ONE COMPANY

ZF Annual Report 2017

Key Figures

	2017	2016
Sales	€36,444 million	€35,166 million
Research & development expenses	€2,230 million	€1,948 million
Operating profit or loss	€1,723 million	€1,614 million
in % of sales	4.7%	4.6%
Adjusted EBIT	€2,339 million	€2,239 million
adjusted EBIT margin	6.4%	6.4%
Net profit or loss before tax	€1,409 million	€1,281 million
in % of sales	3.9%	3.6%
Net profit or loss after tax	€1,167 million	€924 million
Adjusted free cash flow[1]	€1,818 million	€2,000 million
Investment in property, plant and equipment	€1,350 million	€1,185 million
Equity ratio (end of the year)	24.4%	21.0%
Dividends	€50 million	€50 million
Employees[2]	146,148	136,820

1) Cash flow from operating activities less cash flow from investing activities, adjusted for company acquisitions and disposals.

2) Direct and indirect employees without temporary workers, apprentices and vacation workers as of December 31, 2017.

Sales Development by Regions

Europe 48%

North America (NAFTA) 27%

Asia-Pacific 21%

South America 3%

Africa 1%

Sales Distribution by Sectors

81%
Cars and light commercial vehicles <6 t

11%
Commercial vehicles >6 t

8%
Construction and agricultural machinery, marine craft, aircraft, special and rail vehicles, wind power

"ZF's strategy is paying off. Building on this foundation, we intend to boost our power of innovation and ZF's position as a leading technology company."

Since I started to work here in February 2018, I have come to know ZF as a company that is dynamic, versatile and, above all, successful.

In the 2017 fiscal year, the company earned record sales of €36.4 billion and made considerable investments while simultaneously reducing its debt load resulting from the 2015 acquisition of U.S. company TRW. Meanwhile TRW has been integrated to a great extent, which was a truly major project. ZF is now "one company". This opens up our company to future opportunities that we will leverage to address changes in our industry.

From a technological and customer value perspective, we remain committed to shaping the mobility of tomorrow.In the process, we are ambitiously pursuing the promise that we have made with our claim "See – Think – Act", in other words, ZF solutions that enable vehicles and industrial application to see, think and act. This new ZF image is becoming increasingly visible for our employees, customers and all other stakeholders. We are receiving significant volume production orders not only for our conventional driveline and chassis technology as well as active and passive safety technology products, but also increasingly for e-mobility and automatic driving functions.

This positive development is no coincidence, rather the result of the commitment of all company employees over the last years. Our strategy is on the right track! And we will continue to implement and improve upon it. Together with all our employees, I am looking forward to continuing the success story of ZF in 2018 with customers worldwide who are convinced of our established products and innovations.

Yours sincerely,
Wolf-Henning Scheider
Chief Executive Officer

One Company –

Unprecedented Diversity

The mobility of the future is still in the planning stages and ZF, along with its expertise and concepts, is right in the thick of it.

Intelligent mechatronic systems ZF combines its long-term expertise in mechanical components with its know-how in the field of sensors, control electronics and software. ZF allows vehicles to see, think and act. The company is therefore an attractive partner for all automobile manufacturers worldwide whose vehicles will be capable of automated and autonomous driving in future. New mobility providers will also benefit from the company's many decades of experience.

Synergies Seven divisions in which each is responsible for a defined product portfolio, successful in its market environment and valued by customers. These divisions are taking advantage of the company's complete engineering expertise, benefiting from the innovations in the other divisions and taking on commitments together. ZF transfers its automotive expertise to other relevant industries and applies company-wide best practices ranging from materials management to production engineering.

ZF is well-known as an expert supplier in the driveline and chassis technology sector as well as for active and passive safety technology. All of this is true, but there is more to the company than that. After all, many different components have contributed to its success.

Broad portfolio ZF technology can be found in many applications. The mobility solutions range from motorcycles and construction equipment to trucks and yachts. In the world of electromobility, ZF not only stands for efficient power consumption in electric vehicles, but also for intelligent power generation through renewable energy sources, such as wind parks. At the same time, the company transfers its expertise to all other areas of application, including connectedness and cloud-based solutions which will soon be pivotal in all aspects of our lives.

Systems approach Combining component know-how and systems expertise is a trademark of ZF. Both are mutually dependent on one another and give ZF a complete picture of the "vehicle" system. This enables the company to develop innovative individual systems and components and also integrate them. However, ZF is also able to combine its own products to create a ready-to-drive networked system that is particularly appealing to new players in the dynamic automotive industry.

One Company –

One Vision

ZF is moving toward the future with a singular vision. One that is just as simple as it is ambitious: a mobile world with zero emissions and zero accidents. This vision is a defining element of the company's strategy.

ZERO ACCIDENTS ZERO EMISSIONS

Making this vision a reality one step at a time – that is how technology companies have always contributed to the future of society. In the process, ideas have been pursued that, at first glance, appear almost utopian. Our goal is Vision Zero, a mobile world with zero emissions and zero accidents. As a company with a broad range of expertise and an extensive product portfolio, ZF can help make this vision a reality one day: Advanced driver assistance systems and continuous development toward automated and autonomous driving can drastically reduce the number of accidents. Highly efficient hybrid drives and electric drives producing zero local emissions in the passenger car, commercial vehicle and even tractor and construction equipment segments are all part of ZF's contribution toward lowering emissions.

The social long-term goal of Vision Zero goes hand in hand with our strategy. It requires balanced market penetration, innovation and cost leadership, a diversified product portfolio along with financial independence and, lastly, a strong position as an attractive employer. Vision Zero gives these company targets a concrete direction.

Zero Emissions *With a broad product portfolio full of innovative solutions for passenger cars and commercial vehicles, ZF is paving the way toward local zero emission mobility.*

Zero Accidents *The more driving tasks the car takes on, the fewer accidents there could be. However, intelligent mechanical systems and integrated safety are critical features for it to be successful.*

One Company –

New Strengths

The integration of the former company TRW into the ZF Group has strengthened the company as a whole. Since then, ZF has been combining the company's established strengths and traditions with innovative impulses, thus setting the stage for an automotive industry of the future.

Organizational integration was not the sole objective when management and many teams set to work in May 2015 to integrate TRW into the ZF Group. The catchphrase the "best of both" showed that there was a more overarching goal, namely applying new potentials with a view far into the future and leveraging as many benefits as possible from merging the two companies. Synergy effects were only the first step to this end. The Group reviewed and bundled its purchasing volume very quickly.

The fact that both companies were significant players in the aftersales segment also quickly resulted in new developments: At the beginning of 2017, TRW Aftermarket and ZF Services were merged, becoming the second largest retail and spare parts organization in the automotive world.

One long-term task is to leverage the technology potential of the newly formed company. "See – Think – Act" is a catchy phrase that describes ZF's main focus: The triad is the leading principle for the company itself and also a unique selling point for its technological innovations. ZF applies its comprehensive know-how to come up with not only individual solutions for megatrends like mobility, safety, efficiency and autonomous driving, but also to design comprehensive and intelligent systems.

At the same time, the cultural framework and the principles that made the ZF brand what it has been for 102 years have remained intact: fairness and sustainability paired with the power of innovation and the highest quality. Based on this foundation and along with its strategic orientation, ZF will continue along its path of success.

146,148
Employees

230
Locations

40
Countries

The figures show that the ZF Group has gained considerably in size and market significance.

ZF allows vehicles to see, think and act. Autonomous driving becomes a reality through networking environmental sensors, such as camera and radar, electronic control units and intelligent mechatronics in driveline, chassis and steering.

One Company –

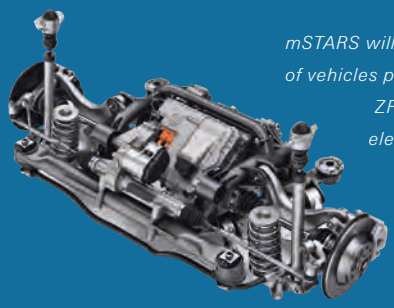
With a Unique Offer

"See – Think – Act" is ZF's claim and its unique selling point. Our portfolio is looking for its equal in the industry. Vehicles "see" with sensors, "think" with control units and "act" with actuators from the company. And that is not all. Through intelligently networking these components, we are creating system solutions for the mobility of tomorrow.

The ZF ProAI supercomputer jointly developed by ZF and Nvidia is the control center of one of the company's test vehicles that is already out on the roads today at a highly automated level.

One chassis with a thousand options: The concept car "Snap" from Rinspeed uses ZF's Intelligent Dynamic Driving Chassis. The add-on equipment is interchangeable.

Future automotive trends are clear: low-emission and purely electric drives, automated and autonomous driving as well as a greater connectedness between all modes of transport and traffic participants. These innovations will gradually replace conventional technology, though it will not happen overnight. Today, ZF is already paving the road toward the automotive future – with innovations that have the potential to become future best-sellers.



mSTARS will make the electrification of vehicles particularly easy because ZF integrates the powerful electric drive directly in the innovative rear axle.

ZF ProAI At the beginning of 2017, ZF announced its cooperation with the computing company NVIDIA that is specialized in artificial intelligence. The goal was to have artificial intelligence simplify automated driving functions. Just one year later, the companies delivered: In a prototype vehicle unveiled at the beginning of 2018, the ZF ProAI now ready for market rollout coordinates highly automated driving in accordance with level 3 and level 4.

IDDC (Intelligent Dynamic Driving Chassis) It was once called a "mobile chassis platform". The future of mobility is again moving in this direction with ZF's intelligent dynamic driving chassis or IDDC – one unit with integrated drive and chassis functions as well as intelligent sensors and automated driving functions. Mobility suppliers can build on this module by adding their own cabins for people or goods transport.

mSTARS With its mSTARS axle system, ZF is opening the door to the age of electric motors. In its basic design, the rear axle is perfect for conventionally motorized cars and light commercial vehicles. However, for zero local emissions driving, an electric axle drive may also be integrated. If the vehicle is also equipped with a conventional front axle drive, the mSTARS rear axle drive creates an all-wheel drive hybrid.

One Company –

In a Strong Network

In the agile world of mobility, it is critical that one's own core competences are supported by ideas from strong partners. ZF has prepared itself for the new speed of development by setting its own course internally and by creating a network of partnerships and cooperations.

Following the principle "See – Think – Act", ZF has successfully established itself as a system supplier of solutions for automated driving and e-mobility. The Group possesses expertise that ranges from sensors and computing units to mechanical components and implementing signals. Yet the automotive industry is undergoing dramatic change: A wave of new technologies, market requirements, regulations and competitors are all part of the new landscape. Never before has it been so important to offer the right solutions within the shortest period of time. That is why the company has created the ZF Vision Zero Ecosystem. Through cooperations with start-ups and investments in highly-specialized companies, ZF has expanded its expertise and is ensuring its access to new key technologies.

doubleSlash

With a 40 percent shareholding in the software company, ZF is the driving force behind vehicle networking.

Faurecia

With the interior design specialist Faurecia, ZF has developed, as part of a strategic partnership, entirely new safety concepts that are needed for vehicle interiors.

Astyx

ZF also has a 45 percent share in Astyx, whose radar technology perfectly complements ZF's own development activities.

e.GO mobile AG

These partners are working on an all-electric autonomously driving people and cargo mover.

ibeo

With its stake in ibeo, ZF has gained access to a decisive sensor technology: mobile LIDAR sensors for three-dimensional recognition of the vehicle environment.

ZF VISION ZERO ECO SYSTEM

Nvidia

The ZF ProAI control unit equipped with artificial intelligence is based on a supercomputer platform from another cooperation partner. It represents the heart of autonomous driving.

Hella

This cooperation focuses on sensor technology such as front camera systems, image recognition and radar systems.

Baidu

ZF and Baidu are developing comprehensive solutions for autonomous driving and telematics specifically for the Chinese market.

Car eWallet

ZF is working with UBS and IBM to develop a transaction platform that vehicles can use to pay independently.

One Company –

Supported by People

Corporate success depends not only on processes and quality structures, but also on the people who use them. ZF systematically trains its employees so that they can help make the company a bit better than it was before.

Digitalization and connectedness are challenging companies in all industries – in two ways in particular. On the one hand, they have to expand their own product range and offer additional and innovative services. On the other, they have to take advantage of new opportunities in the working world to become faster and more efficient.

In both areas, the expertise of the company's own employees is one of the most valuable sources of success. Through its ZF Excellence Award, for instance, the company receives every year a flood of innovative ideas that are beneficial for the whole Group. The sharing of best practices is right at the top of the priority list in this company-wide competition.

The Group is breaking new ground in its search for innovations. As an example, in spring 2017, the company invited all employees to come forward to give internal pitches on their best ideas for digital products and services. More than 500 creative suggestions were submitted that were generated on top of normal day-to-day business. The company is currently endorsing and gradually implementing many of them.

In addition, established methods continue to be effective. For example, the number of continuous improvement suggestions in the production plants at ZF remains high, not to mention the impressive number of patent applications filed by employees in the ZF development centers.

How will we leverage the opportunities offered by digitalization? Which ideas would we implement if we were a start-up? How can we develop market-ready products faster? ZF employees have come up with excellent ideas in response to these questions – both on the shop floors and in the engineering offices.

Outstanding skills are ZF's trump card and it is systematically preparing its employees for impending changes in the working world. Digitalization is also playing an essential role in this context. Numerous training and qualification options prepare colleagues – from the management trainee down to the production line worker – for new responsibilities and duties that include digital solutions.

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€36,4 billion sales

146,148 employees

€1,4 billion invested in property, plant and equipment

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Preface to the Financial Report

Dear Customers and Business Partners,
Dear Employees and Readers,

ZF has just completed a very successful 2017 fiscal year with sales rising by 3.6% to €36.4 billion, which is a new record high. Revenue increased by 6% after adjusting for exchange rate variables and M&A activities. The adjusted EBIT climbed from €2,239 million to €2,339 million. And the free cash flow of €1,818 million is also very positive. Just two and a half years after acquiring TRW, the Group has succeeded in reducing gross debt to €6.4 billion, which is almost half of the original amount.

We are investing heavily to ensure that the ZF Group remains viable in the future. Investments in property, plant and equipment totaled €1,350 million in the 2017 fiscal year. With 3.7% of sales, the investment ratio thus slightly exceeded the amount spent in the prior year. In the year under review, we have also invested in expanding the production capacities of existing products as well as in launching new products. As in the previous year, investments focused primarily on Germany, the USA, China and Mexico. Moreover, research and development expenses amounted to €2,230 million, again rising exponentially over the previous year. We are therefore backing up our claim of being a key player in the future trends of electromobility, autonomous driving and digitalization with innovative products and services.

Global economic growth gained momentum during the last fiscal year. ZF has benefited from the fairly widespread upswing and has leveraged the market opportunities resulting thereof. As in previous years, industry-wide developments were relatively inconsistent. While the global production of passenger cars and light commercial vehicles rose, the non-automotive sector experienced a slight decrease. In contrast to the prior year, ZF's sales share changed only slightly, with Europe being the top-selling sales region at 48% of total sales, followed by North America at 27% and Asia-Pacific at 21%.

An important operational highlight to mention is the integration of TRW into the ZF Group. The new ZF brand image unveiled for the first time at IAA 2017 makes the merging of the two companies also apparent to the public. ZF is now "one company". We have therefore implemented an essential element of our corporate strategy, thus ensuring the future of ZF as a technology leader for the long term. In addition to continuous improvements in existing products, we are driving the expansion of future technologies such as e-mobility, autonomous driving and artificial intelligence. At the same time, we are banking on our leading principle "See – Think – Act" by combining environmental recognition (see) with electronic control units (think) and electromechanical actuators (act).

For 2018, we are expecting the global economy's strong dynamic growth to continue, while trends in the industries relevant for us will be inconsistent. ZF is forecasting Group sales of roughly €36.5 billion for the coming fiscal year with an organic growth rate of 5%. The increase in sales is based on stable development in markets relevant to the Group and on expanding our business with existing and new customers and products. Adjusted for purchase price allocation and M&A activity effects, the EBIT margin is expected to be around 6%. Investments in property, plant and equipment will be roughly 4% of sales in 2018, while investments in R&D are set to go up.

All the successes mentioned thus far would not have been possible without our dedicated employees and partners. We would like to acknowledge our employees worldwide for their incredible commitment day in and day out to the success of ZF. I would also like to thank our customers, suppliers and other business partners for their ongoing trust and for the respectful cooperation we have all enjoyed. Lastly, I would like to thank the shareholder representatives and members of the Supervisory Board who are intensely involved in company matters and who support us in making far-reaching decisions to ensure the future of the company.

As we head toward an exciting future, we will continue to do everything in our power to continue writing the success story of ZF.

Friedrichshafen, March 2018

Wolf-Henning Scheider
Chief Executive Officer

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Board of Management from left to right

Wilhelm Rehm Corporate Materials Management, Commercial Vehicle Technology, Industrial Technology **Michael Hankel** Corporate Production, Car Powertrain Technology, Car Chassis Technology, E-Mobility **Jürgen Holeksa** Corporate Human Resources, Corporate Governance, Service Companies **Wolf-Henning Scheider** Chief Executive Officer, responsible for: Corporate Research & Development, ZF Aftermarket **Dr. Konstantin Sauer** Corporate Finance, IT, M&A **Dr. Franz Kleiner** Corporate Quality, Active & Passive Safety Technology, North America **Peter Lake** Corporate Market, Asia-Pacific, South America

Report of the

Supervisory Board

Dr.-Ing. Franz-Josef Paefgen
Chairman of the Supervisory Board

The business and the result again developed positively at ZF in 2017. Thanks to this strong base, ZF was able to continue systematically advancing the ZF 2025 Strategy, particularly its focus on electromobility, autonomous driving and digitalization.

A key component of this strategy, namely the integration of TRW Automotive Holding Corp., acquired in May 2015, was essentially complete by the end of the fiscal year with merged corporate functions, a unified identity and the remaining activities transferred into the line organization. Since the beginning of 2017, the service activities of ZF and TRW have been successfully brought together in one organization, "ZF Aftermarket".

However, 2017 was also characterized by some important personnel changes:

Following the resignation of the chairman of the Supervisory Board, Prof. Dr. Giorgio Behr, on December 2, 2017, Dr.-Ing. Franz-Josef Paefgen was appointed as his successor on December 4, 2017.

