cash and cash equivalents at the end of the fiscal year is shown in the following condensed consolidated cash flow statement:

EUR million	2018	2017
Cash flow from operating activities	256,9	219,0
+ Cash flow from investing activities	-244,2	-224,6
+ Cash flow from financing activities	-36,2	-70,8
= Changes in cash and cash equivalents	**-23,4**	**-76,4**
+ Cash and cash equivalents at the beginning of the period	**91,2**	**170,6**
+ Foreign exchange rate differences in cash and cash equivalents	-0,6	-3,0
= Cash and cash equivalents at the end of the period	**67,2**	**91,2**

Cash and cash equivalents decreased by EUR 24.0 million at the end of fiscal year 2018. The negative cash flow from investing activities increased in fiscal year 2018, in particular due to payments for investments in the rental fleet (EUR 303.4 million; of which EUR 99.3 million was attributable to RPO transactions and EUR 72.7 million to SLB transactions), which were offset by proceeds from disposals from the rental fleet (EUR 128.5 million; of which EUR 45.7 million was attributable to RPO transactions and EUR 50.7 million to SLB transactions).

The cash flow from financing activities is characterized by the debt service due to existing financing measures.

Cash flow from operating activities had a positive effect, increasing by EUR 37.9 million compared with the previous year. This was mainly due to higher net profit before taxes and the change in working capital.

INVESTMENTS

EUR million	2018	2017	Change %
Intangible assets	15,2	13,4	13,4%
Land and buildings	18,8	17,0	10,6%
Operating and business equipment including technical equipment	41,1	39,7	3,6%
Investments in financial assets	0,2	4,5	-94,5%
Total investments excluding rental fleet	**75,3**	**74,6**	**1,0%**
Investments in the rental fleet	204,1	148,8	37,2%
Total investments including rental fleet	**279,4**	**223,4**	**25,1%**

Investments in property, plant and equipment and intangible assets amounting to EUR 279.4 million (including EUR 204.1 million in the rental fleet) were offset in the fiscal year by ordinary depreciation of EUR 168.7 million, which thus covered 60.4% of investments (previous year: 70.5%). The increase in investments compared with the previous year is mainly due to the rental fleet.

NET ASSETS

Structurally, the Group's assets are broken down as follows:

ASSETS Proportion in % of balance sheet total	2018 IFRS	2017 IFRS	2017 HGB
Balance sheet total in EUR million	**2.384**	**2.273**	**1.549**
Current assets			
Cash and cash equivalents	2,8%	4,0%	5,9%
Financial assets, trade receivables	16,2%	16,2%	24,6%
Contract assets	1,4%	1,0%	0,0%
Inventories	20,9%	20,4%	26,4%
Miscellaneous	2,0%	1,7%	1,2%
Non-current assets			
Financial assets, trade receivables	1,7%	1,6%	2,0%
Intangible assets; property, plant, and equipment	49,1%	48,8%	38,8%
Miscellaneous	6,0%	6,3%	1,1%

The total assets of the Group increased in the 2018 fiscal year by EUR 110.4 million to EUR 2,383.6 million. This is attributable in particular to an increase in property, plant, and equipment (EUR 46.3 million), inventories (EUR 33.2 million) and trade receivables (EUR 19.5 million). By contrast, cash and cash equivalents fell by EUR 24.0 million.

At 1.2 p.a., capital turnover[17] was the same as the previous year (1.2 p.a.). Because of the high level of sales performance at the end of 2018, the days of sales outstanding increased as of the balance sheet date to 48 days (previous year: 50 days).

The rights of use to leased assets are also reported under property, plant, and equipment.

[17] Capital turnover = sales / (previous-year balance sheet total + reporting year balance sheet total) / 2

Comparison of Current Situation with Forecast

	2018	
EUR million	Actual	Forecast
Sales	2.896,9	2.500,0
Net profit before tax	130,8	87,5
ROCE	7,6%	6,2%

Sales and net profit before taxes increased significantly or sharply compared to the forecast, which is attributable in particular to the very good development of the Construction Equipment EU, Construction Equipment CIS and Rental SBUs. The ROCE was slightly higher than forecast.

5 Results of Operations, Financial Position, Net Assets of Zeppelin GmbH

Results of Operations

ZEP's sales increased by EUR 2.1 million to EUR 27.7 million in 2018 (previous year: EUR 25.7 million). This development was mainly due to the increase in sales from the intra-Group leasing of land and buildings amounting to EUR 1.0 million and the IT services rendered amounting to EUR 1.0 million.

Other operating income decreased by EUR 0.2 million to EUR 3.0 million (previous year: EUR 3.2 million). This primarily consisted of the reversal of provisions amounting to EUR 1.9 million (previous year: EUR 0.9 million) and of charges passed on to affiliated companies amounting to EUR 0.6 million (previous year: EUR 0.7 million). In addition, income of EUR 0.8 million from the settlement of claims for damages was reported in the previous year.

The income from participations was EUR 33.6 million (previous year: EUR 36.4 million) and fell by EUR 2.8 million as a result of lower dividend distributions. On the basis of profit-and-loss transfer agreements, a total of EUR 69.9 million (previous year: EUR 40.1 million) was received in the fiscal year 2018 as income from profit transfer and the recharging of taxes passed on to the tax group. This was offset by expenses from loss absorption amounting to EUR 20.0 million (previous year: EUR 5.5 million).

Personnel expenses fell by EUR 2.5 million year-on-year to EUR 16.1 million (previous year: EUR 18.6 million). The drop came from one-off severance payments made in the previous year (wind-up costs). Amortization of intangible assets and depreciation of property, plant, and equipment was EUR 0.4 million less than the previous year (EUR 6.0 million; previous year: EUR 6.4 million).

Other operating expenses decreased by EUR 3.5 million to EUR 14.7 million (previous year: EUR 18.2 million). This was due in particular to lower administrative costs in the year under review (EUR 4.3 million; previous year: EUR 5.9 million), due to lower consulting and training costs.

The net interest result – excluding income from loans classified as fixed financial assets – amounted to EUR 0.7 million in the fiscal year, an improvement of EUR 4.9 million on the previous year. This is mainly due to lower interest expenses from interest rate swaps and bonded loans. In addition, interest income from affiliated companies increased.

Net profit before taxes fell year-on-year to EUR 25.6 million (previous year: EUR 48.8 million), mainly due to the write-down of the investment book values.

Net income for the year was EUR 0.9 million (previous year: EUR 36.8 million). This includes income taxes of EUR 24.6 million (previous year: EUR 12.0 million), which increased due to the consideration of tax estimation risks from the current tax audit.

FINANCIAL POSITION

The financial strategy is derived from the corporate purpose of ZEP (the holding of participations, rental of land, buildings and technical equipment owned by the company to affiliated companies and the financing of the Group). The long-term commitment of funds to property, plant and equipment and financial assets (62.9% of assets) should correlate as far as possible with matching financing on the liabilities side of the balance sheet. Here, the creation of equity from retained profits is an important source of funding.

ZEP's equity fell to EUR 559.5 million (previous year: EUR 569.0 million) as a result of transfers from other retained earnings in the year under review and amounted to 58.7% of the balance sheet total (previous year 58.5%). The long-term funds come to EUR 279.1 million (29.3% of the balance sheet total) and consist of accruals for pensions (EUR 34.2 million) and liabilities to banks (EUR 244.9 million).[18] Current funds include provisions (EUR 24.1 million), liabilities to banks (EUR 25.8 million)[19], trade liabilities (EUR 2.7 million), liabilities to affiliated companies (EUR 46.3 million, mainly from investing affiliated companies' funds and cash-pooling) as well as other liabilities (EUR 16.1 million).

The fiscal year 2018 saw EUR 108.3 million (previous year: EUR 13.5 million) invested. Of this amount, EUR 80.0 million relates to loans to affiliated companies, EUR 20.0 million to capital increases for shares in affiliated companies and EUR 8.3 million to property, plant, and equipment and intangible assets. Depreciation amounted to EUR 55.5 million (previous year: EUR 7.3 million). Of this amount, EUR 49.5 million relates to the write-down on the participation in Zeppelin Systems GmbH.

NET ASSETS

ZEP's assets consist primarily of investments of EUR 401.9 million (previous year: EUR 431.4 million), loans to affiliated companies of EUR 80.2 million (previous year: EUR 52.2 million) and land, buildings and assets under construction of EUR 113.2 million (previous year: EUR 112.0 million). These assets thus correspond to 62.4% (previous year: 61.2%) of the balance sheet total, which fell to EUR 953.7 million (previous year EUR 973.3 million). Receivables from affiliated companies rose by EUR 12.3 million to EUR 336.0 million (previous year: EUR 323.7 million). In the same period, credit balances at banks fell by EUR 29.1 million to EUR 14.8 million. Non-current assets of EUR 611.2 million (previous year: EUR 602.8 million) were offset by non-current liabilities of EUR 838.6 million (previous year: EUR 877.0 million) as of December 31, 2018. The latter mainly consist of equity, accruals for pensions and long-term liabilities. Long-term asset coverage fell from 145.5% to 137.2%, mainly due to a lower level of long-term bonded loans, as parts of the total portfolio have to be reported as current since they mature in 2019.

Investments in property, plant, and equipment amounted to EUR 7.6 million (previous year: EUR 10.6 million). Of this amount, EUR 7.4 million (previous year: EUR 9.5 million) related to land, buildings, equipment and assets under construction, which are rented to associates. This mainly involves investments in properties and buildings that are leased to Zeppelin Rental GmbH and Zeppelin Baumaschine GmbH.

COMPARISON OF CURRENT SITUATION WITH FORECAST

At EUR 5.2 million, ZEP's net income for the year according to IFRS is lower than forecast (EUR 45.1 million). This was due to a write-down on investment book values.

[18] This figure includes EUR 162.5 million in bonded loans.
[19] This figure includes a bonded loan of EUR 22 million.

C Opportunity and Risk Report

1 Risk Report

General Aspects

As an internationally active corporate group, Zeppelin is exposed to various risks. In particular, macroeconomic and industry-specific risks, performance-related, personnel-related and financial risks must be taken into account. The risks presented below apply equally to Zeppelin GmbH and the Group.

Macroeconomic and Industry-Specific Risks

Because of the broad range of countries, industries and business models in which the Group is active, the macroeconomic and industry-specific risks are broadly distributed.

Zeppelin is one of the largest dealers selling Caterpillar construction and mining equipment as well as engines. Although the dealership agreement between Caterpillar and Zeppelin can be terminated at relatively short notice, no substantial risk is seen here because of the extremely successful partnership between the two companies for more than 60 years. Zeppelin is also the market leader in leasing a broad array of construction machines and equipment, including complementary products and services in the relevant markets. In its target industries, including construction, energy, and shipping, there is some risk of defaults on receivables, which is countered by effective receivables and credit management. Appropriate account is taken of existing currency risks through currency hedging activities and proactive currency management.

The markets served by the Plant Engineering business unit are very diversified and include companies in the international rubber and tire industry, plastics producers and processors and the food industry around the world. In order to reduce its risks from defaults on receivables, the Group concludes agreements regarding down payments and interim payments as well as collateral. In order to protect itself against economic and political risks, the Group takes advantage of German government-backed trade export credit guarantees.

Performance-Related Risks

Caterpillar's delivery capacity and ability to deliver on time is the main risk to performance. Zeppelin and Caterpillar work together to continuously increase availability, for example, by making logistical improvements, maintaining inventories in interim storage facilities, and preconfiguring machines. In order to ensure delivery, it also maintains sufficient inventories to balance out delivery bottlenecks and delays.

The risks are further minimized through international collaboration and management by strategic business units and inventory optimization.

Personnel Risks

Because of the strong economic situation in Germany and demographic change within Zeppelin, the company will be losing a number of experienced employees over the next five to ten years across all SBUs and finding replacements for them on the labor market will require considerable effort. At the same time, the ongoing pace of digitalization poses a challenge for Zeppelin and all other companies.

Zeppelin is responding to this challenge with a number of strategic projects and initiatives in the area of human resources (HR) that aim to maintain the company's productivity in the future. The work carried out by HR involves retaining as many employees as possible and preparing them for the future challenges of an increasingly digital working world. HR will also focus on creating a strong employer brand in order to make the company an even more attractive and competitive employer in the competitive labor market.

The rate of voluntary resignations rose slightly in 2018 (5.8% average Group-wide) compared to 2017 (4.9%), but it continues to confirm the high level of loyalty of Zeppelin employees.

A number of Group projects were implemented during 2018 in the area of Human Resources in order to further increase the attractiveness of Zeppelin as an employer. An IT-supported talent management system shows employees career paths and trains specialists and managers for key management positions. Thanks to the Group-wide certification, completed in March 2018, obtained with the "audit berufundfamilie" quality mark issued by the Federal Ministry for Economic Affairs and the Federal Ministry for Family Affairs, Zeppelin has improved the work/life balance of its employees. Specifically, a concept for promoting health in the workplace was developed and a set of rules for mobile working was created in the German Group companies. In addition, a consistent follow-up process subsequent to the Z VOICE employee opinion survey carried out in 2017 ensures improvements to working conditions and management behavior at the level of individual managers. With the help of an IT-supported employee recommendation program introduced in 2018, the number of qualified applicants increased notably, especially in the category of technical specialists.

The aim of Zeppelin's efforts in the area of digital change is to take advantage of the opportunities presented by digitalization for HR work, too. The internal communication platform Z CONNECT was further expanded in 2018 in order to consistently promote networking and exchange between employees of different strategic business units. Furthermore, employees share their knowledge on various digital topics in presentations and discussions through the Zeppelin Learning Community, situated within Human Resources. In order to further optimize HR work within the Group, the Human Resources department has been working together with Group IT since autumn 2018 on designing a long-term HR/IT strategy. Three strategic projects were also launched to deal with the changes in the working world and their effects on the workforce in order to set the necessary course in good time.

FINANCIAL RISKS

Financial risks are limited by, among other things, maintaining a solid capital base and through long-term Group financing. In the fiscal year 2018, the Group's equity ratio was 32.4% (previous year: 30.7%). In addition, ZEP and its participations (after deducting the fair value of plan assets) have funds available from pension obligations amounting to EUR 138.2 million.

The Group's financial leeway at any time is also primarily ensured by the syndicated credit facility that was set up in 2011 and then extended early in 2015. This syndicated credit facility has a term until 2022. In addition, in order to diversify its outside sources of capital, the Group issues bonded loans and makes use of sales financing via several specialized institutions. Extensive credit facilities are also available for SLB transactions, especially for financing the rental fleet.

With the inclusion of BNP Paribas S.A. Niederlassung Deutschland as the sixth core bank in the group of syndicate banks, the volume of the syndicated credit facility was increased to EUR 605 million (previous year: EUR 500 million). This volume is divided between a cash line of EUR 412.5 million and a guarantee line of EUR 192.5 million.

As of the balance sheet date, the Group had available funds from liabilities to banks and institutional investors totaling EUR 341.6 million (previous year: EUR 336.9 million), of which EUR 309.5 million (previous year: EUR 331.0 million) was long-term. Funds from leasing liabilities amounted to EUR 234.2 million (previous year: EUR 239.7 million). The long-term portion was EUR 185.6 million (previous year: EUR 154.2 million).

In accordance with the Group's financial strategy of hedging a large share of its average financial liabilities against interest rate risks, the Group makes use of interest rate swaps. These hedging transactions secure ZEP against an increase in interest expenses in the event of drawdowns under the syndicated credit facility as well as for bonded loans. Hedging transactions have been concluded that expire in 2023, 2024 and 2025. These transactions provide the Group with long-term protection against the risk that rates will rise again. The Group's business activities in emerging markets and developing countries expose it to currency risks. To contain them, cash flows in other currencies from individual transactions or projects are hedged with currency forwards and futures. In addition, the Group limits currency risks by financing its subsidiaries in emerging economies and developing countries in local currencies and by employing sophisticated asset management techniques. To monitor currency risks, the Group operates a value-at-risk limit system that is integrated in the Group-wide treasury management system and continuously monitored with action areas being highlighted. Consistent risk management and largely stable currency markets contributed to an overall low foreign currency loss in 2018. Additional information regarding interest rate changes and currency risks is included in the Notes to the Group Financial Statements.

At EUR 0.5 million, or 0.02% of sales, the default rate by external customers for all Group companies was below the figure for the previous year, which was EUR 2.3 million, or 0.09% of sales. The low figure of 0.02% of sales confirms the long-term success of the measures in the area of credit checks and claims management. Corresponding risks were also prevented by collaborating extensively with sales financing companies and securing down payments from customers for projects and plants.

To protect itself against the financial consequences of large liability risks and substantial damages when it bears limited inherent risks, the Group takes out insurance policies. Special attention is paid to claims management and the related prevention of claims through precautionary measures. Within the scope of an international insurance management system, coverage is continually monitored and adjusted as required. In addition, insurance coverage is centrally coordinated and managed for the entire Group. The real estate investments in Russia underway in St. Petersburg were insured against political risks by obtaining German government-backed guarantees for direct investments in other countries.

Risk Management System

General Aspects

As a global company, the Group is exposed to a number of risks. The Group counters these risks and meets the applicable operational, market-related and legal requirements with a comprehensive risk management system. Risk management is part of the Group's business and decision-making processes and aims to identify, quantify, and report risks at an early stage. The focus here is to counter the risks that have been identified and to avoid risks that jeopardize the survival of the Group.

Dedicated planning and reporting is a key aspect of risk management. The goal here is to ensure comprehensive recording of risks. All managers are involved in the identification, analysis and evaluation of risks. Countermeasures to avoid or reduce risks are initiated as needed.

The quarterly reporting system comprises the assessment of the identified risks according to their magnitude and likelihood of occurrence based on 12 risk categories and documents the countermeasures taken and their effectiveness over time.

In addition, the ad-hoc risk reporting process ensures that adequate measures are initiated in a timely manner if material risks occur. The Group's established Risk Panel is responsible for monitoring all risks and tracking the measures that have been initiated.

At Zeppelin, country-specific risks are evaluated on the basis of established country risk reports. The management team and risk manager in every country in which Zeppelin is active have access to a report with information about economic, political and business area-specific risks. This information also serves as the basis for controlling and the initiation of adequate measures to avoid risks.

An external review initiated by Zeppelin in 2017 in connection with potential violations of export regulations was undertaken in 2018 and will be completed by 2019. The accusation could not be confirmed. There were no findings that might have a significant impact on the Group’s assets, financial position or earnings.

In 2018, the Group auditing department conducted several standard audits. These inspections were primarily conducted on the operating companies Zeppelin Baumaschinen GmbH (two audits) and Zeppelin Russland OOO as well as Zeppelin GmbH (two audits). Further investigations were conducted in the area of fraud and compliance. In addition, four follow-up inspections were carried out at Zeppelin Russia OOO, Zeppelin Ukraine TOV, Zeppelin Rental GmbH and Zeppelin Systems China (Beijing) Co. Ltd. Furthermore, a "cultural dialog" took place at Zeppelin Rental GmbH under the direction of the Group auditing department. This interdisciplinary project involves an examination of the business unit's non-financial areas – strategy, risk management, organization and culture.

Assessment of Risk Categories

The above-mentioned risk types are contained in the following four risk categories:

- Asset risks (inventories/stocks, receivables, risks in the rental fleet, risks from agreements with financing companies (Rental Purchase Options/RPOs, reported in the contract risk category until 2017))
- Currency risks (transaction/translation currency risks)
- Contract risks (contract risks, warranty risks)
- Financial risks (order backlog risks, sales risks, fiscal risks, market-related earning risks, other risks)

A matrix is used to assess risks in terms of their probability of occurrence and their potential impacts on earnings. The definitions used are explained below.

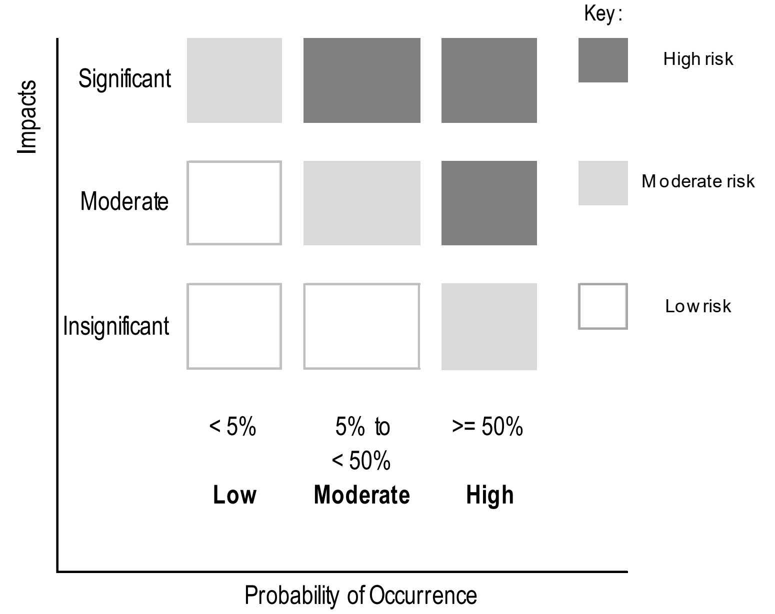
Definitions

Degree of impact	Definition of impact
Insignificant	Only insignificant, limited negative impacts on the earnings situation (net losses < EUR 10 million[20])
Moderate	Some negative impacts on the earnings situation (net losses >= EUR 10 million and < EUR 20 million[20])
Significant	Considerable negative impacts on the earnings situation (net losses >= EUR 20 million[20])

Probability of occurrence	Description
< 5%	Low
5% to < 50%	Moderate
>= 50%	High

[20] per risk category

Evaluation Matrix



RELATIVE IMPORTANCE OF RISK CATEGORIES

Risk category	Risk of occurring	Impact on profit situation[21]	Risk assessment
Asset risks	Moderate	Insignificant	Low
Currency risks	N/A	Insignificant	Low/moderate
Contractual risks	Low	Insignificant	Low
Financial risks	Moderate	Insignificant	Low

OVERALL ASSESSMENT OF THE RISK SITUATION

The implemented risk management system is highly regarded within the Group and is an integral component of the business processes. It ensures that control mechanisms and measures to avoid and reduce risk are effective.

The Group's management controlling department and risk panel continuously monitor the risk reporting system and take steps to keep improving the quality of risk management, which is checked and assessed by the auditor each year to ensure that it is being properly and effectively practiced.

No risks that could endanger the continued existence of Zeppelin GmbH or its subsidiaries existed during the year under review, nor are any such risks now discernible for the future.

[21] per risk category

2 Opportunities

Actively searching for and taking advantage of opportunities while simultaneously weighing the associated risks is a key task of entrepreneurial activity and thus also of the management of ZEP and all its subsidiaries. The goal is to strengthen and further expand Zeppelin's position as a leading and successful provider of forward-looking solutions in the areas of construction equipment, rentals, construction logistics, drives and energy, plant engineering and new digital business models across Zeppelin's competencies. In this respect, Zeppelin implemented and continued a number of strategic initiatives in 2018 designed to ensure the profitability of the Group over the long term. In 2018, this mainly included strategic company acquisitions, the expansion of business areas, and measures for further developing digital solutions in the core segments.

The Group has also expanded the nationwide presence of the Quality Service business area of the Plant Engineering SBU. In the course of this expansion, the Quality Service business area has been renamed as Zeppelin Aviation & Industrial Service. The change of name takes account of the steady expansion of our aviation expertise and our growing range of services. In June 2018, the company opened its doors at its new site near Cologne/Bonn Airport, where a modern training facility for the aviation industry has been built.

An important factor for the future sustainability of the Group is the digitalization strategy, which was further refined and optimized in 2018. It includes the digital business platforms, such as klickrent, which enables users to easily rent construction machines and other equipment with a single click. Secondly, telematics and the increasing networking of components and machines with each other and with the Internet are becoming more and more important. The use and evaluation of data to improve business models and processes is also becoming increasingly important for the Group and is already creating additional benefits for Zeppelin's customers.

Additional measures to digitalize current Group business models will be carried out in coming years. Customers will thus be able to process all major and relevant transactions with Zeppelin digitally. Digitalization will make it much easier to handle current processes and will create the resources for other, more consulting-intensive businesses. In the future, the two models – digital and analog – will work hand in hand to ensure the success of Zeppelin as a company.

3 Compliance

Compliance at Zeppelin is based on the conviction that social responsibility, observance of the law, and ethical conduct are essential for long-term business success. Complying with legal requirements, official regulations, and internal corporate guidelines is a key part of Zeppelin's management and corporate culture. The Group joined the UN Global Compact underscoring its clear commitment to human rights and sustainable corporate management.

The Group's code of conduct is the cornerstone of its compliance program. Employees can contact the internal compliance organization via the Zeppelin Intranet or a special email address. Alternatively, external lawyers also act as contacts. Regular compliance training is supplemented with a multilingual compliance e-learning program. Individual compliance workshops were also conducted in 2017 for an expanded group of managers in collaboration with the Konstanz Institute of Corporate Governance (KICG) at the University of Konstanz.

The Group's compliance program was strengthened further by expanding compliance management within the strategic business units. The compliance officers and employees responsible for implementing the program receive special training on an ongoing basis to train and qualify them for their roles. The compliance officers responsible for the strategic business units have been certified for this position.

D FORECAST

The economic development in 2019 will be significantly influenced by geopolitical factors such as the trade dispute between China and the USA; the sanctions imposed by the USA and the EU against Russia; Brexit; the resurgent debt crisis in Italy; and protectionist tendencies and measures.