With effect from December 7, 2017, Dr. Stefan Sommer, CEO of ZF Friedrichshafen AG, left the ZF Group. Pending the appointment of a successor, his deputy, CFO Dr. Konstantin Sauer, took charge of the company along with the R&D Corporate Function as well as the ZF Aftermarket Division.

The Supervisory Board performed the duties incumbent upon it under the law and the by-laws with great diligence. We continually monitored the Board of Management's work and assisted it in the execution of its managerial tasks, the strategic further development of the company and other important individual matters. Outside of the board meetings, the chairman of the Supervisory Board also received regular reports from the chief executive officer about current and important developments in the company. This reciprocity will continue under our new leadership. The efficiency review undertaken by the Supervisory Board in 2017 by means of a comprehensive self-evaluation is to be taken forward in the interest of continuous improvement in teamwork and effectiveness.

During 2017, the Supervisory Board met for four regular meetings during which the Board of Management reported on the company's situation and all essential current and strategically important issues. The Supervisory Board also held two extraordinary meetings in May 2017 to discuss a matter relevant to M&A. A further extraordinary meeting took place in December 2017 to study the particulars of the chairman of the Supervisory Board and the chief executive officer.

At the respective meetings, the Supervisory Board discussed both the progress made and the challenges involved in implementing the ZF 2025 Strategy drawn up by the Board of Management. Core elements include, among other things, the further balanced global market penetration, product innovations and the focus on strategically and financially appealing new business. A common objective of the Supervisory Board and the Board of Management is the sustainable further development of the ZF Group based on the requirements for new technologies in increasingly dynamic markets. The successful integration of ZF TRW plays a major role, especially for leveraging the business potential inherent in the megatrends of efficiency, safety and automated driving. The development of these activities, the process of integrating ZF TRW as well as the realignment of the ZF management concept were regularly deliberated by the Supervisory Board and its committees. The M&A projects initiated as part of the strategy were also discussed in detail. At its last regular meeting of 2017, the Supervisory Board approved the company's operational planning for the next years, reaffirming the ZF 2025 Strategy and the pace of implementation.

The Supervisory Board pays special attention to the Board of Management's presentation of key activities in the framework of strategic and operational planning, which are to further improve operational performance and profitability as well as help to achieve the planned net debt reduction and a higher equity ratio. The Supervisory Board will make sure it

is kept up to date about how implementation of the actions is progressing. Positive aspects are the improved operating margins and the faster repayment of interest-bearing debt capital. The Board of Management also presented the Compliance Report and reported about the significant individual risks within the context of risk management. No risks were identified which were a threat to continued existence.

At its meetings, the Executive Committee of the Supervisory Board addressed, in particular, the strategic focus of the ZF Group, personnel issues of the Board of Management and division management, promoting young talents, succession planning and the overall HR strategy.

During the meeting on March 29, 2017, the appointed auditor reported to the Audit Committee in detail on the results of the annual financial statements and the consolidated financial statements, and discussed these as well as ZF's challenges in Finance with the Board of Management. At the other two meetings, the Board dealt with the compliance organization, the risk management system, the internal audit system and operational planning. The chairpersons of both committees, Prof. Dr. Giorgio Behr and – after his departure – Dr. Franz-Josef Paefgen and Dr. Margarete Haase reported on the essential issues and activities in their committees at the subsequent Supervisory Board meetings.

The annual financial statements of ZF Friedrichshafen AG compiled by the Board of Management in accordance with the provisions of the German Commercial Code (HGB) and the consolidated financial statements compiled in accordance with § 315e HGB on the basis of the International Financial Reporting Standards (IFRS), dated December 31, 2017, as well as the corresponding management reports, were audited by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft. The company issued its unqualified audit opinion in each case. The Supervisory Board extensively studied the documentation. All members of the Supervisory Board had access to the audit reports to do this. In addition, the appointed auditor explained the main audit results first to the Audit Committee and then to the Supervisory Board during the board meeting on March 21, 2018. In both cases, the results were discussed in detail in the presence of the auditor. The Supervisory Board raised no objections, accepted the financial statement audit results and adopted the annual financial statements of ZF Friedrichshafen AG as well as the consolidated financial statements. The Supervisory Board advised the shareholders to approve the annual financial statements, adopt the consolidated financial statements and accept the recommendation of the Board of Management for the appropriation of the net profit.

For the fiscal year 2017, the Board of Management drew up a report on the relations to affiliated companies (dependence report) according to § 312 German Stock Corporation Law (AktG). The Supervisory Board audited this report; no objections were raised. Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft audited the report and issued the following audit opinion:

"Based on our dutiful audit and assessment, we confirm that

firstly, the actual statements of the report are correct;

secondly, the contribution by the company with regard to the legal transactions presented in the report was not unreasonably high."

The Supervisory Board agrees to the audit result of the appointed auditor. According to the concluding audit result by the Supervisory Board, no objections are to be raised with regard to the Board of Management's closing statement contained in the report. Despite facing difficult obstacles at times, the Board of Management, the management, the employee representatives and the entire workforce of the ZF Group did an outstanding job in 2017. The Supervisory Board would like to take this opportunity to express its appreciation and thank everyone for the work they have done, the high level of commitment to the company as well as the objective and constructive teamwork.

Friedrichshafen, March 2018

On behalf of the Supervisory Board
Dr.-Ing. Franz-Josef Paefgen
Chairman of the Supervisory Board

Management Bodies

Board of Management

Wolf-Henning Scheider, Stuttgart, (since February 1, 2018) Chief Executive Officer, Corporate Research and Development, ZF Aftermarket

Dr. Konstantin Sauer, Überlingen, Corporate Finance, IT, M&A, Chief Executive Officer (from December 8, 2017 to January 31, 2018)

Dr. Stefan Sommer, Meersburg, (until December 7, 2017) Chief Executive Officer, Corporate Research and Development, ZF Aftermarket

Michael Hankel, Eschborn, Corporate Production, Car Powertrain Technology, Car Chassis Technology, E-Mobility

Jürgen Holeksa, Friedrichshafen, Corporate Human Resources, Corporate Governance, Service Companies

Dr. Franz Kleiner, Eriskirch, Corporate Quality, Active & Passive Safety Technology, North America

Peter Lake, Franklin, USA, Corporate Market, Asia-Pacific, South America

Wilhelm Rehm, Höchstädt, Corporate Materials Management, Commercial Vehicle Technology, Industrial Technology

Supervisory Board

The Supervisory Board of the company has been set up in accordance with the provisions of the Act on the Co-determination of Employees. It is composed as follows:

Dr.-Ing. Franz-Josef Paefgen, Ingolstadt, (since December 4, 2017), Chairman of the Supervisory Board, former Chairman and Chief Executive of Bentley Motors Ltd., Crewe, Great Britain

Prof. Dr. Giorgio Behr, Buchberg, Switzerland, (until December 2, 2017) Chairman of the Supervisory Board, CEO and President of the BBC Group, Villmergen, Switzerland

Frank Iwer*, Stuttgart, Deputy Chairman of the Supervisory Board, Head of Staff Position Political and Strategic Planning of the Board of Management of IG Metall, Frankfurt

Jörg Ammon*, Salem, Head of ZF Friedrichshafen AG Projects, Friedrichshafen

Ernst Baumann, Münsing, former Member of the Management Board of BMW AG, Munich

Matthias Beuerlein*, Volkach, Team Leader of Non-Production Materials Purchasing, Schweinfurt location of ZF Friedrichshafen AG, Friedrichshafen

Andreas Brand, Friedrichshafen, First Mayor of the City of Friedrichshafen

Jürgen Bunge*, Lemförde, Chairman of the Lemförde location Works Council of ZF Friedrichshafen AG, Friedrichshafen

Achim Dietrich*, Kressbronn, Chairman of the Group Works Council of ZF Friedrichshafen AG, Friedrichshafen

Prof. Dr. Dr. Claudia Eckert, Munich, Chair for IT Security, Technische Universität München, Munich

Robert Friedmann, Beilstein, Chairman of the Central Managing Board of the Würth Group, Künzelsau

Dr. Margarete Haase, Cologne, Member of the Management Board of DEUTZ AG, Cologne

Peter Kippes*, Schweinfurt, First Representative of IG Metall Administration Center Schweinfurt

Dr. Joachim Meinecke, Freiburg, Lawyer

Oliver Moll*, Bergrheinfeld, Chairman of the Schweinfurt location Works Council of ZF Friedrichshafen AG, Friedrichshafen

Jürgen Otto, Coburg, CEO of Brose Group, Coburg

Vincenzo Savarino*, Friedrichshafen, First Representative of IG Metall Administration Center Friedrichshafen-Upper Swabia

Wolfgang Schuler*, Riegelsberg, Chairman of the Saarbrücken location Works Council of ZF Friedrichshafen AG, Friedrichshafen

Hermann Sicklinger*, Thyrnau, Chairman of the Passau location Works Council of ZF Friedrichshafen AG, Friedrichshafen

Dagmar Steinert, Mannheim, (since December 15, 2017) Member of the Executive Board and CFO of Fuchs Petrolub SE, Mannheim

Weidong Xu, Castrop-Rauxel, Managing Director of Kelvion Heat Exchangers (China) Co. Ltd.

* Employee representative

Chief Representative

Andreas Hartmann, Cologne

ZF Group sales increased to € 36,444 million in 2017. At the end of the year under review, the number of employees totaled 146,148. An amount of € 1,350 million was invested in property, plant and equipment, the amount spent on R&D rose to € 2,230 million. The adjusted EBIT came to € 2,339 million. Profit after tax amounted to € 1,167 million.

Group Management Report

Basic Principles of the ZF Group

Operating Activities and Corporate Structure

ZF Friedrichshafen AG is a corporation, of which 93.8% is owned by the Zeppelin Foundation and 6.2% by the Dr. Jürgen and Irmgard Ulderup Foundation. The company is headquartered in Friedrichshafen. As of December 31, 2017, the Group's workforce worldwide comprised 146,148 employees in around 40 countries.

ZF holds leading positions on the global market thanks to its **innovative products.**

As a global leader in driveline and chassis technology as well as active and passive safety technology, ZF operates in particular in the passenger car and commercial vehicle industry. In addition, our activities cover other market segments such as construction and agricultural machinery, wind power, marine propulsion, aviation technology, rail drives, special drives and test systems for industry with a focus on the automotive sector. Alongside transmission systems, units and components, the company also produces chassis systems and components as well as safety technology, electronics and sensors. ZF offers a wide range of services that are marketed by the ZF Aftermarket organization. These services primarily involve the spare parts business for driveline and chassis technology as well as maintenance and repair services. The main sales markets of the Group are Europe, North America and the Region of Asia-Pacific, with China as the core market.

ZF is set up along the lines of a matrix organization which links the Group-wide competencies of the corporate functions with the global business responsibility of the divisions and business units. The central departments of the ZF Group are headed by the members of the Board of Management. The members of the Board of Management are assigned directly to the seven divisions. The same applies to the responsibilities with regard to the Regions of North America, South America and Asia-Pacific.

The Group structure with seven divisions is aligned with the market and customer:

- The Car Powertrain Technology Division is responsible for the following business units: Automatic Transmissions, Manual Transmissions/ Dual Clutch Transmissions, Axle Drives and Powertrain Modules.

Corporate Structure ZF Friedrichshafen AG

Shareholders: 93.8% Zeppelin Foundation and 6.2% Dr. Jürgen and Irmgard Ulderup Foundation

Car Powertrain Technology	Car Chassis Technology	Commercial Vehicle Technology	Industrial Technology	E-Mobility	ZF Aftermarket	Active & Passive Safety Technology
Automatic Transmissions	Chassis Systems	Truck & Van Driveline Technology	Off-Highway Systems	Electronic Systems	Independent Aftermarket	Braking Systems
Manual Transmissions / Dual Clutch Transmissions	Chassis Componets	Axle & Transmission Systems for Buses & Coaches	Industrial Drives	Electric Traction Drive	Original Equipment Service/Specific Original Equipment	Steering Systems
Axle Drives	Suspension Technology	CV Chassis Technology	Marine & Special Driveline Technology	Axle Drives	Manufacturing	Occupant Safety Systems
Powertrain Modules		CV Powertrain Modules	Test Systems	Electronic Interfaces	Services	Electronics
		CV Steering Systems	Aviation Technology	System House	Friction Materials Group	Body Control Systems
			Wind Power Technology			

Corporate Functions/Regions

- The Car Chassis Technology Division includes the following business units: Chassis Systems, Chassis Components and Suspension Technology.

- The Commercial Vehicle Technology Division is responsible for the following business units: Truck & Van Driveline Technology, Axle & Transmission Systems for Buses & Coaches, CV Chassis Technology and CV Powertrain Modules. In the fiscal year 2017, the CV Steering Systems Business Unit which had previously been assigned to the Active & Passive Safety Technology Division became part of the Commercial Vehicle Technology Division.

- The Industrial Technology Division combines the following business units: Off-Highway Systems, Industrial Drives, Marine & Special Driveline Technology, Test Systems, Aviation Technology and Wind Power Technology.

- The E-Mobility Division with the Electronic Systems and Electric Traction Drive Business Units as well as the System House brings together the expertise in electromobility under a single roof.

- ZF Services and TRW Aftermarket have been managed as the ZF Aftermarket Division since the start of fiscal year 2017. The TRW name has been retained as a product brand and enhances the existing brand portfolio alongside ZF, Sachs, Lemförder, Boge and Openmatics.

- The Active & Passive Safety Technology Division, established by the ZF Group to manage the business activities of ZF TRW after its acquisition, includes the following business units: Braking Systems, Steering Systems, Occupant Safety Systems and Electronics. In August 2017, the company agreed the sale of the Body Control Systems Business Unit.

Corporate Management

The shareholders, the Zeppelin Foundation and the Dr. Jürgen and Irmgard Ulderup Foundation exercise their voting rights at the annual shareholders' meeting.

ZF Friedrichshafen AG and the ZF Group are led by the Board of Management, which manages the company, and by the Supervisory Board, which monitors the Board of Management. For the most part, the activities of the Board of Management are strategic in nature and comprise responsibility for the corporate functions, the divisions and the regions. In this context, particular importance is placed on close networking and cooperation within the Group. Operational topics are mainly addressed in the divisions and business units.

ZF is **divided up into** seven Group divisions that are **market and customer-oriented.**

Dr. Stefan Sommer resigned as chief executive officer of ZF Friedrichshafen AG as of December 7, 2017. CFO Dr. Konstantin Sauer took interim charge of the company along with the R&D Corporate Function as well as the ZF Aftermarket Division. The Board of Management thus comprised six members as of year-end 2017. On January 31, 2018, the Supervisory Board appointed Wolf-Henning Scheider as chief executive officer effective as of February 1, 2018.

The supervision of the Board of Management by the Supervisory Board, whose members are appointed with equal representation, is supported by an Executive Committee and an Audit Committee which are both composed of members of the Supervisory Board. Following the resignation of the chairman of the Supervisory Board of ZF Friedrichshafen AG, Prof. Dr. Giorgio Behr, on December 2, 2017, Dr.-Ing. Franz-Josef Paefgen was appointed as the new chairman on December 4, 2017. Ms. Dagmar Steinert was elected as a member of the Supervisory Board on December 15, 2017. The Supervisory Board comprised 20 members as of year-end 2017.

In light of German legislation governing equal representation of women and men in managerial positions in the private and public sectors, targets for the relevant managerial levels have been discussed and set for ZF Friedrichshafen AG to be achieved by June 30, 2022.

At the first managerial level (executive vice president/ senior vice president) and the second managerial level (vice president) below the Board of Management, the percentage of women is planned to increase to 15.0% each. At the first and second managerial levels, the targets set for June 30, 2017 (8.4% and 8.1%, respectively) have been exceeded.

For vacancies regarding the Board of Management, a quota of 10.0% female Board of Management members is envisaged by June 30, 2022.

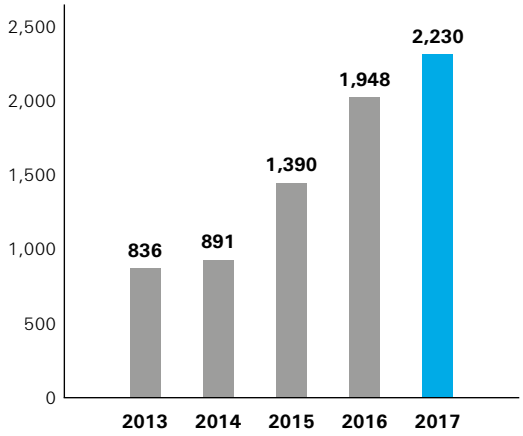
At the moment, 20.0% of the members of the Supervisory Board are women. The target of 30.0% by June 30, 2022 will apply when the next term of office begins in spring 2018.

Research and Development

ZF continued to drive forward its research and development during the last fiscal year. 16,250 employees worldwide work in this field at 20 main development locations. In 2017, ZF invested €2,230 million (2016: €1,948 million) in R&D, which is 6.1% of Group sales. In addition, it continued to support its valuable trademark rights and domains worldwide. The company's brand and domain inventory now consists of more than 6,464 individual brands in 497 brand families and more than 1,571 domains.

Combining "See, Think and Act" raises **dynamics and safety.**

R&D costs
in € million



See – Think – Act

As market and technological leader in driveline, chassis as well as active and passive safety technology, ZF is broadening opportunities for its products through intelligent networking. True to its guiding principle "See – Think – Act", ZF has combined environmental recognition technologies (See) with electronic control units (Think) and electromechanical actuators (Act) to increase dynamics and safety. In doing so, the company has also created a strong foundation for highly automated and autonomous driving.

ZF demonstrated this approach at the 2017 Global Press Event by introducing its concept car – the Vision Zero Vehicle. This prototype prevents wrong-way driving (Wrong-way Inhibit), counteracts distraction behind the wheel (Driver Distraction Assist) and makes it easier to switch between autonomous and human-operated driving (Bring Back Attention). The Integral Chassis Control (ICC) function connects the individual systems in the chassis to create a control network that additionally improves handling and safety.

ZF is also advancing conventional components. This is high on the agenda for automated and semi-autonomous driving features, because during the transition phase to complete autonomous driving, the interface between human and machine will

play a critical role in preventing accidents. Based on this, the Group unveiled a steering wheel concept that features an LCD display, gesture control and adaptive lighting via an intuitive feedback and monitoring system at the Consumer Electronics Show (CES) held in Las Vegas in January 2018.

ZF's R&D activities focused on efficient and intelligent systems for conventional, electric and hybrid drives. The showpiece of these efforts is the modular rear-axle system mSTARS (modular Semi-Trailing Arm Rear Suspension), which ZF installed for the first time in its Vision Zero Vehicle. Manufacturers can produce combustion engines, hybrid drives or electric motors for the same vehicle range on the basis of just one platform – mSTARS. ZF also enhanced its existing driveline technology products by expanding and optimizing their transmission and braking functions.

In the commercial vehicle branch, the Group's Evasive Maneuver Assist (EMA) function for trucks launched in 2016 won over the jury at the CLEPA Innovation Award, which is given out by the European Association of Automotive Suppliers.

Potential and patents

In developing new products and concepts, ZF depends on innovative development methods and the expertise of its engineers, who submitted a total of 2,161 patents in 2017. Of those, 1,455 were first filings. ZF has thus defended its position as one of the top patent filers in Germany. Ten outstanding employee innovations were honored once again with ZF's annual Graf-von-Soden Award in 2017.

Moreover, ZF gave its employees the opportunity to play an active role in shaping the company. In the Digital Innovation Challenge, the employees submitted over 330 ideas on how to effectively leverage new opportunities offered by digitalization. 17 finalists in four categories presented their ideas at an internal company event and a jury selected the most promising ones. These projects are now in the advanced development phase to be transformed into minimal viable products (MVPs).

Ecosystem with strategy and results

To meet the challenges of enormous market changes and obtain faster access to strategic key technologies, ZF continued to build up its external network of partnerships, cooperations and joint ventures. The Group calls this network the "Vision Zero Ecosystem", tying in with its Vision Zero for an accident and emission-free world. The first success to emerge from the network is the "ZF ProAI" control box with artificial intelligence, developed by the company in cooperation with American chip manufacturer NVIDIA. At the end of 2017, Deutsche Post DHL placed an order for this technology for deployment in its test fleet of autonomous delivery vehicles. In addition, ZF concluded a strategic partnership agreement with Hella, which specializes in sensor technology, and is working with Schaeffler on developing a joint cloud platform for wind turbine gearboxes. At the 2017 International Motor Show IAA in Frankfurt, ZF announced promising new cooperations and presented the network's initial outcomes:

The **Vision Zero Ecosystem** network is launching its first innovative product on the market.

- For example, ZF and the Chinese Internet company Baidu are developing comprehensive technical solutions for autonomous driving in China.
- As a system partner for occupant safety, ZF is involved in the EU project BEHICLE, which is designed to meet the Euro NCAP five-star rating.
- For the Car eWallet cloud mobility service, ZF was able to gain two top-level partners in IBM and UBS. ZF has now also welcomed two new service providers aboard: APCOA (Europe's largest car park management business) and the charging station provider ChargePoint.
- Faurecia and ZF introduced their first jointly developed seating concept that the companies designed as part of their "Cockpit 2025" cooperation.

ZF's subsidiary Zukunft Ventures GmbH also made a positive contribution to the corporate strategy. In May 2017, it concluded a joint venture with Aachen-based start-up e.GO Mobile AG with the goal of developing an autonomous people and cargo mover. Not only that, Zukunft Ventures also initiated the acquisition of engineering firm IEE Sensing Germany which specializes in software development for drive assistance programs, safety and autonomous driving.

From theory to practice

In fiscal year 2017, ZF built prototypes for a variety of concepts including not only the Vision Zero Vehicle but also a city bus test vehicle. The electric bus, which is fitted with the CeTrax central drive, was showcased at Belgium's Busworld trade show. The drive was unveiled for the first time in 2016. Now, just one year later, the development team in Friedrichshafen has implemented a CeTrax application on the road. In addition, ZF introduced its first off-highway application for the ZF ProAI in a tractor concept at Agritechnika in Hanover.

Focused on the future

To shape the mobility of tomorrow to be more efficient, ZF is positioning itself in R&D by reorganizing itself and intensifying its activities.

As an example, ZF celebrated the grand opening of its India Technology Center (ITC) in Hyderabad (India) in March 2017. Its primary activities include software development and testing. Over 60 engineers are now actively working at the center.

Corporate Research and Development was reorganized in order to reinforce this department's controlling corporate role. This means that we can press ahead with shaping products and technologies in line with the ZF strategy (autonomous driving, safety, efficiency) as well as exploring new business fields.

ZF standardized the previous product evolution processes in line with those of the Active & Passive Safety Technology Division. In doing so, product development was broken down and flexibly displayed as three sub-processes (innovation, core and application) from the initial idea right up to market launch.

In a dynamic environment, it is necessary to adapt to constantly changing conditions. This is why ZF established a new and flexible project management approach referred to as "agile transformation". It is intended to continue networking, self-organization, trust and continuous learning activities.

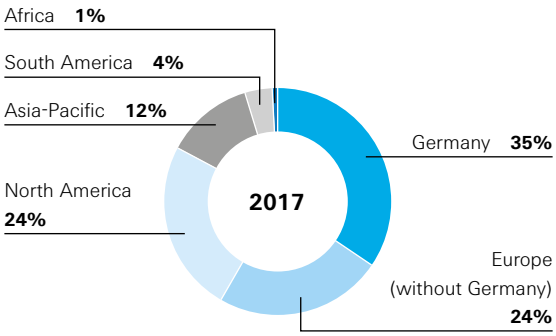
In 2017, for the first time, ZF also defined lead projects in terms of advanced development, basics and cross-section. These projects prioritize promising megatrends in automotive technology, including autonomous driving, electromobility and intelligent linking between simulation and test when developing products and functions.

Employees

As of December 31, 2017, ZF employees worldwide numbered 146,148 (2016: 136,820). The rise in the number of employees compared to the prior year can be mainly traced back to expanding personnel capacities in the Active and Passive Safety Technology, E-Mobility, Car Chassis Technology and Car Driveline Technology Divisions, especially in China, Mexico, Portugal, the USA and Germany. Moreover, additional staff was hired in the Shared Service Center at the Polish Czestochowa location and at the India Technology Center in Hyderabad (India). In 2017, ZF Friedrichshafen AG once again ranked among Germany's major providers of training and apprenticeship opportunities. At the end of 2017, ZF's workforce in Germany included approximately 2,100 apprentices and co-op students.

ZF is one of the **largest training companies** in Germany.

Employees by regions



Digital fitness increasingly important

Digitalization and related changes in the global production landscape are placing new demands on worker skills, training and education. That is why employees and graduates in the software and IT fields are becoming increasingly more attractive to the automotive industry. In order to develop and manufacture intelligent mechanical products, ZF needs workers not only from traditional occupations, but also employees who can meet entirely new job specifications.

Digitalization and connectedness are also changing requirements in vocational and professional training. That's why, back in 2016, ZF set up a cross-company project team that analyzed changed job qualification profiles and worked out solution models. As a result of the "Training 4.0" project, ZF integrated new content into its vocational training programs in the year under review, particularly in the fields of IT and electronic engineering. The Group has additionally expanded its current vocational training program to include new professions. At the same time, ZF is also investing in technical infrastructure, including, for example, data glasses or establishing technical training centers. Our instructors are constantly undergoing further training to become familiar with new methods and tools.

To meet changing requirements in the global Industry 4.0 environment, ZF is adapting its employee and university recruiting marketing methods. For example, together with the Swiss Federal Institute of Technology Zürich (ETH Zürich) and the Technical University of Darmstadt, two new universities were defined which will focus on research in the fields of artificial intelligence, electromobility and autonomous driving. Furthermore, ZF reinforced its image as a technology company by exhibiting at trade shows and other in-house or external events that focus on IT. As part of the student engineering contest called Formula Student, ZF now also supports teams that develop driverless race cars. Moreover, a new HR image campaign was initiated and targeted advertising actions were started up in the IT environment. Even within the ZF Global Trainee Program or when awarding external grants, ZF is placing greater importance on information technology and electrical engineering.

New program for nurturing executive managers

During the course of its efforts to integrate ZF TRW, the Group also created the "ZF Global Leaders" program, a standardized promotion landscape that supports the consistent development and mentoring of executive managers. The program covers various management modules and combines personal discussions, virtual learning, self-reflection and peer group coaching methods as well as real-world case studies. The primary goal is to facilitate rapid action when moving up from one management level to the next. Since executive managers in strategically relevant regions gain important work experience regarding future business requirements, the program creates touchpoints between the highest ZF management level and external specialists. This makes for maximum networking and learning opportunities. The program's contents are based on the ZF 2025 Strategy. Executive manager development is thus an important contribution toward anchoring and implementing the strategic goals of the ZF Group.

New careers are also emerging at ZF through **megatrends** like digitalization.

Standardizing incentive plan structures

Also within the context of integrating ZF TRW, the Group introduced a harmonized and performance-based short-term incentive program for executive managers in the 2017 fiscal year. The new system is intended to promote a culture of innovation and performance that is more heavily geared toward achieving targets, thus ensuring the future success of the entire company. The short-term incentive program consists of financial performance indicators as well as an individual component that is based on the targets and performance of each individual employee. The individual target agreement and performance evaluation process has been moved to a cloud-based IT solution. In order to bring sustainable company development more to the fore, ZF has expanded its long-term incentive program to include executives at the third management level.

Sustainability

Sustainability management

ZF's sustainability management activities for the 2017 fiscal year were characterized by the further harmonization of processes, key indicators and targets as part of integrating ZF TRW. Existing sustainability-related management approaches in the areas of supply chain management, the environment, employee, product or corporate social responsibility continued to be aligned according to the "best of both" approach. However, this process has not yet been completed.

ZF wants to be a key player in advancing **Vision Zero** – a mobile world **with zero accidents and zero emissions.**

The sustainability program will therefore not be fully revised until sometime in 2018. In its current version, the company has been committed to non-financial targets since 2015. These include reducing specific CO_2 emissions in production, lowering the negative environmental footprint in logistics and continuously improving work safety, diversity and ZF's appeal as an employer.

In addition, during the year under review, ZF's other activities covered the systematic handling of customer requests, participation in stakeholder discussions, involvement in studies and cooperative work on association initiatives regarding sustainability in the supply chain.

The publication of its 2016 Sustainability Report marked the first time a joint report was presented by ZF and ZF TRW. It presents consolidated and important non-financial key indicators and management approaches. The report, which was published in summer 2017, is once again based entirely on the Global Reporting Initiative (GRI) and, at the same time, is a progress report for the Global Compact, which ZF has been a member of since 2012. For the 2017 fiscal year, the Sustainability Report will be submitted at the same time as the Annual Report.

With its Vision Zero, ZF has set a strong course for sustainability management in 2017. In 2018, as part of the revision of the materiality analysis for the entire Group, the relevant impacts of business operations will be analyzed and, at the same time, priorities set for the company's net assets, financial position and results of operations. This analysis will then serve as the foundation for the harmonized sustainability program and the courses of action and Group targets described therein.

Compliance

In order to ensure the company's long-term success, corporate social responsibility has to be assumed and business activities must be managed responsibly, sustainably and with integrity. With its effective Compliance Management System (CMS) that was further developed in 2017, ZF has taken this responsibility to heart. The ZF and ZF TRW compliance areas were merged on July 1, 2017. In the course of the integration, the legal and compliance organizations of the ZF Group were also merged. The Board Member for Human Resources and Governance is now responsible for them.

In the year under review, ZF focused on the rollout of a standardized compliance system. Moreover, the requirements for harmonizing directive management were put into place. Global classroom-based courses and expanded (online) training classes have helped raise awareness among employees with regard to possible compliance risk areas. These preventive actions will help reduce compliance risks in order to counteract serious economic threats early on. The effectiveness of the business partner due diligence was improved in terms of risk in order to more efficiently support business processes in the Group.

Environmental protection, occupational health and safety

As a strategic corporate goal, environmental protection is an important principle in the ZF Group's business activities. It is integrated in all levels and processes. Through innovative products and state-of-the-art production technologies, ZF has succeeded in sustainably reducing the unfavorable environmental impacts resulting from its business activities and the use of ZF products. All production plants are operated at the highest environmental protection standards.

As standard, ZF carries out environmental due diligence audits to assess the potential environmental protection and occupational health and safety risks for each major investment and divestiture project. In fiscal year 2017, corresponding audits were conducted for four projects. ZF manages all remediation projects as of a volume of €40,000 at a central level. Thus, €9 million was spent on remediation projects in the fiscal year.

As part of the integration of the Active & Passive Safety Technology Division into the ZF Group, a joint program for environmental protection, occupational health and safety as well as a reporting concept for the company were prepared, with a focus on revising the environmental and climate protection strategy. At the same time, developments from the Paris climate protection follow-up process were taken into account.

Systematic environmental management according to ISO 14001 is the Group standard for all production and main development locations. Since 2006, it has been centrally managed in line with a multisite procedure for 123 certificates according to ISO 14001. The relevant locations of the Active & Passive Safety Technology Division are certified at a decentralized level (107 certificates). External expert audits confirm that the participating locations comply with current environmental legislation and certification standards.

ZF has reported on progress in reducing greenhouse gas emissions using the Carbon Disclosure Project reporting format (CDP).

Up-to-date figures on emissions and resource consumption as well as occupational health and safety can be found in the Sustainability Report.

In 2017, actions to reduce the company's environmental footprint once again focused on saving energy and lowering greenhouse gas emissions. A wide range of projects were initiated at individual locations, for example, a program across all locations for replacing conventional by energy-saving LED lighting technology. At the same time, these projects also save costs.

ZF has implemented **comprehensive measures** to improve **energy efficiency.**

As part of the CO_2 strategy, combined heat and power plants for producing domestic CO_2-reduced power have been a focus in Germany over the past few years. However, the recently passed repeal of the energy tax relief bill for these types of power plants has had a retroactive impact on several ZF locations that commissioned such plants after the cut-off date. As a result, when making new investments, alternatives to using combined heat and power plants as part of the CO_2 strategy will be considered.

Water-use reduction projects are planned in the future especially at locations in areas with water shortages.

When implementing the 13th five-year plan in China, stricter limit values for solvent emissions were stipulated. Management at the respective locations is working with local authorities to develop corresponding implementation plans.

As part of a Group project, the requirements from the Seveso III Directive are being implemented on time at the respective European locations, in close cooperation with local authorities.

Various ZF customers are driving the trend toward occupational health and safety management certification based on the OHSAS standard. To continue to ensure that ZF meets the requirements for receiving customer contracts, certification projects were completed at the relevant locations. More projects will follow in the next few years. Today, a total of 74 ZF locations already have the relevant certification.

Under the umbrella brand **"we care"**, we have launched numerous international **charitable initiatives.**

Corporate social responsibility

At ZF, corporate social responsibility is an important and inherent component of the company's mission statement. We therefore support our local communities by contributing to educational, environmental and community projects as well as sports, recreational and cultural events. Such projects and events range from funding endowment chairs at universities to the ZF Art Foundation, which supports artists and musicians, festivals and non-profit organizations. In addition to top volleyball players from the VfB Friedrichshafen team, ZF also sponsors many recreational sports. The association "ZF hilft" collects donations for sustainable relief projects all over the world. Under the motto "Water is Life", ZF has helped finance three major water projects in Mozambique, Nepal and Peru. These projects involve constructing and improving drinking water supply and sanitary facilities in these countries. Moreover, the money raised is also being used to promote health, hygiene and good sanitary practice training. The funds raised for the "Water is Life" aid project came to a total of €385,000 in 2017. Several fundraising projects initiated through "ZF hilft." from previous years are being continued. In 2017, a trainee project was completed that involved developing an umbrella brand for other charitable projects sponsored by the company and its employees. The new ZF umbrella brand "we care" therefore currently covers 13 charitable projects at various international ZF locations. A shared platform can be used to obtain information on past and current activities. It also provides the contact information of the respective local coordinators for the individual "we care" projects.

Economic Report

The Business Environment

New momentum in the overall economy

After the relatively subdued upturn in overall economic development in 2016, global growth accelerated to 3.5% in the year under review, marking the highest expansion rate for seven years. The situation improved in the course of the year, both in the advanced economies and in emerging markets. Compared to the last ten years, this upswing was fairly broad-based. In terms of gross domestic product (GDP) at purchasing power parities, economic activity rose in around three quarters of the global economy. The main growth contributors were the eurozone, where GDP rose by 2.2%, other emerging European countries and China with 6.7%, Japan with 1.6% and Russia with 1.8%. The USA (2.2%), Great Britain (1.4%) and India (6.3%) also reported growth, although rather more sluggish than expected. The remaining 25% of the global economy was largely made up of developing countries in Latin America, Africa and the Middle East, all of which continued to suffer the effects of comparatively low energy prices or political or economic crises.

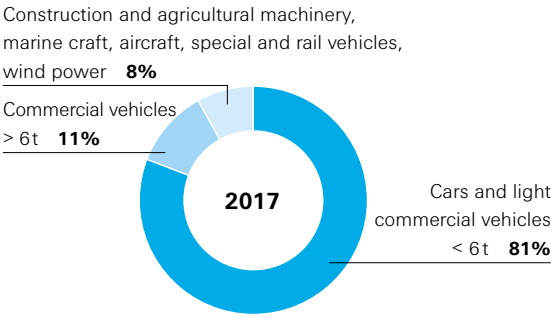
The key drivers of this generally very positive economic development were industrial production and retail, reflationary monetary and fiscal policy, primarily in the mainstream economies, consistently high levels of infrastructure investment, especially in China, and rising raw material prices, which bolstered recovery in emerging raw material export markets.

Development of the industry still inconsistent

In ZF's core industries – passenger cars and light commercial vehicles below 6 tons, trucks and buses above 6 tons, agricultural and construction machinery and wind turbine gearboxes – development varied by sector and region.

In 2017, the **world economy** reached its **highest growth rate** in seven years.

Sales distribution by sectors (before consolidation)



Following a fairly strong upswing of 5% in 2016, **global production of passenger cars and light commercial vehicles** increased by a moderate 2% in the year under review. European production once again rose by 3%, though largely driven by notable purchase incentives in the market. However, new vehicle and lease return inventory was fairly high and is yet to hit the market. Conditions have been similar in North America, with the result that vehicle production fell by 4% in the year under review. Nonetheless, the market is at an historic high with production of 17 million light vehicles. China, the world's largest individual market with production of over 27 million vehicles, only generated slight growth of 2% in the year under review following 2016's incentive-based boom, while India maintained its growth trajectory at around 6%. Crisis markets Russia and Brazil reported a very positive performance, starting from very low levels but ultimately achieving double-digit growth rates.