The International Monetary Fund has forecast GDP growth to remain at 3.7% for the global economy in 2019. A further slight weakening from 2.0% to 1.9% is forecast for the euro area, while Germany is expected to stagnate at 1.9% economic growth. In the USA, the positive effects of the tax cut will diminish and rising interest rates are likely to dampen growth. The IMF is therefore forecasting growth of only 2.5% for the US economy in 2019. Growth is expected to stabilize at 3.1% in the Czech Republic and to improve slightly to 4.1% in Slovakia. In Russia, GDP is expected to rise slightly to 1.8% in 2019, while Ukraine will have to cope with a downturn in its economic output to 2.7% following the upswing of 2018. The forecasts for Austria (2.2%) and Poland (3.5%) are also downward. While Brazil (2.4%) and India (7.4%) will continue to grow, the Chinese economy will weaken to around 6.2%. This continues the downward trend in China as in the previous year, fueled by the trade conflict with the USA.[22]

Expectations vary regarding the development of Zeppelin's core markets in 2019. The Hauptverband der Deutschen Bauindustrie (Confederation of the German Construction Industry) and the Zentralverband des Deutschen Baugewerbes (Central Association of the German Construction Industry) expect sales growth of 6% in nominal terms and +1.0% in real terms in 2019. Growth is expected in all construction sectors. After the construction machinery industry reached historic highs worldwide in 2018, uncertainty in the industry is somewhat on the rise. The Verband Deutscher Maschinen- und Anlagenbauer (Mechanical Engineering Industry Association/VDMA) poses the question as to how long the boom will last. However, provided there are no extraordinary events in the global economy and world politics, no major slump in the construction machinery sector is expected. The other underlying conditions, such as financing conditions, construction activity and the willingness of the public sector and companies to invest, are good. In addition, 2019 is a "BAUMA year" with additional sales potential.[23]

For the CIS construction machine markets, the positive growth trend is set to continue in 2019, albeit with significantly lower growth rates. The Construction Equipment CIS SBU plans to keep its market share constant in 2019, at 8.5%.

Dealers and rental companies remain optimistic about the rental market in Germany, although expected growth rates will be significantly lower than in previous years. The European Rental Association expects growth of 3.9% for 2019 in terms of the current business situation of the entire construction industry. The Czech rental market continues to develop positively and growth is also forecast for 2019.

In the marine segment, the Power Systems SBU expects further growth in the cruise ship sector. Constant sales volume is expected for the energy sector. The German locomotive market will remain at a rather low level in 2019, albeit with growth prospects in subsequent years. No significant impetus is expected for the oil and gas segment. Further growth is expected in the industrial sector, which will create a continuous utilization of production capacities.

In 2019, the core markets of the Plant Engineering SBU will continue to consist primarily of the plastics, rubber, tire and baking industries. Good and stable market conditions are still assumed despite economic and geopolitical risks.

As a result of the conversion of the Group's accounting to International Financial Reporting Standards (IFRS) as of December 31, 2018, Group and business unit planning and controlling will be carried out on the basis of key figures based on IFRS. For the fiscal year 2019, the Group expects a moderate or significant decline in sales and net profit before taxes. Return on capital employed (ROCE) is expected to fall moderately. Zeppelin GmbH expects strong growth in the annual net profit according to IFRS for 2019 (adjusted for the special effect of value allowances on participations in 2018, Zeppelin GmbH also expects strong growth). There are no major differences with respect to the net income in the financial statement for ZEP between IFRS and the German Commercial Code.

E PROPOSED ALLOCATION OF PROFITS

Based on the net retained profits of EUR 358,252 thousand, the Management Board proposes distributing a regular dividend of 18% of net profit attributable to the shareholders of Zeppelin GmbH (EUR 88,462 thousand) from the net retained profits of Zeppelin GmbH, or EUR 15,923 thousand for fiscal year 2019 and carrying EUR 342,329 thousand forward to new account.

[22] IMF World Economic Outlook Database, October 2018
[23] VDMA Economic Outlook December 2018

Friedrichshafen, March 8, 2019

The Management Board of Zeppelin GmbH

Peter Gerstmann | Michael Heidemann | Christian Dummler | Alexandra Mebus

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

ZEPPELIN GMBH FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2018

in kEUR	No	2018	2017
Sales	1	2.896.948	2.621.603
Cost of sales	2	-2.456.509	-2.224.516
Gross profit on sales		**440.438**	**397.087**
Research and development costs		-5.956	-3.665
Selling expenses		-182.833	-173.820
General administrative expenses		-126.576	-129.824
Other income	3	48.012	47.465
Other expenses	4	-29.849	-25.033
Impairment of financial instruments and contract assets (net)		318	-1.697
Share in the result of companies accounted for using the equity method		1.375	1.215
Earnings before financial result		**144.929**	**111.728**
Interest result	6	-14.361	-17.348
thereof, interest expense	6	-18.715	-20.905
thereof, interest income	6	4.354	3.557
Other financial result	6	259	3.335
thereof, other financial expenses	6	-3.105	-2.682
thereof, other financial income	6	3.364	6.017
Net financial result		**-14.101**	**-14.013**
Net profit or loss before tax		**130.827**	**97.715**
Income taxes	7	-40.828	-34.720
Net profit or loss after tax		**89.999**	**62.995**
thereof, attributable to non-controlling interests		1.537	776
thereof, attributable to the shareholders of Zeppelin GmbH		88.462	62.219

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

ZEPPELIN GMBH FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2018

in kEUR	2018	2017
Net profit or loss after tax	**89.999**	**62.995**
Remeasurements of post-employment benefit obligations	-702	-1.571
Income taxes	149	531
Items that will not be reclassified to profit	**-552**	**-1.039**
Exchange differences on the translation of foreign operations	-2.648	-6.454
Hedging gains or losses including transfer to profit or loss	-1.753	1.161
Income taxes	453	-339
Miscellaneous other comprehensive income	0	0
Items that may be reclassified to profit or loss	**-3.948**	**-5.632**
Other comprehensive income after tax	**-4.500**	**-6.672**
Total comprehensive income	**85.499**	**56.323**
thereof, attributable to non-controlling interests	1.474	434
thereof, attributable to the shareholders of Zeppelin GmbH	84.025	55.890

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

ZEPPELIN GMBH AS OF DECEMBER 31, 2018

in kEUR	No	12/31/2018	12/31/2017	1/1/2017
Assets				
Current assets				
Cash and cash equivalents	9	67.178	91.175	170.588
Financial assets	10	17.372	19.514	16.056
Trade receivables	10	369.700	348.601	268.047
Contract assets	11	32.199	22.633	31.807
Other assets	12	43.874	33.268	32.576
Income tax receivables		3.388	4.727	3.974
Inventories	13	497.557	464.350	424.562
		1.031.269	**984.267**	**947.610**
Non-current assets				
Financial assets	14	27.434	22.721	19.923
Trade receivables	14	12.147	13.705	14.184
Other assets	12	51.984	50.997	43.727
Current income tax receivables		167	243	108
Investments accounted for using the equity method	15	18.870	17.619	14.426
Intangible assets	16	51.749	37.131	26.604
Property, plant, and equipment	17	1.117.947	1.071.612	1.013.528
Deferred taxes	7	72.059	74.952	77.590
		1.352.358	**1.288.979**	**1.210.089**
		2.383.627	**2.273.247**	**2.157.698**

in kEUR	No	12/31/2018	12/31/2017	1/1/2017
Equity and liabilities				
Current liabilities				
Financial liabilities	18	82.066	92.960	160.546
Trade payables	18	133.066	109.923	84.633
Other financial liabilities	18	118.748	91.895	92.274
Contract liabilities	11	119.263	152.671	146.521
Other liabilities	19	94.713	80.605	66.598
Income tax liabilities		9.790	12.391	11.355
Employee benefits	21	84.416	77.373	69.496
Other provisions	22	36.218	30.230	31.265
		678.281	**648.048**	**662.689**
Non-current liabilities				
Financial liabilities	20	512.050	496.263	452.947
Trade payables	20	0	166	233
Other financial liabilities	20	148.272	155.604	126.780
Contract liabilities	11	14.156	14.622	13.979
Other liabilities	19	61.543	64.023	57.752
Income tax liabilities		15.285	9.805	2.946
Employee benefits	21	138.332	141.775	143.842
Other provisions	22	6.978	6.447	4.255
Deferred taxes	7	37.345	40.109	42.143
		933.961	**928.814**	**844.876**
Equity				
Share capital	23	100.000	100.000	100.000
Capital reserves	23	60.000	60.000	60.000
Retained earnings	23	614.817	536.744	484.548
Accumulated other comprehensive income	23	-10.766	-6.329	0
Equity attributable to the shareholders of Zeppelin GmbH		**764.051**	**690.416**	**644.548**
Non-controlling interests	23	7.334	5.969	5.585
		771.385	**696.385**	**650.133**
		2.383.627	**2.273.247**	**2.157.698**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

ZEPPELIN GMBH FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2018

in kEUR	Share capital	Capital reserves	Retained earnings	Accumulated other comprehensive income			Equity attributable to the shareholders of Zeppelin GmbH	Non-controlling interests	Equity
				Remeasurement of post-employment benefit obligations	Exchange differences on the translation of foreign operations	Hedging gains or losses			
1/1/2017 (HGB)	**100.000**	**60.000**	**506.013**	**0**	**-37.342**	**0**	**628.671**	**4.687**	**633.357**
Transition to IFRS	0	0	-21.465	0	37.342	0	**15.878**	898	**16.776**
1/1/2017 (IFRS)	**100.000**	**60.000**	**484.548**	**0**	**0**	**0**	**644.548**	**5.585**	**650.133**
Net profit or loss after tax			62.219				**62.219**	776	**62.995**
Other comprehensive income				-1.039	-6.112	822	**-6.329**	-342	**-6.672**
Dividends			-10.000				**-10.000**	-49	**-10.049**
Other changes			-22	0	0	0	**-22**	0	**-22**
31.12.2017	**100.000**	**60.000**	**536.745**	**-1.039**	**-6.112**	**822**	**690.416**	**5.969**	**696.385**
Net profit or loss after tax			88.462				**88.462**	1.537	**89.999**
Other comprehensive income				-552	-2.585	-1.300	**-4.438**	-63	**-4.501**
Dividends			-10.367				**-10.367**	-109	**-10.476**
Other changes			-22				**-22**	0	**-22**
31.12.2018	**100.000**	**60.000**	**614.817**	**-1.592**	**-8.697**	**-477**	**764.051**	**7.334**	**771.385**

CONSOLIDATED STATEMENT OF CASH FLOWS

ZEPPELIN GMBH FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2018

in kEUR	2018	2017
Net profit or loss after tax	**89.999**	**62.995**
Income taxes	40.828	34.720
Net profit or loss before tax	**130.827**	**97.715**
Depreciation, amortization, impairments and reversals of impairment losses	206.127	193.017
thereof, intangible assets	6.558	3.996
thereof, property, plant and equipment excluding rental fleet	55.682	51.252
thereof, rental fleet	143.702	136.750
thereof, financial assets	185	1.019
Share in the result of companies accounted for using the equity method	-1.375	-1.215
Change in post-employment benefit obligations	-4.583	-3.493
Change in long-term provisions	676	1.965
Unrealized foreign exchange gains/losses	1.775	-1.744
Interest income and expenses	14.361	17.348
Income from other participations	-1.128	-394
Other non-cash income/expenses	-3.246	-7.176
Income from asset disposals	421	-221
Change in inventories	-44.292	-51.214
Change in trade receivables	-14.418	-80.075
Change in other receivables and assets	-17.289	-2.445
Change in trade payables	21.217	25.315
Change in other payables and other liabilities	-4.223	42.555
Income taxes received	1.932	3.929
Income taxes paid	-29.874	-14.835
Cash flow from operating activities	**256.907**	**219.031**

in kEUR	2018	2017
Cash flow from operating activities	**256.907**	**219.031**
Payments for investments in		
Intangible assets	-18.061	-14.444
Property, plant and equipment excluding rental fleet	-49.851	-43.535
Rental fleet	-303.402	-283.824
Financial assets	-429	-5.372
Proceeds from the sales of		
Intangible assets	113	42
Property, plant and equipment excluding rental fleet	5.336	3.924
Rental fleet	128.492	112.564
Financial assets	77	3.236
Net cash flow from business combinations	-9.489	0
Interest received	1.906	2.401
Dividends received	1.128	394
Cash flow from investment activities	**-244.180**	**-224.614**
Proceeds from long-term borrowings	7.515	43.015
Repayment of long-term borrowings	0	-1.959
Net proceeds and repayments of short-term borrowings	4.211	670
Proceeds from the conclusion of SLB transactions	72.369	9.989
Payments for SLB liabilities	-74.991	-72.315
Payments for lease liabilities	-21.306	-22.793
Interest paid	-13.498	-17.383
Dividends paid to shareholders of Zeppelin GmbH	-10.367	-10.000
Distributions made to non-controlling shareholders	-109	-49
Cash flow from financing activities	**-36.175**	**-70.825**
Changes in cash and cash equivalents	**-23.447**	**-76.408**
Cash and cash equivalents at the beginning of the period	**91.175**	**170.588**
Changes in cash and cash equivalents	-23.447	-76.408
Foreign exchange rate differences in cash and cash equivalents	-550	-3.005
Cash and cash equivalents at end of the period	**67.178**	**91.175**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

OF ZEPPELIN GMBH FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2018

A COMPANY

The Zeppelin Group (hereinafter "Zeppelin" or "Group") provides solutions for the following areas: construction and agricultural equipment, rental equipment, construction logistics, drives and energy, engineering, and plant engineering. The Group is legally domiciled in Friedrichshafen, with its headquarters located in Garching near Munich. The consolidated financial statements comprise Zeppelin GmbH and its subsidiaries.

Group-wide collaboration at Zeppelin revolves around a management holding company and six strategic business units (hereinafter "SBU"): Construction Equipment EU, Construction Equipment CIS, Rental, Power Systems, Plant Engineering, and Z Lab. The structure supports the bundling of operations and the targeted orientation of the business models towards various markets and customers.

Zeppelin GmbH is a *Kapitalgesellschaft* (corporation) whose voting rights are held 96.25% by Luftschiffbau Zeppelin GmbH, Friedrichshafen, and 3.75% by the Zeppelin Foundation. The Zeppelin Foundation is administered by the City of Friedrichshafen. The Zeppelin Foundation holds 90.0% of the shares in Luftschiffbau Zeppelin GmbH; the remaining 10.0% are held by Zeppelin GmbH. Based on an agreement concluded between Zeppelin GmbH and Luftschiffbau Zeppelin GmbH on November 7, 2011, control is passed through to the Zeppelin Foundation, which therefore is the ultimate parent company of Zeppelin GmbH. The Zeppelin Foundation does not have legal personality and does not prepare consolidated financial statements. That is why Zeppelin GmbH is obliged to prepare Group financial statements in accordance with Section 290 (1) sentence 1 HGB (German Commercial Code).

B BASIS OF PREPARATION

As a non-publicly traded company, Zeppelin GmbH makes use of the option under Section 315e (3) HGB to prepare its consolidated financial statements in accordance with IFRS.

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS and IAS) and Interpretations (IFRIC and SIC) adopted into European law by the European Commission as at the reporting date. The International Accounting Standards are drawn up by the International Accounting Standards Board (IASB) while the interpretations are designed by the International Financial Reporting Standards Interpretations Committee (IFRSIC). These bodies are supported by a private foundation based in London (GB), the International Accounting Standards Foundation.

The fiscal year corresponds to the calendar year. All figures are presented in euros, the functional currency of the Group, and have been rounded up or down to the nearest thousand euros (kEUR). Rounding may result in rounding differences.

The consolidated financial statements are prepared in accordance with the historical cost convention with exceptions made for e.g. for derivatives and participations, which are measured at fair value.

Due to the first-time adoption of IFRS, the consolidated financial statements include comparative information for the previous reporting period as well as for the opening balance sheet as at January 1, 2017 including the corresponding disclosures.

The consolidated financial statements have been authorized for submission to the shareholders and to the Supervisory Board of Zeppelin GmbH on March 8, 2019 by the Management Board. The shareholders may request changes or amendments to the consolidated financial statements in the course of approval.

ACCOUNTING STANDARDS APPLIED

Early Adoption of New and Amended Standards

In the fiscal year 2018, Zeppelin early adopted the following standard:

IFRS 16 - Leases

IFRS 16 introduces an accounting model under which (with few exceptions) leases are recognized in the balance sheets of lessees. A lessee recognizes a right of use that represents its right to use the underlying asset and a lease liability that represents its obligation to make lease payments.

Exceptions apply for short-term leases and leases of low-value assets. Lessor accounting is similar to the rules applicable under the previous regulation, which required the lessor to classify leases as finance or operating leases.

IFRS 16 replaces the existing guidance on leases, including IAS 17, IFRIC 4, SIC-15 and SIC-27.

The standard shall be applied for annual periods beginning on or after January 1, 2019. Early adoption is permitted for entities applying IFRS 15 at or before the date of first-time adoption of IFRS 16.

The Group has applied IFRS 16 early using the retrospective approach and making use of the exemptions applicable to first-time IFRS financial statements (see also Section E).

New and Amended Standards not yet Adopted

By the date of preparation of the consolidated financial statements, the IASB and IFRIC had published new and amended existing accounting standards, the first-time application of which is only mandatory or permitted after the balance sheet date. The regulations and expected effects of their application on the Group financial statements are presented below:

Accounting standard		First application	Brief summary
IFRIC 23	Uncertainty over income tax treatments	1/1/2019	Clarification as to how the recognition and measurement of provisions under IAS 12 are to be applied where there is uncertainty over income tax matters. Provisions have been made for possible charges arising from tax audits. Further uncertain income tax matters with material impact on the consolidated financial statements are not expected.
IFRS 9	Prepayment features with negative compensation	1/1/2019	Clarification as to how certain financial instruments with prepayment features are to be classified in accordance with IFRS 9. The consolidated financial statements of Zeppelin GmbH do not include any such financial instruments.
IAS 28	Investments in associates and joint ventures	1/1/2019	The amendment clarifies that an entity shall apply IFRS 9 to long-term investments in an associate or joint venture only if those parts of a net investment in that associate or joint venture are not accounted for using the equity method. No material impact on the consolidated financial statements is expected.
IAS 19	Plan amendments, curtailments or settlements	1/1/2019	The changes mainly relate to the recognition of an amendment, curtailment or settlement of a defined benefit plan. No material impact on the consolidated financial statements is currently expected.
IFRS 3, IFRS 11, IAS 12, IAS 23	Annual improvements 2015 to 2017	1/1/2019	No material impact on the consolidated financial statements is expected.
Conceptual framework in IFRS standards	Adjustment of cross-references to the concept framework in IFRS standards	1/1/2020	Adjustments to cross-references within accounting standards have no impact on accounting, valuation, presentation or disclosure.
IFRS 17	Insurance contracts	1/1/2021	Rules on accounting for insurance contracts are not relevant to Zeppelin.
IFRS 10, IAS 28	Sales or contributions of assets between an investor and its associate/joint venture	Still open	Sale or contribution of assets between an investor and an associated company or joint venture. Impacts on Zeppelin's accounting are still under review.

Consolidated Group

Subsidiaries

The following subsidiaries are included in the consolidated financial statements:

Name	Registered office	Equity share in %		
		12/31/2018	12/31/2017	1/1/2017
Zeppelin GmbH	Germany	-	-	-
AT Baumaschinentechnik Beteiligungs GmbH	Germany	100.0	100.0	100.0
Baustellen-Verkehrs-Technik GmbH	Germany	100.0	-	-
BIS Inspection Service GmbH	Germany	100.0	100.0	100.0
Fast Rent GmbH (merged into Zeppelin Rental GmbH in 2018)	Germany	-	100.0	100.0
Zeppelin Baumaschinen GmbH	Germany	100.0	100.0	100.0
Zeppelin Lab GmbH (formerly Klickrent GmbH)	Germany	100.0	100.0	100.0
Zeppelin Power Systems GmbH & Co. KG	Germany	100.0	100.0	100.0
Zeppelin Power Systems Verwaltungs GmbH	Germany	100.0	100.0	100.0
Zeppelin Rental GmbH	Germany	100.0	100.0	100.0
Zeppelin Rental Verwaltungs GmbH	Germany	100.0	100.0	100.0
Zeppelin Struktur GmbH	Germany	100.0	100.0	100.0
Zeppelin Systems GmbH	Germany	100.0	100.0	100.0
Zeppelin Armenien OOO	Armenia	100.0	100.0	100.0
Zeppelin Systems Benelux N.V.	Belgium	100.0	100.0	100.0
Zeppelin Systems Latin America Equipamentos Industriais Ltda.	Brazil	100.0	100.0	100.0
Zeppelin Systems China (Beijing) Co. Ltd.	China	100.0	100.0	100.0
Zeppelin Systems China (Shanghai) Co. Ltd.	China	60.0	60.0	60.0
Zeppelin Systems UK Limited	England	100.0	100.0	100.0
Zeppelin Systems France S.A.R.L.	France	100.0	100.0	100.0
Zeppelin Systems India Pvt. Ltd.	India	100.0	100.0	100.0
Nuova Ciba S.p.A.	Italy	100.0	-	-
Zeppelin Systems Italy S.r.l.	Italy	90.0	90.0	90.0
Zeppelin Österreich GmbH	Austria	100.0	100.0	100.0
Zeppelin Rental Österreich Verwaltungs GmbH	Austria	100.0	100.0	100.0
Zeppelin Rental Österreich GmbH & Co. KG	Austria	100.0	100.0	100.0
Zeppelin Polska Sp. z o.o.	Poland	100.0	100.0	100.0
PRIME Machinery OOO (merged into Zeppelin Russland OOO in 2018)	Russia	-	100.0	100.0
Zeppelin Immobilien Russland OOO	Russia	100.0	100.0	100.0
Zeppelin Power Systems Russland OOO	Russia	100.0	100.0	100.0
Zeppelin Russland OOO	Russia	100.0	100.0	100.0
Zeppelin Systems Gulf Co. Ltd.	Saudi Arabia	100.0	100.0	100.0
Zeppelin International AG	Switzerland	100.0	100.0	100.0
Zeppelin Systems Singapore Pte. Ltd.	Singapore	100.0	100.0	100.0
DIMA service for plant engineering s. r.o.	Slovakia	100.0	100.0	100.0

Name	Registered office	Equity share in %		
		12/31/2018	12/31/2017	1/1/2017
Zeppelin SK s.r.o.	Slovak Republic	100.0	100.0	100.0
Zeppelin Systems Korea Corporation	South Korea	100.0	100.0	100.0
Zeppelin Tajikistan OOO.	Tajikistan	100.0	100.0	100.0
Zeppelin CZ s.r.o.	Czech Republic	100.0	100.0	100.0
Zeppelin Turkmenistan JV	Turkmenistan	100.0	100.0	100.0
Zeppelin Ukraine TOV	Ukraine	100.0	100.0	100.0
Zeppelin Central Asia Machinery OOO	Uzbekistan	100.0	100.0	100.0
Zeppelin Systems USA Inc.	United States of America	100.0	100.0	100.0
Zeppelin Belarus OOO	Belarus	100.0	100.0	100.0

The following subsidiaries are not included in the consolidated financial statements because their non-inclusion has no material impact on the presentation of the net assets, financial position and earnings.

The shares in these companies are measured at fair value through profit or loss. The fair values largely correspond to the historical acquisition costs.

Name	Registered office	Equity share in %		
		12/31/2018	12/31/2017	1/1/2017
MWB Marine Services GmbH	Germany	60.0	60.0	-
Zeppelin SkySails Sales & Service GmbH & Co. KG	Germany	-	75.0	75.0
Zeppelin SkySails Sales & Service Verwaltungs GmbH & Co. KG	Germany	90.0	67.0	67.0
Reimelt Ltda. (liquidated in 2018)	Brazil	-	90.0	90.0
PJSC "Ukrcukorteploi-zolyaciya" (UCTI)	Ukraine	98.0	98.0	98.0

Joint ventures

The following joint ventures are included in the consolidated financial statements using the equity method:

Name	Registered office	Equity share in %		
		12/31/2018	12/31/2017	1/1/2017
Fehmarnbelt Solution Services A/S	Denmark	50.0	50.0	50.0

The subsidiary Zeppelin Rental GmbH holds a 50.0% interest in the joint venture Fehmarnbelt Solution Services A/S in Greve (Denmark). Decisions are made jointly with the second shareholder, Ramirent Plc. Fehmarnbelt Solution Services A/S is responsible for overseeing the major construction site "Fehmarn Belt Fixed Link". The service portfolio includes temporary premises and infrastructure solutions, equipment rental, maintenance and service, logistics planning and management, energy and climate solutions, facilities management, access control, and disposal. Fehmarnbelt Solution Services A/S is not listed on the stock exchange.

In accordance with the articles of incorporation, the parties are entitled to all the economic benefits arising from the joint agreement up to the amount of the capital contribution. Zeppelin has a residual claim in this respect to the net assets of Fehmarnbelt Solution Services A/S.

Associates

The following associates are included in the consolidated financial statements using the equity method:

Name	Registered office	Equity share in %		
		12/31/2018	12/31/2017	1/1/2017
Smart Controls India Ltd.	India	40.0	40.0	-
CZ Loko a.s.	Czech Republic	49.0	49.0	49.0

Zeppelin Systems GmbH holds a 40.0% interest in Smart Controls India Ltd., whose registered office is in Gwalior, India, with effect from August 1, 2017 via Zeppelin Systems India Pvt. Ltd. The company focuses on automation solutions as well as control technology for the rubber, carbon black and tire industry. It also serves as a production location for switch cabinet construction.

CZ Loko, a.s., whose registered office is in Česká Třebová (Czech Republic), is an associated company accounted for using the equity method and is a strategic sales partner of Zeppelin. The company mainly manufactures, repairs and sells railway traction vehicles, metal structures, and machinery. Zeppelin CZ s.r.o. holds 49.0% of the shares and thus participates in the decision-making process. In addition, the Management Board and commercial management of Zeppelin CZ s.r.o. is a member of the Supervisory Board of CZ Loko.