Production of commercial vehicles above 6 tons, having already recovered lost ground in 2016, grew by an unexpectedly healthy 15% in the year under review. China's extremely strong performance was a key growth contributor along with South America and Russia, both of which improved significantly again post-recession (20% and 16%, respectively). New emission and weight regulations along with replacement needs on the back of the peak in demand in 2010 triggered a veritable boom, resulting in a production increase of 34%. By comparison, development in Europe and North America proved relatively stable. Europe saw a further production increase of 6% and North America achieved roughly the same, although pre-summer monthly figures were down significantly and did not pick up until August.

In the **non-automotive** sector, the **agricultural machinery** market above 75 kW saw a slight decline of 2%. The sharp slump of 15% in China was a key factor in this. Production in North America also fell by 2%. However, the sales situation in Europe continued on a positive note, also in the agricultural engineering sector, with tractor production increasing by 2%. Simultaneously, South America also needed to catch up significantly. As a result, production volumes rose by 7%, having already expanded by 11% in the prior year. News in the **construction-machinery** industry was very positive, with global production up by 16% compared to 2016. China had been suffering a drastic slowdown in the construction-machinery production since 2011, resulting in a 75% fall in production volume. However, the trend reversed in 2016 and production figures rose sharply in 2017 with an increase of almost 35%. The Chinese government is pushing ahead with infrastructure development, for example, its "One Belt, One Road" initiative (the New Silk Road), and expediting the implementation of planned construction projects. The downward trend in the construction-machinery industry has also bottomed out in North America: Having contracted by 21% in 2016, production expanded by 10%. European production rose by 8% as a result of a healthy domestic economy and increasing exports, and South America and Russia also made gains following economic turnarounds.

The **production of commercial vehicles** over 6 tons **skyrocketed.**

As regards the other industrial technology markets, **marine propulsion systems** gained only slight but positive momentum in the pleasure craft sector, while the commercial craft sector is rather moving sideways. Growth in the **rail drives** markets was also subdued. The market for **wind turbine gearboxes** was sluggish, having come under heavy price pressure mainly driven by falling energy costs and rising solar energy capacity. While Europe reported significant growth based on higher offshore volumes and an increasing need to repower ageing facilities, the other major markets saw a notable decline in 2017. In North and South America and Asia-Pacific, the percentage fall in new wind turbine installations reached double digits, but this was partly attributable to certain projects being postponed until 2018. Consequently, this downturn is somewhat overstated pending a correction in the coming year.

Overview of the Business Trend and Board of Management Overall Statement on Business Performance

The integration of TRW Automotive Holdings Corp., acquired on May 15, 2015, was essentially complete by the end of fiscal year 2017, with merged corporate functions and a unified identity as regards customers and suppliers. The ZF and TRW service organizations were successfully launched as "One Aftermarket" in early 2017. ZF's new, consolidated brand presence at the 2017 International Motor Show IAA gave a clear signal that the integration has been a success.

The acquisition of ZF TRW is part of the implementation of the ZF 2025 corporate strategy and represents a key milestone in securing ZF's long-term future as a technology company.

Fiscal year 2017 was a great success for the ZF Group. Revenue increased by 3.6% from €35.2 billion to €36.4 billion. After adjusting for exchange rate influence and M&A activities, revenue increased by 6% generating stronger growth than the market. The ZF Group's positive financial position and results of operations despite major technological challenges in the automotive industry is also reflected in the increase in adjusted EBIT from €2,239 million to €2,339 million and a strong adjusted free cash flow of €1,818 million. Just two and a half years after the acquisition of TRW, gross debt as of December 31, 2017 (€6.4 billion) is down to almost half the original amount.

As regards sales, ZF's figure of €36,444 million exceeds the sales target forecast at the end of last year and it is at the top end of the target adjusted for the first half of the year (above €36 billion). The same applies to adjusted EBITDA (EBIT corrected by depreciation/amortization) where the margin of 10.6% is in line with the forecast of above 10%. The adjusted EBIT margin figure of 6.4% is also in line with the stated target (above 6%). As regards free cash flow adjusted for company acquisitions and disposals, the target of significantly greater than €1 billion was clearly achieved at €1.8 billion.

2017 focused on further strengthening profitability against a backdrop of increased R&D costs and generating free cash flow in order to continue to reduce the debts incurred as a result of acquiring TRW. The resulting reduction in the total assets as well as the further increased net profit after tax fed through to a higher equity ratio of 24.4% at the end of the fiscal year, up 3 percentage points. This positive trend shall be maintained thanks to continued high profitability and further debt relief in the following years. The ZF Group rests on a solid financial foundation thanks to its long-term oriented and diversified financing, as well as cash and cash equivalents of €1.3 billion and an unused credit line of €3.0 billion at Group level. The rating agencies Moody's and Standard & Poor's assess these developments of the ZF Group as positive. With Baa3, Moody's upgraded the ZF Group into the investment grade rating in December 2017. Against the backdrop of a stable liquidity and financial basis as well as good business performance, the economic situation of the consolidated ZF Group is considered to be positive on the whole.

The **integration** of ZF TRW was **completed to a great extent** in 2017.

Results of Operations, Net Assets and Financial Position

Preliminary remark

On August 30, 2017, an agreement was entered into with Luxshare Limited about the disposal of the Body Control Systems Business Unit. The sale of this business activity had not occurred as of December 31, 2017. At the end of the fiscal year, the underlying assets and liabilities are classified as assets and liabilities held for sale and reported separately in the consolidated statement of financial position.

The **organic sales growth** of the ZF Group rose **to 6%** in 2017.

Results of operations

In the fiscal year 2017, the ZF Group succeeded once again in increasing its sales compared to the previous year. Sales in the amount of €36,444 million in fiscal year 2017 represent an increase of €1,278 million over €35,166 million in the prior year. This corresponds to a growth rate of 3.6%. The organic growth amounts to 6% after adjusting for effects from M&A activities and exchange rate effects. Sales in the Car Powertrain Technology Division improved by €744 million to €8,725 million in fiscal year 2017. This growth by more than 9% is attributable to the continuous high demand for automatic passenger car transmissions. The rise in sales in the Car Chassis Technology Division to €6,484 million (2016: €6,447 million) is based on a disproportionately high increase in the Region of Asia-Pacific, which was partly counteracted by the sales development in North America as well as currency effects.

Sales of the Commercial Vehicle Technology Division grew by 7% to €3,172 million. The strong market development in China as well as the positive reversal of trend in Russia and Brazil were the main drivers of this increase.

Consolidated statement of profit or loss
in € million

	2017	%	2016	%
Sales	36,444	100.0%	35,166	100.0%
Cost of sales	−29,895	−82.0%	−29,069	−82.7%
Gross profit on sales	**6,549**	**18.0%**	**6,097**	**17.3%**
Research and development costs	−2,230	−6.1%	−1,948	−5.5%
Selling and administrative expenses	−2,615	−7.2%	−2,580	−7.3%
Other income and expenses	19	0.0%	45	0.1%
Operating profit or loss	**1,723**	**4.7%**	**1,614**	**4.6%**
Net result from participations	48	0.2%	64	0.2%
EBIT	**1,771**	**4.9%**	**1,678**	**4.8%**
Financial income	313	0.9%	485	1.3%
Financial expenses	−675	−1.9%	−855	−2.5%
Net financial result (without net result from participiptions)	**−362**	**−1.0%**	**−397**	**−1.2%**
Net profit or loss before tax	**1,409**	**3.9%**	**1,281**	**3.6%**
Income taxes	−242	−17.2%	−357	−27.9%
Net profit or loss after tax	**1,167**	**3.2%**	**924**	**2.6%**

Sales development by divisions and business units
in € million

	2017	2016	Changes compared to 2016
Car Powertrain Technology	8,725	7,981	+9.3%
Car Chassis Technology	6,484	6,447	+0.6%
Commercial Vehicle Technology	3,172	2,960	+7.2%
Industrial Technology	2,530	2,552	−0.9%
E-Mobility	924	862	+7.2%
Active & Passive Safety Technology	13,970	13,645 [1)]	+2.4%
ZF Aftermarket	3,007	2,815 [1)]	+6.8%
Corporate R&D, Corporate Headquarters and Service Companies	468	483	−3.1%
– Consolidation	−2,836	−2,579 [1)]	+10.0%
Total	**36,444**	**35,166**	**+3.6%**

[1)] Prior-year figures have been adjusted due to the establishment of the ZF Aftermarket Division.

At €2,530 million in fiscal year 2017, sales of the Industrial Technology Division was almost on prior-year level. The sales decline in the Wind Power Technology Business Unit was compensated to a great extent by sales growth in the Off-Highway Systems Business Unit.

The E-Mobility Division was newly founded in fiscal year 2016. Accordingly, this year's annual report includes a prior-year comparison for the first time. The sales of €924 million represents an increase of more than 7%. Taking into account the disposal of the Cherry Group in October 2016, organic growth exceeds 9%. This mainly results from the high demand for hybrid modules and control systems for automatic passenger car transmissions.

As of January 1, 2017, the aftermarket activities of the Active & Passive Safety Technology Division and the ZF Services Business Unit were brought together into one new division. In the past fiscal year 2017, the sales of the ZF Aftermarket Division amounted to €3,007 million (2016: €2,815 million), representing a rise by roughly 7% over the same period of the previous year.

The sales of the Active & Passive Safety Technology Division rose by €325 million to €13,970 million in fiscal year 2017 (2016: €13,645 million), despite the sale of the Engineered Fasteners & Components Business Unit in July 2016 as well as the bundling of the aftermarket activities in 2017. Adjusted by the above-mentioned structural and currency effects, sales rose accordingly by approximately 6%.

The distribution of sales by region only showed minor changes compared to the sales in 2016. Top-selling region was again Europe, accounting for 48% (2016: 48%) of sales, followed by North America with 27% (2016: 27%) and Asia-Pacific with 21% (2016: 22%). The sales share of the Region of South America increased by one percentage point to 3%, while the sales share of the Region of Africa remained unchanged at 1%. Regional growth was mixed. Due to the positive market trend in Europe, sales increased across all divisions by roughly €615 million to €17,394 million. The sales development in North America in fiscal year 2017 was affected by changes in the US dollar exchange rate. Sales rose by €329 million to

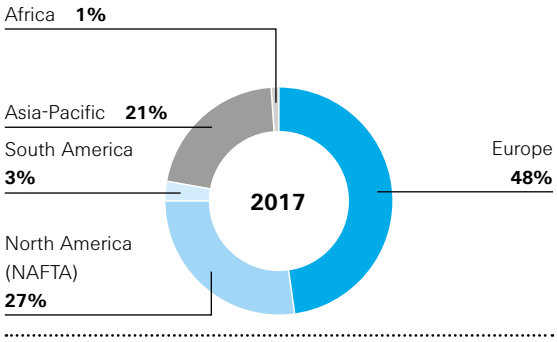
The **new E-Mobility Division** recorded organic **growth of over 9%.**

€10,010 million in 2017. In the Region of Asia-Pacific, above-average organic growth of more than 8% was offset by negative currency effects owing to the development of the Renminbi exchange rate. Accordingly, in fiscal year 2017, sales in the region rose to €7,775 million (2016: €7,649 million). Sales in South America increased by €221 million and amounted to €1,066 million in the year under review (2016: €845 million). This increase is mainly attributable to a slight recovery of the markets, particularly in Brazil, as well as positive currency effects.

In the fiscal year 2017, the gross profit on sales rose by €452 million to €6,549 million. Consequently, the gross margin continued to improve and now amounts to 18.0% (2016: 17.3%). The improved earnings quality is primarily based on an increase in productivity. The increase in research and development costs from 5.5% to 6.1% in proportion to the sales figure is a result of the implementation of the corporate strategy to strengthen future technologies. Selling and administrative expenses slightly improved over the previous year's level and are now at 7.2% (2016: 7.3%) of sales.

Sales development by regions
in € million (consolidated)

	2017	2016	Changes compared to 2016
Europe	17,394	16,779	+3.7%
North America (NAFTA)	10,010	9,681	+3.4%
South America	1,066	845	+26.2%
Asia-Pacific	7,775	7,649	+1.6%
Africa	199	212	−6.1%
Total	**36,444**	**35,166**	**+3.6%**



The net result from participations amounts to €48 million in 2017 (2016: €64 million). Thus, EBIT increased in the past fiscal year to a total amount of €1,771 million (2016: €1,678 million). Adjusted by the €568 million of extraordinary items relating to the purchase price allocation, the adjusted EBIT margin was on the prior-year level of 6.4%. Consequently, the EBIT margin could be kept at the previous year's level despite the rise in the R&D ratio by 0.6 percentage points.

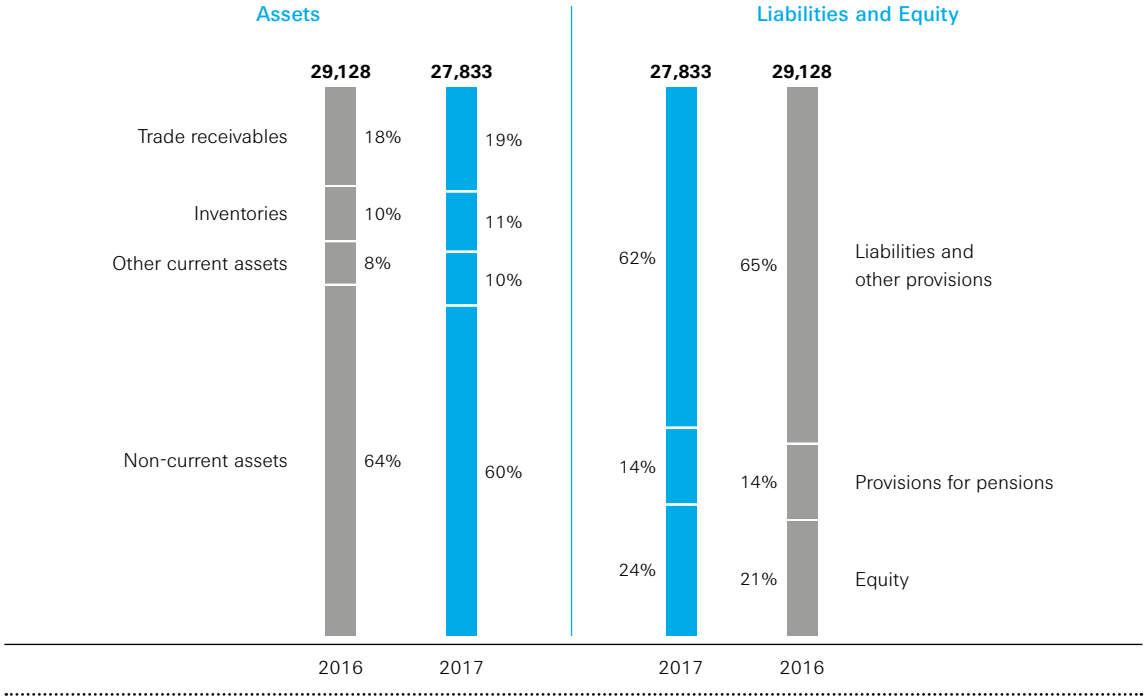
Financial income amounted to €313 million in the past fiscal year (2016: €458 million). The higher prior-year figure mainly includes income from the disposal of securities, which were transferred in trust to the ZF Asset Trust e.V. to hedge pension obligations. This is offset by financial expenses in the amount of €675 million (2016: €855 million). The lower financial expenses are substantially a consequence of lower expenses for hedging transactions, reduced interest expenses for pension provisions as well as lower interest expenses attributable to the reduction of financial debt. This effect was offset by premiums from the buyback of USD bonds completed in December 2017. Premature repayments result in interest savings for the fiscal years to come.

Tax expenses amounted to €242 million in 2017, compared with €357 million in the previous year. These low tax expenses mainly result from the U.S. tax reform.

Net assets position

In 2017, the ZF Group's total assets declined to €27,833 million (2016: €29,128 million). This reduction in assets is primarily attributable to exchange rate effects as well as write-downs of undisclosed reserves identified in the context of the purchase price allocation from the TRW acquisition.

Consolidated statement of financial position
in € million



Current assets rose by €802 million to €11,205 million (2016: €10,403 million), mainly driven by the reclassification of non-current assets to the "Assets held for sale and disposal groups" item. The change in classification results from the agreed sale of the Body Control Systems Business Unit, which had not been completed by the reporting date, though. In contrast, the shares in Haldex Aktiebolag acquired in 2016 were reclassified to non-current assets in the fiscal year 2017. Trade receivables rose by €83 million to €5,303 million in the past fiscal year. This increase is largely attributable to the growth of the operating business. This was offset by exchange rate effects, particularly the appreciation of the euro against the US dollar, as well as by the reclassification of trade receivables, attributable to the Body Control Systems Business Unit, to the "Assets held for sale and disposal groups" item.

Continued **high investments** are ensuring the **company growth** and innovative capacity.

Non-current assets fell by €2,097 million to €16,628 million (2016: €18,725 million). This decline essentially results from a reduction in intangible assets and property, plant and equipment. Intangible assets fell from €9,893 million to €8,039 million and property, plant and equipment went down from €6,626 million to €6,194 million. Apart from the already described exchange rate effects, this decline is mainly due to the reclassification of non-current assets of the Body Control Systems Business Unit to the "Assets held for sale and disposal groups" item. Amortization on assets that were recognized within the context of purchase price allocation from the TRW acquisition also caused a decline in intangible assets.

Deferred tax assets decreased by €70 million to €772 million. This mainly results from the reduction of the future tax rate from 35% to 21% based on the U.S. tax reform.

Investments in property, plant and equipment

In the past fiscal year, investments in property, plant and equipment amounted to €1,350 million (2016: €1,185 million). The investment ratio of 3.7% of sales was slightly above the prior-year level.

66.2% of the capital expenditure was spent on payments in advance and construction in progress, 15.1% was spent on technical equipment and machines as well as other equipment, factory and office equipment, respectively, and 3.6% on land and buildings.

The capital expenditure mainly related to the expansion of capacities for existing products and the ramp-up of new products. To this end, capital expenditure went into transmission applications (incl. hybridization), electric traction drives, electronics, chassis systems, damper modules, brakes and steering systems, occupant safety as well as body control systems. There were also investments in the expansion of development and office buildings in Saarbrücken and Friedrichshafen (Germany) as well as in Shanghai (China) and Northville, Michigan (USA).

Geographically, capital expenditure focused on Germany, the USA, China and Mexico. Depreciation on property, plant and equipment (excluding impairment losses) amounted to €1,241 million (2016: €1,292 million).

Capital structure and financing

Financial liabilities amounted to €6,446 million as of December 31, 2017 (2016: €8,430 million). Without considering the change of derivative financial instruments, there was a reduction in gross debt by €1,871 million, which reflects the continuation of the consistent de-leveraging strategy in the past fiscal year. Exchange rate effects, above all the appreciation of the euro against the US dollar, also had a positive impact, thus further reducing gross debt. The remaining financial liabilities derive primarily from the financing of the ZF TRW acquisition in May 2015 and are largely fixed interest-bearing. The financial instruments issued in this context are euro and US dollar-denominated corporate bonds with final maturities from 2019 to 2025 and a nominal amount as of the reporting date of €2,225 million and $2,247 million respectively (2016: €2,250 million and $3,377 million) and bonded loans with final maturities from 2018 to 2022 and a nominal amount of €1,218 million (2016: €2,274 million). The decrease of the US dollar-denominated corporate bonds is substantially the result of a buy-back which took place in December 2017. The buy-back in the amount of $700 million was partially refinanced through a short-term bank loan. In the past fiscal year, ZF prematurely redeemed three tranches of its bonded loans with final maturity originally between 2018 and 2022 and in a nominal amount of €1,001 million. The syndicated loan was refinanced in 2016 and had a remaining amount of €3.0 billion in form of a revolving credit line, which was completely unused as of the reporting date. A contractually agreed extension option was exercised, so that the credit line now has a residual term until July 2022.

Against the backdrop of the corporate goal to be financially independent, ZF is aiming at a stable investment grade rating. As of the reporting date, ZF has company and bond ratings of Baa3 with a stable outlook from Moody's and BB+ with a positive outlook from Standard and Poor's. Moody's raised the rating by one notch compared to the previous reporting date. In the fiscal year 2018, ZF expects to be upgraded to investment grade level also by Standard & Poor's.

The company's **de-leveraging strategy** is being **further implemented** by reducing gross debt load.

The increase of trade payables is, among other things, attributable to the growth of the operating business as well as thanks to working capital management. This was offset again by exchange rate effects, particularly the depreciation of the US dollar, as well as the reclassification of liabilities of the Body Control Systems Business Unit to the "Liabilities of disposal groups" item. Trade payables rose in total by €649 million to €6,010 million.

In the past fiscal year, income tax provisions decreased by €150 million to €338 million, primarily due to tax payments and adjustments for previous years. As of the reporting date, the deferred tax liabilities amounted to €622 million (2016: €949 million). The main reason behind this decline was the reduction of the future tax rate in the USA from 35% to 21%. In addition, deferred tax liabilities declined due to the reverse effects from depreciation and amortization resulting from the purchase price allocation of ZF TRW as well as exchange rate effects.

Provisions for pensions fell by €289 million to €3,851 million in the year under review. The decline mainly results from an increase in the discount rate in Germany from 1.9% to 2.1%.

As of December 31, 2017, the Group equity, including non-controlling interests, amounted to €6,785 million compared to €6,115 million in the prior year. The equity ratio improved to 24.4% (2016: 21.0%). Equity mainly increased due to the net profit after tax in the amount of €1,167 million as well as actuarial gains of €308 million from the valuation of pension provisions. Differences from currency translation had a negative effect on equity in a total amount of €716 million. Dividends paid to the shareholders of ZF Friedrichshafen AG (€50 million) and to holders of non-controlling interests (€72 million) totaled €122 million in the year under review (2016: €78 million) and also reduced equity.

Financial position

The cash position declined by €163 million in the fiscal year 2017. Taking into account effects of exchange rate changes in the amount of €140 million, cash and cash equivalents decreased accordingly from €1,627 million to €1,315 million as of year-end 2017.

The **free cash flow** totals **€1,787 million.**

The increase in cash flow from operating activities of €97 million over the previous year to €3,431 million had a positive effect. A main driver in this regard was the net profit before income tax which rose by €128 million as well as the optimization of working capital. This compensated for the income tax payments and the changes in non-current provisions made through profit or loss which increased compared to the previous year.

The cash flow from investing activities amounted to €–1,644 million. In 2016, this figure amounted to €–992 million. The prior-year figure contained cash received from the sale of the Engineered Fasteners & Components Business Unit and the Cherry Group.

The expenditures for investments in associates and participations in the fiscal year 2017 largely involve the acquisition of shares by Zukunft Ventures GmbH. The cash payments included in the previous year comprise the share purchase for the purpose of acquiring a stake in Haldex Aktiebolag. Moreover, there was a cash outflow in the current fiscal year of €1,350 million for investments in property, plant and equipment (2016: €1,185 million). As a result, the free cash flow amounts to €1,787 million compared to €2,342 million in 2016. The free cash flow adjusted for company acquisitions and disposals of €31 million reached €1,818 million (2016: €2,000 million).

The cash flow from financing activities amounted to €–1,950 million in the past fiscal year (2016: €–2,234 million). The cash outflow in fiscal year 2017 is attributable, in particular, to the redemption of financial debt within the context of the deleveraging strategy. The repayments in the last fiscal year of €2,810 million mainly referred to the early repurchases of USD bonds in the amount of $1,267 million and to the redemption of bonded loans of €1,056 million. In 2017, the interests and transaction costs paid were at €377 million (2016: €344 million). The increase over the previous year mainly results from premiums in connection with the early repurchase of US dollar bonds.

The net financial position was €–5,076 million (2016: €–6,635 million) as of the reporting date. It consists of current and non-current financial liabilities excluding derivative financial instruments, less cash and cash equivalents as well as securities. Thus, the net financial position improved by €1,559 million compared to the prior year. Further debt relief continues to represent an essential company target of ZF in fiscal year 2018.

Consolidated statement of cash flows
in € million

	2017	2016
Cash flow from operating activities	3,431	3,334
Cash flow from investing activities	–1,644	–992
Free cash flow	**1,787**	**2,342**
Cash flow from financing activities	–1,950	–2,234
Change in cash position	**–163**	**108**
Cash position at the beginning of the fiscal year	1,627	1,495
Changes in cash position from exchange rate effects	–140	24
Cash position at the end of the fiscal year	**1,324**	**1,627**

Forecast, Opportunities and Risk Report

Risk Report

Risk management system

The aim of risk management at ZF Friedrichshafen AG is to identify and assess risks as early as possible and to avoid such risks by initiating appropriate measures or to minimize their impact. The regular analysis of identified risks increases the employees' risk awareness and enables continuous improvement.

ZF defines risk as any event that may result in negative deviations from the business plan. The Board of Management is responsible for the risk management system and reports to the Audit Committee and the Supervisory Board about the major risks on a regular basis. The implementation of the ZF risk management system is regularly audited in terms of compliance by Corporate Audit. In addition, the external auditors annually check ZF's early detection system for risks.

Risks are being identified early on, **proactively controlled** and monitored.

The risk management system is set out in a ZF Group directive which can be accessed by all employees. This directive describes processes and responsibilities of the risk management system. Risk areas are defined as structural elements along the value added chain, including risks in terms of quality, sales, procurement, restructuring, location and other risks. Risks are captured, assessed and tracked on the basis of these risk areas. The directive is regularly reviewed and updated and is binding for all ZF Group companies.

Risks are captured, assessed and tracked quarterly in the reporting units. The identified risks are combined at division and Group level and tracked in coordination with the responsible corporate function department. The ZF risk management system captures risks in terms of their potential financial impact and probability of occurrence where these risks exceed a limit defined by the Board of Management. Opportunities are included if they have a direct material link to a risk.

Risks that could jeopardize the continued existence of the Group or one of its companies and risks that exceed a defined limit are brought to the attention of the person responsible at division and Group level via an ad-hoc reporting process. This process enables ZF to initiate effective risk control measures in a timely manner.

Risks that are subject to regular reporting essentially arise in the market, quality (warranty obligations) and procurement areas. Risks that arise out of operational business activities, legal issues and transactions relevant under taxation law are also reported.

Strategic risks

The ZF Group's strategic risks essentially involve risks from the following areas:

- **Global markets**
  ZF may well face risks, similar to those encountered by the automotive supplier industry as a whole, associated with unfavorable developments in global markets, which may have negative repercussions on sales, profitability and financing conditions. Geopolitical developments can also lead to changed scenarios with associated risks for ZF. Fiercer competition may also adversely affect sales development and sales prices.

  Moreover, there is the risk that individual countries might take evermore protectionist measures when trying to protect or improve their competitiveness on the global market. This might result in market access barriers, such as higher import duties or more complicated certification processes in order to reduce imports. Changes in the tax environment or tax legislation also have the potential to significantly influence the development of the whole market.

  In addition to activities in the traditional markets, ZF is also operating more widely in the BRIC countries Brazil, Russia, India and China. Economic downturns in these countries may lead to declining sales and payment defaults. In the fast-growing Asian market, which is vital to ZF, yet more providers are set to enter the fray and further intensify competition. ZF decisively limits these kinds of market risks by specifically promoting a broader, more diverse product portfolio.

- **Technology**
  ZF currently generates a substantial proportion of its sales with products based on the combustion engine driveline. The progressive electrification in the passenger car and commercial vehicle drive segment may jeopardize the hitherto strong market position. ZF combats this long-term development with specific measures, such as stepping up activities in the Electronic Systems and Electric Traction Drive Business Units and expanding its expertise in forward-looking technologies like Advanced Driver Assistance Systems (ADAS).

- **Countries and locations**
  ZF is represented with 230 locations in around 40 countries worldwide. In some of these countries, risks associated with unstable political conditions or different competitive, legal and taxation systems may pose a threat to the company.

Operating risks

The ZF Group's operating risks essentially entail risks from the following areas:

Diversification and a broad product portfolio **minimize market risks.**

- **Market and customers**
  Risks may ensue from the various market developments in the product segments and regions as well as from the ramp-up of new products. Disruptive technologies constitute further potential risk areas alongside price and competitive pressure.

  Low growth rates in the Chinese market are among the risks in the Car Powertrain Technology, Car Chassis Technology and Active & Passive Safety Technology Divisions.

A fall in orders due to insourcing coupled with increasing price pressure call for the systematic implementation of cost-cutting measures in the Commercial Vehicle Technology Division.

In the spare parts business, the increasing market power of wholesalers is ratcheting up the already high price pressure. This applies especially to merchandise. The ZF Aftermarket Division was established on January 1, 2017 in order to strengthen our competitive position. In this division, the Parts & Service Business Unit of the Active & Passive Safety Technology Division has been amalgamated with the ZF Services Business Unit.

- **Quality**
  In the case of very high-volume ZF products such as the 8HP and 9HP automatic transmissions, faulty products may translate into substantial financial losses on account of warranty obligations. ZF is also exposed to this risk in the field of safety-relevant products such as airbags. ZF resolutely combats such possibilities with the aid of the certified ZF quality management system and by means of thorough quality checks and optimized process workflows.

- **Procurement practices**
  Critical situations may arise due to bottlenecks in the supply chain and financial problems affecting key suppliers. In addition, volatile raw material prices, such as for steel, pose a challenge for ZF. Increasing raw material prices lead to a rise in material costs. Systematic market investigation and targeted analyses help ZF respond early on to unfavorable index developments on the raw materials market.

- **IT**
  Unauthorized access to IT systems and product piracy, industrial espionage or social engineering may cause ZF huge losses. Alongside security incident and problem management, preventive measures such as antivirus programs, source code scanning and hard disk encryption, which are continually adapted to the increasing threats, should help minimize the impact of the afore-mentioned risks.

- **Compliance/legal/taxation**
  In the context of its operational activities, ZF is regularly facing legal disputes and possibly also investigations by authorities. This may result in payment or other obligations. National antitrust authorities are increasingly focusing on investigating infringements of competition rules, which may result in fines associated with unlawful conduct. ZF minimizes these risks through a comprehensive compliance management system. Additional tax demands may also be made as a consequence of regular audits by the tax authorities in the various countries in which our companies operate. Tax laws and circumstances relevant to tax, especially in relation to acquisitions, could be interpreted and assessed in a different manner by local tax authorities than by ZF.

Financial risks

Liquidity, foreign currency, interest rate and counterparty risks as well as credit risks are monitored, controlled and, if necessary, hedged as part of central risk management in order to ensure the ZF Group's financial stability. Guidelines and provisions regarding the individual risk types have been put in place which determine how to assess the particular risk. Wherever possible and expedient, derivative financial instruments to hedge existing underlying or planned transactions are used to manage interest and currency risks in particular. Derivative financial instruments with plain vanilla character are used. Only hedges that refer to a specific underlying transaction are allowed. If the prerequisites of hedge accounting are met, they will be actively used. The financing of the acquisition of TRW Automotive Holdings Corp. in 2015 and the resulting cash flows between the eurozone and US dollar area in particular may lead to risks that cannot be hedged in their entirety. In order to manage these risks more effectively, a new Group strategy was developed in 2017 to hedge currency risks and will be implemented gradually over the course of 2018.

In order to reduce counterparty risks within finance, all transactions are carried out only with banks having a first-class credit rating and as part of centrally stipulated limits. The necessary financial flexibility is guaranteed by means of central cash pooling with sufficient cash and confirmed credit lines with matching maturities. The financial stability of our suppliers and customers is continually checked; if necessary, measures are initiated to safeguard the supply chain or receivables.

Risks are also associated with the syndicated loan agreement of ZF Friedrichshafen AG. In addition to other obligations, this agreement also includes financial covenants, which must be complied with at all times. A breach of these financial covenants would mean that, in the event of a claim, the creditor could demand immediate repayment of the syndicated loan or terminate the credit line. ZF Friedrichshafen AG has complied with the financial covenants at all times, including as of the reporting date. From a current perspective, ZF has no reason to believe that these obligations will be breached in future.

Opportunities Report

ZF's range of products and services coupled with its global presence ensure it is fully equipped t o respond in good time and appropriately to the challenges of the expected megatrends and thus reap the benefits. The ZF 2025 Strategy is similarly tailored to these megatrends. The organic sales growth planned by 2020, the consistent implementation of cost engineering projects, optimized material price structures and the focus on cost and structural optimizations will help improve the operational performance. Opportunities also arise from continuously developing new and existing products, extending development expertise and setting up new locations both at home and abroad, which can, in turn, further improve our competitiveness on the global market.

ZF intends to **leverage the opportunities** that are emerging from megatrends.

The **continued existence** of the ZF Group **is not at risk.**

Particular opportunities arise from the integration of the Active & Passive Safety Technology Division: Apart from reinforcing its strategic positioning by extending its technology and product portfolio, ZF also expects improved market access as well as synergies, especially in materials management and sales, and as a result of merging and extending shared services activities. We are also seeing appreciable positive momentum from the merger of the ZF Services Business Unit with the service segment of the Active & Passive Safety Technology Division to create a uniform aftermarket organization. Current developments in the airbag market due to product recalls by Japanese manufacturer Takata are opening up new opportunities for the Active & Passive Safety Technology Division.

New technology trends such as the connected car, autonomous driving and integrated safety technology are becoming increasingly ready for market and open up new opportunities, as do the current developments in electrification of the driveline. The upgrading of development and testing capacities bears testimony to these trends. For example, test tracks are increasingly being converted in order to provide the optimum conditions in which to test and validate autonomous driving features. Consistent consolidation of the E-Mobility Division as the core element in ZF's e-mobility strategy, and the ensuing bundling of expertise for electric drives, have also substantially bolstered our position in this promising field.

Board of Management overall statement on the opportunity and risk situation

An established risk management system is used to combat the aforementioned across-the-board potential risks at ZF.

Based on information available at present as well as the individual risks illustrated in the financial statement and set out in this report, no additional market-related opportunities and risks can be identified which may substantially influence the ZF Group's results of operations, net assets and financial position, or jeopardize its continued existence in fiscal year 2018. The Group's financial situation is stable; the need for financial means is covered by existing liquidity and available credit lines.

Forecast Report

The future-related statements made in the following sections of the forecast report are based on ZF's current assumptions and expectations.

This also includes market data and analyses from external service providers that are reliable according to ZF. The existing opportunities and risks as explained in detail in the opportunities and risk report were taken as a basis for the following assessments and forecasts. ZF has no influence on many of these factors, so the actual business development may deviate from the forecast.

The economic environment

At the end of 2017, many key indicators reflected a positive trend. The purchasing managers' indices (industry) in the major economies rose in the course of 2017, reaching record highs in the USA and the eurozone. Similarly, according to the ifo indicator figures (as of November 2017), in the fourth quarter of 2017 the world economic climate reached its highest level since 2011. However, it should be taken into account that while the current situation was assessed very positively, especially in the developed economies, expectations for the next six months are rather more cautious.

The widespread economic upswing seen in 2017 is therefore likely to continue in 2018, with at least the same year-on-year growth level. Some experts even anticipate a marginal improvement in global GDP to over 3.5%, which was achieved in 2017. Compared to previous periods of upswing, this figure is still relatively moderate. As in the past year, economic stimulus in the industrialized countries is having an impact. Monetary policy is expected to remain fairly expansionary, investment is expected to continue at a high level and labor market data could remain positive. Further moderate increases in raw material prices, particularly in Brazil and Russia, should enable the developing economies to continue to climb out of recession. The OECD is forecasting a marked increase in investment activity in India and some other Asian economies. After the disproportionately high economic stimulus measures in China in 2016 and 2017, the country is now likely to shift to a more sustainable growth path, but nonetheless above 6%.

As regards the global production of **passenger cars and light commercial vehicles**, there are no serious disruptions on the horizon this year and volumes are expected to increase by around 2%. This applies to both Europe and North America. Without the stimulus of the purchase incentives of the last few years, though, production in China is likely to increase on a similar scale. The outlook for recovering markets South America and Russia continues to be positive, with an anticipated increase of up to 7% in production. Likewise, India is expected to grow again significantly by around 7%.

After a double-digit production increase in **heavy commercial vehicles** in the past fiscal year, a downward correction of around 5% is expected in 2018. It is anticipated that this development is basically attributable to China. A production decline of up to 20% is expected for the Chinese market. Once again, moderate growth at a high level is becoming apparent in Europe, and North America is maintaining the marginal increase after a series of heavy downturns in summer 2017. The post-crisis recovery phase continues in Russia and South America where volumes are expected to rise by up to 10% (even slightly more in Brazil), and the growth forecast for India is also positive at 9%.