Subsidiaries with significant non-controlling interests
The consolidated financial statements include the following subsidiaries with significant non-controlling interests**.**

Name	Registered office	Non-controlling interests in %		
		12/31/2018	12/31/2017	1/1/2017
Zeppelin Systems China (Shanghai) Co. Ltd	China	40.0	40.0	40.0
Zeppelin Systems Italy S.r.l.	Italy	10.0	10.0	10.0

The following tables present financial information on Zeppelin Systems Italy S.r.l. before intragroup eliminations:

in kEUR	Zeppelin Systems Italy S.r.l.		
	12/31/2018	12/31/2017	1/1/2017
Share in net assets			
Current assets	6.578	12.260	4.764
Non-current assets	830	837	902
Current liabilities	-3.150	-8.071	-1.739
Non-current liabilities	-1.292	-1.162	-935
	2.965	**3.864**	**2.992**
Share in %	10,0	10,0	10,0
	297	**386**	**299**

in kEUR	Zeppelin Systems Italy S.r.l.	
	2018	2017
Share in net profit or loss after tax		
Sales	17.787	14.803
Net profit or loss	190	1.364
Share in %	10,0	10,0
	19	**136**

in kEUR	Zeppelin Systems Italy S.r.l. 2018	2017
Share in cash flow from operating activities		
Cash flow from operating activities	-599	2.954
Share in %	10,0	10,0
	-60	**295**
Share in cash flow from investment activities		
Cash flow from investment activities	-1	5
Share in %	10,0	10,0
	0	**1**
Share in cash flow from financing activities		
Cash flow from financing activities	-1.124	-584
Share in %	10,0	10,0
	-112	**-58**
Dividends	**109**	**49**

The following tables present the financial information on Zeppelin Systems China (Shanghai) Co. Ltd. before intragroup eliminations:

in kEUR	Zeppelin Systems China (Shanghai) Co. Ltd. 12/31/2018	12/31/2017	01.01.2017
Share in net assets			
Current assets	47.465	19.304	18.888
Non-current assets	5.375	10.252	11.419
Current liabilities	-35.248	-14.349	-14.787
Non-current liabilities	0	-1.244	-2.307
	17.592	**13.963**	**13.214**
Share in %	40,0	40,0	40,0
	7.037	**5.585**	**5.285**

in kEUR	Zeppelin Systems China (Shanghai) Co. Ltd. 2018	2017
Share in net profit or loss after tax		
Sales	48.894	14.598
Net profit or loss	3.786	1.605
Share in %	40,0	40,0
	1.515	**642**

in kEUR	Zeppelin Systems China (Shanghai) Co. Ltd. 2018	2017
Share in cash flow from operating activities		
Cash flow from operating activities	7.928	4.865
Share in %	40,0	40,0
	3.171	**1.946**
Share in cash flow from investing activities		
Cash flow from investment activities	69	-43
Share in %	40,0	40,0
	27	**-17**
Share in cash flow from financing activities		
Cash flow from financing activities	0	0
Share in %	40,0	40,0
	0	**0**
Dividends		**0**

Business Combinations

Zeppelin Rental GmbH (hereinafter "ZRD") acquired all shares and voting rights in Baustellen-Verkehrs-Technik GmbH, Barleben/Berlin (hereinafter "BVN") from the sole shareholder Eberhard Nonn with effect from January 1, 2018. BVN is a regional traffic safety company in East Germany and offers its customers services such as safety measures, construction site markings, traffic lights, stationary signage, and planning services. The acquisition strengthens the market position in the construction site traffic safety segment.

In addition, Zeppelin Systems GmbH (hereinafter "ZSD") acquired all shares and voting rights in Nuova Ciba SPA Reggio Emilia, Italy (hereinafter "NCI") by purchase agreement dated February 15, 2018 and with economic effect from January 1, 2018. Control was transferred on February 15, 2018. Founded in 1960, NCI specializes in the design and manufacture of complete automated systems for the transport, storage, and weighing of solids, powders, and liquid materials for the rubber and tire industry. The acquisition further strengthens the market position in Southern Europe and North Africa in this market segment. NCI employs 36 staff.

The acquisitions were made at the fair value of the assets and liabilities transferred. At the time of acquisitions, the fair values were as follows:

in kEUR	
Assets	
Current assets	
Cash and cash equivalents	2.637
Other financial assets	899
Receivables	5.123
Other assets	1.706
Inventories	163
	10.528
Non-current assets	
Intangible assets	3.134
Property, plant, and equipment	1.696
Deferred taxes	204
	5.034
	15.562
Debts	
Current liabilities	
Liabilities	3.391
Provisions	712
	4.103
Non-current liabilities	
Financial liabilities	1.414
Deferred taxes	748
	2.162
	6.265
Net assets	**9.297**

The gross amounts of receivables correspond to their fair values. No doubtful receivables were identified.

In the previous year, Zeppelin Rental GmbH & Co. KG (now ZRD) acquired all shares and voting rights in Limes mobil GmbH Verkehrssicherung, Berlin (hereinafter "Limes"), from Saferoad RRS GmbH, WWeroth, with effect from January 1, 2017. In the course of the acquisition, Limes was merged into ZRD.

Limes has been active on the market since 1997 and offers its customers professional site and traffic guidance for day-day and large construction sites. Limes also offers concrete safety barriers. With the purchase, 37 employees were taken over. The market position in the site and traffic guidance segment has been strengthened.

The acquisition was made at the fair value of the assets and liabilities transferred. At the time of acquisition, the fair values were as follows:

in kEUR	
Assets	
Current assets	
Cash and cash equivalents	332
Other financial assets	28
Receivables	2.607
Other assets	11
Inventories	249
	3.227
Non-current assets	
Intangible assets	1
Property, plant, and equipment	4.759
	4.760
	7.987
Debts	
Current liabilities	
Liabilities	5.873
Provisions	311
	6.184
Non-current liabilities	
Financial liabilities	5.610
thereof, shareholder loans	5.610
	5.610
	11.794
Net assets	**-3.807**

The shareholder loan was repaid in the course of the acquisition.

The gross amount of receivables equals EUR 2,713 thousand. It is assumed that a partial amount of EUR 112 thousand is not recoverable.

C ACCOUNTING POLICIES

With exception of the exemptions and exceptions applicable for the opening balance sheet as at 1/1/2017 (fist-time adoption according to IFRS 1), Zeppelin has consistently applied the following accounting policies in all periods presented.

CONSOLIDATION AND INVESTMENTS

The Group financial statements comprise Zeppelin GmbH and its subsidiaries. A subsidiary is a company which is directly or indirectly controlled by Zeppelin GmbH. Control exists when Zeppelin has control over the investments in subsidiaries, is exposed to risk from, or is entitled to, fluctuating rates of return on its investment in the associated company, or has the ability to influence the level of return on the associated company. If facts and circumstances indicate that one or more of the three elements of control have changed, Zeppelin examines whether an investment in subsidiaries is controlled. In the case of structured companies, control may arise from contractual arrangements.

Zeppelin assigns the consolidated net profit after taxes and each component of other Group earnings to the shareholders of Zeppelin GmbH and those of the non-controlling interests. The overall result is allocated to the shareholders of Zeppelin GmbH and the non-controlling interests even if this results in a negative balance for the interests of non-controlling interests.

An entity is included in the Group financial statements from the date on which Zeppelin obtains control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the reporting period are recognized in the Group financial statements from the date on which Zeppelin obtains control of the subsidiary until the date on which control ceases.

All intragroup assets and liabilities, equity, income and expenses and cash flows from transactions between Group companies are eliminated on consolidation.

Uniform accounting and valuation principles are used for preparing the annual statements of those companies included in the Group financial statements.

A list of the subsidiaries of Zeppelin GmbH is included in the "Consolidated Group" section.

When the shareholding of non-controlling interests in equity changes, the carrying amounts of the controlling and non-controlling interests are adjusted to reflect the changes in their relative ownership interests in the subsidiary. Zeppelin recognizes any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received directly in equity and allocates it to Zeppelin GmbH shareholders.

Consolidation ends when Zeppelin relinquishes control of the subsidiary. In this case, the associated assets (including goodwill), liabilities, non-controlling interests and other components of equity are derecognized. Any resulting gain or loss is recognized in the statement of profit or loss. Any retained investment is accounted for either at fair value or, in the case of investments in associates and joint ventures, using the equity method.

Business combinations are accounted for using the acquisition method. The acquisition costs arising from the company acquisition are measured as the sum of the consideration transferred, which is measured at the fair value at the time of acquisition, and the value of the non-controlling interests in the acquired company. For each business combination, Zeppelin determines whether non-controlling interests are measured at fair value or at the proportionate share of the acquired entity's identified net assets. The costs arising from the business combination are recognized as administrative expenses. Goodwill arising from a business combination is initially measured at cost, being the difference between the sum of the consideration transferred, the amount of non-controlling interests and the previously held interests over the identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired exceeds the total consideration transferred, the difference is recognized in the statement of profit or loss. Goodwill is tested for impairment annually and written down to the lower recoverable amount if necessary.

Entities measured using the equity method include investments in associates and joint ventures.

Associates are entities in which Zeppelin has significant influence over the financial and operating policies, but does not control them completely or controls them through joint control. A joint venture results from an agreement in which the parties exercise joint control and share the rights to the net assets of the joint venture.

Investments in associates and joint ventures are accounted for using the equity method. The investment is initially recognized at cost but subsequently adjusted for any changes in Zeppelin's share of the net assets of the associated company or joint venture.

Zeppelin's share of the net profit after tax of the associated company or joint venture is reported in the Group income statement, its share of other income in other comprehensive income.

Where necessary, adjustments are made to the uniform Group accounting and valuation methods.

Zeppelin determines annually at the balance sheet date whether there is any objective evidence that the investment in an associated company or joint venture may be impaired.

Intragroup balances and transactions as well as income and expenses from intragroup transactions are eliminated when preparing the Group financial statements.

Gains and losses on transactions with companies accounted for using the equity method are eliminated against Zeppelin's interest in the associated company to the amount of Zeppelin's interest. However, losses are only eliminated to the extent that there is no indication of impairment. When the associated company sells the products resulting from intragroup deliveries, these corrections are reversed in the income statement or in subsequent years by adjusting the Group retained earnings.

Foreign Currency Valuation

Each company translates foreign currency transactions into the functional currency of that company at the transaction date. In subsequent periods, companies measure monetary assets and liabilities at the closing rate. Non-monetary items denominated in foreign currencies continue to be measured at the historical exchange rate at the transaction date. Currency translation differences arising from measurement in the functional currency of the respective company are recognized in the statement of profit or loss.

Assets and liabilities of companies not belonging to the eurozone are translated into the reporting currency of the Group (euro) at the closing rate, income and expenses at the average rate of their respective functional currency. Differences arising from translation using the reporting currency are recognized in other comprehensive income.

	12/31/2018	12/31/2017	1/1/2017
Closing rate			
EUR/CZK	25,72	25,54	27,02
EUR/GBP	0,89	0,89	0,86
EUR/PLN	4,30	4,18	4,41
EUR/RUB	79,72	69,39	64,30
EUR/USD	1,15	1,20	1,05
EUR/UAH	31,71	33,50	28,42

	2018	2017
Average rate		
EUR/CZK	25,65	26,33
EUR/GBP	0,88	0,88
EUR/PLN	4,26	4,26
EUR/RUB	74,04	65,94
EUR/USD	1,18	1,13
EUR/UAH	32,13	30,08

Impairment Tests

At each balance sheet date, Zeppelin determines whether there is any indication that an asset may be impaired. If such an indication exists, Zeppelin performs an impairment test.

In order to carry out impairment tests, the assets concerned must generate cash inflows that are largely independent of those attributable to other assets. This applies to individual assets only in a few cases. Generally, individual assets must be combined into larger cash-generating units (CGUs) for the impairment test.

For the impairment test, the carrying amount of the CGU or the individual asset is compared with the recoverable amount. The recoverable amount represents the amount that Zeppelin can realize by continuing to include the CGU or individual asset into its operations (represented by value in use) or by selling it (represented by fair value less costs to sell). If the recoverable amount is less than the carrying amount of the asset or CGU, an impairment loss to the recoverable amount is recognized as an expense.

Goodwill acquired in business combinations is allocated to those CGUs or groups of CGUs that are expected to benefit from the synergies of the combination. For Zeppelin, each SBU represents a group of CGUs to which goodwill is allocated for impairment testing.

Zeppelin generally determines the recoverable amount of CGUs or individual assets at fair value less costs to sell. The DCF method is applied. The cash flows used for the calculation are derived from the mid-term plan approved by management for the next three years on an after-tax basis. The expected cash flows after this period are extrapolated using growth rates. The growth rate corresponds to 1.0% (12/31/2017: 1.0%; 1/1/2017: 1.0%). The cost of capital after taxes is used to determine the present value. The fair value determined in this way falls into level 3 of the fair value hierarchy.

If an impairment loss is recognized for a CGU, it is first allocated to the goodwill attributable to that CGU and then allocated proportionately to the remaining carrying amounts of the CGU.

Impairment losses on goodwill are not reversed. For other assets, the reversal of impairment losses is limited to a maximum of amortized cost.

Classification by Maturity

Zeppelin classifies assets and liabilities in the balance sheet according to maturity.

Assets and liabilities are classified as current if their realization is expected within twelve months of the balance sheet date. All other assets and liabilities are classified as non-current.

Bank liabilities under the syndicated credit facility of Zeppelin GmbH are reported under non-current liabilities insofar and as long as the remaining term of the syndicated credit facility agreement at the balance sheet date is at least 12 months.

Sales from Contracts with Customers

Zeppelin recognizes sales when obligations to customers are met by the transfer of an agreed good or the provision of an agreed service.

Sales are measured at the transaction price. The transaction price is the consideration expected to be received by the Group for the transfer of the goods or provision of the services. Variable transaction price components such as rebates, cash discounts, contractual penalties or customer bonuses reduce sales.

Customer payments are generally due upon performance or as milestone payments according to specific payment schedules.

With a few exceptions, Zeppelin generates sales in the project business based on the progress of work performed over a given period.

Zeppelin recognizes sales from services both on a time and period basis. In the case of time-based service provision, sales are recognized at the amount of the billable consideration after the service has been rendered. Period-based recognition of sales is done either according to the performance progress or at the amount of the billable consideration.

If a specified threshold value is exceeded, the performance progress is determined at the ratio of the costs incurred in the period to the estimated total costs. Below this threshold, sales may not be realized in excess of the costs incurred during the period. Contract amendments may result in adjustments to both the transaction price and the performance progress.

Sales from selling products for which Zeppelin has a repurchase obligation (hereinafter "RPO transactions") are recognized as a sale with right of return or as a lease, depending on the contractual arrangements between the sales financing partner and the end customer. If the agreement between the sales financing partner and the end customer includes an option to return the contractual item, it is accounted for as a sale with a right of return. On the other hand, if the agreement contains an obligation for the sales financing partner to take back the asset, it is accounted for as a lease.

For disposals deemed sales with the right of return, Zeppelin estimates the return rate at the time of sale and reduces the proceeds from the sale by the present value of the agreed repurchase prices in accordance with this rate. The present value of the repurchase prices is carried as a liability as a repurchase obligation. The amount of the repurchase obligation is reassessed in each period. Changes in estimates lead to sales corrections in the current fiscal period. If the right of return is not exercised at the end of the contract term, the repurchase obligation is reversed through the income statement against the realization of sales.

For disposals deemed as leases, the proceeds from the disposal are deferred in full – partly as a financial liability, partly as deferred sales – on the liabilities side. The present value of the repurchase prices is carried as a financial liability. The difference between the proceeds from the disposal and the financial liability is carried on the liabilities side as deferred sales and recognized as rental income and interest income on a straight-line basis over the term of the contract.

Rental income relates primarily to operating leases. Income from operating leases is recognized on a straight-line basis over the term of the lease.

Income from warranty extensions is deferred as a liability and recognized on a straight-line basis over the term of the contract.

Construction Equipment EU SBU

The business activities of the Construction Equipment EU SBU mainly comprise the sale, rental, and servicing of construction machines (partly with extended warranty). Contracts from the sale of construction machines and services are not combined.

Sales from selling construction machines are recognized upon delivery and transfer of control to the customer. For bill-and-hold agreements, sales are recognized upon invoicing.

Sales may also be made as RPO transactions. The timing of sales recognition in these cases depends on whether the transaction is classified as a sale with right of return or as a lease.

Sales from service contracts are recognized on a time and period basis.

Construction Equipment CIS SBU

The business activities of the Construction Equipment CIS SBU mainly comprise the sale, rental, and servicing of construction machines and agricultural equipment (partly with extended warranty). Contracts from the sale of construction machines and agricultural equipment and services are not combined.

Sales from the selling of construction machines and agricultural equipment are recognized upon delivery and transfer of control to the customer.

Sales may also be made as RPO transactions. The timing of sales recognition in these cases depends on whether the transaction is classified as a sale with right of return or as a lease.

Sales from service contracts are recognized on a time and period basis.

Rental SBU

The Rental SBU rents out construction machines as well as a wide range of construction equipment, modular room systems, construction site and traffic guidance systems, work platforms, forklifts and lifts, and vehicles. In addition, a comprehensive range of services is offered, including project business.

Rentals and services represent separate performance obligations. The transaction price is allocated to the individual performance obligations on the basis of the contracted prices.

The rental business is carried out by way of an operating lease.

Sales from services are recognized on a time and period basis.

Sales from the project business are recognized at the time of invoicing at the amount of the chargeable consideration.

Power Systems SBU

The business activities of the Power Systems SBU comprise the sale and service of engine and drive solutions (some with extended warranties). In addition, services in the project business are provided through the sale of, inter alia, generating sets for power generation and combined heat and power plants.

Sales from selling engines and drive solutions are recognized upon delivery and transfer of control to the customer. In the case of delivery to consignment warehouses, sales are recognized at the time at which the consignment is delivered to the warehouse, as control passes to the customer at this time.

Sales from servicing are recognized on a time and period basis.

Sales from the project business are mainly recognized on a period basis according to the performance progress.

If a customer receives the option to purchase additional engines at fixed prices at the time the contract is concluded, part of the transaction price is allocated to this option and realized when the option is exercised or lapses.

Plant Engineering SBU

The business activities of the Plant Engineering SBU comprise the development, implementation, and manufacture of customer-specific plants for the storage and processing of high-quality bulk materials, and the development and manufacture of components. In addition, the SBU offers various after-sales and quality services.

Sales from the project business are recognized on a period basis according to the performance progress.

If only development services are offered, sales are recognized when control over the development results is transferred to the customer.

Sales from the selling of components are recognized upon delivery and transfer of control to the customer.

Sales from quality services are recognized at the time of invoicing at the amount of the charged consideration.

Sales from after-sales services are recognized on a time and period basis.

Income Taxes

The tax expense for the period consists of current and deferred taxes. Taxes have been recognized in the statement of profit or loss unless they relate to items recognized directly in equity or in other comprehensive income. In this case, the taxes have been recognized in equity or in other comprehensive income.

The current tax claims and tax liabilities are determined in accordance with the tax regulations applicable on the balance sheet date.

Offsetting of current tax assets and liabilities is permitted only if the Group has a legally enforceable right to set off current tax assets against current tax liabilities and the tax assets and liabilities relate to income taxes levied by the same tax authority either on the same taxable entity or on different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

For uncertain income tax items, the best estimate is the probable expected tax payment.

Deferred taxes are recognized for temporary differences between the carrying amounts under IFRS and the tax base of assets and liabilities, and for tax loss carryforwards and tax credits. Deferred taxes are not recognized for temporary differences arising on initial recognition of an asset or liability if the assets or liabilities result from a transaction that is not a business combination and, at the time of the transaction, affects neither earnings before tax nor taxable income.

Zeppelin recognizes deferred tax assets only to the extent that it is probable that future taxable result will be available against which the deductible temporary differences and unused tax losses and credits can be offset. Zeppelin tests deferred tax assets for impairment at each reporting date.

Deferred tax liabilities arising from temporary differences in connection with investments in subsidiaries, associates and interests in joint ventures are recognized by Zeppelin, unless the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates which, according to current estimates, apply in accordance with the current legal situation.

Deferred tax assets and deferred tax liabilities are offset if they relate to the same tax authority and the same taxable entity or to a group of different taxable entities that are jointly assessed for income tax purposes. Deferred taxes from short-term temporary differences are not offset with deferred taxes from long-term temporary differences.

Inventories

Inventories are carried at the lower of cost or net realizable value. In addition to directly attributable direct costs, production costs also include overheads attributable to the production process.

Depending on the business model and market conditions, the portfolio value is determined using the first-in, first-out method or the average method.

Intangible Assets

Goodwill arising on business combinations is measured at the acquisition date at the excess of the consideration received for the shares acquired in the companies over the net assets acquired. The net assets correspond to the difference between the fair values of the acquired assets and the fair values of the assumed liabilities and contingent liabilities.

Goodwill is not subject to scheduled amortization but is tested for impairment annually or when there are indications that it may be impaired. Details of the annual impairment test are presented in the "Impairment Tests" section.

Expenses for the development of new products are carried on the assets side as development costs if the products are technically and economically feasible and intended for the Group's own use or marketing, the expenses can be reliably measured, and sufficient resources are available to complete the development project.

Production costs of internally generated intangible assets include direct costs as well as overheads attributable to the development process. Development expenses that do not meet the criteria set out in the previous paragraph, and research expenses are recognized immediately in the statement of profit or loss. Internally generated intangible assets are amortized on a straight-line basis over their useful lives and written down if there are indications of impairment.

Individually acquired intangible assets are carried at cost.

Intangible assets acquired as part of a business combination are measured at fair value at the acquisition date.

Acquired intangible assets are amortized on a straight-line basis over their period of use and subjected to an annual impairment test if there are indications of impairment. Licenses and similar rights are amortized over their contractual terms. Other useful lives are as follows:

	Useful life
Software, concessions, and industrial property rights	3-6 years
Internally generated intangible assets	5 years

Useful lives and residual values are reassessed at each reporting date and adjusted if necessary.

Apart from goodwill, Zeppelin does not recognize any intangible assets with indefinite useful lives.

Subsequent expenses are recognized in the statement of profit or loss if they cannot be capitalized.

Property, Plant, and Equipment

Property, plant, and equipment is initially recognized at cost and subsequently measured at amortized cost less accumulated depreciation and accumulated (non-scheduled) impairment losses. Reversals of impairment losses are recognized up to the amount of the amortized cost. In addition to directly attributable direct costs, production costs also include overheads attributable to the production process.

Expenses for maintenance and repairs are recognized in the statement of profit or loss unless they are capitalized as subsequent acquisition or production costs.

Property, plant, and equipment is depreciated on a straight-line basis over its estimated useful life to its expected residual value. The useful lives of property, plant, and equipment are reassessed at each reporting date and adjusted if necessary. Land is not depreciated.

The estimated useful lives of significant property, plant, and equipment for 2018 and 2017 are:

	Useful life
Building	8 – 40 years
Plant and machinery	2 – 25 years
Operating and business equipment	2 – 14 years
Rental fleet	3 – 10 years

Leasehold rights are depreciated on a straight-line basis over the term of the agreement.

Borrowing Costs

If a considerable period of time elapses before a tangible asset or intangible asset is ready for operation, the borrowing costs directly attributable to the acquisition or production of the asset are capitalized. The recognition of borrowing costs begins at the commencement of acquisition or production and ends when the asset is ready for operation.

Financial Instruments

Financial instruments are contracts that give rise to a financial asset of one party and a financial liability or equity instrument of the other. These include both primary financial instruments (e.g. trade receivables, loans, cash and cash equivalents, loans and promissory notes, as well as trade payables and other liabilities) and derivative financial instruments (interest rate swaps, currency swaps and forward exchange operations).

Primary financial instruments are initially recognized when they are purchased or sold on the settlement date and derivative financial instruments are initially recognized on the trading date.

A financial asset is derecognized when the contractual rights to cash flows from the asset expire or the rights to receive the cash flows and all significant opportunities and risks of ownership of the financial asset are transferred to another entity. Derecognition does not take place if all significant opportunities and risks are retained or if, in the event of risk sharing, control over the asset is retained. The retained portion of such financial assets is recognized separately as a financial asset and/or financial liability (continuing involvement).

Financial liabilities are derecognized when all contractual obligations have been met, canceled, or lapsed.

Financial assets are grouped into the following categories for measurement and reporting purposes:

- measured at amortized cost ("AC"), which at Zeppelin includes in particular cash and cash equivalents, trade receivables and other receivables, as well as loans;
- measured at fair value through profit or loss ("FVTPL"), which at Zeppelin includes in particular investments, interests in non-consolidated subsidiaries, and all deriva-

tives with a positive fair value that are not accounted for in accordance with hedge accounting rules.

The following categories exist for the measurement and reporting of financial liabilities:

- AC, which at Zeppelin includes in particular loans and bonded loans, trade payables, and other liabilities;
- FVTPL, which at Zeppelin includes in particular all derivatives with a negative fair value that are not accounted for in accordance with hedge accounting rules.

The Group financial statements do not include financial instruments at fair value through other comprehensive income ("FVOCI").

Financial assets are allocated to the AC category if they are held exclusively to collect the contractual cash flows and the contractual payments relate exclusively to interest and principal repayments.

With few exceptions, all financial liabilities are classified as AC that do not have to be classified as FVTPL or are accounted for under hedge accounting rules.

Financial assets and financial liabilities are allocated to the FVTPL category if they are held exclusively for trading purposes. Under certain conditions it would also be possible to allocate financial instruments to this category by exercising an accounting option – the fair value option – although these financial instruments would actually have to be accounted for in accordance with the rules for the AC category. However, Zeppelin does not exercise the fair value option.

Zeppelin categorizes all financial assets and financial liabilities at the date of acquisition and periodically reassesses whether the criteria for classification are still met.

Upon initial recognition, all financial assets are measured at fair value plus any directly attributable transaction costs, irrespective of their classification, and all financial liabilities are measured at fair value less any directly attributable transaction costs.

The fair value generally corresponds to the transaction price. The fair value of financial assets and financial liabilities in the AC category with maturities of more than twelve months that do not bear interest or bear interest at low rates corresponds to the present value of the agreed cash flows. The present value is determined using a discount rate appropriate to the term. An exception exists for trade receivables without significant financing components. These are measured on initial recognition at the amount of the unconditional claim to consideration.

Financial assets and financial liabilities in the AC category are subsequently measured using the effective interest method. Using the effective interest method, all directly attributable fees, consideration paid or received, transaction costs, and other premiums or discounts included in the calculation of the effective interest rate are amortized over the expected term of the financial instrument.

Interest income and expenses from the application of the effective interest method are recognized in the income statement under interest income or interest expenses from financial instruments.

Financial assets and financial liabilities in the FVTPL category are subsequently measured at fair value, with changes in value recognized in the statement of profit or loss.

Derivatives embedded in contracts where the underlying is a financial asset are never accounted for separately. Instead, the hybrid financial instrument is assessed as a whole with regard to its classification. Embedded derivatives whose underlying contract is a financial liability are separated from the underlying contract and accounted for separately under certain conditions (e.g. loans with interest rate agreements that include a floor).

Zeppelin reports financial assets and financial liabilities gross. They are only offset if at the present time there is an enforceable right to set off with respect to the amounts and it is intended to settle them on a net basis.

Impairments

The calculation of valuation allowances for financial assets in the AC category (as well as for contract assets from agreements with customers) is based on a forward-looking model taking into account expected credit defaults.

For non-performing financial assets, value adjustments are recorded at the gross amount. A financial asset is classified as non-performing ("definition of default") if there are significant reasons to believe that a debtor is unlikely to meet its payment obligations to Zeppelin.

Financial assets are derecognized when they are irrecoverable, for example as a result of the conclusion of insolvency proceedings.

All financial assets that are neither non-performing nor irrecoverable are collectible. These financial assets are written down at the time of initial recognition in accordance with the expected 12-month credit loss (hereinafter "12-month ECL"). In the event of a significant deterioration in creditworthiness, they are written down by the amount of the expected credit loss by maturity (hereinafter "lifetime ECL").

For trade receivables and contractual assets, a simplified approach is applied in which only the lifetime ECL plays a role (hereinafter "simplified approach"). Under this approach, risk categories are created and assigned different impairment rates. The Group companies determine the default risk according to individual approaches, taking into account country and business area-specific risks. The companies use data from market data portals (including Creditreform), historical default rates, and customer-specific, forward-looking credit risk analyses.

In addition, all financial assets in the AC category (and contractual assets from agreements with customers) are tested for individual impairment indicators at each reporting date. Financial assets are considered impaired if, as a result of one or more events occurring after the initial recognition of the asset, there is objective evidence that the expected future cash flows have changed negatively.

Objective evidence of an impairment can be various facts such as late payment over a certain period of time, initiation of enforcement measures, imminent insolvency or over-indebtedness, application for or opening of insolvency proceedings, or failure of restructuring measures.

Hedge Accounting

Zeppelin uses derivative and foreign currency components of primary financial instruments to hedge cash flows against interest rate and exchange rate fluctuations and to hedge fair value against interest rate fluctuations. However, the requirements for hedge accounting are applied only when the conditions for hedge accounting are met. For reasons of practicability, hedge accounting is only applied to hedges of exchange rate risks if a certain period-related threshold for the nominal volume of hedging transactions without hedge accounting is exceeded. The threshold is derived from an upper limit for the potential impact of the failure to apply hedge accounting on consolidated net profit after taxes and the period accrual of expenses and income. Zeppelin designates all derivative components with a few exceptions relating to the Plant Engineering SBU.

Hedge accounting can only be applied if there is a clear hedging relationship between the hedged item and the hedging instrument with demonstrable, sufficient effectiveness. The hedging relationship must be formally documented and its effectiveness demonstrated upon initial recognition as a hedging relationship and subsequently on a quarterly basis.

The hedging relationship meets all hedge effectiveness requirements if

- the value of the hedging transaction moves in the opposite direction to the value of the underlying transaction,
- the credit risk does not have a dominant influence on the hedging relationship, and
- the hedging ratio of the hedging relationship reported in the balance sheet corresponds to the actual hedging ratio.

The effectiveness of hedging relationships is demonstrated by prospective effectiveness tests. In the case of currency hedges, the prospective effectiveness test is based on a comparison of the main terms of the hedging transaction with the main terms of the underlying transaction; in the case of interest rate hedges it is based on a statistical method (regression analysis).

Where hedge accounting is applied to derivatives or to the foreign currency component of primary financial instruments used to hedge against the risk of fluctuating cash flows ("cash flow hedges"), the effective portion of changes in the fair value of the derivative are recognized in other comprehensive income and reported in the cumulative other comprehensive income for hedge accounting. The effective change in value is the smaller of the cumulative change in value of the hedging instrument and the cumulative change in value of the hedged item. The undesignated and ineffective portion of the change in value continues to be recognized in the statement of profit or loss. If the hedging transactions relate to cash flows from operating activities, the portion of the change in value recognized in the statement of profit or loss is reported under other expenses and income. Otherwise, they are reported under other financial expenses and income.

Effectiveness is the degree to which the changes in value of the hedged item and the hedging instrument offset each other. The effective and ineffective portions of the change in value are determined using the cumulative dollar offset method.

The amount recognized in cumulative other comprehensive income is reclassified to the income statement in the same period or periods in which the hedged expected cash flows or hedged item affect the statement of profit or loss.

Hedge accounting is discontinued as soon as a forecast transaction is no longer probable and the hedging instrument no longer meets the criteria for hedge accounting, expires, or is sold, terminated, or exercised. The hedging transaction is henceforth be accounted for in accordance with the rules for financial assets and financial liabilities in the FVTPL category. If an expected transaction is no longer expected to occur, the amount previously recognized in cumulative other comprehensive income for hedge accounting is immediately reclassified to the statement of profit or loss. In all other respects, the reclassification of the amounts previously recognized in cumulative other comprehensive income for hedge accounting follows the same principles as for continuing cash flow hedges.

In the case of hedging relationships used to hedge changes in the fair value of assets, liabilities, or off-balance-sheet firm commitments (hereinafter "fair value hedges"), the changes in the fair value of the hedged item attributable to the risk, and the changes in the fair value of the hedging derivative are recognized in the statement of profit or loss and reported net. For financial instruments measured at amortized cost, the cumulative adjustments are amortized over the (remaining) term.

Fair Value

Fair values are determined on the basis of a three-level hierarchy based on the proximity of the valuation factors used to an active market (hereinafter the "fair value hierarchy"). A market is referred to as "active" if quoted prices are readily and regularly available on that market and these prices are based on actual, regularly occurring market transactions.

Level 1: The fair value corresponds to a price for identical assets and liabilities quoted on active markets (unchanged).

Level 2: The fair value is based on market data that is either directly or indirectly observable for the asset or liability and that does not represent quoted prices under Level 1.

Level 3: The fair value is based on input data that is not quoted prices under Level 1 and not derived from directly or indirectly observable market data.

The fair values of Levels 2 and 3 are determined using financial valuation methods (e.g. discounted cash flow models). They correspond to the prices that would be received between independent market participants for the sale of an asset or paid for the transfer of a liability.

The fair values underlying these Group financial statements have been determined on the basis of the market conditions prevailing on the reporting date.

Reclassifications between the levels of the fair value hierarchy require a separate explanation in the notes to the Group financial statements. The periods covered by these Group financial statements do not include any reclassifications between hierarchical levels.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents comprise cash (cash on hand and bank balances) and cash equivalents. Cash equivalents are short-term, highly liquid financial investments with initial maturities of less than 3 months that can be converted into fixed cash amounts at any time and subject to insignificant fluctuations in value.

EMPLOYEE BENEFITS

Obligations for short-term employee benefits are recognized as personnel expenses as soon as the related work is performed. In addition, a liability is recognized for performance already provided by the employee if there is a legal or constructive obligation to pay that benefit at the reporting date and the amount of the obligation can be reliably estimated.

Post-employment benefits include defined contribution and defined benefit plans.

For defined contribution plans, Zeppelin's obligation is limited to the payment of fixed contributions. The pension payments themselves are made by an external institution (e.g. an insurance company) without triggering further obligations for Zeppelin. All other forms of pension provision are defined benefit plans. This also applies to pension provision covered by pension plans if Zeppelin is obliged to make additional payments to achieve a guaranteed minimum return.

Payments for defined contribution plans are recognized as personnel expenses in the period in which the related work is performed. Prepaid contributions are recognized as an asset to the extent that there is a right to reimbursement or reduction of future payments.

In the case of defined benefit plans, the obligations are determined annually using the projected unit credit method by actuarial valuation. For each plan, economic trend assumptions (e.g. salary and pension trends) are taken into account in addition to estimates of the future benefits which the employees have tendered in the current and previous periods. This amount is discounted at a discount rate appropriate to the term and offset against the fair value of the plan assets. The discount rate used to determine the actuarial present value of promised retirement benefits is determined on the basis of returns at the reporting date on high-quality fixed-rate corporate bonds denominated in the same currency and with the same maturity as the benefit entitlements earned at the measurement date.

Any excess of plan assets over pension obligations resulting from this calculation is limited in amount to the present value of the economic benefits available in the form of repayments or reductions in future contributions. When calculating the present value of an economic benefit, applicable minimum funding requirements must also be taken into account.

Gains and losses from the revaluation of the pension obligation are recognized directly in other comprehensive income. The revaluation includes the actuarial gains and losses, the return on plan assets (excluding interest), and the effect of any asset ceiling (excluding interest). The service cost, which represents the additional entitlements of employees acquired in the fiscal year, is part of personnel expenses. The interest result, which is calculated as the imputed interest on the basis of the actuarial interest rate applicable to the net obligation or net assets at the beginning of the fiscal year, is recognized in the financial result.

Past service cost and gains and losses on plan settlements are recognized immediately as personnel expenses in the period in which the change, curtailment, or settlement occurs.

Other long-term employee benefits mainly comprise anniversary provisions and provisions for partial retirement obligations. Valuation is based on the valuation principles for defined benefit pension plans. Obligations from partial retirement agreements are offset against the fair value of the plan assets. A surplus of assets is reported under other assets. Effects from revaluations are recognized in personnel expenses in the period in which they arise.

Termination benefits are recognized as an expense at the earlier of the following two dates: when Zeppelin can no longer withdraw the offer or when the restructuring measures have been decided and communicated. If it can be assumed that the benefits will not be settled in full within twelve months of the reporting date, they must be discounted.

OTHER PROVISIONS

Other provisions are recognized for all currently identifiable risks and contingent liabilities that will result in a future economic burden and the amount of which can be reliably estimated.

Provisions are recognized at the amount required to settle the obligations on the basis of the best estimate. Non-current provisions are recognized at present value if the effect of discounting is material.

LEASING

Zeppelin acts as both lessee and lessor.

Accounting as Lessee

As lessee, Zeppelin generally recognizes a right of use and a corresponding lease liability for each lease.

Zeppelin makes use of the exemptions for short-term leases with a term of less than twelve months and leases for low-value assets. Expenses arising from these leases are recognized as expenses on a straight-line basis over the term of the lease.

Zeppelin does not make use of the option to combine leasing and non-leasing components.

Rights to use intangible assets are accounted for in accordance with the rules for intangible assets.

Rights of use arising from leases are initially measured at cost. Cost comprises the initial carrying amount of the lease liability plus any lease payments made before or at the beginning of the lease less any incentive payments and plus any initial direct costs.

The rights of use are subsequently measured at amortized cost less cumulative scheduled depreciation and cumulative impairment losses. Depreciation is charged over the shorter of the useful life of the asset or the term of the lease. If ownership of the leased asset is transferred to Zeppelin (through the exercise of an option or other contractual arrangement), it is depreciated over the (remaining) useful life of the leased asset.

The initial and subsequent measurement of lease liabilities is based on the present value of the minimum lease payments outstanding at the reporting date. Interest expenses are spread over the term in such a way as to produce a constant interest rate.

Accounting as Lessor

With regard to accounting as lessor, a distinction is made between operating leases and finance leases.

In the case of finance leases, the material risks and opportunities arising from ownership of the leased asset are transferred to the lessee. This results in the recognition of a receivable at the amount of the present value of future lease payments to be made.

If the opportunities and risks remain with Zeppelin, an operating lease exists and the leased assets are measured at amortized cost and reported under "Leased fleet". Leased assets are depreciated in accordance with the rules for property, plant, and equipment. The lease payments are recognized in the statement of profit or loss under rental income on a straight-line basis over the remaining term.

Sale-Leaseback Transactions

The sale-leaseback transactions (hereinafter "SLB") entered into by Zeppelin for refinancing purposes include tender rights. There is no transfer of control. Assets that are the subject of such agreements remain under property, plant, and equipment. Zeppelin recognizes payment obligations arising from SLB transactions as liabilities at their present value. They are discounted at the implicit interest rate.

D DISCRETIONARY DECISIONS AND ESTIMATES

The preparation of IFRS Group financial statements requires that discretionary decisions and assumptions be made about future events that affect the recognition and measurement of assets and liabilities. In individual cases, the actual values may deviate from the discretionary decisions and estimates. Changes are recognized at the time they become known in accordance with the accounting and valuation methods applicable to the respective assets and liabilities. This applies in particular to the following assets and liabilities.

Zeppelin performs annual impairment tests for all cash-generating units that contain goodwill. The impairment tests are based on assumptions regarding the development of cash flows and the weighted average cost of capital (WACC) of the respective unit.

The carrying amounts of property, plant and equipment, and intangible assets are based on assumptions regarding useful lives and residual values. In the case of the rental fleet from RPO transactions without an acquisition option, the residual value estimates are based on assumptions about the development of the residual values of the machines underlying the transactions.

The carrying amount of the return rights from RPO transactions with purchase options is based on assumptions about the development of the residual values of the machines underlying the transactions at the time the options are exercised and about the development of the return rate.

Contract assets and liabilities from sales recognition based on performance progress are based on assumptions about the expected total contract costs.

In determining the impairment of financial assets measured at amortized cost, assumptions are made about the expected solvency of the respective debtors.

The recognition of deferred tax assets is based in part on expectations about the development of the taxable income of the respective taxable entity.

Other provisions are based on assumptions and estimates regarding the occurrence, amount, and timing of the respective obligations. Details about the assumptions and estimates underlying the provisions are given in Note 22.

E CONVERSION TO IFRS

CONVERSION METHOD

Zeppelin prepared Group financial statements in accordance with IFRS for the first time as at December 31, 2018. The accounting and valuation principles applicable as at December 31, 2018 were applied consistently for all periods presented in these Group financial statements. In addition, Zeppelin has opted for early adoption of the rules of IFRS 16 "Leases".

The differences resulting from the conversion to IFRS as at January 1, 2017 were offset against equity with no effect on income. They are shown in the balance sheet presentation in subsequent periods is made in accordance with the explanations in the "Accounting Policies" section.

Zeppelin has made use of the following exceptions and simplifications to the fully retrospective application of IFRSs at the date of conversion.

Zeppelin does not apply IFRS 3 retrospectively to business combinations effected before January 1, 2017. This applies both to the initial consolidation of subsidiaries and to the initial recognition of associates and joint ventures at the proportionate share of equity. Both the classification of the acquisition and the carrying amounts of the assets and liabilities determined as part of the purchase price allocation in accordance with HGB are included in the opening balance sheet in accordance with IFRS. The carrying amounts of goodwill existing under HGB were transferred unchanged to the opening balance sheet and tested for impairment. As at 1/1/2017, no impairment was identified.

Individual properties in Germany were recognized at fair value as a replacement for amortized cost after full retrospective application of IFRS. This is a one-off operation. Land is subsequently measured at amortized cost.

Zeppelin adopts IFRS 16 early. Existing lease liabilities and rights of use were recognized at the present value of the remaining minimum lease payments in accordance with the exemptions. Leasing contracts with a remaining term of less than twelve months and a low value continue to be recognized as expenses on a straight-line basis.

The exemptions for the treatment of cumulative currency translation differences of foreign operations were applied and the item was valued at zero as at 1/1/2017.

Zeppelin applies an exemption for restoration obligations, according to which:

- provisions for restoration obligations at the time of conversion are measured in accordance with regular rules
- the amount to be recognized as part of the cost of the asset is the carrying amount of the provision at initial recognition less cumulative depreciation accumulated up to the date of conversion.

The conversion to IFRS had the following effects on Group equity and comprehensive income:

		1/1/2017	12/31/2017		
in kEUR	No		Net profit	Other equity	Equity
Equity according to HGB		**633.357**	**57.597**	**-16.550**	**674.404**
Property, plant, and equipment	a	35.958	358	0	36.316
Intangible assets	b	0	907	0	907
Goodwill	c	0	6.452	0	6.452
Lease agreements	d	-4.349	-1.300	0	-5.648
Inventories	e	1.897	2.058	0	3.955
Sales recognition	f	-13.266	-12.316	0	-25.583
Financial instruments	g	-13.091	4.211	1.161	-7.718
Employee benefits	h	-36.073	5.749	-1.571	-31.895
Other provisions	i	3.223	-801	0	2.422
Deferred income taxes	j	40.429	662	-339	40.752
Foreign currency valuation	k	680	-1.189	502	-7
Consolidation	l	1.369	-170	828	2.027
Equity according to IFRS		**650.133**	**62.219**	**-15.968**	**696.385**

The cash flow statement changed as follows:

in kEUR	HGB	Adjustment	IFRS
Cash and cash equivalents as at 1/1/2017	**170.572**	**16**	**170.588**
Changes in cash and cash equivalents			
Cash flow from operating activities	111.280	107.751	219.031
Cash flow from investment activities	-195.463	-29.151	-224.614
Cash flow from financing activities	7.774	-78.599	-70.825
	-76.409	**1**	**-76.408**
Foreign exchange rate differences in cash and cash equivalents	-3.003	-2	-3.005
Cash and cash equivalents as at 12/31/2017	**91.160**	**15**	**91.175**

The increase in the cash flow from operating activities at the expense of the cash flow from financing activities is mainly due to the application of the rules on accounting for SLB transactions.

The increase in the cash flow from operating activities at the expense of the cash flow from investment activities is mainly due to the application of the rules on accounting for leases as a lessee.

Notes to the Conversion Effects

a. Property, Plant, and Equipment

Land was recognized at a fair value of EUR 45,404 thousand; the adjustment of EUR 35,425 thousand as at 1/1/2017 was offset against the reserve for IFRS conversion. This real estate was valued at amortized cost under HGB.

b. Intangible Assets

The book value differences mainly result from the capitalization of intangible assets in accordance with IFRS. As a result, depreciation increased in the fiscal year 2017 compared with HGB.

c. Goodwill

Goodwill is amortized on a straight-line basis under HGB. Under IFRS, these assets are not amortized but tested annually for impairment. Zeppelin did not identify any need for impairment of goodwill in accordance with IFRS at either 1/1/2017 or 12/31/2017. As a result, depreciation in the fiscal year 2017 was lower than in the Group financial statements prepared in accordance with HGB.

d. Lease Agreements

Zeppelin recognized rights of use and lease liabilities at the present value of the minimum lease payments for all leases of non-low-value leased assets with a term of more than twelve months. As a result, property, plant, and equipment and financial liabilities increased by the same amount. The rights of use are written down in accordance with IFRS. This increased write-downs in fiscal year 2017 compared with the Group financial statements prepared in accordance with HGB. The present value of the lease liability is compounded annually and increases financial expenses in fiscal year 2017 compared to HGB. The leasing expenses recorded in accordance with HGB do not apply in accordance with IFRS. This reduces other expenses in fiscal year 2017.

Due to the lack of disposal requirements, Zeppelin recognizes assets and liabilities from SLB transactions in accordance with IFRS. As a result of this, property, plant, and equipment and financial liabilities are higher than in the HGB Group financial statements. The difference between property, plant, and equipment and financial liabilities as at 1/1/2017 was offset against the reserve for IFRS conversion. Under HGB, payments for SLB transactions were recognized as expenses under leasing expenses. The IFRS statement of profit or loss, on the other hand, includes write-downs and interest expense from compounding. The total of write-downs and interest expenses under IFRS exceeds the leasing expenses under HGB. This reduces consolidated net profits after taxes in accordance with IFRS in fiscal year 2017 compared with Group earnings after taxes in accordance with HGB.

e. Inventories

Inventories are subsequently measured at net realizable value in accordance with IFRS. Under HGB, inventories are valued at the lower of cost or net realizable value. This led to a slight increase in inventories. The difference as at 1/1/2017 was offset against the reserve for IFRS conversion. There were different expenses in fiscal year 2017.

f. Sales Recognition

The adjustment effects mainly result from the period-related sales recognition in the project business, the recognition of RPO transactions, full-service contracts, and warranty extensions in accordance with IFRS.

Under IFRS, Zeppelin recognizes sales from the project business based on performance progress. Deviations between sales measured on the basis of performance progress and the performance invoiced to date are recognized as contractual assets or liabilities and project expenses are recognized in the statement of profit or loss. According to HGB, sales are recognized upon acceptance of the performance. Project expenses are recognized as work in progress or finished goods.

Depending on the contractual arrangements, RPO transactions are accounted for under IFRS either as a sale with right of return or as a lease. In the case of sales with a right of return, repurchase obligations are recognized at the amount of the expected repurchase value of the machines sold and a right of return for the right to repurchase machines upon settlement of the repurchase obligation, when the construction machines are delivered. If the right of return is not exercised, these items are released to income. In the case of rentals, the proceeds from the sale are fully deferred against financial liabilities and deferred sales. Deferred sales are released on a straight-line basis over the term of the contract. Under HGB, sales were recorded at the amount of the sales price at the time of the sale and a provision for impending losses from the repurchase obligations was recognized insofar as the expected value of the assets fell below the contractually agreed repurchase price over time. The repurchase obligations were disclosed in the notes under other financial obligations.

Under IFRS, contract liabilities for the sale of extended warranties are recognized at the amount of the agreed consideration when the contract is concluded. These are released on a straight-line basis over the warranty period against recognition of sales. According to HGB, sales were recognized upon invoicing.

Differences between the valuations according to HGB and according to IFRS as at 1/1/2017 were offset against the reserve for IFRS conversion. There were different sales and expenses in fiscal year 2017.

g. Financial Instruments

Financial instruments comprise primary and derivative financial instruments.

According to HGB, derivatives are only recognized if they have a negative fair value and are not designated as hedging instruments in valuation units. Zeppelin has largely designated derivatives in valuation units and therefore not recognized them in the balance sheet. Under IFRS, all derivatives must be recognized and measured at fair value on an ongoing basis. The balance from the valuations of the derivatives as at 1/1/2017 was offset against the reserve for IFRS conversion. With the conversion to IFRS, Zeppelin applied hedge accounting rules to certain derivatives. Changes in the fair value of derivatives are either recognized initially in cumulative other comprehensive income for hedge accounting and transferred to the statement of profit or loss when the hedged item is transferred to profit or loss (cash flow hedges) or offset by changes in the fair value of the hedged item simultaneously being recognized in profit or loss (fair value hedges). Otherwise, changes in the value of derivatives are recognized in the statement of profit or loss. In accordance with IFRS, the subsequent measurement of derivatives results in financial income and expenses and changes in equity for fiscal year 2017 that differ from HGB due to amounts recognized in other comprehensive income for hedge accounting.

In the case of primary financial assets, in particular trade receivables, the HGB regularly tests whether there are objective indications of impairment and whether impairment losses should therefore be recognized. The impairment model under IFRS is based on expected losses, which must initially be recognized in the statement of profit or loss upon addition of the financial asset. Due to the different impairment rules, there were minor differences in the carrying amount as at 1/1/2017, which were offset against the reserve for IFRS conversion. In the fiscal year 2017, expenses and income from valuation allowances differed slightly.

h. Employee Benefits

The conversion to IFRS increased the amount of obligations for pensions, anniversaries, and partial retirement. The change in the carrying amounts and the Group comprehensive earnings is mainly due to different measurement parameters (in particular different discount rates) on which the actuarial measurement methods are based.

Differences between the valuations according to HGB and according to IFRS as at 1/1/2017 were offset against the conversion reserve. There were different personnel and interest expenses in fiscal year 2017.

i. Other Provisions

Provisions under HGB also include deferred maintenance, which may not be recognized under IFRS. Due to the recognition of restoration obligations, the carrying amount of provisions and property, plant, and equipment had to be adjusted as at 1/1/2017, and this adjustment was offset against the conversion reserve. The adjusted depreciation amount of the assets is depreciated prospectively over its remaining useful life and accordingly increases depreciation in fiscal year 2017 compared with HGB.

j. Income Taxes

The various adjustment entries lead to changes in temporary differences between the IFRS balance sheet and the tax balance sheet compared with HGB. Deferred taxes are to be formed on these. The deferred tax effect as at 1/1/2017 was offset against the reserve for IFRS conversion. As at 12/31/2017, the adjustments resulted in different balance sheet valuations, a different income tax expense, and deferred taxes recognized directly in equity in 2017 compared to HGB.

k. Foreign Currency Valuation

In contrast to accounting under HGB, the valuation of monetary items in foreign currencies does not follow the imparity principle. The resulting differences were offset against the reserve for IFRS conversion as at 1/1/2017. In the fiscal year 2017, profits and losses from foreign currency valuation deviated from HGB.

l. Consolidation

Adjustments from consolidation mainly relate to currency translation in the Group and the elimination of intercompany results. Different output quantities result in different effects.