Economic development in **2018 continues to look positive.**

After a sluggish year, the **agricultural machinery** market is improving slightly, with forecasters predicting a minor increase of 1% in global production. In this market, too, production in China is in decline again and expected to fall by 5%. All other markets, however, are trending upward, with a 2% growth rate predicted in Europe and North America, and South America faring even better at over 5%. The outlook for the **construction machinery** market is slightly more positive: global production is set to increase by 3%. With the exception of South America where there are expectations of double-digit growth, all other markets are forecast to grow at between 0 and 5%. Growth in the **marine transmissions** markets remains moderately positive, and economic activity in **rail drives** has stalled. In contrast, the **wind turbine gearbox** market is giving off far more positive signals. Market expectations have climbed by almost 10% based on pent-up demand and postponements from 2017, an upward trend in offshore installations, pressure to modernize ageing facilities in order to reduce energy costs, and repowering (replacing obsolete facilities with new, more efficient turbines). While demand in the European market is only expected to move sideways, North and South America show clear double-digit growth.

ZF Group sales look set to **continue to grow organically.**

Future corporate development

Assuming the above-mentioned market developments, stable currency exchange rates as well as taking the planned disposal of the Body Control Systems Business Unit into account, ZF is expecting Group sales of around €36.5 billion for 2018 with organic growth of 5%.

The increase in sales is based on stable development in markets relevant to the Group and on expanding our business with existing and new customers and products.

Adjusted for structural re-allocations of business units, all divisions are expecting sales increases.

As of January 01, 2018, the Axle Drives Business Unit of the Car Powertrain Technology Division will be integrated into the E-Mobility Division. Taking this re-allocation into account, a significant sales increase is expected for the Car Powertrain Technology Division for the 2018 fiscal year. This increase is attributable to the high demand of existing and new customers for 8HP and 9HP transmission applications.

The outlook for the Car Chassis Technology Division is also positive. Besides integrating the module business from the Active & Passive Safety Technology Division, this division is attracting new customers, especially in the area of electromobility. This is contributing to overall company growth. Not only that, the Car Chassis Technology Division is profiting from the growth of existing strategic customers both in Asia and North America. Further growth impulses from the traditional axle assembly are also expected.

For 2018, the Commercial Vehicle Technology Division is also forecasting a considerable boost in sales due to ongoing intense customer interest in product solutions for automated manual transmissions, the electric ReAX steering system and e-mobility. The re-allocation of the CV Steering Systems Business Unit will also lead to an increase in division sales.

Increasing sales are again forecast for the Industrial Technology Division for the 2018 fiscal year. This dynamic growth is being driven particularly by the Off-Highway Systems and the Wind Power Technology Business Units. In the process, the Wind Power Technology Business Unit is profiting from the further expansion of wind power as an alternative to fossil fuels for generating electricity.

The growth seen in the E-Mobility Division reflects the rising demand for products in conjunction with electrification of the driveline. Different product ramp-ups, including electric axles, power electronic applications and electric shift systems are the drivers behind the dynamic sales growth. Sales will also increase thanks to the re-allocation of the Axle Drives Business Unit.

The ZF Aftermarket Division expects continued sales growth for both the free aftermarket business as well as the spare parts and service business with automotive manufacturers.

Taking the re-allocation of business units and the planned disposal of the Body Control Systems Business Unit into account, a sales increase above the market growth is expected for the Active & Passive Safety Technology Division. Strongest growth drivers are braking technology product solutions and passenger car steering systems. Applications from the field of integral vehicle safety, such as airbag and seatbelt systems, are also showing signs of highly dynamic growth. ADAS applications such as camera and radar systems are expected to show double-digit sales growth.

Forecasters predict that around 4% of sales will be invested in property, plant and equipment in 2018. ZF expects to see the research and development cost rise again compared to 2017, underpinning the Group's innovation capacity in areas such as electromobility, autonomous driving and digitalization, and therefore our ability to play a leading role in tomorrow's automotive industry.

ZF expects a strain on the earnings quality if the euro continues to become stronger and should higher investments in research and development become necessary due to future technologies. In addition, material prices will rise on the raw material markets. Against this backdrop, ZF aims for an adjusted EBIT margin of around 6%.

Targeted measures designed to improve price quality, productivity and cost development, coupled with synergies from integrating ZF TRW, will contribute to improving operating performance and thus compensate for the higher research and development costs.

Based on the planned development of the operating business, the intended investments as well as the continuation of consistent working capital management, the aim is to achieve free cash flow adjusted for company acquisitions and disposals of over €1 billion for 2018. Using this strong free cash flow, the aim is to further reduce financial liabilities and thus continue to drive forward the debt relief of the ZF Group.

In addition to improving operating profit quality and concentrating on core business, the focus will be on expanding technologies for autonomous driving, e-mobility and integrated safety.

The headcount at ZF is set to rise slightly in line with forecast corporate growth and the further expansion of development activities.

Given the different development of the regional markets and divisions, ZF demonstrates sound organic growth, which is above average compared with the rest of the market, in the short and medium term when analyzing the overall picture. The Group is tapping into new markets, rolling out new future-oriented products and underpinning its technology leadership through sustainable investment in research and development.

A high free cash flow should encourage **rapid debt relief.**

Taking into account the aforementioned factors, the trust of customers, suppliers and business partners in the collaboration with ZF as well as the committed, qualified employees willing to deliver outstanding performance and embrace change, ZF can rise to the upcoming challenges and look to the future with optimism.

Friedrichshafen, February 28, 2018
ZF Friedrichshafen AG
The Board of Management

Consolidated Financial Statements

Consolidated Statement of Profit or Loss

ZF Friedrichshafen AG for the period dating January 1 to December 31, 2017

in € million	Notes	2017	2016
Sales	1	36,444	35,166
Cost of sales	2	29,895	29,069
Gross profit on sales		**6,549**	**6,097**
Research and development costs	8	2,230	1,948
Selling expenses		1,289	1,263
General administrative expenses		1,326	1,317
Other income	3	494	530
Other expenses	4	475	485
Result from associates	5	49	48
Other net result from participations	5	−1	16
EBIT		**1,771**	**1,678**
Financial income	6	313	458
Financial expenses	6	675	855
Net profit or loss before tax		**1,409**	**1,281**
Income taxes	7	242	357
Net profit or loss after tax		**1,167**	**924**
thereof shareholders of ZF Friedrichshafen AG		1,084	859
thereof non-controlling interests		83	65

Consolidated Statement of Comprehensive Income

ZF Friedrichshafen AG for the period dating January 1 to December 31, 2017

in € million	Notes	2017	2016
Net profit or loss after tax		**1,167**	**924**
Line items that will be reclassified in the consolidated statement of profit or loss			
Foreign currency translation differences		−716	−28
Mark-to-market of securities			
Losses arising during the year (2016: gains)		−30	51
Amounts reclassified through profit or loss		0	−97
Mark-to-market of cash flow hedges			
Gains arising during the year (2016: losses)		62	−2
Amounts reclassified through profit or loss		17	−51
Amounts reclassified to acquisition costs through comprehensive income		0	−7
Income taxes		−22	12
		−689	**−122**
Line items that will not be reclassified in the consolidated statement of profit or loss			
Actuarial gains (2016: losses) from pension obligations		393	−621
Income taxes		−85	181
		308	**−440**
Other comprehensive income after tax	24	**−381**	**−562**
Total comprehensive income		**786**	**362**
thereof shareholders of ZF Friedrichshafen AG		717	308
thereof non-controlling interests		69	54

Consolidated Statement of Financial Position
ZF Friedrichshafen AG as of December 31, 2017

Assets in € million	Notes	Dec. 31, 2017	Dec. 31, 2016
Current assets			
Cash and cash equivalents		1,315	1,627
Financial assets	9	66	94
Trade receivables	10	5,303	5,220
Other assets	11	531	477
Income tax receivables		28	13
Inventories	12	3,058	2,864
		10,301	**10,295**
Assets held for sale and disposal groups	23	904	108
		11,205	**10,403**
Non-current assets			
Financial assets	13	960	764
Other assets	11	246	213
Associates	14	417	386
Intangible assets	15	8,039	9,893
Property, plant and equipment	16	6,194	6,626
Investment property	18	0	1
Deferred taxes	7	772	842
		16,628	**18,725**
		27,833	**29,128**

Liabilities and equity in € million	Notes	Dec. 31, 2017	Dec. 31, 2016
Current liabilities			
Financial liabilities	19	1,396	926
Trade payables		5,936	5,335
Other liabilities	20	1,867	1,843
Income tax provisions		338	488
Other provisions	21	690	725
		10,227	**9,317**
Liabilities of disposal groups	23	215	0
		10,442	**9,317**
Non-current liabilities			
Financial liabilities	19	5,050	7,504
Trade payables		74	26
Other liabilities	20	396	434
Provisions for pensions	22	3,851	4,140
Other provisions	21	613	643
Deferred taxes	7	622	949
		10,606	**13,696**
Equity			
Subscribed capital	24	500	500
Capital reserve	24	386	386
Retained earnings [1]	24	5,600	4,930
Equity attributable to shareholders of ZF Friedrichshafen AG		**6,486**	**5,816**
Non-controlling interests		299	299
	24	**6,785**	**6,115**
		27,833	**29,128**

[1] Assets held for sale and disposal groups account for €8 million (2016: €–2 million).

Consolidated Statement of Cash Flows

ZF Friedrichshafen AG for the period dating January 1 to December 31, 2017

in € million	Notes	2017	2016
Net profit or loss before income tax		1,409	1,281
Depreciation/Reversal of impairments for intangible assets and property, plant and equipment		2,092	2,173
Changes in non-current provisions made through profit or loss		−109	128
Income taxes paid		−539	−364
Results from first-time consolidation and deconsolidation		0	−37
Results from the disposal of intangible assets and property, plant and equipment		6	9
Net result from participations and net financial result		314	333
Increase in inventories		−391	−30
Increase in trade receivables		−478	−485
Increase in other assets		−92	−118
Increase in other liabilities		1,219	444
Cash flow from operating activities		**3,431**	**3,334**
Expenditures for investments in			
intangible assets		−356	−309
property, plant and equipment		−1,350	−1,185
associates		−20	−39
participations		−16	−110
financial receivables		−7	−17
Proceeds from the disposal of			
intangible assets		6	0
property, plant and equipment		35	20
participations		0	9
financial receivables		16	64
Cash inflow from the sale of consolidated companies	27	0	487
Dividends received		18	34
Interest received		30	54
Cash flow from investing activities		**−1,644**	**−992**

in € million	Notes	2017	2016
Dividends paid to ZF Friedrichshafen AG shareholders		−50	−50
Dividends paid to holders of non-controlling interests		−72	−28
Repayments of borrowings	28	−2,810	−2,880
Proceeds from borrowings	28	1,359	1,068
Interest paid and transaction costs		−377	−344
Cash flow from financing activities		**−1,950**	**−2,234**
Net change in cash		**−163**	**108**
Cash position at the beginning of the fiscal year		1,627	1,495
Effects of exchange rate changes on cash		−140	24
Cash position at the end of the fiscal year	26	**1,324**	**1,627**

Consolidated Statement of Changes in Equity

ZF Friedrichshafen AG for the period dating January 1, 2016 to December 31, 2017

in € million	Notes	Subscribed capital	Capital reserve
Jan. 1, 2016		**500**	**386**
Net profit or loss after tax			
Other comprehensive income after tax			
Total comprehensive income		**0**	**0**
Dividends paid			
Changes in the basis of consolidation			
Other changes			
Dec. 31, 2016		**500**	**386**
Net profit or loss after tax			
Other comprehensive income after tax			
Total comprehensive income		**0**	**0**
Dividends paid			
Changes in the basis of consolidation			
Dec. 31, 2017		**500**	**386**

Retained earnings					Equity attributable to shareholders of ZF Friedrichshafen AG	Non-controlling interests	Group equity
Other retained earnings	Foreign currency translation differences	Mark-to-market of securities	Mark-to-market of cash flow hedges	Actuarial gains and losses			
							24
5,073	**297**	**40**	**−17**	**−726**	**5,553**	**297**	**5,850**
859					859	65	924
	−17	−42	−52	−440	−551	−11	−562
859	**−17**	**−42**	**−52**	**−440**	**308**	**54**	**362**
−50					−50	−28	−78
−1					−1	−23	−24
6					6	−1	5
5,887	**280**	**−2**	**−69**	**−1,166**	**5,816**	**299**	**6,115**
1,084					1,084	83	1,167
	−702	−29	56	308	−367	−14	−381
1,084	**−702**	**−29**	**56**	**308**	**717**	**69**	**786**
−50					−50	−72	−122
3					3	3	6
6,924	**−422**	**−31**	**−13**	**−858**	**6,486**	**299**	**6,785**

Notes to the Consolidated Financial Statements
of ZF Friedrichshafen AG for 2017

Fundamental Principles

Corporate structure

ZF Friedrichshafen AG is a corporation, of which 93.8% is owned by the Zeppelin Foundation and 6.2% by the Dr. Jürgen and Irmgard Ulderup Foundation. The company is headquartered in 88046 Friedrichshafen, Germany, Löwentaler Straße 20 and is listed in the commercial register of the municipal court of Ulm under the number HRB 630206.

Further explanations on the corporate structure can be found in the management report.

General

The line items of the consolidated statement of profit or loss, the consolidated statement of comprehensive income, the consolidated statement of financial position, the consolidated statement of cash flows and the consolidated statement of changes in equity are broken down and explained in the notes to the consolidated financial statements.

The Group's currency is the euro. Unless otherwise stated, all amounts are reported in millions of euros (€ million).

The Board of Management of ZF Friedrichshafen AG approved these consolidated financial statements on February 28, 2018, and forwarded them to the Supervisory Board.

The consolidated financial statements, which were prepared as of December 31, 2017, as well as the group management report will be announced in the Electronic Federal Gazette.

The consolidated statement of financial position is broken down by maturities. The financial line items are divided into non-current and current assets and/or liabilities on the basis of whether they have a residual term of more than one year or up to one year, respectively.

Assets and liabilities included in a disposal group classified as held for sale as well as assets held for sale are presented separately from other assets and liabilities in the consolidated statement of financial position.

The recognition of assets and liabilities is carried out according to the historical cost principle. This does not include derivative financial instruments, securities and investments in participations that are recognized at fair value, as far as it can be determined reliably.

Adoption of IFRS

As a company that is not publicly traded, ZF Friedrichshafen AG has chosen the option to draw up its consolidated financial statements on the basis of IFRS pursuant to § 315e Section 3 HGB (German Commercial Code).

The consolidated financial statements are in accordance with the standards and interpretations valid on the reporting date and issued by the International Accounting Standards Board (IASB), London (Great Britain), as adopted by the EU, and the additional requirements of German commercial law pursuant to § 315e Section 3 in conjunction with § 315e Section 1 HGB.

The following changes to standards were applied for the first time in the fiscal year 2017:

- Amendment to IAS 12 "Income Taxes"
- Amendment to IAS 7 "Consolidated Statement of Cash Flows"

The amendments to IAS 12 include guidelines as to how a company has to determine future taxable income and explain the circumstances in which future taxable income may include amounts from the realization of assets above the carrying amount.

The amendments to IAS 7 are intended to improve the information published in the IFRS financial statements on changes in the company's indebtedness. Pursuant to the amendments, a company has to provide additional disclosures about the changes of financial liabilities where the related cash proceeds and cash payments are shown as part of the cash flows from financing activities in the consolidated statement of cash flows.

The above-mentioned changed standards were applied for the first time in the current fiscal year and did not lead to any change in the ZF Group accounting.

The IASB has passed the following standards and interpretations that the European Union has already endorsed into European law but which are not yet mandatory. There was no early adoption.

- IFRS 15 "Revenue from Contracts with Customers" (mandatory adoption for fiscal years beginning on or after January 1, 2018)
- Amendment to IFRS 15 "Revenue from Contracts with Customers" (mandatory adoption for fiscal years beginning on or after January 1, 2018)
- Clarification of IFRS 15 "Revenue from Contracts with Customers" (mandatory adoption for fiscal years beginning on or after January 1, 2018)
- IFRS 9 "Financial Instruments" (mandatory adoption for fiscal years beginning on or after January 1, 2018)
- IFRS 16 "Leases" (mandatory adoption for fiscal years beginning on or after January 1, 2019)
- Amendment to IFRS 4 "Insurance Contracts" (mandatory adoption for fiscal years beginning on or after January 1, 2018)
- Improvements to IFRS 2014 – 2016 (mandatory adoption for fiscal years beginning on or after January 1, 2017 and January 1, 2018, respectively)

The objective of IFRS 15 is to aggregate the revenue recognition rules included in various standards and interpretations and, on the basis of a uniform five-step revenue recognition model, define basic principles applicable to all industries and all types of sales transactions. IFRS 15 determines the timing and the amount of revenue recognition. The core principle is that revenue is recognized during the transfer of goods or services in an amount that reflects the expected consideration. IFRS 15 comprises, among other things, expanded guidance for multiple-element arrangements as well as new rules for the treatment of service contracts and contract modifications. In addition, the new standard requires the disclosure of a number of quantitative and qualitative information to enable users of the consolidated financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows from contracts with customers. IFRS 15 supersedes IAS 11 "Construction Contracts" and IAS 18 "Revenue" as well as the related interpretations.

ZF provides services for its customers over the life cycle of its products, with such services being typical for the respective term. At the beginning of the term, prior to the start of volume production, ZF normally provides development services that define the specifications of the products and their production. Within the framework of activities of volume production preparation, tools required for volume production are developed and manufactured. Within the framework of volume production, variable remuneration components may have an impact on the amount of sales. In the aftermarket and service area, goods and services are provided to customers over the entire volume production runtime and thereafter.

The first-time application of IFRS 15 is expected to result basically in the following effects:

- The separation of performance obligations, which is required under IFRS 15 if certain prerequisites are met, and the resulting allocation of the transaction price will affect the timing of revenue recognition.
- The capitalization of costs of obtaining a contract, which is mandatory under IFRS 15 if certain prerequisites are met, results in an increase in total assets. Total assets will also increase due to the recognition of contract assets, i.e. from customer receivables for which there is no legal title yet.
- The application of the control concept will lead to an earlier revenue recognition at a specific point in time in relation to tool revenue and to a reduction of total assets.
- The development reimbursements received from customers that were previously included in sales continue to be reported in sales. However, the corresponding development expenses will be reported in future under cost of sales, rather than research and development expenses. The amended procedure in the realization of expenses from which revenue can be generated will lead to an increase in inventories and total assets.
- The warranty obligations incurred towards vehicle manufacturers generally do not represent a separate performance obligation and therefore will continue to be accounted for in accordance with IAS 37.
- In connection with the separate items for contract assets and contract liabilities required under IFRS 15, there will be reclassifications from other liabilities to contract liabilities in particular.