F NOTES TO THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS

1 SALES

Sales from contracts with customers are broken down by SBU, product, and type of sales recognition as follows:

in kEUR	Construction Equipment EU	Construction Equipment CIS	Rental	Power Systems	Plant Engineering	Holding company	Consolidation	Group
	2018							
Sales								
Earthmoving	722.423	248.696	0	0	0	0	-816	**970.304**
Earthmoving equipment (used)	232.983	19.563	0	0	0	0	-2.229	**250.317**
Rental business	385	777	244.798	0	0	1.165	-32.030	**215.096**
Forklifts	12.439	0	38.097	0	0	0	-539	**49.997**
Power systems	0	0	0	202.254	0	0	-2.447	**199.807**
Agricultural equipment	0	13.464	0	0	0	0	0	**13.464**
Production plants	0	0	0	0	111.533	0	0	**111.533**
Processing plants and mixers	0	0	0	0	111.662	0	-22	**111.639**
Systems for the food industry and liquids handling	0	0	0	0	63.994	0	0	**63.994**
Components and site equipment	0	0	59.753	0	15.803	0	-17	**75.538**
Spare parts	224.662	175.915	0	106.090	0	0	-33.809	**472.858**
Customer service	109.093	24.063	80.928	51.262	45.063	0	-7.897	**302.513**
Miscellaneous	13.117	0	49.573	29	140	2.451	-6.138	**59.171**
Zeppelin GmbH	0	0	0	0	0	25.321	-24.604	**718**
	1.315.102	**482.478**	**473.148**	**359.635**	**348.195**	**28.938**	**-110.549**	**2.896.948**
Sales								
thereof time-based	1.209.080	482.189	454.047	308.732	96.611	26.455	-103.129	**2.473.986**
thereof period-based	106.022	289	19.101	50.903	251.584	2.482	-7.420	**422.962**
	1.315.102	**482.478**	**473.148**	**359.635**	**348.195**	**28.938**	**-110.549**	**2.896.948**

in kEUR	2017 Construc-tion Equip-ment EU	Construc-tion Equip-ment CIS	Rental	Power Systems	Plant Engineering	Holding company	Con-solidation	Group
Sales								
Earthmoving	653.210	174.852	0	0	0	0	-1.324	**826.738**
Earthmoving equipment (used)	226.460	22.615	0	0	0	0	-1.242	**247.833**
Rental business	429	936	216.049	0	0	4	-22.812	**194.606**
Forklifts	15.997	0	33.730	0	0	0	-309	**49.418**
Power systems	0	0	0	195.979	0	0	-3.201	**192.778**
Agricultural equipment	0	16.205	0	0	0	0	0	**16.205**
Production plants	0	0	0	0	116.652	0	0	**116.652**
Processing plants and mixers	0	0	0	0	92.670	0	-6	**92.664**
Systems for the food industry and liquids handling	0	0	0	0	58.724	0	0	**58.724**
Components and site equipment	0	0	43.150	0	13.870	0	-11	**57.009**
Spare parts	210.924	175.244	0	94.086	0	0	-32.741	**447.514**
Customer service	94.304	22.479	75.110	50.410	41.692	0	-8.051	**275.943**
Miscellaneous	8.390	0	41.993	29	-223	2.398	-7.493	**45.093**
Zeppelin GmbH	0	0	0	0	0	23.255	-22.830	**425**
	1.209.714	**412.331**	**410.031**	**340.503**	**323.386**	**25.657**	**-100.019**	**2.621.603**
Sales								
thereof time-based	1.117.636	411.674	410.031	311.313	82.898	23.089	-92.461	**2.264.180**
thereof period-based	92.078	657	0	29.190	240.488	2.568	-7.558	**357.423**
	1.209.714	**412.331**	**410.031**	**340.503**	**323.386**	**25.657**	**-100.019**	**2.621.603**

The following table shows the value of all or part of the unfulfilled obligations arising from contractual relationships with customers as of the respective reporting date (hereinafter "order backlog")[24] and the periods during which Zeppelin expects to realize sales from this order backlog.

in kEUR	Sub-sequent year	2nd to 5th sub-sequent year	There-after	Total
12/31/2018	742.176	147.488	2.023	**891.686**
12/31/2017	543.889	263.363	138	**807.390**
1/1/2017	446.786	168.004	5.526	**620.315**

2 Cost of Sales

The cost of sales comprises:

in kEUR	2018	2017
Cost of sales		
Cost of materials	-1.996.808	-1.786.127
Personnel expenses	-310.606	-283.284
Depreciation	-44.753	-41.337
Other expenses	-104.342	-113.767
	-2.456.509	**-2.224.516**

[24] According to IFRS, the order backlog only includes order relationships with fixed consideration agreements and secure receipt of consideration.

3 Other Income

The other operating income comprises:

in kEUR	2018	2017
Other income		
Handling margin from SLB transactions	3.294	2.541
Reimbursements	4.643	5.548
Book gains from asset disposals	1.573	1.364
Release of provisions and other liabilities	7.486	9.559
Rents and leases	2.301	3.038
Exchange rate gains	10.700	8.893
Income from derecognized receivables	777	1.070
Insurance compensation and indemnity payments	4.918	2.870
Miscellaneous	12.321	12.581
	48.012	**47.465**

4 Other Expenses

Other expenses include:

in kEUR	2018	2017
Other expenses		
Losses from asset disposals	-1.994	-1.143
Exchange rate losses from foreign currency valuation	-12.301	-10.936
Expenses from the derecognition of financial instruments	-506	-2.269
Contributions	-2.349	-2.395
Other taxes	-3.423	-2.724
Expenses for bank and guarantee fees, financial expenses	-1.372	-1.345
Miscellaneous	-7.906	-4.221
	-29.849	**-25.033**

5 Personnel Expenses

Personnel expenses include:

in kEUR	2018	2017
Personnel expenses		
Wages and salaries	-423.423	-398.646
Social security contributions	-86.140	-77.790
Post-employment benefits	-3.747	-4.499
	-513.310	**-480.934**

The average number of employees during the year was:

Full-time equivalents	2018	2017
Employees		
Sales, marketing	1.546	1.508
Service (spare parts and after-sales)	3.910	3.679
Engineering, order processing, materials management, logistics	900	826
Production, assembly, quality management	716	644
Administration	1.142	1.060
Trainees and apprentices	287	288
	8.502	**8.004**

6 Financial Result

The financial result consists of net interest income and other financial result and includes the following income and expenses:

in kEUR	2018	2017
Financial result		
Interest result		
Interest income		
from financial instruments	1.890	1.558
from discounting	2.448	1.982
from loans to affiliated companies	16	17
from interest rate derivatives	0	0
	4.354	**3.557**
Interest expenses		
from financial instruments	-12.159	-13.498
from discounting	-3.187	-2.311
from lease agreements	-1.800	-2.211
from loans from affiliated companies	0	0
from interest rate derivatives	-1.568	-2.886
	-18.715	**-20.905**
	-14.361	**-17.348**
Other financial result		
Other financial income		
Income from participations	1.128	394
Other income from financial instruments	2.236	5.623
	3.364	**6.017**
Other financial expenses		
Other expenses from financial instruments	-3.105	-2.682
	-3.105	**-2.682**
	259	**3.335**
	-14.101	**-14.013**

The expenses from discounting include interest expenses from the subsequent measurement of post-employment benefits and other long-term employee benefits amounting to EUR 1,328 thousand (2017: EUR 1,461 thousand), from the compounding of other provisions amounting to EUR 203 thousand (2017: EUR 63 thousand), and contract assets and liabilities amounting to EUR 1,655 thousand (2017: EUR 786 thousand).

Gains and losses from the derecognition of financial assets measured at amortized cost are of minor significance.

Further information on the financial result is provided in section H.

7 Income Taxes

The income tax expense is composed as follows:

in kEUR	2018	2017
Income taxes		
Current income taxes	-41.706	-35.026
Deferred income taxes	878	306
	-40.828	**-34.720**

The income tax rate of 29.7% levied in Germany (2017: 29.3%) comprises corporation tax (15.0%), trade tax (average 13.4% in 2017; average 13.8% in 2018 after inclusion of ZRD in the consolidation group), and solidarity surcharge (5.5%).

The differences to the effective tax rate are explained as follows:

in kEUR	2018	2017
Net profit before taxes	**130.827**	**97.715**
Tax rate in %	29,689	29,265
Expected income tax expense	**-38.841**	**-28.596**
Different tax rates	8.603	6.299
Trade tax base amount	943	-638
Tax rate changes	696	-84
Utilization of unrecognized tax loss carryforwards	5	470
Current year losses for which no deferred tax assets were recognized	-25	434
Impairments on deferred tax assets	846	359
Non-deductible expenses	-4.333	-6.201
Tax-free income	686	1.127
Other permanent differences	-1.376	-1.537
Current taxes relating to other	-9.130	-6.866
Deferred taxes relating to other periods	747	123
Partnerships	0	0
Miscellaneous effects	350	390
Actual income tax expense	**-40.828**	**-34.721**
Effective tax rate in %	-31,21	-35,53

The deferred tax rates shown in the following table are the result:

in kEUR	12/31/2018 Deferred tax assets	12/31/2018 Deferred tax liabilities	12/31/2017 Deferred tax assets	12/31/2017 Deferred tax liabilities	1/1/2017 Deferred tax assets	1/1/2017 Deferred tax liabilities
Recognition in the Group financial statements						
Deferred taxes before offsetting						
Cash and cash equivalents	4	180	122	33	204	0
Other financial assets and receivables (current)	14.704	26.626	12.127	23.007	8.365	17.617
Inventories	32.042	29.890	21.321	28.049	19.513	29.329
Financial assets (non-current)	779	4.438	490	2.472	366	1.808
Other financial assets and receivables (non-current)	1	14.306	915	15.048	122	13.801
Intangible assets	3.229	1.565	2.393	852	1.927	17
Property, plant, and equipment	5.187	143.014	3.220	153.337	3.922	161.996
Current liabilities	93.057	13.342	104.095	16.864	92.300	8.803
Current provisions	7.509	14.081	4.685	5.891	3.540	1.816
Non-current liabilities	105.915	274	112.393	141	117.376	372
Employee benefits	16.824	1.861	16.394	1.005	17.865	921
Non-current provisions	1.522	43	939	185	585	80
Loss carryforwards	5.143		5.011	0	8.270	0
	285.916	**249.620**	**284.105**	**246.884**	**274.356**	**236.559**
Value allowance	-1.582		-2.378		-2.350	
Offsetting	-212.274	-212.274	-206.775	-206.775	-194.415	-194.415
	72.059	**37.345**	**74.952**	**40.108**	**77.590**	**42.143**

The current portion of deferred tax assets amounts to EUR 65,452 thousand (12/31/2017: EUR 69,713 thousand; 1/1/2017: EUR 71,308 thousand). The current portion of deferred tax liabilities amounts to EUR 1,644 thousand (12/31/2017: EUR 722 thousand; 1/1/2017: EUR 1,250 thousand).

There are temporary differences on interests in subsidiaries, associates, and joint ventures amounting to EUR 8,522 thousand (31/12/2017: EUR 6,694 thousand; 1/1/2017: EUR 6,473 thousand), for which no deferred tax liabilities were recognized in the reporting periods presented. The differences would only be effective for tax purposes if the investments were sold. The investments will not be sold in the foreseeable future.

In Germany, there are corporation tax loss carryforwards of EUR 4,726 thousand (12/31/2017: EUR 6,027 thousand; 1/1/2017: EUR 18,068 thousand), and trade tax loss carryforwards of EUR 5,059 thousand (12/31/2017: EUR 6,105 thousand; 1/1/2017: EUR 16,077 thousand). Overseas, there are loss carryforwards of EUR 15,168 thousand (12/31/2017: EUR 16,969 thousand; 1/1/2017: EUR 15,181 thousand).

As Zeppelin did not expect sufficient taxable profit to be available for offsetting in future periods at each reporting date, no deferred tax assets were recognized for the following items:

in kEUR	12/31/2018 Gross amount	12/31/2018 Value for tax purposes	12/31/2017 Gross amount	12/31/2017 Value for tax purposes	1/1/2017 Gross amount	1/1/2017 Value for tax purposes
Deferred tax assets						
Deductible temporary differences	0	0	0	0	0	0
Tax loss carryforwards	10.001	1.582	16.270	2.378	14.889	2.350
thereof corporate income tax and local income tax	6.821	1.142	10.187	1.576	9.103	1.588
thereof trade tax	3.180	441	6.083	801	5.786	762
	10.001	**1.582**	**16.270**	**2.378**	**14.889**	**2.350**

The unrecognized loss carryforwards expire as follows:

in kEUR	Amount	Indefinite	Expiry date Subsequent year	Expiry date 2nd to 5th subsequent year	Expiry date Thereafter
31.12.2018	10.001	9.125	876	0	0
31.12.2017	16.270	15.645	0	625	0
31.12.2016	14.889	14.889	0	0	0

As Zeppelin assumed that sufficient taxable income would be generated for offsetting in future periods, deferred tax assets were recognized for companies that had closed the current or prior period with a loss, which exceeded deferred tax liabilities by EUR 9,244 thousand (31/12/2017: EUR 7,625 thousand; 1/1/2017: EUR 10,672 thousand).

8 Other Notes to the Group Statement of Profit or Loss

Depreciation of property, plant, and equipment, and amortization of intangible assets are included in the following items of the Group income statement:

in kEUR	2018	2017
Scheduled depreciation		
In the cost of sales	-44.605	-41.337
In the selling expenses	-5.696	-4.732
In the administrative expenses	-9.414	-8.826
In the research and development expenses	-453	-352
	-60.169	**-55.247**

G Notes to the Balance Sheet

9 Cash and Cash Equivalents

A breakdown of cash and cash equivalents is shown below:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Cash and cash equivalents			
Checks, cash in hand, and bank balances	67.178	91.175	170.588
	67.178	**91.175**	**170.588**

Liquid assets correspond to cash and cash equivalents. The development of cash and cash equivalents is presented in the statement of cash flows.

10 CURRENT FINANCIAL ASSETS

Current financial assets include:[25]

in kEUR	12/31/2018 FVTPL	AC	Miscellaneous
Cash and cash equivalents	**-**	**67.178**	**-**
Financial assets			
Derivatives	298	-	200
Loans	-	880	-
Continuing involvement	-	-	148
Other receivables	-	15.846	-
	298	**16.726**	**348**
Trade receivables	**-**	**369.700**	**-**

in kEUR	12/31/2017 FVTPL	AC	Miscellaneous
Cash and cash equivalents	**-**	**91.175**	**-**
Financial assets			
Derivatives	841	-	276
Loans	-	693	-
Continuing involvement	-	-	184
Other receivables	-	17.520	-
	841	**18.213**	**460**
Trade receivables	**-**	**348.601**	**-**

in kEUR	1/1/2017 FVTPL	AC	Miscellaneous
Cash and cash equivalents	**-**	**170.588**	**-**
Financial assets			
Derivatives	82	-	0
Loans	-	144	-
Continuing involvement	-	-	0
Other receivables	-	15.829	-
	82	**15.974**	**0**
Trade receivables	**-**	**268.047**	**-**

Information on financial assets to related entities is provided in section J.

The carrying amounts of current financial assets correspond to their fair values.

For derivative financial instruments, future cash flows are determined using forward curves. In particular, exchange rates and yield curves are used, which can be observed on the relevant markets and obtained via market information systems. The fair value of these instruments corresponds to the sum of the discounted cash flows. The fair values determined for derivatives therefore fall under level 2 of the fair value hierarchy (see the "Fair Value" subsection in the "Financial Instruments" section under "C Accounting Policies").

Transfers of Receivables

The continuing involvement (assets and liabilities) included in the financial statements results from an ABS program and from joint liability risks from risk-sharing agreements with sales financing partners.

Under the ABS program, the buyer of the receivables is obliged to purchase certain short-term trade receivables. The purchase obligation revolves on a monthly basis and relates to trade receivables of a maximum of EUR 23,500 thousand. The agreement expired in the first half of fiscal year 2018. The relevant risks for the risk assessment are credit risk and late payment risk. The credit risk consists of the risk of defaulting receivables and is largely transferred against payment of a fixed purchase price discount. A first loss guarantee amounting to 1.0% of the receivables transferred and the risk of late payment are retained in full.

The volume of receivables transferred under the ABS program in the past fiscal year was between EUR 12,151 thousand and EUR 23,500 thousand (2017: between EUR 10,304 thousand and EUR 23,500 thousand). The nominal amount of the receivables transferred existing at the reporting date was EUR 0 thousand (12/31/2017: EUR 8,944 thousand; 1/1/2017: EUR 0 thousand). The maximum risk of loss resulting from these receivables was EUR 0 thousand (12/31/2017: EUR 8,944 thousand; 1/1/2017: EUR 0

25 Derivatives in hedge accounting and continuing involvement do not fall under any of the measurement categories of IFRS 9. They are therefore included in the "Miscellaneous" category.

thousand). The carrying amount and fair value of the continuing involvement recognized for this purpose were each EUR 0 thousand (12/31/2017: EUR 118 thousand; 1/1/2017: EUR 0 thousand). At the time of derecognition, the fair value of the continuing involvement, the purchase price discounts, and the program fees were recognized in the statement of profit or loss. Expenses from purchase price discounts and program fees were EUR 55 thousand (2017: EUR 223 thousand).

In certain transactions, receivables from customers due in the short term are transferred to a sales financing partner against payment of consideration. This is generally a leasing company. This converts the short-term receivable into a financing transaction with the customer. Under certain conditions and within the framework of risk-sharing agreements, Zeppelin undertakes to share the credit default risk from the sales financing partner's financing transaction proportionately. The volume of receivables subject to risk sharing in the past fiscal year was EUR 8,065 thousand (2017: EUR 5,807 thousand). The nominal amount of receivables with risk sharing as at the reporting date was EUR 11,358 thousand (12/31/2017: EUR 4,898 thousand; 1/1/2017: EUR 0 thousand). The maximum risk of loss resulting from these receivables was EUR 7,765 thousand (12/31/2017: EUR 3,318 thousand 1/1/2017: EUR 0 thousand). The carrying amount and fair value of the continuing involvement recognized for this purpose were each EUR 7,776 thousand (12/31/2017: EUR 3,323 thousand; 1/1/2017: EUR 0 thousand). At the time of derecognition, the difference between the carrying amount of the receivable and the value of the continuing involvement was recognized in the income statement. No fees were incurred for the conclusion of the contracts.

11 Contract Assets and Liabilities

The contract assets result primarily from the project business. Contract liabilities result from the project business, services, and warranty extensions.

in kEUR	12/31/2018	12/31/2017	1/1/2017
Contract assets			
Project business			
Gross inventory	31.815	23.048	31.587
Value allowances	-310	-422	-248
	31.505	**22.626**	**31.339**
Other contracts			
Gross inventory	694	7	468
Value allowances	0	0	0
	694	**7**	**468**
	32.199	**22.633**	**31.807**
Contract liabilities			
from the project business	66.804	85.446	84.998
from service contracts	20.208	17.348	14.384
from warranty extensions	46.407	64.499	61.118
	133.419	**167.293**	**160.500**

Changes in the balance of contract assets and liabilities from the project business may result from advance payments, interim and final settlements, sales recognition based on performance progress, adjustments to sales, performance obligations settled in prior periods, and exchange rate effects. Changes in the fiscal year amounting to EUR 11,152 thousand (2017: EUR 1,839 thousand) are attributable to adjustments of performance obligations met in previous periods. Zeppelin recognized sales of EUR 30,933 thousand (2017: EUR 33,578 thousand) for performance obligations included in contract liabilities from prior periods.

The balance of contract liabilities from service contracts represents the excess of service payments received from customers over the cumulative sales recognized from the rendering of services. Zeppelin recognized sales of EUR 79 thousand (2017: EUR 0 thousand) for performance obligations included in contract liabilities from prior periods.

The balance of contract liabilities from extended warranties represents the excess of warranty payments received from customers over the cumulative sales recognized from the rendering of warranty services. Zeppelin recognized sales of EUR 17,657 thousand (2017: EUR 16,474 thousand) for performance obligations included in contract liabilities from prior periods

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12 OTHER ASSETS

A breakdown of other assets is shown below:

in kEUR	12/31/2018 Total	12/31/2018 thereof current	12/31/2017 Total	12/31/2017 thereof current	1/1/2017 Total	1/1/2017 thereof current
Other assets						
Refund claims and prepayments for other taxes	4.138	4.138	2.572	2.572	7.033	7.033
Excess of plan assets over the defined benefit obligation	0	0	316	29	315	133
Advance payments for wages and salaries	1.374	1.374	1.659	1.659	1.435	1.435
Repurchase rights from RPO transactions	47.829	10.751	44.618	9.178	37.211	7.142
Advance payments for warranty extensions	5.565	2.427	4.268	1.636	3.331	1.429
Advance payments for purchased services	1.696	1.370	2.066	1.752	1.749	1.749
Miscellaneous other advance payments	35.256	23.814	28.764	16.441	25.229	13.655
	95.858	**43.874**	**84.264**	**33.268**	**76.303**	**32.576**

Advance payments for purchased services mainly relate to advance rent payments for short-term rents or rents for low-value assets, warranty extensions, insurance and bank charges, which are not interest expenses, advance pension payments, and maintenance services. The miscellaneous other advance payments mainly relate to excise taxes.

13 INVENTORIES

A breakdown of the carrying amount of inventories is shown below:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Inventories			
Raw materials, consumables, and supplies	25.015	23.322	23.091
Work in progress	30.410	32.094	32.710
Finished goods and merchandise	398.404	358.576	324.044
Advance payments on inventories	43.729	50.358	44.717
	497.557	**464.350**	**424.562**

EUR 1,689,285 thousand of inventories were recorded as material consumption (2017: EUR 1,504,354 thousand).

Zeppelin recorded impairment losses on inventories of EUR 17,803 thousand (2017: EUR 10,747 thousand) in the fiscal year and realized reversals of impairment losses on inventories of EUR 5,509 thousand (2017: EUR 5,125 thousand). Reversals of impairment losses on inventories result from disposals at prices that exceed the previously estimated net realizable value.

14 Non-Current Financial Assets

The carrying amounts and fair values of non-current financial assets are:[26]

in kEUR	FVTPL Carrying amount	FVTPL Market value	AC Carrying amount	AC Market value	Miscellaneous
	12/31/2018				
Financial assets					
Derivatives	0	0	-	-	549
Shares	13.826	13.826	-	-	-
Participations	18	18	-	-	-
Loans	-	-	727	727	-
Continuing involvement	-	-	-	-	7.617
Other receivables	-	-	4.697	4.697	-
	13.844	**13.844**	**5.424**	**5.424**	**8.166**
Trade receivables	**-**	**-**	**12.147**	**12.294**	**-**

in kEUR	FVTPL Carrying amount	FVTPL Market value	AC Carrying amount	AC Market value	Miscellaneous
	12/31/2017				
Financial assets					
Derivatives	40	40	-	-	1.089
Shares in affiliates	13.799	13.799	-	-	-
Participations	18	18	-	-	-
Loans	-	-	601	601	-
Continuing involvement	-	-	-	-	3.247
Other receivables	-	-	3.912	3.912	-
	13.872	**13.871**	**4.512**	**4.512**	**4.336**
Trade receivables	**-**	**-**	**13.705**	**13.808**	**-**

[26] Derivatives in hedge accounting and continuing involvement do not fall under any of the measurement categories of IFRS 9. They are therefore included in the "Miscellaneous" category.

	1/1/2017				
	FVTPL		AC		Misce-llaneous
in kEUR	Carrying amount	Market value	Carrying amount	Market value	
Financial assets					
Derivatives	1.515	1.515	-	-	3
Shares	12.373	12.373	-	-	-
Participations	914	914	-	-	-
Loans	-	-	443	443	-
Continuing involvement	-	-	-	-	0
Other receivables	-	-	3.741	3.741	-
	15.736	**15.735**	**4.184**	**4.185**	**3**
Trade receivables	**-**	**-**	**14.184**	**13.914**	**-**

Information on financial assets to related entities is provided in section J.

Information on determining the fair values of derivatives is provided in section C.

The carrying amount of the shares in affiliates relates firstly to shares in subsidiaries that were not included in the consolidation group for reasons of materiality (see subsection "Subsidiaries" in the section "Consolidation Group" under B "Principles for Preparing the Group Financial Statements"). Secondly, the carrying amount includes shares in the parent company of Zeppelin GmbH, Luftschiffbau Zeppelin GmbH, Friedrichshafen, of EUR 11,276 thousand. The shares correspond to 10.0% of the subscribed capital of EUR 35,000 thousand. The shares do not confer any dividend subscription rights and are inalienable. The fair value corresponds to the historical acquisition costs.

The carrying amount of the participations relates to shares held by Zeppelin GmbH in Wirtschaftsförderung Bodenseekreis GmbH. The participation in Energyst B.V., with a carry amount of EUR 907 thousand as at 1/1/2017, was written down to EUR 0 thousand in fiscal year 2017.

The information on the fair values of the loans corresponds to the present value of the cash inflows. They are discounted using credit risk-adjusted interest rates. The valuation method falls under level 2 of the fair value hierarchy (see subsection "Fair Value" in the section "Financial Instruments" under C "Accounting Policies").

For derivative financial instruments, future cash flows are determined using forward curves. In particular, exchange rates and yield curves are used, which can be observed on the relevant markets and obtained via market information systems. The fair value of these instruments corresponds to the sum of the discounted cash flows. The fair values determined for derivatives therefore fall under level 2 of the fair value hierarchy (see the "Fair Value" subsection in the "Financial Instruments" section under "C Accounting Policies").

15 Investments Accounted for Using the Equity Method

The carrying amount of investments accounted for using the equity method are attributable to associates and joint ventures as follows:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Companies valued using the equity method			
Associates	18.198	16.946	13.753
Joint ventures	673	673	673
	18.870	**17.619**	**14.426**

The carrying amount of the associates includes CZ Loko a.s. and Smart Controls India Ltd.

Summarized financial information about CZ Loko a.s. is presented in the following table:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Share of equity capital			
Net assets			
Current assets	53.587	48.949	39.445
Non-current assets	26.793	26.786	24.733
Current liabilities	-40.490	-38.127	-32.359
Non-current liabilities	-6.237	-5.292	-2.745
	33.654	**32.317**	**29.074**
Share in %	49,0	49,0	49,0
Other adjustments	-390	-1.047	-493
	16.100	**14.788**	**13.753**

in kEUR	2018	2017
Share of net profit or loss after tax		
Sales	88.857	85.228
Net profit/loss	2.762	2.632
Share in %	49,0	49,0
	1.353	**1.289**
Share of other comprehensive income		
Other comprehensive income	-86	579
Share in %	49,0	49,0
	-42	**284**
Dividends received	**0**	**538**

The associate Smart Controls India Ltd. is not material for the presentation of the net assets, financial position and earnings of the Group. Zeppelin has the following interests in net profit or loss after tax and other comprehensive income:

in kEUR	2018	2017
Total comprehensive income		
Net profit or loss after tax	200	37
Other comprehensive income	-10	-8
	190	**29**

The joint venture Fehmarnbelt Solutions Services A/S is not material for the presentation of the net assets, financial position and results of operations of the Group. Zeppelin has the following interests in net profit or loss after tax and other comprehensive income:

in kEUR	2018	2017
Total comprehensive income		
Net profit or loss after tax	-156	-43
Other comprehensive income	-2	-4
	-157	**-47**

16 Intangible Assets

The changes in intangible assets are shown below:

in kEUR	Goodwill	Software, concessions, industrial rights	Internally generated intangible assets	Payments in advance	Total
Costs					
1/1/2017	**74.856**	**49.929**	**0**	**2.325**	**127.110**
Additions	198	11.345	0	2.901	14.444
Disposals	0	-315	0	-4	-318
Changes in the consolidated group	0	0	0	0	0
Net exchange differences	417	-795	0	0	-378
Transfers	0	245	0	-292	-47
Reclassifications	0	0	0	0	0
12/31/2017	**75.471**	**60.408**	**0**	**4.931**	**140.810**
Additions	2.829	12.820	138	2.274	18.061
Disposals	0	-153	0	-116	-269
Changes in the consolidated group	0	3.134	0	0	3.134
Net exchange differences	48	-549	0	0	-501
Transfers	0	491	2.549	-2.848	191
Reclassifications	0	0	0	0	0
12/31/2018	**78.348**	**76.151**	**2.687**	**4.240**	**161.426**
Accumulative amortization					
1/1/2017	**-61.174**	**-39.331**	**0**	**-1**	**-100.506**
Depreciation	0	-3.996	0	0	-3.996
Impairments	0	0	0	0	0
Reversals of impairments	7	0	0	0	7
Disposals	0	310	0	0	310
Changes in the consolidated group	0	0	0	0	0
Net exchange differences	-244	748	0	0	503
Transfers	0	3	0	0	3
Reclassifications	0	0	0	0	0
12/31/2017	**-61.412**	**-42.266**	**0**	**-1**	**-103.679**
Depreciation	0	-4.144	-425	0	-4.568
Impairments	0	-1.990	0	0	-1.990
Reversals of impairments	0	0	0	0	0
Disposals	0	137	0	1	139
Changes in the consolidated group	0	0	0	0	0
Net exchange differences	-77	498	0	0	422
Transfers	0	0	0	0	0
Reclassifications	0	0	0	0	0
12/31/2018	**-61.488**	**-47.764**	**-425**	**0**	**-109.677**

The asset class "Software, concessions, and industrial rights" includes an ERP system currently being developed for the Construction Equipment EU SBU. A total of EUR 18,428 thousand (12/31/2017: EUR 10,557 thousand; 1/1/2017: EUR 3,940 thousand) was recognized.

As at December 31, 2018, there were contractual obligations to acquire intangible assets amounting to EUR 378 thousand (12/31/2017: EUR 59 thousand; 1/1/2017: EUR 30 thousand).

The allocation of the carrying amount of goodwill to the CGUs is presented below:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Goodwill			
Construction Equipment EU	8.012	8.040	7.663
Rental	7.587	6.018	6.018
Plant Engineering	1.260	0	0
	16.859	**14.059**	**13.682**

Zeppelin generally determines the recoverable amount of a CGU as its fair value less costs to sell. The DCF method is applied. The cash flows used for the calculation are derived from the mid-term plan approved by management for the next three years on an after-tax basis. The expected cash flows after this period are extrapolated using growth rates. As at the reporting date, the growth rate was 1.0% (12/31/2017: 1.0%; 1/1/2017: 1.0%). The growth rate reflects management's expectations of future growth derived from the past. To determine the present value, cost of capital rates after taxes of between 5.0% and 6.0% (12/31/2017: 5.0% to 6.2%; 1/1/2017: 5.1% to 6.6%) were used. The cost of capital rates take into account Zeppelin's industry-specific risk. The determined fair value falls under level 3 of the fair value hierarchy (see subsection "Fair Value" in the section "Financial Instruments" under C "Accounting Policies").

17 Property, Plant, and Equipment

Changes in property, plant, and equipment are presented below:

in kEUR	Land and buildings	Technical equipment and machines	Operating and business equipment	Rental fleet (RPO)	Rental fleet (other)	Payments in advance and construction in progress	Total
Costs							
1/1/2017	**460.541**	**68.242**	**139.606**	**219.524**	**544.573**	**13.075**	**1.445.561**
Additions	22.067	6.018	32.692	105.915	177.909	7.681	352.283
Disposals	-2.010	-3.816	-13.177	-47.177	-98.740	-1.153	-166.072
Changes in the consolidated group	0	0	0	0	0	0	0
Net exchange differences	-136	-978	-2.793	553	2.274	-518	-1.598
Transfers	5.443	2.457	-326	0	121	-7.647	47
Reclassifications	0	0	0	0	0	0	0
12/31/2017	**485.906**	**71.923**	**156.002**	**278.815**	**626.137**	**11.439**	**1.630.222**
Additions	18.824	4.568	35.607	99.287	204.117	13.756	376.158
Disposals	-5.387	-2.405	-10.237	-64.781	-120.558	-934	-204.301
Changes in the consolidated group	475	121	337	0	312	0	1.244
Net exchange differences	-1.219	-686	-1.621	-57	-1.146	-1.196	-5.925
Transfers	2.101	-715	1.664	0	-862	-3.575	-1.387
Reclassifications	-172	-44	179	0	-84	19	-102
12/31/2018	**500.528**	**72.763**	**181.931**	**313.264**	**707.916**	**19.508**	**1.795.910**

in kEUR	Land and buildings	Technical equipment and machines	Operating and business equipment	Rental fleet (RPO)	Rental fleet (other)	Payments in advance and con-struction in progress	Total
Accumulative depreciation							
1/1/2017	**-145.423**	**-45.097**	**-93.034**	**-8.509**	**-139.878**	**-94**	**-432.033**
Additions (depreciation)	-22.460	-5.258	-23.473	-36.904	-88.419	-60	-176.575
Additions (impairments)	0	0	0	0	0	0	0
Reversals of impairments	-37	0	0	0	139	0	102
Disposals	878	3.734	11.374	7.999	24.541	0	48.525
Changes in the consolidated group	0	0	0	0	0	0	0
Net exchange differences	258	769	1.850	-183	-1.318	-2	1.374
Transfers	-69	-201	248	0	-51	69	-3
Reclassifications	0	0	0	0	0	0	0
12/31/2017	**-166.853**	**-46.053**	**-103.034**	**-37.597**	**-204.987**	**-86**	**-558.609**
Additions (depreciation)	-23.431	-5.304	-26.947	-43.243	-89.212	0	-188.136
Additions (impairments)	0	0	0	0	0	0	0
Reversals of impairments	0	0	-92	0	69	0	-23
Disposals	400	2.322	8.426	19.090	34.464	86	64.788
Changes in the consolidated group	0	-2	700	0	0	0	698
Net exchange differences	273	428	977	17	535	0	2.229
Transfers	-12	161	217	0	832	0	1.198
Reclassifications	0	22	-177	0	50	0	-106
12/31/2018	**-189.624**	**-48.426**	**-119.930**	**-61.733**	**-258.250**	**0**	**-677.963**

The asset classes shown in the statement of changes in non-current assets include rights of use for leased assets. Further details are provided in Note 27.

In the fiscal year 2018, Zeppelin received compensation of EUR 4,505 thousand for damaged property, plant, and equipment (2017: EUR 2,821 thousand).

As at December 31, 2018, there were contract obligations for Zeppelin to acquire property, plant, and equipment amounting to EUR 93,568 thousand (12/31/2017: EUR 92,794 thousand; 1/1/2017: EUR 64,437 thousand).

18 Current Financial Liabilities

Current financial liabilities include:[27]

in kEUR	12/31/2018 FVTPL	AC	Miscellaneous
Financial liabilities			
Borrowings	-	8.763	-
Bonded loans	-	23.391	-
Derivatives	1.157	-	5
Lease liabilities	-	-	48.603
Continuing involvement	-	-	148
Miscellaneous	-	0	-
	1.157	**32.153**	**48.755**
Trade payables	**-**	**133.066**	**-**
Other financial liabilities	**-**	**118.748**	**-**

in kEUR	12/31/2017 FVTPL	AC	Miscellaneous
Financial liabilities			
Borrowings	-	4.513	-
Bonded loans	-	1.397	-
Derivatives	1.327	-	42
Lease liabilities	-	-	85.492
Continuing involvement	-	-	189
Miscellaneous	-	0	-
	1.327	**5.911**	**85.722**
Trade payables	**-**	**109.921**	**-**
Other financial liabilities	**-**	**91.895**	**-**

in kEUR	1/1/2017 FVTPL	AC	Miscellaneous
Financial liabilities			
Borrowings	-	3.222	-
Bonded loans	-	68.713	-
Derivatives	1.951	-	184
Lease liabilities	-	-	86.476
Continuing involvement	-	-	0
Miscellaneous	-	0	-
	1.951	**71.935**	**86.661**
Trade payables	**-**	**84.633**	**-**
Other financial liabilities	**-**	**92.274**	**-**

Information on financial liabilities to related entities is provided in section J.

Current financial liabilities have residual terms of less than one year. Therefore, their carrying amounts at the reporting date correspond to their fair values. The fair values fall under level 2 of the fair value hierarchy (see subsection "Fair Value" in the section "Financial Instruments" under C "Accounting Policies").

For derivative financial instruments, future cash flows are determined using forward curves. Exchange rates and yield curves are used, which can be observed on the relevant markets and obtained via market information systems. The fair value of these instruments corresponds to the sum of the discounted cash flows. As such, the fair values determined for derivatives fall under level 2 of the fair value hierarchy (see subsection "Fair Value" in the section "Financial Instruments" under C "Accounting Policies").

[27] Derivatives in hedge accounting and continuing involvement do not fall under any of the measurement categories of IFRS 9. They are included in the "Miscellaneous" category.

19 Other Liabilities

Other debts include:

in kEUR	12/31/2018 Total	12/31/2018 thereof current	12/31/2017 Total	12/31/2017 thereof current	1/1/2017 Total	1/1/2017 thereof current
Other debts						
Other tax liabilities	37.390	37.390	23.565	23.565	17.469	17.469
Deferred sales from RPO transactions	110.303	49.151	110.939	47.452	97.373	41.224
Liabilities for wages and salaries	1.759	1.628	1.775	1.583	1.781	1.781
Payments received in advance for services	5.437	5.267	6.767	6.568	4.240	3.134
Other advance payments	1.367	1.277	1.582	1.438	3.486	2.990
	156.257	**94.713**	**144.628**	**80.605**	**124.350**	**66.598**

Advance payments for services to be rendered mainly relate to marketing support and rent. The miscellaneous other advance payments mainly relate to obligations to employees and other benefits.

20 Non-Current Financial Liabilities

The carrying amounts and fair values of non-current financial liabilities are:[28]

in kEUR	12/31/2018 FVTPL Carrying amount	FVTPL Market value	AC Carrying amount	AC Market value	Miscellaneous
Financial liabilities					
Borrowings	-	-	147.146	148.258	-
Bonded loans	-	-	162.309	168.595	-
Derivatives	4.073	4.073	-	-	5.272
Lease liabilities	-	-	-	-	185.622
Continuing involvement	-	-	-	-	7.628
	4.073	**4.073**	**309.454**	**316.853**	**198.522**
Trade payables	**-**	**-**	**0**	**0**	**-**
Other financial liabilities	**-**	**-**	**148.272**	**147.628**	**-**

[28] Derivatives in hedge accounting and continuing involvement do not fall under any of the measurement categories of IFRS 9. They are included in the "Miscellaneous" category.

	12/31/2017				
	FVTPL		AC		Misce-llaneous
in kEUR	Carrying amount	Market value	Carrying amount	Market value	
Financial liabilities					
Borrowings	-	-	145.868	148.346	-
Bonded loans	-	-	184.190	191.072	-
Derivatives	-	-	-	-	8.703
Lease liabilities	-	-	-	-	154.250
Continuing involvement	-	-	-	-	3.253
	0	**0**	**330.058**	**339.419**	**166.205**
Trade payables	**-**	**-**	**166**	**189**	**-**
Other financial liabilities	**-**	**-**	**155.604**	**155.570**	**-**

	1/1/2017				
	FVTPL		AC		Misce-llaneous
in kEUR	Carrying amount	Market value	Carrying amount	Market value	
Non-Current Financial Liabilities					
Borrowings	-	-	107.002	107.002	-
Bonded loans	-	-	119.341	125.587	-
Derivatives	13.073	13.073	-	-	14
Lease liabilities	-	-	-	-	213.517
Continuing involvement	-	-	-	-	0
	13.073	**13.073**	**226.343**	**232.589**	**213.531**
Trade payables	**-**	**-**	**233**	**233**	**-**
Other financial liabilities	**-**	**-**	**126.780**	**126.605**	**-**

Information on financial liabilities to related entities is provided in section J.

With the exception of the disclosures on the fair value of the continuing involvement, the fair values of the financial liabilities correspond to the present value of the cash outflows. They are discounted using credit risk-adjusted interest rates. The valuation method falls under level 2 of the fair value hierarchy (see subsection "Fair Value" in the section "Financial Instruments" under C "Accounting Policies").

For derivative financial instruments, future cash flows are determined using forward curves. In particular, exchange rates and yield curves are used, which can be observed on the relevant markets and obtained via market information systems. As such, the fair values determined for derivatives fall under level 2 of the fair value hierarchy (see subsection "Fair Value" in the section "Financial Instruments" under C "Accounting Policies").

21 Employee Benefits

Employee benefits include:

in kEUR	12/31/2018 Total	12/31/2018 thereof current	12/31/2017 Total	12/31/2017 thereof current	1/1/2017 Total	1/1/2017 thereof current
Employee benefits						
Short-term employee benefits						
Vacation and overtime	18.833	18.833	17.679	17.679	15.928	15.928
Variable salary components and bonuses	39.504	39.504	35.339	35.339	31.947	31.947
Commissions	6.309	6.309	5.895	5.895	4.805	4.805
Social contributions	4.941	4.910	3.268	3.220	4.292	4.230
Miscellaneous	2.241	2.159	2.680	2.305	2.636	2.333
	71.829	**71.715**	**64.861**	**64.439**	**59.608**	**59.242**
Net liability from defined benefit pension plans	**141.182**	**7.279**	**144.316**	**7.080**	**146.343**	**6.938**
Other long-term employee benefits						
Jubilee bonuses	2.493	395	2.310	238	2.407	203
Partial retirement	2.371	631	2.266	676	2.237	878
Miscellaneous	147	0	153	0	172	0
	5.010	**1.026**	**4.728**	**914**	**4.816**	**1.081**
Post-employment benefits	**4.727**	**4.397**	**5.243**	**4.940**	**2.571**	**2.235**
	222.748	**84.416**	**219.148**	**77.373**	**213.339**	**69.496**

Provisions for Defined Benefit Pension Plans

Zeppelin provides participating employees with post-employment pension and similar benefits in the form of defined contribution and defined benefit plans under which benefits are payable in the form of payments on and after retirement, disability, and death.

Defined contribution plans mainly relate to the statutory pension insurance of the Federal Republic of Germany and company pension benefits with contributions paid to direct insurance companies by way of employer financing and deferred compensation.

Expenses for defined contribution plans amounted to EUR 2,358 thousand (2017: EUR 2,255 thousand).

The largest defined benefit commitment is the pension plan of Zeppelin Metallwerke GmbH (now Zeppelin GmbH), which was closed in 1995 and largely transferred to Zeppelin Baumaschinen GmbH and Zeppelin Systems GmbH in the course of restructuring. The amount of the respective claims depends on the length of service and the pensionable income before 1/1/1996. Current pensions are adjusted annually at 1.0%. In addition, there are further defined benefit commitments for smaller pension plans and individual commitments to managing directors and selected executives. The commitments provide for a lifelong pension, a partial disability or survivors' pension, or corresponding contributions and various capital options.

As at the reporting date, for a total of 3,009 employees (12/31/2017: 3,044; 1/1/2017: 3,023) there were obligations from defined benefit commitments, of which 1,048 are due to active employees (12/31/2017: 1,064; 1/1/2017: 1,043), 404 to former employees with vested pension rights (12/31/2017: 406; 1/1/2017: 416) and 1,557 to pensioners and surviving dependants (12/31/2017: 1,574; 1/1/2017: 1,564).

Zeppelin has invested plan assets to meet and finance its defined benefit commitments, which are measured at fair value and offset against provisions for pensions. Plan assets include reinsurance policies and funds paid into pension trusts (CTAs) as plan assets. The plan assets are earmarked, secured against insolvency, and pledged.

A breakdown of the net liability and changes thereto are presented below:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Net liability			
Provisions for pensions	149.154	151.941	153.250
thereof covered	13.309	11.979	11.617
thereof not covered	135.846	139.962	141.633
Fair value of plan assets	-7.973	-7.805	-7.089
	141.182	**144.137**	**146.162**

in kEUR	Provisions for pensions	Plan assets	Net liability
1/1/2017	**153.250**	**7.089**	**146.162**
Service costs	1.922	0	1.922
Interest result	2.271	108	2.163
Benefits paid by company / plan	-7.471	-131	-7.340
Actuarial gains (-) and losses (+)	1.683	61	1.622
from the change in demographic assumptions	5	0	5
from the change in financial assumptions	1.510	0	1.510
due to experience adjustments	168	0	168
Employee contributions	147	147	0
Employer contributions	477	808	-331
Net exchange differences from plans abroad	-338	-273	-65
Change in the consolidated group	0	-4	4
12/31/2017	**151.941**	**7.805**	**144.137**

in kEUR	Provisions for pensions	Plan assets	Net liability
12/31/2017	**151.941**	**7.805**	**144.137**
Service costs	1.139	0	1.139
Interest result	2.111	134	1.977
Benefits paid by company / plan	-7.557	-778	-6.779
Actuarial gains (-) and losses (+)	-49	-261	212
from the change in demographic assumptions	1.602	0	1.602
from the change in financial assumptions	-2.030	0	-2.030
due to experience adjustments	379	0	379
Employee contributions	160	162	-2
Employer contributions	360	694	-334
Net exchange differences from plans abroad	137	122	14
Change in the consolidated group	912	94	818
12/31/2018	**149.154**	**7.973**	**141.182**

For the following fiscal year Zeppelin expects payments for employer contributions to plan assets of EUR 958 thousand (12/31/2017: EUR 1,418 thousand; 1/1/2017: EUR 521 thousand), and pension payments of EUR 113 thousand (12/31/2017: EUR 172 thousand; 1/1/2017: 372).

The valuation of provisions for pensions is essentially based on the following actuarial assumptions:

Percent (%)	12/31/2018	12/31/2017	1/1/2017
Discount rate	1.0 - 7.7	0.8 - 6.9	0.8 - 6.9
Future wage and salary increases	1.8 - 6.5	1.8 - 6.5	1.0 - 6.5
Future pension increase	1.0 - 2.0	1.0 - 2.0	1.0 - 2.0

The calculation basis for life expectancy is the 2018 G mortality tables (2017: 2005 G) by Klaus Heubeck.

The average duration of provisions for pensions is between 4.0 and 20.4 years (12/31/2017: 5.0 to 20.4 years; 1/1/2017: 6.0 to 20.8 years).

Zeppelin is exposed to actuarial risks from the measurement of provisions for pensions. The carrying amount of provisions is particularly sensitive to fluctuations in discount rates and life expectancy. The following sensitivity analysis provides a quantitative assessment of the extent of the actuarial risks.

in kEUR	12/31/2018	12/31/2017	01.01.2017
Discount rate			
+0.25%	138.060	139.321	134.958
-0.25%	146.327	147.913	143.712
Life expectancy			
+ 1 year	148.263	149.516	145.103
- 1 year	135.803	137.369	133.160

A breakdown of the plan assets is presented below:

in kEUR	12/31/2018			12/31/2017			1/1/2017		
	listed	unlisted	Total	listed	unlisted	Total	listed	unlisted	Total
Plan assets									
Cash	0	104	**104**	0	205	**205**	0	274	**274**
Equity instruments	1.065	0	**1.065**	996	0	**996**	939	0	**939**
Debt instruments	1.590	0	**1.590**	1.430	0	**1.430**	1.344	0	**1.344**
Real estate	679	0	**679**	591	0	**591**	574	0	**574**
Investment funds	0	481	**481**	0	31	**31**	0	0	**0**
ABS program	113	0	**113**	0	0	**0**	0	0	**0**
Insurance policies	0	3.744	**3.744**	200	4.182	**4.382**	185	3.654	**3.839**
Miscellaneous	197	0	**197**	170	0	**170**	120	0	**120**
	3.643	4.330	**7.973**	3.387	4.418	**7.805**	3.161	3.927	**7.089**

22 Other Provisions

A breakdown of other provisions is presented below:

in kEUR	Warranties	Onerous contracts	Provisions	Loyalty bonuses and other price reductions	Legal fees	Miscellaneous	Total
1/1/2017	**16.796**	**2.815**	**3.019**	**1.523**	**2.821**	**8.547**	**35.520**
Addition	8.257	2.970	820	3.144	655	6.074	21.920
Utilization	-5.282	-1.487	-2.236	-1.067	-444	-2.931	-13.447
Reversals	-3.502	-743	-291	-114	-347	-1.585	-6.581
Discounting	134	0	0	0	0	3	137
Unwinding of the discount	-6	0	0	0	0	13	7
Interest rate change	0	0	0	0	0	0	0
Changes in the consolidated group	0	0	0	0	0	0	0
Net exchange differences	-430	-57	-52	0	-198	-143	-880
12/31/2017	**15.966**	**3.499**	**1.260**	**3.485**	**2.488**	**9.978**	**36.677**

in kEUR	Warranties	Onerous contracts	Provisions	Loyalty bonuses and other price reductions	Legal fees	Miscellaneous	Total
12/31/2017	**15.966**	**3.499**	**1.260**	**3.485**	**2.488**	**9.978**	**36.677**
Addition	11.604	4.261	676	4.149	1.328	7.328	29.346
Utilization	-6.185	-3.084	-707	-2.865	-159	-2.833	-15.833
Reversals	-4.846	-112	-128	-252	-309	-1.904	-7.550
Discounting	-10	-1	0	0	0	-2	-13
Unwinding of the discount	19	0	0	0	0	41	59
Interest rate change	0	0	0	0	0	0	0
Changes in the consolidated group	137	0	0	0	0	574	711
Net exchange differences	-47	-19	-6	0	-107	-21	-200
12/31/2018	**16.638**	**4.545**	**1.095**	**4.517**	**3.241**	**13.160**	**43.197**

A summary of other provisions by maturity is presented in the following table:

in kEUR	12/31/2018		12/31/2017		1/1/2017	
	Total	thereof current	Total	thereof current	Total	thereof current
Other provisions						
Warranties	16.638	14.755	15.966	13.553	16.796	14.237
Onerous contracts	4.545	4.315	3.499	2.643	2.815	2.686
Commissions	1.095	1.095	1.260	1.260	3.019	3.019
Loyalty bonuses and price reductions	4.517	4.517	3.485	3.485	1.523	1.523
Legal fees	3.241	3.241	2.488	2.488	2.821	2.821
Miscellaneous	13.160	8.295	9.978	6.800	8.547	6.980
	43.197	**36.218**	**36.677**	**30.230**	**35.520**	**31.265**

Warranty provisions are recognized for warranty obligations. The valuation takes into account the expected value of the warranty costs attributable to the sales made. Warranty provisions are reversed upon expiry of the respective warranty period. The number of warranty claims, the warranty costs, and the timing of warranty claims are subject to estimation.

Provisions for onerous contracts are recognized for pending sales transactions if the unavoidable costs exceed the expected economic benefits from the settlement of these transactions. Expected costs and sales are estimated. A large part of the provisions relates to orders for which sales are realized according to degree of completion. They are recognized as soon as the expected total costs from the fulfillment of the contract exceed the contract value.

Provisions for commissions relate to expected obligations to pay commissions to third parties for the brokerage of business. The amount of the brokerage commission is estimated.

Provisions for loyalty bonuses and other price discounts are recognized for the achievement of certain targets (e.g. sales targets) within a defined period. Estimates are required in terms of attaining the targets and the amount of the resulting discounts.

Provisions for legal fees are recognized for expected litigation expenses. Estimates relate to the amount of court costs such as court fees and expenses, as well as non-court costs, for example for lawyers. It is also necessary to estimate the extent of Zeppelin's contribution to the costs of the proceedings and the time at which it will be able to benefit from the pending proceedings.

23 Equity

The share capital of EUR 100,000 thousand (12/31/2017: EUR 100,000 thousand; 1/1/2017: EUR 100,000 thousand) is divided into two shares. These are issued and fully paid in. The following table illustrates the carrying amount per share and the associated voting rights.

in kEUR	12/31/2018	12/31/2017	01.01.2017
Luftschiffbau Zeppelin GmbH			
Carrying amount of share capital	96.250	96.250	96.250
Voting rights in %	96,25	96,25	96,25
Zeppelin			
Carrying amount of share capital	3.750	3.750	3.750
Voting rights in %	3,75	3,75	3,75

Zeppelin distributed a dividend of EUR 10,367 thousand in fiscal year 2018 (2017: EUR 10,000 thousand). The dividend is paid to the shareholders of Zeppelin GmbH in proportion to their shares.

The capital reserve of EUR 60,000 thousand results from shareholder contributions. It serves to permanently strengthen the equity of Zeppelin GmbH.