The application of IFRS 15 will result in an increase in the equity ratio by an expected 0.5–1% in the opening statement of financial position for 2018.

ZF will adopt the new standard as of January 1, 2018 and apply the modified retrospective method, which means that the cumulative effects from the first-time application of IFRS 15 as of January 1, 2018 have to be reported in retained earnings. Earlier years are not adjusted.

The clarifications to IFRS 15 relate to the identification of performance obligations from a contract as well as guidelines for the assessment of principal-agent relationships and whether revenue from a license granted has to be realized either at a point in time or over a period of time.

IFRS 9 contains new provisions for the classification and measurement of financial assets and financial liabilities and will replace IAS 39. According to this, financial assets are to be recognized depending on their respective characteristics and considering the business model or business models and their cash flow characteristics, either at amortized cost or at fair value through profit or loss (FVTPL) or at fair value through other comprehensive income (FVOCI). Contrary to the currently valid provisions, equity instruments are generally to be measured at fair value. Changes in the fair value of the equity instruments may also be recorded in equity in other comprehensive income without affecting profit or loss. To the extent that changes in the fair value are recognized through other comprehensive income without affecting profit or loss, they will, in future, no longer be reclassified to the statement of profit or loss upon the disposal of these instruments. In future, ZF will measure the equity instruments carried at market values at fair value through other comprehensive income without affecting profit or loss.

The previous provisions of IAS 39 are adopted to a large extent with regard to the classification and measurement of financial liabilities. A new rule refers to the accounting of financial liabilities. In case the fair value option is applied, the part of the fair value change resulting from the change of one's own credit risk is to be recorded, in future, in other comprehensive income and not in the consolidated statement of profit or loss. The first-time application of the standard will not have any material effects on the accounting of financial liabilities.

In addition, IFRS 9 comprises new rules for hedge accounting. Changes to the previous accounting principles mainly refer to new provisions regarding the designation of instruments and risks, requirements for hedge effectiveness, the adjustment and discontinuation of hedging relationships and some rules for the recognition of hedging relationships. After an analysis of the effects arising from the introduction of the standard, ZF expects that the existing hedging relationships continue to be classified as hedging relationships under the new hedge accounting rules.

IFRS 9 comprises revised provisions regarding impairment of financial instruments. The new model of taking into account expected credit losses replaces the previously used incurred loss model and leads to an earlier recognition of losses by recognizing both losses already incurred and losses expected in the future. In order to implement the new rules on impairment, ZF has developed a rating-based model to determine the expected loss rates of trade receivables. ZF will apply the simplified impairment model provided for under IFRS 9 and recognize the lifetime expected credit losses from all trade receivables and contract assets. The recognition of expected losses under the new allowance model is expected to result in an earlier recognition of allowances. ZF expects that the first-time application of the impairment model will result in the recognition of a negative amount of €45–55 million in retained earnings.

ZF will adopt IFRS 9 for the first time in the fiscal year beginning on January 1, 2018 and apply the modified retrospective method, which means that the cumulative effect from the first-time application as of January 1, 2018 have to be recognized in retained earnings. Earlier years are not adjusted. The rules set out in IAS 39 in relation to the accounting of hedging relationships will continue to be applied.

IFRS 16 in particular replaces and changes the previous provisions of IAS 17 in relation to the accounting for leases by lessees. The distinction previously made by the lessee pursuant to IAS 17 between recognized obligations from finance leases and unrecognized obligations from operating leases is revoked and replaced by an accounting model for lessees that introduces mandatory recognition. The procedure set out in IAS 17 for finance leases is largely followed. Accordingly, as per IFRS 16, an asset has to be recognized in form of a right-of-use asset in the amount of the present value of future lease payments and a corresponding liability from the right of use. Pursuant to IAS 17, the future obligations from operating leases were only subject to requirements as regards a disclosure in the notes. IFRS 16 only introduces exceptions for agreements with a term of up to one year and for assets that can be used independently, that are of low value and in future do not affect the financial statements, similarly to the operating lease set out in IAS 17, and that are recognized directly in profit or loss. Accordingly, depreciation expense for the asset has to be presented separately from the interest expense on the liability for the right of use, with interest expenses being recognized as a component of the net financial result.

Based on the implementation of IFRS 16, the following material effects are expected:

- In contrast to the previous disclosure of the payment obligations from operating leases in the notes, the rights of use and the related liabilities have to be recognized in the balance sheet in future. The initial application of the standard is expected to result in an increase in financial liabilities and an increase in non-current assets in a similar amount.
- Expenses from operating leases were previously recognized in their full amount as part of the operating profit. In future, only the depreciation and amortization of recognized right-of-use assets are recorded in the operating profit, while the interest portion is recorded in the net financial result. This will result in an improvement of the EBIT and the cash flow from operating activities as well as in a reduction of the cash flow from financing activities.
- Pursuant to IAS 17, renewal options are not taken into account in the measurement of the financial liability from finance leases to the extent that such option is not exercised. In contrast, IFRS 16 requires that periods covered by options are taken into account if certain prerequisites are met. This may lead to changes regarding the previously recognized financial liabilities for specific contracts previously recognized as finance leases.

The transitional provisions of IFRS 16 permit both a fully retrospective and a modified retrospective initial application. Pursuant to the modified retrospective approach, lessees are not required to adjust comparative information for leases that were previously classified as operating leases. Instead, they have to recognize the cumulative effect from the first-time application of the new standard as an adjustment of the opening value of retained earnings (or other components of equity) in the statement of financial position at the date of first-time application. ZF expects to apply the modified retrospective method for the transition to IFRS 16 and will, to a great extent, make use of the practical expedients. A Group-wide project to introduce IFRS 16 was initiated in 2016 and continued in 2017. A reliable estimate of the quantitative effect can only be made once the project has been completed.

The adjustments to IFRS 4 refer to the first-time adoption of IFRS 9 for insurers. Without these adjustments, the different effective dates for IFRS 9 and the new standard for insurance contracts result in an increased volatility of earnings for a transition period as well as a double transition effort. The clarification does not lead to any change in the ZF Group accounting.

The improvements to IFRS 2014 – 2016 describe a collective standard which was published in December 2016 and deals with amendments to various IFRSs. The amendments are listed below:

- IFRS 1: Deletion of remaining short-term exemptions for first-time adopters pursuant to IFRS 1. Appendix E.
- IFRS 12: Clarification that the disclosure requirements of the standard – except for IFRS 12.B10-B16 – also apply to interests that are within the scope of IFRS 5.
- IAS 28: Clarification that the election to measure an investment in an associate or joint venture held by a venture capital organization or another qualifying entity may be exercised differently for each such investment.

Furthermore, the following standards and interpretations, which may be relevant in part for ZF Friedrichshafen AG, have already been passed by the IASB, but have not yet been endorsed by the European Union. ZF Friedrichshafen AG will not adopt any of these standards earlier:

- IFRIC 22 "Foreign Currency Transactions and Advance Consideration" (mandatory adoption for fiscal years beginning on or after January 1, 2018)
- Amendment to IFRS 2 "Share-based Payment" (mandatory adoption for fiscal years beginning on or after January 1, 2018)
- Amendment to IAS 40 "Investment Property" (mandatory adoption for fiscal years beginning on or after January 1, 2018)
- IFRS 17 "Insurance Contracts" (mandatory adoption for fiscal years beginning on or after January 1, 2021)
- IFRIC 23 "Uncertainty over Income Tax Treatments" (mandatory adoption for fiscal years beginning on or after January 1, 2019)
- Amendment to IFRS 9 "Financial Instruments" (mandatory adoption for fiscal years beginning on or after January 1, 2019)
- Amendment to IAS 28 "Investments in Associates and Joint Ventures" (mandatory adoption for fiscal years beginning on or after January 1, 2019)
- Improvements to IFRS 2015 – 2017 (mandatory adoption for fiscal years beginning on or after January 1, 2019)
- Amendment to IAS 19 "Employee Benefits" (mandatory adoption for fiscal years beginning on or after January 1, 2019)

The publication of IFRIC 22 clarifies a question as to the application of IAS 21 which refers to the date to be used to determine the exchange rate for the translation of foreign currency transactions that involve the receipt or the payment of advance consideration. Accordingly, the date of the transaction relevant for determining the exchange rate to be used for the related asset, income or expense is the date on which an entity initially recognizes the asset or liability arising from the advance consideration.

The amendments to IFRS 2 refer to the classification of share-based payment transactions that are settled on a net basis as well as to the accounting for a modification that changes the classification of share-based payment transactions from "cash-settled" to "equity-settled". In addition, there was a clarification how to take into consideration vesting conditions within the framework of the measurement of cash-settled share-based payment transactions.

The amendment to IAS 40 clarifies in which cases the classification of a property as an "investment property" begins or ends, respectively, when the property is still under construction or in development. Due to the fact that the list previously set out in IAS 40.57 was phrased as an exhaustive list, the classification of unfinished property was not clarified unambiguously. The list is now explicitly deemed to be a non-exhaustive list so that unfinished property now also falls under the scope of the provisions.

IFRS 17 governs the accounting of insurance contracts and is designed to enhance the transparency and comparability of financial statements of insurance companies. The new standard contains the following major new rules. The measurement of actuarial provisions is to be made on the basis of current assumptions, including discount rates. Investment and financing components have to be offset against income from insurance premiums and against expenses from insurance benefits. In addition, a strict separation of actuarial result and net financial result has to be made in the statement of profit or loss.

The publication of IFRIC 23 clarifies an application issue as regards IAS 12 "Income Taxes". The tax treatment of particular circumstances and transactions may depend on the future acceptability granted by the taxation authority or in a tax jurisdiction. IAS 12 "Income Taxes" governs how current and deferred taxes have to be accounted for. IFRIC 23 clarifies how to apply the recognition and measurement rules set out in IAS 12 "Income Taxes" when uncertainties over income tax treatments exist.

The amendments to IFRS 9 refer to a limited adjustment of the assessment criteria that are relevant to the classification of financial assets. If specific circumstances exist, financial assets with a prepayment feature with negative compensation may be recognized at amortized cost or at fair value through other comprehensive income, rather than at fair value through profit or loss.

The amendments to IAS 28 clarify that IFRS 9 has to be applied to other financial instruments issued by an associate or joint venture to which the equity method is not applied. This also comprises long-term interests that form part of an entity's net investment.

The improvements to IFRS 2015 – 2017 describe a collective standard that deals with amendments to four IFRSs. The individual amendments are as follows:

- IFRS 3: If a company obtains control of a business in which it held an interest within the context of a joint operation, the principles for business combinations achieved in stages have to be applied. The interest previously held by the acquirer has to be remeasured accordingly (IFRS 3.42A).
- IFRS 11: If a party obtains joint control in a business in which it previously held an interest within the context of a joint operation, the previously held interest is not remeasured (IFRS 11.B33CA).
- IAS 12: All income tax consequences of dividend payments have to be recognized in the same way as income underlying the dividends. This means that such income has to be recorded in profit or loss, unless the dividends are based on income that was recognized directly in other comprehensive income or other equity (IAS 12.57A).
- IAS 23: If a company has raised funds to obtain qualifying assets, the respective company, when calculating the capitalization rate, has to exclude from this calculation the costs for borrowings that were taken out specifically for the purpose of obtaining qualifying assets until such assets are completed (IAS 23.14).

In accordance with the amendments to IAS 19, companies have to use updated assumptions after a plan amendment, curtailment or settlement to determine current service cost and the net interest for the remainder of the reporting period. In addition, any decreases of the surplus must be recognized in profit or loss as a component of past service cost, even if such surplus was previously not reported due to the asset ceiling effect. It is currently being investigated which effects the application of IFRIC 23 will have on the consolidated financial statements. ZF currently does not expect that the remaining amendments, if adopted by the EU in this form, will have a significant impact on the presentation of financial statements.

Basis of consolidation

In addition to ZF Friedrichshafen AG, 35 domestic and 254 foreign subsidiaries controlled by ZF Friedrichshafen AG are included in the consolidated financial statements.

The following table shows the composition of the consolidated ZF Group (without ZF Friedrichshafen AG):

	Jan. 1, 2017	First-time consoli-dations	Legal changes	Deconsoli-dations	Dec. 31, 2017
Subsidiaries	272	22	−1	−4	289
of which domestic	22	13	0	0	35
of which foreign	250	9	−1	−4	254
Joint ventures	9	1	0	0	10
Associates	8	2	0	0	10

In the fiscal year 2017, the following companies were included in the consolidated financial statements of ZF Friedrichshafen AG for the first time:

in %	Share in capital
Astyx GmbH, Ottobrunn, Germany	44.5
FOTON ZF LCV Automated Transmission (Jiaxing) Co. Ltd., Jiaxing, China	40
Lucas Automotive Grundstücksverwaltungs AG & Co. KG, Koblenz, Germany	100
Lucas Varity Grundstücksverwaltungs AG & Co. KG, Koblenz, Germany	100
PT. ZFAG Aftermarket Jakarta, Jakarta, Indonesia	100
TRW Airbag Systems Grundstücksverwaltungs AG & Co. KG, Aschau am Inn, Germany	100
TRW Automotive Electronics & Components Grundstücksverwaltungs AG & Co. KG, Radolfzell, Germany	100
TRW Automotive Grundstücksverwaltungs AG & Co. KG, Alfdorf, Germany	100
TRW Automotive Safety Systems Grundstücksverwaltungs AG & Co. KG, Aschaffenburg, Germany	100
ZF Asia B.V., Amsterdam, Netherlands	100
ZF Asia-Pacific Holding GmbH, Friedrichshafen, Germany	100
ZF Aurelia GmbH, Friedrichshafen, Germany	100
ZF Auslandsverwaltungs GmbH, Friedrichshafen, Germany	100
ZF Cassiopeia GmbH, Friedrichshafen, Germany	100
ZF Chassis Systems Zatec s.r.o., Plzeň, Czech Republic	100
ZF Danmark ApS, Tåstrup, Denmark	100
ZF Europa Beteiligungs GmbH, Friedrichshafen, Germany	100
ZF Europe B.V., Amsterdam, Netherlands	100
ZF FOTON Automated Transmission (Jiaxing) Co. Ltd., Jiaxing, China	51
ZF Hero Chassis Systems Private Limited, New Delhi, India	50
ZF Holdings B.V., Amsterdam, Netherlands	100
ZF NewCo II GmbH, Friedrichshafen, Germany	100
ZF Nürnberg Trading and Asset GmbH & Co. KG, Nuremberg, Germany	100
ZF South America Holdings B.V., Amsterdam, Netherlands	100
ZF Taiwan Ltd., Taipei, Taiwan	100

The companies included for the first time in the basis of consolidation are primarily newly founded companies.

Furthermore, five companies were deconsolidated in 2017 as a result of merger or liquidation.

Consolidation principles

The consolidation of investments in subsidiaries is carried out according to the purchase method. When control was obtained, the revalued assets and liabilities of the subsidiary and contingent liabilities, if they do not depend on a future event, are offset against the fair value of the consideration paid for the shares. Contingent purchase price payments are recognized at the amount expected. Subsequent adjustments of contingent purchase price payments are recognized in profit or loss. Acquisition-related expenses are recognized in profit or loss when they are incurred.

Any excess remaining after capital consolidation is recognized as goodwill and recorded under intangible assets. The goodwill is tested for impairment as of the reporting date. An impairment test is performed during the year if there are any triggering events. Negative differences arising on the consolidation of investments in subsidiaries are recognized in profit or loss in the consolidated statement of profit or loss under other income.

If not all interests are acquired during an acquisition, the non-controlling interests can be recognized at the amount of the proportionally revalued net assets or at their proportional total company value including the applicable goodwill. This right of choice is applicable to every company acquisition. As of December 31, 2017, all non-controlling interests are reported with the proportional net assets.

In the case of a step acquisition, the already existing interests in the company to be consolidated are revalued at the fair value at the date when control is obtained. The difference to the carrying amount of the investment is recognized in profit or loss.

The acquisition of additional interests of already consolidated subsidiaries is recognized as an equity transaction. In this method, the difference between the cost of the investment acquired and the carrying amount of the non-controlling interest is recognized in retained earnings. The effects of a sale of interests, which does not lead to a loss of control over a subsidiary, are to be recognized in other comprehensive income with no effect on profit or loss by offsetting the capital gain or loss against retained earnings and by increasing the non-controlling interests to the amount of the proportional net assets.

The deconsolidation of subsidiaries is carried out on the date of the loss of control or the date of liquidation. The gain or loss on deconsolidation is recognized in other income or expenses, respectively. Remaining interests are recognized at fair value under investments in participations.

Consolidation of receivables, liabilities, provisions, income and expenses as well as gains or losses is effected for the companies included in the basis of consolidation. Guarantees and warranties between consolidated companies are eliminated.

Foreign currency translation

The financial statements of consolidated group companies prepared in foreign currencies are translated on the basis of the concept of functional currency by the modified closing rate method. Since the subsidiaries operate independently from a financial, economic and organizational point of view, the functional currency is generally identical with the company's local currency. Accordingly, the income and expenses in the financial statements of subsidiaries drawn up in foreign currencies are translated in the consolidated financial statements applying average rates, and assets and liabilities at the closing rate. The exchange difference resulting from the translation of equity at historical rates and the exchange differences resulting from the translation of the consolidated statement of profit or loss at the average exchange rate are recognized in other comprehensive income in equity without effect on profit or loss.

Upon initial recognition, foreign currency receivables and liabilities are measured at the rate valid on the day of transaction in the individual financial statements of ZF Friedrichshafen AG and its subsidiaries. The closing rate on the reporting date will be used for subsequent measurements. Foreign exchange gains and losses from the revaluation of trade receivables and trade payables on the reporting date are recognized in other income and expenses. Foreign exchange gains and losses from financial assets and liabilities are generally recognized within other financial income and financial expenses. To the extent that non-current financial receivables or liabilities denominated in foreign currency exist towards a foreign operation, the settlement of which is neither planned nor likely in the foreseeable future, any translation differences are not recognized in profit or loss in other financial income and expenses, but directly in equity as other comprehensive income. A transfer to the consolidated statement of profit or loss only occurs upon repayment or sale of the foreign operation.