A breakdown of retained earnings is presented below:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Retained earnings			
Shares in Luftschiffbau Zeppelin GmbH	11.276	11.276	11.276
First-time application of IFRS	15.952	15.952	15.952
Foreign currency translation differences	-37.417	-37.417	-37.417
Other retained earnings	625.006	546.934	494.737
	614.817	**536.744**	**484.548**

The reserve for the first-time application of IFRS includes the equity differences resulting from the conversion from HGB to IFRS. The reserve for currency translation includes the cumulative currency translation differences up to the date of conversion to IFRS. Other retained earnings obtain the accumulated earnings of the companies included in the consolidated financial statements.

The Management Board proposes to distribute 18.0% or EUR 15,923 thousand (2017: EUR 10,367 thousand) from the net profit attributable to the shareholders of Zeppelin GmbH of EUR 358,252 thousand (2017: EUR 367,712 thousand), and to carry forward EUR 342,329 thousand (2017: EUR 357,663 thousand) to new account.

The value of deferred taxes reported in accumulated other comprehensive income is EUR 796 thousand (12/31/2017: EUR 192 thousand; 1/1/2017: EUR 0 thousand).

	12/31/2018		
in kEUR	Before income taxes	Income taxes	After income taxes
Actuarial gains and losses from employer pension plans	-2.273	681	-1.592
Hedge relationships	-592	115	-477

	12/31/2017		
in kEUR	Before income taxes	Income taxes	After income taxes
Actuarial gains and losses from employer pension plans	-1.571	531	-1.039
Hedge relationships	1.161	-339	822

	1/1/2017		
in kEUR	Before income taxes	Income taxes	After income taxes
Actuarial gains and losses from employer pension plans	0	0	0
Hedge relationships	0	0	0

In the fiscal year, EUR 346 thousand (2017: EUR 428 thousand) was reclassified from cumulative other comprehensive income for hedge accounting to the income statement. The related deferred taxes were EUR 103 thousand (2017: EUR 125 thousand).

24 Capital Management

As part of its capital management, Zeppelin's objective is to maintain or increase the company's ability to continue as a going concern and the benefits for the shareholders of Zeppelin GmbH through financial stability. In order to achieve these objectives, measures are taken to control the capital structure by managing the extent of debt financing. The control methods have not changed compared to the previous year.

Zeppelin's credit agreements include financial covenants relating in part to equity and debt. Zeppelin has complied with all financial covenant agreements.

Zeppelin monitors the capital on the basis of the debt ratio, the equity ratio, and the return on capital according to IFRS. The control ratios are aimed at the management of balance sheet equity.

A breakdown of the ratios is presented below:

	12/31/2018	12/31/2017	1/1/2017
Debt ratio[6]	1,48	1,61	-
Equity ratio	32,4%	30,6%	30,1%
Return on capital	**7,6%**	**6,5%**	
Earnings before interest and taxes	145.188	115.063	
Capital employed	1.905.829	1.759.324	

The capital employed consists of fixed assets and working capital. The basis for calculating the ratios has not changed compared to the previous year.

25 Leasing

Lessee

Zeppelin's lease agreements mainly relate to real estate, motor vehicles (hereinafter "vehicles"), office and business equipment, as well as technical equipment and machinery.

The term of the lease agreements for real estate is between 2 and 684 months (12/31/2017: between 2 and 684 months; 1/1/2017: between 2 and 684 months). Extension and termination options were agreed under these leases. Zeppelin uses these options to ensure the best possible flexibility with regard to the continuation or abandonment of sales locations and rental stores. The measurement of lease liabilities reflects current estimates of the expected exercise or non-exercise of these options. Zeppelin is partially obliged to restore the properties to their original condition upon termination of a lease agreement. Provisions for restoration obligations are recognized for this purpose in accordance with IAS 16.

The term of the lease agreements for vehicles is between 6 and 74 months (12/31/2017: between 6 and 74 months; 1/1/2017: between 6 and 74 months). There are no purchase or extension options or termination options. Compensation payments are made for excess mileage if the maximum mileage on which the contract is based is exceeded. Vehicle lease agreements are often concluded with a time lead corresponding to the manufacturers' delivery times.

The term of the lease agreements for office and business equipment is between 1 and 60 months (12/31/2017: between 1 and 60 months; 1/1/2017: between 1 and 60 months). There are usually no purchase or extension options or termination options.

The term of the lease agreements for technical equipment and machinery is between 21 and 61 months (12/31/2017: between 12 and 61 months; 1/1/2017: between 12 and 61 months). There are usually no purchase or extension options or termination options.

29 The debt ratio is equal to the financial debt divided by the earnings before interest, taxes, depreciation and amortization.

The following table summarizes cash flows, expenses, and income resulting from leases:

in kEUR	2018	2017
Interest expenses from lease liabilities	-1.800	-2.211
Expenses from short-term lease agreements	-15.722	-14.315
Expenses from lease agreements for low-value assets	-2.915	-6.096
Expenses from variable lease payments other than lease payments	-762	-744
Income from subleases	1.028	1.233
Cash outflow from leasing	-38.928	-100.359
thereof from lease liabilities	-23.890	-83.917
thereof from short-term leasing and low-value assets	-15.038	-16.442

The total of fixed lease payments for contracts whose term had not yet commenced as at the reporting date amounted to EUR 985 thousand (12/31/2017: EUR 1,245 thousand; 1/1/2017: EUR 664 thousand).

Changes to the carrying amounts of the rights of use are presented below:

in kEUR	Land and buildings	Technical equipment and machinery	Operating and business equipment	Rental fleet (other)
Costs				
01.01.2017	**86.168**	**1.996**	**11.175**	**469**
Additions	14.137	1.919	8.868	0
Disposals	-902	0	-138	0
Changes in the consolidated group	0	0	0	0
Net exchange differences	-326	113	-178	0
Transfers	0	564	-564	0
Reclassifications	0	0	0	0
12/31/2017	**99.078**	**4.592**	**19.164**	**469**
Additions	13.796	1.029	8.078	2
Disposals	-5.179	-303	-2.748	-41
Changes in the consolidated group	453	0	0	0
Net exchange differences	-394	-22	-427	0
Transfers	7	-965	1.511	0
Reclassifications	-160	0	-74	0
12/31/2018	**107.601**	**4.330**	**25.504**	**430**

Accumulative depreciation

1/1/2017	**0**	**0**	**0**	**0**
Additions (depreciation)	-12.585	-1.349	-5.537	-150
Additions (impairments)	0	0	0	0
Reversals of impairments	0	0	0	0
Disposals	88	0	77	0
Changes in the consolidated group	0	0	0	0
Net exchange differences	55	-24	19	0
Transfers	0	0	0	0
Reclassifications	0	0	0	0
12/31/2017	**-12.441**	**-1.374**	**-5.441**	**-150**
Additions (depreciation)	-13.623	-1.084	-6.655	-103
Additions (impairments)	0	0	0	0
Reversals of impairments	0	0	-108	0
Disposals	327	281	2.380	0
Changes in the consolidated group	0	0	0	0
Net exchange differences	164	8	82	0
Transfers	-7	167	-229	0
Reclassifications	0	0	24	0
12/31/2018	**-25.581**	**-2.002**	**-9.947**	**-253**

Information on the maturities of the lease liability is provided in Note 27 "Liquidity Risk".

Zeppelin uses SLB transactions to finance certain parts of the rental fleet.

Lessor

Zeppelin rents out construction machines as well as a wide range of construction equipment, modular room systems, construction site and traffic guidance systems, work platforms, forklifts and lifts, and vehicles. The vast majority of rental business is accounted for in accordance with the rules for operating leases. In addition, rental income includes income from deferred sales from RPO transactions, which are accounted for as rentals.

Income from operating leases was:

in kEUR	2018	2017
Income from leases	391.085	352.462
thereof variable	871	1.601

In subsequent fiscal years, Zeppelin expects fixed payments from operating leases of:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Proceeds from operating leases			
in subsequent year	54.453	53.127	42.774
thereof SBU Rental order backlog	45.240	39.094	29.211
in 2nd subsequent year	6.005	6.253	5.994
in 3rd subsequent year	6.883	4.286	5.078
in 4th subsequent year	6.438	2.710	2.321
in 5th subsequent year	6.188	2.692	1.867
Thereafter	6.673	3.390	2.132
	86.641	**72.457**	**60.166**

Changes to the carrying amount of assets leased under operating leases are presented below:

in kEUR	Rental fleet (RPO)	Rental fleet (other)
Costs		
1/1/2017	**219.524**	**544.573**
Additions	105.915	177.909
Disposals	-47.177	-98.740
Changes in the consolidated group	0	0
Net exchange differences	553	2.274
Transfers	0	121
Reclassifications	0	0
12/31/2017	**278.815**	**626.137**
Additions	99.287	204.117
Disposals	-64.781	-120.558
Changes in the consolidated group	0	312
Net exchange differences	-57	-1.146
Transfers	0	-862
Reclassifications	0	-84
12/31/2018	**313.264**	**707.916**
Accumulative depreciation		
1/1/2017	**-8.509**	**-139.878**
Additions (depreciation)	-36.904	-88.419
Additions (impairments)	0	0
Reversals of impairments	0	139
Disposals	7.999	24.541
Changes in the consolidated group	0	0
Net exchange differences	-183	-1.318
Transfers	0	-51
Reclassifications	0	0
12/31/2017	**-37.597**	**-204.987**
Additions (depreciation)	-43.243	-89.212
Additions (impairments)	0	0
Reversals of impairments	0	69
Disposals	19.090	34.464
Changes in the consolidated group	0	0
Net exchange differences	17	535
Transfers	0	832
Reclassifications	0	50
12/31/2018	**-61.733**	**-258.250**

H FINANCIAL INSTRUMENTS

26 OTHER DISCLOSURES ON FINANCIAL INSTRUMENTS

Classification

The following table summarizes the carrying amounts of the financial instruments included in the Group financial statements by measurement category:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Financial assets			
AC	471.175	476.207	472.977
FVTPL	14.143	14.714	15.818
	485.318	**490.921**	**488.794**
Financial liabilities			
AC	741.693	693.557	602.198
FVTPL	5.231	1.327	15.023
	746.924	**694.884**	**617.222**

Zeppelin has not made any reclassifications between these categories.

The excess of financial liabilities over financial assets mainly results from the accounting for leases and for SLB transactions. The assets recognized for these transactions (rights of use and rental fleet) are not financial instruments but property, plant, and equipment and are therefore not included in the above comparison.

Offsetting

Zeppelin does not hold any cash collateral and does not set off any balance sheet items. Derivative financial instruments, credit balances, and liabilities to banks are recognized gross in the Group balance sheet.

In the case of derivative financial instruments and account balances with banks, all derivatives existing between the counterparties concerned as well as credit balances and liabilities could be offset in the event of insolvency. At present, Zeppelin has no legal right to set off, nor does Zeppelin intend to settle on a net basis.

Carrying amounts and offsetting potentials are presented in the summary below:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Derivatives			
Derivatives with positive fair value	1.047	2.246	1.600
Offsetting potential	-1.045	-2.071	-1.578
	2	**175**	**22**
Derivatives with negative fair value	10.507	10.071	15.222
Offsetting potential	-1.045	-2.071	-1.578
	9.462	**8.000**	**13.644**
	9.461	**7.825**	**13.622**
Cash at bank and borrowings			
Cash at bank	67.178	91.175	170.588
Offsetting potential	-14.986	-45.663	-61.008
	52.192	**45.512**	**109.580**
Borrowings	155.908	150.381	110.225
Offsetting potential	-14.986	-45.663	-61.008
	140.922	**104.718**	**49.217**
	193.114	**150.230**	**158.796**

Collateral Provided and Received

Zeppelin has not pledged any financial assets as collateral for financial liabilities and does not itself hold any significant collateral for financial assets.

Net Results

The following table summarizes the net results from financial instruments by measurement category. They include net income and expenses from interest, revaluation, currency translation, value allowances, and disposal effects.

in kEUR	2018	2017
Financial assets		
AC	-2.899	-2.408
FVTPL	111	2.041
	-2.788	**-367**
Financial liabilities		
AC	-9.133	-15.414
FVTPL	-939	567
	-10.072	**-14.847**

The net results in the AC measurement category include expenses from the application of the effective interest method of EUR -12,023 thousand (2017: EUR 13,364 thousand).

Hedge Accounting

In accordance with Group policies, Zeppelin uses derivative financial instruments only with a reference to underlying transactions within the framework of currency and interest rate risk management to hedge cash flows from interest and exchange rate fluctuations and to hedge the fair value against interest-related fluctuations (see section "Principles of Financial Risk Management" under Note 28 "Management of Financial Risks"). However, not every hedging relationship is accounted for as such. The following summary presents the carrying amounts of the derivatives portfolio by hedges reported in the balance sheet and not reported in the balance sheet:

in kEUR	12/31/2018	12/31/2017	1/1/2017
Derivatives			
Cash flow hedging			
Derivatives for interest rate hedging	-9.346	-9.776	-13.912
thereof in hedge relationships reported in the balance sheet	-5.272	-8.702	0
thereof in hedge relationships not reported in the balance sheet	0	-1.074	-13.912
thereof in hedge relationships whose accounting had to be discontinued	-4.073	0	0
Derivatives for currency hedging	-846	888	-1.225
thereof in hedge relationships reported in the balance sheet	13	260	0
thereof in hedge relationships not reported in the balance sheet	-480	628	-1.225
thereof in hedge relationships whose accounting had to be discontinued	-379	0	0
	-10.192	**-8.888**	**-15.137**
Fair value hedging			
Derivatives for interest rate hedging	731	1.063	1.515
thereof in hedge relationships reported in the balance sheet	731	1.063	0
thereof in hedge relationships not reported in the balance sheet	0	0	1.515
	731	**1.063**	**1.515**
	-9.461	**-7.825**	**-13.622**
thereof positive fair values	1.047	2.246	1.600
thereof negative fair values	10.507	10.071	15.222

Hedge Accounting for Currency Hedges

Zeppelin uses forward exchange contracts and currency swaps to manage currency risks. Zeppelin also uses the foreign currency component of medium and long-term financial liabilities from SLB transactions to hedge currency risks arising from the EUR/PLN currency pair (see subsection "Currency Risk" in the section "Market Risks" under Note 28 "Management of Financial Risks").

For practical reasons, the hedge accounting rules for these hedges are only applied from a certain period-related threshold. With the exception of derivatives, which are used to hedge cash flows from projects of the Plant Engineering SBU (here Zeppelin only designates the spot price component), Zeppelin generally includes all derivative components in hedge accounting. As a result, hedge accounting is applied for the following currency hedging relationships:

- Hedging of firmly contracted customer and purchase contracts (EUR/USD) that are recognized off-balance
- Hedging of intercompany loans (EUR/RUB)
- Hedging of highly probable firm cash inflows in foreign currency (EUR/PLN)

Risks arising from firmly contracted customer and purchase contracts (EUR/USD) that are recognized off-balance are hedged by concluding forward exchange transactions. Intercompany loans (EUR/RUB) are hedged by concluding currency swaps in the corresponding currency with matching amounts and maturities. It is therefore expected that the offsetting changes in value of the underlying and hedging transactions will be almost completely offset in the future for each hedged risk.

The following tables present a summary of the key terms of the forward exchange contracts used to hedge firmly contracted customer and purchase contracts that are recognized off-balance and the currency swaps used to hedge intercompany loans.

in kEUR	Carrying amount	Nominal	Zeppelin		Price	
			pays	receives	from	to
12/31/2018						
Positive fair values						
Currency forwards	18	3.902	EUR	USD	1,14	1,16
Negative fair values						
Currency forwards	5	834	EUR	USD	1,15	1,15

in kEUR	Carrying amount	Nominal	Zeppelin		Price	
			pays	receives	from	to
12/31/2017						
Positive fair values						
Currency forwards	80	1.345	USD	EUR	1,07	1,19
Currency swaps	221	3.404	RUB	EUR	68,77	68,77
	301	**4.749**				
Negative fair values						
Currency forwards	17	2.104	EUR	USD	1,19	1,21
Currency swaps	25	2.639	RUB	EUR	74,20	74,20
	42	**4.743**				

The nominal amount of these transactions is due as follows:

in kEUR	Subsequent year	2nd to 5th subsequent year	Thereafter	Total
12/31/2018				
	4.736	0	0	**4.736**
12/31/2017				
	9.115	377	0	**9.492**

A breakdown of the carrying amounts of derivatives (reported under non-current and current financial assets and non-current and current financial liabilities) and the related amounts recognized in cumulative other comprehensive income is presented below:

in kEUR	Carrying amounts		Accumulated change in value	Accumulated other comprehensive income	
	Positive fair values	Negative fair values		for current cash flow hedges	for ended cash flow hedges
12/31/2018					
	18	5	22	14	-343
12/31/2017					
	301	42	292	207	

The contract assets and liabilities resulting from firmly contracted customer and purchase contracts have the following carrying amounts:

in kEUR	Firmly contracted supplier agreements			Accumulated change in value
	Contract assets	Contract liabilities	Off-balance-sheet portion	
12/31/2018				
	275	0	4.458	-22
12/31/2017				
	202	0	3.182	-96

The accumulated change in value of intercompany loans with a nominal volume of 0 (2017: RUB 430,000 thousand) was TEUR 0 (2017: EUR -196 thousand). The hedging relationships expired at the end of 2018.

At the beginning of fiscal year 2018, Zeppelin hedged highly probable, firm cash inflows in foreign currency from operating activities for the EUR/PLN currency pair with maturities matching those of the foreign currency component of financial liabilities from medium- and long-term SLB transactions in the corresponding currency. It is expected that the offsetting changes in value of the underlying and hedging transactions will be almost completely offset in the future the currency risk.

The table below presents a summary of the key terms of the financial liabilities from medium- and long-term SLB transactions used to hedge highly probable cash inflows from operating activities denominated in foreign currencies:

in kEUR	Carrying amount	Remaining balance of liability	Term
12/31/2018			
	7.838	7.838	3 to 6 years

The nominal amount of these transactions is due as follows:

in kEUR	Subsequent year	2nd to 5th subsequent year	Thereafter	Total
12/31/2018				
	1.995	5.619	223	**7.838**

A breakdown of the carrying amounts of these transaction (reported under non-current and current financial liabilities) and the related amounts recognized in accumulated other comprehensive income is presented below:

in kEUR	Carrying amount	Accumulated change in value	Accumulated other comprehensive income
12/31/2018			
	7.838	207	-207

The underlying transactions are off-balance-sheet, firmly contracted, and highly probable cash inflows from operating activities. The expected inflows of cash and cash equivalents and their cumulative change in value are as follows:

in kEUR	Expected cash inflows	Accumulated change in value
12/31/2018		
	7.838	-207

Changes to the amount recognized in accumulated other comprehensive income for currency risk hedges are as follows:

in kEUR	Carrying amount
1/1/2017	**0**
Change in fair value	860
Recycling due to realization of the underlying transaction	-653
12/31/2017	**206**
Change in fair value	-518
Recycling due to realization of the underlying transaction	-288
Recycling for losses that are no longer expected	63
12/31/2018	**-537**

Non-offsetting, ineffective portions of the hedging relationships generally result from the one-sided consideration of the specific credit risk of each party in the hedging transactions. For reasons of materiality, this ineffectiveness is not recognized.

Hedge Accounting for Interest Rate Hedges

Zeppelin uses interest rate swaps to manage interest rate risks (see subsection "Interest Rate Risk" in the section "Market Risk" under Note 28 "Management of Financial Risks").

Volumes and maturities are aligned with the structure of the cash flows of the financial liabilities and with the desired degree of hedging. To the extent that the parameters of the hedged item and the hedging instrument relevant to valuation match, the changes in value of the hedged item and the hedging instrument caused by interest rate fluctuations are systematically offset.

Hedging relationships are reported in the balance sheet as cash flow hedges or fair value hedges. The underlying transactions are bonded loans and drawdowns under the syndicated credit facility.

Cash Flow Hedges

The following tables present a summary of the main terms of the interest rate swaps used to hedge cash flows from underlying transactions with variable interest rates:

in kEUR	Carrying amount	Nominal	Zeppelin pays		Zeppelin receives	
			from	to	from	to
12/31/2018						
Negative fair values						
	5.272	60.000	1,65%	1,71%	3M Euribor	3M Euribor

in kEUR	Carrying amount	Nominal	Zeppelin pays		Zeppelin receives	
			from	to	from	to
12/31/2017						
Negative fair values						
	8.703	125.000	1,29%	1,71%	3M Euribor	3M Euribor

The maturity structure of these transactions is summarized in the table below according to reference amounts:

in kEUR	Subsequent year	2nd to 5th subsequent year	Thereafter	Total
12/31/2018				
	0	0	60.000	**60.000**
12/31/2017				
	0	0	125.000	**125.000**

The decline as at 12/31/2018 is attributable to the termination of hedge accounting.

A breakdown of the carrying amounts of derivatives (reported under non-current and current financial assets and non-current and current financial liabilities) and the related amounts recognized in accumulated other comprehensive income is presented below:

in kEUR	Carrying amounts		Accu-mulated change in value	Accumulated other comprehensive income	
	Positive fair values	Negative fair values		for current cash flow hedges	for ended cash flow hedges
12/31/2018					
	0	5.272	-171	-171	117
12/31/2017					
	0	8.703	1.319	954	0

The carrying amounts of the hedged items (reported under non-current and current financial liabilities) are as follows:

in kEUR	Carrying amounts	Accu-mulated change in value
12/31/2018		
Bonded loans	185.700	
thereof hedged	64.980	0
Drawdowns under the syndicated credit facility	150.289	
thereof hedged	59.451	516
	124.431	**516**
12/31/2017		
Bonded loans	185.587	
thereof hedged	64.959	556
Drawdowns under the syndicated credit facility	148.913	
thereof hedged	59.516	398
	124.475	**954**

Changes to the amount recognized in cumulative other comprehensive income for interest rate hedges are as follows:

in kEUR	Carrying amount
1/1/2017	**0**
Change in fair value	3.428
Recycling due to realization of the underlying transaction	-2.473
12/31/2017	**954**
Change in fair value	701
Recycling due to realization of the underlying transaction	-1.709
12/31/2018	**-54**

Non-offsetting, ineffective portions of the hedging relationship generally result from the one-sided consideration of the specific credit risk of each party in the hedging transaction. For reasons of materiality, Zeppelin does not recognize this ineffectiveness.

In the case of interest rate hedges, ineffectiveness may also arise from contractual agreements in the underlying transactions, which cannot be reflected in the hedging transactions. These include, for example, floor agreements that are included in the agreements on interest on loans.

In addition, ineffectiveness arose from the introduction of IFRS accounting. This is a one-time special effect that arises exclusively from the interest rate derivatives in the portfolio at the time of conversion.

The market value existing in these cases when hedge accounting was adopted on 1/1/2017 leads to ineffectiveness.

Income of EUR 744 thousand (2017: EUR 364 thousand) was recognized in other comprehensive income for ineffectiveness.

Fair Value Hedges

The following table presents a summary of the main terms of the hedging instruments used to fluctuations in the fair value of bonded loans:

in kEUR	Carrying amount	Nominal	Zeppelin pays		Zeppelin receives	
			from	to	from	to
12/31/2018						
Positive fair values						
	731	25.000	3M Euribor + 1.9075%	3M Euribor + 2.055%	3,20%	3,75%

in kEUR	Carrying amount	Nominal	Zeppelin pays		Zeppelin receives	
			from	to	from	to
12/31/2017						
Positive fair values						
	1.063	25.000	3M Euribor + 1.9075%	3M Euribor + 2.055%	3,20%	3,75%

The maturity structure of these transactions is summarized in the table below according to reference amounts:

in kEUR	subsequent year	2nd to 5th subsequent year	Thereafter	Total
12/31/2018				
	20.500	4.500	0	**25.000**
12/31/2017				
	0	25.000	0	**25.000**

The carrying amounts of derivatives in fair value hedges (reported under non-current and current financial assets and non-current and current financial liabilities) are as follows:

in kEUR	Carrying amounts		Accu-mulated change in value
	Assets	Debts	
12/31/2018			
	731	0	-786

in kEUR	Carrying amounts		Accu-mulated change in value
	Assets	Debts	
12/31/2017			
	1.063	0	-453

The carrying amounts of the hedged items (reported under non-current financial liabilities) are as follows:

in kEUR	Carrying amounts	Accumulated base adjustment	Accumulated change in value
12/31/2018			
Bonded loans	25.333	0	786
12/31/2017			
Bonded loans	25.301	-60	453

As part of the fair value hedge, income and expenses from the subsequent measurement of derivatives amounting to EUR -334 thousand (2017: EUR -453 thousand) were recognized. Adjustments of EUR -334 thousand (2017: EUR -453 thousand) and amortization of carrying amount adjustments of EUR 393 thousand (2017: EUR 393 thousand) were recognized in the carrying amount of the loans. The changes in the value of the hedged item and the hedging instrument caused by changes in the market interest rate level are systematically balanced out so that the parameters of the hedged item and the hedging instrument relevant to valuation match.

Non-offsetting, ineffective portions of the hedging relationship generally result from the one-sided consideration of the specific credit risk of each party in the hedging transaction. For reasons of materiality, Zeppelin does not recognize this ineffectiveness.

27 Management of Financial Risks

Principles of Financial Risk Management

The principles and responsibilities for the management and controlling of risks arising from financial instruments are defined by Group management in accordance with the legal provisions and set out in Group guidelines.

The Group is exposed to various financial risks arising from the Group's business and financing activities. Financial risks are divided into liquidity, default, and market risks (currency and interest rate risks).

Group management and the Group Supervisory Board receive regular reports on the Group's financial risks. Compliance with the Group guidelines is checked by the internal audit department and selectively by the Group auditor.

The methods and assumptions used in financial risk management have not changed since the previous reporting period.

Liquidity Risk

The liquidity risk is managed on the basis of business planning, which ensures that the funds required to finance the operating business and current and future investments in all Group companies are available promptly and in the required currency at reasonable cost. Liquidity risk management includes determining, with the aid of a liquidity plan, liquidity requirements from operating activities, investing activities, and other financial measures.

A rolling 12-month liquidity forecast and medium-term financial plan show the Group's liquidity requirements, which are fully covered at all times by a long-term syndicated credit facility of sufficient size, bonded loans and concluded and available SLB capacities.

The following summary presents the expected cash outflows from financial liabilities at the respective reporting dates:

in kEUR	in subsequent year		in 2nd to 5th subsequent year		Thereafter	
	Interest	Repayment	Interest	Repayment	Interest	Repayment
12/31/2018						
Financial liabilities						
Borrowings	7.845	9.347	19.694	147.695	0	0
Bonded loans	2.712	22.000	7.439	87.500	2.312	75.000
Derivatives	2.150	50.868	6.441	0	695	0
thereof currency forwards	0	50.868	0	0	0	0
thereof interest rate derivatives	2.150	0	6.441	0	695	0
Lease liabilities	0	51.230	0	171.989	0	16.606
Miscellaneous	0	0	0	0	0	0
	12.707	**133.445**	**33.574**	**407.184**	**3.006**	**91.605**
Trade payables	**0**	**134.521**	**0**	**0**	**0**	**0**
Other financial liabilities	**0**	**120.189**	**0**	**147.818**	**0**	**3.019**

in kEUR	in subsequent year		in 2nd to 5th subsequent year		Thereafter	
	Interest	Repayment	Interest	Repayment	Interest	Repayment
12/31/2017						
Financial liabilities						
Borrowings	5.926	3.652	20.718	148.656	0	0
Bonded loans	3.126	0	9.681	69.500	4.009	115.000
Derivatives	2.665	33.996	6.446	0	1.115	0
thereof currency forwards	0	33.996	0	0	0	0
thereof interest rate derivatives	2.665	0	6.446	0	1.115	0
Lease liabilities	0	87.550	0	129.938	0	29.801
Miscellaneous	0	0	0	0	0	0
	11.717	**125.198**	**36.845**	**348.094**	**5.124**	**144.801**
Trade payables	**0**	**137.969**	**0**	**166**	**0**	**0**
Other financial liabilities	**0**	**94.411**	**0**	**157.789**	**0**	**0**

in kEUR	in subsequent year		in 2nd to 5th subsequent year		Thereafter	
	Interest	Repay-ment	Interest	Repay-ment	Interest	Repay-ment
1/1/2017						
Financial liabilities						
Borrowings	5.666	3.884	13.885	110.648	0	0
Bonded loans	3.549	67.000	8.006	34.500	4.788	85.000
Derivatives	3.293	19.861	7.869	415	1.813	0
thereof currency forwards	0	19.861	0	415	0	0
thereof interest rate derivatives	3.293	0	7.869	0	1.813	0
Lease liabilities	0	88.628	0	198.150	0	20.734
Miscellaneous	0	0	0	0	0	0
	12.507	**179.374**	**29.760**	**343.713**	**6.602**	**105.734**
Trade payables	**0**	**85.764**	**0**	**233**	**0**	**0**
Other financial liabilities	**0**	**92.607**	**0**	**123.341**	**0**	**0**

In the reporting period, Zeppelin made all interest and principal repayments on time and in full and also met all capital requirements contained in credit and loan agreements. There are no concentrations of risk. Contingent liabilities are not expected to result in material actual liabilities and thus significant cash outflows for which no provisions have been recognized.

Default Risk

Credit Risk Management

To manage credit risk, Zeppelin has established a creditworthiness management system tailored to market conditions and customers. Before an order is accepted, a credit assessment is carried out on the basis of the creditworthiness data available on the customer. The Construction Equipment EU, Power Systems, and Rental SBUs use a market data portal for this purpose. Credit risk classes and credit limits are determined on the basis of the results of the credit assessment. If credit limits are exceeded, transactions are only settled against advance payment or the deposit of additional collateral such as bank guarantees. A significant proportion of new and used machines and engines are sold with the involvement of sales financing partners. At our own risk, purchase price deferrals or long-term financing purchase agreements are only granted in exceptional cases after intensive credit checks. Zeppelin harmonizes Group-wide credit management for customers who have business relationships with multiple SBUs by assigning Group credit limits, escalation processes, and monthly reporting on the utilization of Group limits.

The markets of the Plant Engineering SBU are highly diversified. In order to reduce the risk of bad debt losses, the Group concludes agreements regarding down payments and interim payments, collateral, and credit and trade credit insurance. In order to protect itself against economic and political risks, the Group takes advantage of German government-backed trade export credit guarantees.

The availability of market data on the creditworthiness of customers is very limited in the markets in which the Construction Equipment CIS SBU operates. Therefore, transactions are generally only carried out against advance payment or bank guarantees. Credit limits and payment terms are only granted if, in exceptional cases, the creditworthiness of a customer can be assessed with sufficient reliability. Credit limits and payment terms are subject to strict monitoring.

Zeppelin only invests its cash and cash equivalents in banks with the highest creditworthiness and probabilities of default close to zero. If creditworthiness deteriorates significantly, Zeppelin withdraws all cash and cash equivalents promptly or reduces them to a level that is acceptable from a risk perspective.

Default Risk

Zeppelin distinguishes between recoverable non-performing and irrecoverable financial assets. Zeppelin divides credit risk into creditworthiness levels using different concepts tailored to market conditions and customers.

A financial asset is classified as non-performing ("definition of default") if there are significant reasons to believe that a debtor is unlikely to meet its payment obligations to Zeppelin.

A financial asset is deemed irrecoverable if, for example, Zeppelin is unable to collect the amount receivable definitively as a result of the conclusion of insolvency proceedings.

All financial assets that are neither non-performing nor irrecoverable are collectible.

The following table summarizes the credit quality and the maximum default risk represented by the gross value according to the aforementioned categories:

in kEUR	Credit quality	Value allowance	Gross value	Value allowance	Carrying amount
12/31/2018					
Financial assets					
Loans	recoverable	12-month ECL	1.377	0	1.377
	recoverable	Lifetime ECL	3.568	-3.339	229
Other receivables	recoverable	12-month ECL	20.389	0	20.389
	non-performing	Lifetime ECL	717	-562	155
			26.051	**-3.901**	**22.150**
Trade receivables	**Lifetime ECL - simplified approach**		**401.364**	**-19.517**	**381.848**
Contract assets	**Lifetime ECL - simplified approach**		**32.509**	**-310**	**32.199**
Cash and cash equivalents					
Cash and cash equivalents	recoverable	12-month ECL	67.178	0	67.178
	non-performing	Lifetime ECL	810	-810	0
			67.988	**-810**	**67.178**

in kEUR	Credit quality	Value allowance	Gross value	Value allowance	Carrying amount
12/31/2017					
Financial assets					
Loans	recoverable	12-month ECL	1.065	0	1.065
	recoverable	Lifetime ECL	3.568	-3.339	229
	non-performing	Lifetime ECL	712	-712	0
Other receivables	recoverable	12-month ECL	18.170	0	18.170
	recoverable	Lifetime ECL	146	-131	15
	non-performing	Lifetime ECL	3.747	-500	3.247
			27.408	**-4.682**	**22.726**
Trade receivables	**Lifetime ECL - simplified approach**		**383.998**	**-21.692**	**362.306**
Contract assets	**Lifetime ECL - simplified approach**		**23.054**	**-422**	**22.633**
Cash and cash equivalents					
Cash and cash equivalents	recoverable	12-month ECL	91.175	0	91.175
	non-performing	Lifetime ECL	767	-767	0
			91.942	**-767**	**91.175**

in kEUR	Credit quality	Valuation allowance	Gross value	Valuation allowance	Carrying amount
1/1/2017					
Financial assets					
Loans	recoverable	12-month ECL	359	0	359
	recoverable	Lifetime ECL	3.568	-3.339	229
	non-performing	Lifetime ECL	712	-712	0
Other receivables	recoverable	12-month ECL	19.570	0	19.570
	non-performing	Lifetime ECL	529	-529	0
			24.738	**-4.580**	**20.158**
Trade receivables		**Lifetime ECL - simplified approach**	**300.800**	**-18.568**	**282.232**
Contract assets		**Lifetime ECL - simplified approach**	**32.055**	**-248**	**31.807**
Cash and cash equivalents					
Cash and cash equivalents	recoverable	12-month ECL	170.588	0	170.588
	non-performing	Lifetime ECL	903	-903	0
			171.491	**-903**	**170.588**

In the case of financial instruments measured at fair value through profit or loss, the carrying amount reflects the maximum default risk.

in kEUR	12/31/2018	12/31/2017	1/1/2017
Financial assets			
Derivatives	1.047	2.246	1.600
Shares	13.826	13.799	12.373
Participations	18	18	914
Securities	0	14	934
	14.891	**16.078**	**15.821**

Valuation Allowances

Valuation allowances are recognized by Zeppelin taking into account past events and expectations regarding the future development of credit risk (see the "Impairment Losses" subsection in the "Financial Instruments" section under C "Accounting Policies"). The methods used to measure the valuation allowance have not changed compared with the previous year.

Loans mainly relate to associates and affiliated companies not included in the consolidation group.

The change in the value allowance on other receivables is attributable to the change in the gross balance.

Value allowances on trade receivables and contract assets are consistently measured using a simplified approach that only takes into account expected credit losses to maturity.

The following risk profile is derived for trade receivables in relation to the maturity structure:

in kEUR	Total	not due	days until overdue < 30	31 - 60	61 - 90	91 - 180	181 - 360	> 360	non-performing
12/31/2018									
Trade receivables									
Gross	401.364	256.906	98.029	14.076	5.169	5.675	6.003	10.536	4.971
Valuation allowance	-20.079								
	381.285								

in kEUR	Total	not due	days until overdue < 30	31 - 60	61 - 90	91 - 180	181 - 360	> 360	non-performing
12/31/2017									
Trade receivables									
Gross	383.998	231.237	87.747	23.941	7.881	8.987	2.626	15.625	5.954
Valuation allowance	-22.134								
	361.864								

in kEUR	Total	not due	days until overdue < 30	31 - 60	61 - 90	91 - 180	181 - 360	> 360	non-performing
1/1/2017									
Trade receivables									
Gross	300.800	212.602	50.266	10.423	5.597	3.992	4.042	7.848	6.031
Valuation allowance	-18.879								
	281.920								

Changes to the balance of valuation allowances on trade receivables are presented below:

in kEUR	creditworthiness not impaired	creditworthiness impaired	Total
1/1/2017	**-12.781**	**-6.098**	**-18.879**
Transfer	-2.775	-35	**-2.811**
Revaluation	-938	0	**-938**
Derecognition	150	-1.105	**-955**
Reversal	1.487	284	**1.771**
Change in gross value	-560	97	**-464**
Change in creditworthiness parameters	-3	-165	**-168**
Net exchange differences	222	86	**309**
12/31/2017	**-15.198**	**-6.937**	**-22.134**
Transfer	-369	-234	**-603**
Revaluation	-1.633	-99	**-1.733**
Derecognition	1.575	109	**1.684**
Reversal	3.550	195	**3.745**
Change in gross value	-186	-951	**-1.137**
Change in creditworthiness parameters	-189	0	**-189**
Change in the consolidated group	0	-179	**-179**
Net exchange differences	285	181	**467**
12/31/2018	**-12.164**	**-7.915**	**-20.079**

Changes in the balance of valuation allowances on contract assets are attributable to changes in the gross value.

Cash and cash equivalents comprise cash on hand and bank balances. The change in the carrying amounts of irrecoverable cash and cash equivalents is attributable to currency translation effects.

Market Risks

Zeppelin is exposed to market risks from exchange rate and interest rate fluctuations. Zeppelin uses derivative financial instruments (forward exchange contracts, currency and interest rate swaps) to manage the impact of market risks on its operating results. These hedges are entered into under appropriate consideration of the risk management requirements applicable to banks and are subject to strict monitoring. Zeppelin's risk positions are hedged taking account of certain risk limits. In individual cases, Zeppelin also uses primary financial instruments to hedge currency risks.

Currency Risk

Zeppelin's global operations expose it to currency risks arising from fluctuating exchange rates. Zeppelin uses the value-at-risk approach to measure currency risks.

The objective of currency risk management is to hedge cash flows and fair values against exchange rate fluctuations.

The Group's exposure to foreign exchange risk consists primarily of EUR/USD, EUR/RUB, EUR/CZK, EUR/GBP, EUR/PLN, USD/UAH and USD/RUB.

Currency risks from the USD/UAH and USD/RUB currency pairs are largely eliminated by minimizing the difference between income and expenses in the respective foreign currency (hereinafter "natural hedges"). Zeppelin also limits currency risks by concluding forward exchange contracts and currency swaps. Zeppelin also uses the foreign currency component of medium and long-term financial liabilities from SLB transactions in EUR to hedge currency risks arising from the EUR/PLN currency pair. Due to these hedges, the natural hedges, and offsetting effects between the different currency pairs within the Group, Zeppelin is not exposed to any significant currency risks in a normal market environment.

The main non-derivative financial instruments (cash and cash equivalents, trade and other receivables, loans, bonded loans, trade payables, and other liabilities) are nominated in their functional currency. Due in particular to the generally short-term maturity of these instruments, possible changes in exchange rates have only a very minor impact on consolidated net profit after taxes and Group total comprehensive income.

The following sensitivity analysis illustrates the extent of the currency risk. It shows the effects of hypothetical exchange rate changes on consolidated net profit after taxes and the Group overall result. The effects are determined by applying hypothetical changes in the exchange rate to the measurement of the derivative and non-derivative financial instruments as at the reporting date. In the case of derivative financial instruments accounted for as hedging instruments in cash flow hedges, changes in other comprehensive income for hedge accounting are also taken into account. It is assumed that the portfolio at the reporting date is representative for the year as a whole.

On the basis of Zeppelin's currency hedging strategy, the currency pairs EUR/CZK, EUR/GBP, and EUR/RUB only have sensitivities resulting from the interest rate difference. These are not disclosed below due to lack of materiality. Currency risks from the USD/RUB and USD/UAH currency pairs are largely eliminated by natural hedges. The sensitivity analysis therefore focuses on the presentation of the currency risk from the EUR/USD and EUR/PLN currency pairs.

If the exchange rates of the above currency pairs had been 10.0% higher or lower as at the reporting date, this would have had the following effects on Group net income and the Group overall result:

in kEUR				2018 Net profit for the year	2018 Total comprehensive income	2017 Net profit for the year	2017 Total comprehensive income
Derivatives							
	EUR	USD	+10.0%	2.114	280	4.096	19
			-10.0%	-2.580	-342	-5.006	-23
Original financial instruments							
	EUR	USD	+10.0%	-1.252	0	-4.301	0
			-10.0%	1.531	0	5.256	0
Balance							
	EUR	**USD**	**+10.0%**	**862**	**280**	**-205**	**19**
			-10.0%	**-1.049**	**-342**	**250**	**-23**

in kEUR				2018 Net profit for the year	2018 Total comprehensive income	2017 Net profit for the year	2017 Total comprehensive income
Derivatives							
	EUR	PLN	+10.0%	-16	0	437	0
			-10.0%	-22	0	-534	0
Original financial instruments							
	EUR	PLN	+10.0%	-178	-713	1.627	0
			-10.0%	217	871	-1.331	0
Balance							
	EUR	**PLN**	**+10.0%**	**-194**	**-713**	**2.064**	**0**
			-10.0%	**195**	**871**	**-1.865**	**0**

Interest Rate Risk

Financial instruments sensitive to interest rates are subject to interest rate risk. This exists either in the form of a market value risk or a cash flow risk. The market value risk is determined according to the sensitivity of the book value of a financial instrument depending on the market interest rate level. The cash flow risk describes the extent to which future interest payments will change as a result of changes in interest rates.

Financial liabilities sensitive to interest rates consist primarily of variable-interest liabilities to banks and other variable-interest financial liabilities in EUR.

The objective of interest rate risk management is to hedge the interest rate risk for a specific period and a defined proportion of the Group's financial liabilities against a significant increase in capital market interest rates. Zeppelin uses interest rate swaps for this purpose.

The following sensitivity analysis illustrates the extent of the interest rate risk. It shows the effects of a hypothetical parallel shift in the yield curve for the euro area on Group net profit after taxes and the consolidated total comprehensive income. The analysis takes account of the effects of a change in interest rates on the interest result from derivative and non-derivative financial instruments and on the reporting date value of derivative financial instruments. In the case of derivatives accounted for as hedging instruments in cash flow hedges, changes in other comprehensive income for hedge accounting are also taken into account. It is assumed that the portfolio at the reporting date is representative for the year as a whole.

A parallel shift of +50 or -25 basis points in the yield curve for the euro area would have had the following effects on Group net profit and the consolidated total comprehensive income:

2018 Net profit for the year	2018 Total comprehensive income	2017 Net profit for the year	2017 Total comprehensive income
1.119	757	655	2.836
-577	-390	-354	-1.461

I Notes to Transactions with Related Parties and Individuals

Zeppelin's related parties include joint ventures, associates, and affiliated companies, Luftschiffbau Zeppelin GmbH and its subsidiaries, and the Zeppelin Foundation.

In addition, ZF Friedrichshafen AG, which is controlled by the Zeppelin Foundation, and all of its affiliated companies are also related parties.

Transactions with related parties and receivables and liabilities existing at the reporting date result from ordinary business activities and are broken down as follows:

in kEUR	Affiliates 2018	Affiliates 2017	Associates 2018	Associates 2017	Participations 2018	Participations 2017
Deliveries and services rendered						
Sale of goods	7	20	5.981	0	0	0
Other services	6	1	128	3	0	0
	13	**22**	**6.109**	**3**	**0**	**0**
Deliveries and services received						
Sale of goods	262	75	1	0	0	0
Other services	26	8	52	0	272	397
	314	**84**	**52**	**0**	**272**	**397**
Dividends received	**1.128**	**277**	**0**	**0**	**0**	**100**

in kEUR	LZ GmbH 2018	LZ GmbH 2017	ZF Group 2018	ZF Group 2017
Deliveries and services rendered				
Sale of goods	0	0	269	1.199
Other services	0	0	48	41
	0	**0**	**318**	**1.240**
Deliveries and services received				
Sale of goods	21	0	305	0
Other services	1.596	1.581	0	0
	1.618	**1.581**	**305**	**0**
Dividends received	**0**	**0**	**0**	**0**

in kEUR	Affiliates 12/31/2018	Affiliates 12/31/2017	Affiliates 1/1/2017	Associates 12/31/2018	Associates 12/31/2017	Associates 1/1/2017
Receivables	2	3	1	2.162	0	0
Liabilities	500	500	0	49	0	0

in kEUR	Participations 12/31/2018	Participations 21/31/2017	Participations 1/1/2017	LZ GmbH 12/31/2018	LZ GmbH 12/31/2017	LZ GmbH 1/1/2017
Receivables	299	227	229	10	0	9
Liabilities	1	0	1	0	28	4

in kEUR	ZF Group 12/31/2018	ZF Group 12/31/2017	ZF Group 1/1/2017
Receivables	0	331	77
Liabilities	81	0	6

Transactions with related parties were conducted on terms and conditions that do not differ from those applicable to transactions with independent business partners.

The current remuneration of the active members of the Management Board is EUR 3,398 thousand (2017: EUR 3,108 thousand), of which EUR 2,912 thousand (2017: EUR 2,632 thousand) relates to short-term employee benefits and EUR 486 thousand (2017: EUR 476 thousand) to post-employment benefits. The pension provisions of the members of the Management Board are EUR 7,657 thousand (12/31/2017: EUR 7,962 thousand; 1/1/2017: 7,341). The remuneration of the Supervisory Board for fiscal year 2018 is EUR 571 thousand (2017: EUR 454 thousand).

Pension payments amounting to EUR 486 thousand (2017: EUR 476 thousand) were made to former members of the Management Board. The provision for pension payments to former members of the Management Board is EUR 11,281 thousand (12/31/2017: 11,350; 1/1/2017: 11,430).

In addition, Group companies have not conducted any reportable transactions with members of the Management Board or Supervisory Board of Zeppelin GmbH or other members of management in key positions or with companies in whose management or supervisory bodies these persons are represented. This also applies to close family members of this group of persons.

J Other Notes

28 Notes to the Statement of Cash Flows

Changes to the carrying amounts of the financial liabilities included in the statement of cash flows are presented below:

in kEUR	Borrowings	Bonded loans	Lease liabilities
1/1/2017	**110.225**	**188.053**	**299.993**
Cash flow from financing activities	43.725	-2.000	-85.119
Net exchange differences	-3.802	0	706
Changes in fair value	0	-60	0
Other changes	234	-406	24.161
12/31/2017	**150.381**	**185.587**	**239.742**

in kEUR	Borrowings	Bonded loans	Lease liabilities
12/31/2017	**150.381**	**185.587**	**239.742**
Cash flow from financing activities	11.726	0	-23.928
Changes in the consolidated group	0	0	642
Net exchange differences	-6.376	0	-1.065
Changes in fair value	0	59	0
Other changes	177	53	18.834
12/31/2018	**155.908**	**185.700**	**234.225**

The cash flow from investing activities does not include any additions to rights of use, as the addition is offset by the recognition of a lease liability at the same amount. Information on rights of use and lease liabilities can be found under Note 26. Furthermore, the financial statements do not include any non-cash transactions.

29 Events After the Reporting Date

No significant events occurred after the end of the 2018 fiscal year whose effects would have had a material or endangered impact on the Group's position.

30 Auditor's Fees

The auditor of Zeppelin GmbH is PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (hereinafter "PwC"). The fees amounted to EUR 838 thousand in fiscal year 2018 (2017: EUR 1,844 thousand) and are broken down as follows:

in kEUR	2018	2017
Auditor's fees		
Auditing services	496	507
Other services	342	1.337
	838	**1.844**

The audit item includes fees for auditing the annual financial statements and the consolidated financial statements of Zeppelin GmbH, for auditing the annual financial statements of the German subsidiaries included in the consolidated financial statements, and for reviewing the reporting packages of certain foreign subsidiaries. The auditing fee for the Zeppelin Group amounts to a total of EUR 1,159 thousand (2017: EUR 1,100 thousand). Other audit firms from PwC's network were involved in the audit.

The other services item comprises the fees for Zeppelin GmbH and the Group’s German subsidiaries that are included in the Group financial statements. As in the previous year, this item mainly includes consulting services used in connection with the conversion of Group accounting to IFRS, the introduction of the cost of sales method, and the advisory support for acquisition projects.

In addition to PwC, other audit firms were active in an advisory capacity within the Group.

31 Disclosure

Zeppelin GmbH prepares consolidated financial statements, which must be submitted to the Federal Gazette.

Zeppelin Baumaschinen GmbH, Garching near Munich, Zeppelin Systems GmbH, Friedrichshafen, Zeppelin Power Systems GmbH & Co. KG, Hamburg, Zeppelin Rental GmbH, Friedrichshafen, Zeppelin LAB GmbH, Berlin, BIS Inspection Service GmbH, Hamburg, and Baustellen-Verkehrs-Technik GmbH, Barleben, do not disclose their annual financial statements in accordance with § 264 Abs. 3 HGB or § 264b HGB.

32 Corporate Bodies

The members of the Management Board of Zeppelin GmbH are Mr. Peter Gerstmann (Chairman of the Management Board), Mr. Michael Heidemann (Deputy Chairman of the Management Board), Mr. Christian Dummler (Managing Director) and, since July 1, 2018, Ms. Alexandra Mebus (Managing Director and Labor Director).

The Supervisory Board of Zeppelin GmbH comprises Mr. Andreas Brand (Chairman), Mr. Heribert Hierholzer (Deputy Chairman), Dipl.-Ing. Werner Baier until July 20, 2018, Dr. Reinhold Festge, Dr. Werner Pöhlmann, Prof. Dr.-Ing e. h. Dr. h. c. Dieter Spath, Prof. Dr. h. c. mult. Horst Wildemann, Mr. Thomas Mann, Ms. Roswita Feineis, Ms. Marita Weber, Mr. Ralph Misselwitz, Mr. Vincenzo Savarino, and Ms. Yasmin Mei-Yee Weiß since July 20, 2018.

Friedrichshafen, March 8, 2019

The Management Board of Zeppelin GmbH

Peter Gerstmann	Michael Heidemann	Christian Dummler	Alexandra Mebus

INDEPENDENT AUDITOR'S REPORT

To Zeppelin GmbH, Friedrichshafen

AUDIT OPINIONS

We have audited the consolidated financial statements of Zeppelin GmbH, Friedrichshafen, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at January 1 to December 31, 2018, and the consolidated statement of comprehensive income, consolidated statement of profit or loss, consolidated statement of changes in equity, consolidated statement of cash flows for the financial year from January 1 to December 31, 2018, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Zeppelin GmbH, which is combined with the Company's management report, for the financial year from January 1 to December 31, 2018. In accordance with the German legal requirements, we have not audited the content of the statement on corporate governance pursuant to § [Article] 289f Abs. [paragraph] 1 HGB [Handelsgestzbuch: German Commercial Code] (information about the proportion of female members).

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 § 315e Abs. 1 HGB 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, 2018 and of its financial performance for the financial year from January 1 to December 31, 2018 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 the statement on corporate governance referred to above.

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

BASIS FOR THE AUDIT OPINIONS

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

OTHER INFORMATION

The executive directors are responsible for the other information. The other information comprises the statement on corporate governance pursuant to § 289f Abs. 4 HGB (information about the share of women), which we obtained prior to the date of our auditor's report.

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

In connection with our audit, our responsibility to read the other information and 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.

RESPONSIBILITY 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 con-sidered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

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

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) 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.

Munich, March 8, 2019

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Annual reports and further information
about Zeppelin are available online at
https://www.zeppelin.com/en.html

The annual report was published in April 2019.
It is also available in German.

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Söllner Communications AG, Munich, Germany

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