The translation of any goodwill carried in foreign currency is based on the closing rate as of the reporting date. The differences resulting from currency translation are recognized in equity through other comprehensive income as foreign currency translation differences.

The exchange rates used for foreign currency translation with a significant influence on the consolidated financial statements changed as follows in relation to one euro:

	Closing rate		Average rate	
	Dec. 31, 2017	**Dec. 31, 2016**	**2017**	**2016**
US dollar	1.1993	1.0541	1.1298	1.1067
British pound	0.8872	0.8562	0.8768	0.8198
Chinese renminbi	7.8044	7.3202	7.629	7.3521
Brazilian real	3.9729	3.4305	3.6044	3.8545
Mexican peso	23.6612	21.7719	21.3294	20.6678

Accounting policies

The financial statements of ZF Friedrichshafen AG and the companies included in the consolidated financial statements are drawn up as of December 31 of each fiscal year, applying uniform Group accounting principles.

Recognition of expenses and income

Sales from the sale of products are recognized at the time of transfer of ownership or the risk to the customer, when a price is agreed or can be determined and when payment is probable. Sales are reported net of cash discounts, price reductions, customer bonuses and rebates. Sales from services are recognized according to the stage of completion if the amount of sales can be reliably measured and an economic benefit from the business can be reasonably expected. Royalties are recognized on an accrual basis in accordance with the terms of the underlying contract.

Cost of sales comprises the cost of conversion of products sold as well as the purchase costs of sold merchandise. In addition to the directly attributable material and production costs, it also includes indirect production-related overheads, including depreciation on property, plant and equipment used and amortization of intangible assets. Cost of sales also includes write-downs of inventories to the lower net realizable value.

Research costs and non-capitalizable development costs are recognized in profit or loss when incurred.

Borrowing costs that are directly attributable to the acquisition or production of an asset which requires a considerable amount of time in order to be brought into the intended usable or sellable state are recognized as part of the cost of that asset. All other borrowing costs are recognized immediately as expenses.

Interest income is recognized in profit or loss when it is incurred.

Dividend income is recognized at the time the payout entitlement arises.

Hedging transactions

Derivative financial instruments are used at the consolidated ZF Group for hedging in order to reduce foreign currency and raw material price risks as well as interest rate and market price risks. In accordance with IAS 39, all derivative financial instruments are recognized at market value.

If the criteria for hedge accounting are met, they are accounted for as fair value hedge or cash flow hedge. If hedge accounting is not applicable, the derivative financial instruments are measured at their fair values and changes in fair value are reflected in profit or loss.

Fair value hedges are used to hedge risks of changes in the value of items recognized in the statement of financial position. If the criteria are met, the results from mark-to-market of derivative financial instruments and the underlying hedged items are reflected in profit or loss.

Cash flow hedges are used to hedge exposure to variability in future cash flows. If the market value of derivative financial instruments – used for cash flow hedges – changes, the unrealized gains and losses in the amount of the effective portion are initially recognized in other comprehensive income without affecting profit or loss. Reclassification to the consolidated statement of profit or loss is effected in the same period during which the hedged transaction affects profit or loss. The ineffective part of market value changes is reflected directly in the consolidated statement of profit or loss.

Impacts on profit or loss resulting from hedging transactions that have been concluded in order to hedge risks relating to raw material price changes are shown under cost of sales. The profit and loss derived from foreign currency hedging in connection with hedging operating transactions is recognized under other income and expenses or as part of acquisition cost. The gains and losses from derivative financial instruments used to hedge interest rate, market price or foreign currency risks related to financial assets or liabilities are shown under other financial results.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, bank deposits available any time and short-term overnight money.

Financial assets

Current and non-current financial assets are divided into the following categories:

- Loans and receivables
- Available-for-sale financial assets
- Financial assets at fair value through profit or loss
- Financial assets held for trading

The "Loans and receivables" category comprises cash, financial receivables as well as trade receivables. Loans as well as earmarked time deposit investments and bank deposits are shown under financial receivables. They are recognized at amortized cost using the effective interest method. Trade receivables are recognized at the original invoice amount.

If there are objective indications for an impairment of the loans and receivables, the impairment losses are calculated as the difference between the present value of the expected future cash flows and the carrying amount and recognized in profit or loss using a separate allowance account. In case they are expected to be uncollectible, a direct impairment is recognized.

The "Available-for-sale financial assets" category includes securities as well as investments in participations. Following their initial recognition, available-for-sale financial assets are generally measured at fair value. Investments in participations for which there is no active market and fair values therefore cannot be reliably determined, are recognized at cost. Sale of these shares is currently not planned.

Gains and losses resulting from changes in the fair value of available-for-sale financial assets are recognized directly in other comprehensive income. Reclassification to the consolidated statement of profit or loss is effected as soon as an impairment is recognized, but no later than the date of disposal of financial assets.

In the case of objective evidence for prolonged impairment, such as a continuous decrease of the financial assets' fair values or a considerable decline of the issuer's credit rating, the accumulated net loss is removed from equity and shown under the net financial result. The accumulated net loss is the difference between the acquisition cost and the current fair value, less any impairment loss on the financial asset previously recognized in profit or loss. Subsequent reversals of impairments for equity instruments are registered without affecting profit or loss. In the case of debt instruments, reversals of impairments made through profit or loss are at maximum effected at the level of previously recorded impairments. If there are indications for impairment of investments in participations which are valued at amortized cost, the impairment loss is recognized in profit or loss. There is no reversal of such impairment losses.

"Financial assets and liabilities held for trading" affect derivative financial instruments that do not meet the hedge accounting criteria. Changes in fair value of derivative financial instruments are recognized within other financial income and expenses.

As a rule, financial assets are capitalized as of the settlement date.

A financial asset is derecognized as of the settlement date when the contractual rights to receive cash flows from the asset have expired or substantially all risks and rewards have been transferred. A derecognition is performed ahead of the settlement date, once it is established that the trade receivables as well as financial receivables are uncollectible.

Financial assets and liabilities are offset and the resulting net amount is reported in the consolidated statement of financial position when the entity currently has a legally enforceable right to set off the recognized amounts and it intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

Inventories

As a general rule, raw materials and supplies as well as merchandise are measured at the lower of average cost and net realizable value. Work in progress and finished goods are recognized at cost of conversion, taking into account the lower net realizable value. The cost of conversion includes all costs directly attributable to the manufacturing process and appropriate portions of the production-related overheads. This includes production-related depreciation, prorated general administrative expenses and prorated social expenses.

Investments in associates and joint ventures

Investments in associates and joint ventures are generally recognized in accordance with the equity method with the proportionate equity. If, on the reporting date, there is objective evidence for the impairment of an investment, an impairment test is performed. The share of the consolidated ZF Group in the profit for the period of the associate or joint venture, respectively, is recognized separately in the consolidated statement of profit or loss. Income and expenses that are directly recognized in the equity of the associate or joint venture are recognized in the consolidated ZF Group without effect on profit or loss as well and presented separately in the consolidated statement of comprehensive income.

Intangible assets

Purchased or internally generated intangible assets are capitalized if a future economic benefit can be expected from the use of the asset and the costs of the assets can be reliably determined.

For recognition and measurement of goodwill, please refer to the explanations on the consolidation principles.

Tooling subsidies to suppliers are capitalized when they represent a right granted by the supplier or a fee for a service still to be rendered by the supplier. Tooling subsidies paid are amortized over a period of one to six years.

Development costs are capitalized at cost if both technical feasibility and marketability are ensured. It must furthermore be sufficiently probable that the development activity will generate future economic benefits. Capitalized development costs comprise all costs directly attributable to the development process. Capitalized development costs are amortized from the start of production over an expected product life cycle of five years.

Other intangible assets are recognized at cost and amortized based on the following useful lives:

	in years
Software	3 to 5
Patents, trademarks and licenses	5
Customer relations	3 to 30

Intangible assets with indefinite useful lives affect trademarks and are not amortized.

Property, plant and equipment

The entire property, plant and equipment is used for business purposes and is measured at cost less depreciation for wear and tear. Depreciation on property, plant and equipment is recorded on the basis of the straight-line method in accordance with its utilization. Throughout the consolidated group, systematic depreciation is based on the following useful lives:

	in years
Buildings	9 to 33
Technical equipment and machines	2 to 14
Other equipment, factory and office equipment	2 to 13

The depreciation on machines used in multi-shift operations is increased accordingly by shift allowances.

The residual values, depreciation methods and useful lives of assets are reviewed annually and adapted, if necessary.

In accordance with the provisions on accounting for leases, economic ownership is attributed to the lessee if it bears substantially all of the risks and rewards associated with ownership. Lease agreements which meet these requirements are classified as finance leases. Leased assets are recognized at the commencement of the lease term at fair value or the lower present value of the minimum lease payments. The assets are depreciated on a straight-line basis over the expected useful life or the shorter term of the lease.

The discounted payment obligations resulting from the future leasing installments are recognized under financial liabilities.

In subsequent periods, leasing payments are divided into principal and interest payments. The interest portion is recognized through profit or loss in the net financial result. The principal payments reduce financial liabilities.

Lease and rent payments resulting from operating lease contracts are recognized as expenses in the consolidated statement of profit or loss on a straight-line basis over the duration of the lease term. The future burdens under operating lease relationships are disclosed under other financial obligations.

Investment property

Property that is not owner-occupied, but held to earn rentals or for capital appreciation is reported separately in the statement of financial position under "Investment property". Land and buildings are recognized at amortized cost. Depreciation is based on the method used for buildings which are part of property, plant and equipment.

Government grants

Government grants are recognized only if there is reliable evidence that the related conditions are met and the subsidies are likely to be granted. Investment subsidies are deducted from property, plant and equipment in the period in which they were received. Expense subsidies are recognized as income during the same period in which the expenses, for which compensation was granted, are incurred.

Current market interest rates are used for the valuation of non-interest-bearing or low-interest-bearing government loans. The difference between the discounted value and the repayment value is deferred and recognized under other liabilities. The deferred amount is broken down over the duration of the loan contract and recognized in interest expenses.

Assets held for sale and disposal groups

Assets and liabilities are reported as disposal groups when these are to be disposed of by sale together as a group in a single transaction which is highly probable. Individual assets are reported in the statement of financial position as assets held for sale. The affected assets and liabilities are presented separately in the statement of financial position in current assets and liabilities as "Assets held for sale and disposal groups" and "Liabilities of disposal groups", respectively. Income and expenses of the assets and liabilities affected are included in the profit or loss from continuing operations until disposal.

The disposal group is measured upon initial recognition in accordance with the relevant IFRS standards. Subsequently, the disposal group is measured at the lower of its carrying amount or fair value less costs to sell.

Impairment tests

For investments in associates, intangible assets already in use as well as property, plant and equipment, it is verified as of the reporting date whether there are indications of potential impairment. If there are any indications, an impairment test must be performed. Intangible assets that are not yet ready to be used and intangible assets with indefinite useful lives are subject to an annual impairment test.

To perform the impairment test, the recoverable amount is determined. This is the higher amount of the asset's or the smallest cash-generating unit's fair value less costs to sell and their value in use. The recoverable amount is determined for the individual asset or a cash-generating unit, if no cash flows can be allocated to the individual asset. The cash-generating units underlying the impairment tests are defined on the basis of the Group's business units or the regional organization of the Group. The Group's business units also represent the organizational level which is subject to regular review by management.

The value in use is the net present value of future cash flows, which are expected from the continued use of the asset or the cash-generating unit and its disposal at the end of its useful life. The value in use is determined by the discounted cash flow method on the basis of the current corporate planning data which refers to a three-year planning horizon. The capital cost rates of the consolidated ZF Group, which are determined on the basis of the WACC (Weighted Average Cost of Capital) method, are used to discount the cash flows.

The forecast for cash flows is based on the current operational planning of the consolidated ZF Group, in which general economic data from external macroeconomic research as well as financial surveys is also taken into consideration. The assumptions made consider the country-specific rates of inflation for the period investigated. Cost of materials is forecast based on the individual premises at the level of each cash-generating unit. The development of personnel expenses is also forecast individually on the basis of the collective agreements in effect. Based on these cash flow predictions, the value in use of the cash-generating units is determined assuming a discount factor before tax of 11% to 12% (2016: 10% to 12%) and an unchanged growth rate of 1.5%. For perpetuity going beyond the three-year planning horizon, the cash flows are extrapolated taking into account the respective sustainable expected margin of the individual cash-generating units.

Fair values less costs to sell for property, plant and equipment are estimated on the basis of discounted cash flows as well as a cost-based approach for comparable assets that are generally not based on parameters observable on the market.

An impairment loss is recognized if the recoverable amount falls below the carrying amount of the asset or the cash-generating unit.

If the reason for an impairment loss recognized in an earlier period ceases to exist, the impairment loss is reversed, however up to a maximum of the carrying amount that would have been determined (net of depreciation or amortization) if no impairment loss had been recognized. Impairment losses and reversals of impairment losses for intangible assets and property, plant and equipment are assigned to the functional areas of the consolidated statement of profit or loss.

Goodwill from business combinations is allocated to those groups of cash-generating units that derive benefit from the business combinations. In the consolidated ZF Group, these are the respective divisions and business units. An impairment test for goodwill is performed annually using the impairment test in accordance with the above-described methods. An impairment of goodwill is recognized if the recoverable amount of the corresponding cash-generating unit is below its carrying amount. Impairment losses for goodwill are reported under other expenses. Impairment losses recognized on goodwill are not reversed.

Financial liabilities and other liabilities

Financial liabilities and other liabilities are recognized initially at cost, which represents the fair value of the consideration received. The transaction costs are also taken into account here. In subsequent periods, the liabilities are measured at amortized cost based on the effective interest method. To the extent that financial liabilities have not been utilized, transaction costs are deferred within other assets. Recognition through profit or loss is made using the item "Other financial expenses". The derecognition of financial liabilities and other liabilities will take place as soon as the obligations they are based on have been fulfilled or terminated.

A best estimate is made for the risks of financial guarantee contracts issued by the consolidated group as of the reporting date. To the extent that utilization is probable, a financial liability is recognized in the amount of the expected cash outflow.

The consolidated ZF Group basically dispenses with applying the fair value option to register financial liabilities upon first-time valuation under the category of "Financial liabilities at fair value through profit or loss".

Tooling subsidies received

Tooling subsidies received represent a consideration in exchange for services to be rendered or rights granted to the payer of the subsidy. The subsidies are deferred as tooling subsidies received under other liabilities. The reversal takes place during the project duration.

Provisions for pensions

Provisions for pensions are recognized in accordance with the projected unit credit method. Under this method, not only pensions and vested interests recognized as of the reporting date are taken into account, but also increases in pensions and current salaries and wages that are expected in the future. The calculation is based on actuarial reports, taking into account biometric calculation bases. The plan assets, which are solely used for satisfying the pension obligations and which are restricted from the access of all other creditors, are offset against provisions. If these exceed the amount of provisions, such excess is reported under non-current financial assets. The plan assets are recognized at fair value. Expenses resulting from unwinding the discount on pension obligations and expected returns on plan assets are offset and recognized in interest expenses. Actuarial gains and losses are recognized in full in other comprehensive income in the period in which they occur. All other expenses resulting from the addition to pension provisions are assigned to the affected functional areas within the consolidated statement of profit or loss.

Other provisions

Other provisions are recognized if an obligation to third parties exists, which will probably result in the outflow of resources, and if a reliable estimate can be made of the amount required.

As a general rule, all cost elements that are capitalized in inventories are reflected in the measurement of provisions relating to sales, in particular those for warranties and potential losses on pending transactions. The measurement takes place at the value of the best possible estimate of expenses which are necessary to fulfill the obligation on the reporting date. The measurement of provisions for warranty costs takes place on the basis of actual warranty expenses under consideration of warranty and goodwill periods as well as sales development over several years.

Personnel-related obligations affect long-service awards and semi-retirement obligations in particular. Provisions for employee long-service bonuses are calculated on an actuarial basis. The provisions for semi-retirement obligations comprise individual or pay-scale-related top-up benefits for pension insurance as well as the wages and salaries to be paid during the release phase. They are accrued on a pro-rata basis when the obligation arises.

Semi-retirement obligations are protected against insolvency using a trust model. The assets which are solely used for satisfying the semi-retirement obligations and which are restricted from the access of all other creditors are offset against provisions (plan assets). They are recognized at fair value. If the plan assets exceed the amount of provisions, such excess is reported under non-current financial assets. The return on plan assets is offset against expenses from the interest cost on provisions and reported in the statement of profit or loss.

Non-current provisions with a residual term of more than a year are recognized at the reporting date with their discounted settlement amount. They are discounted when the effect of the time value of money is material.

Income taxes

The **actual income tax receivables and provisions** for current and previous periods are measured using the amount for which reimbursement from or payment to tax authorities is expected. The amount is calculated using the tax rates and the tax laws that are in effect on the reporting date.

Deferred tax assets and liabilities are recognized via temporary differences between the tax basis and the IFRS carrying amounts. Deferred tax assets also include tax reductions that will result from the expected utilization of existing tax loss carryforwards and tax credits in the subsequent years. Deferred taxes are computed on the basis of the tax rates that will or are expected to apply on the realization date with sufficient probability in accordance with the current legal situation in the individual countries.

Deferred tax assets on temporary differences and on tax loss carryforwards are only recognized if there is sufficient probability that the tax reductions resulting from them will actually occur in future.

The carrying amount of deferred tax assets is reviewed on each reporting date and written down accordingly, if it is anticipated that there will not be enough taxable profit to offset the tax assets at least in part. Unrecognized deferred tax assets are reviewed on each reporting date and recognized to the extent that a future taxable income allows the utilization of deferred tax assets.

In addition, no deferred tax assets and liabilities are recognized if these result from the initial recognition of goodwill, an asset or a liability as part of a business transaction which is not a business combination, and if, through this initial recognition, neither the accounting net profit or loss before income tax nor the taxable profit is influenced.

Deferred taxes that refer to line items that are directly recognized in equity are also recognized in equity and not in the consolidated statement of profit or loss.

Deferred tax receivables and deferred tax liabilities are offset against each other, if the consolidated group has a recoverable right to offsetting the actual tax refunds against actual tax liabilities and if they apply to the income taxes of the same tax subject levied by the same tax authority.

Judgments and uncertainties in connection with estimates
Preparation of the consolidated financial statements requires assumptions to be made and estimates to be applied, which affect the reported amounts and disclosure of assets and liabilities, income and expenses as well as contingent liabilities.

Essential assumptions and estimates as used in the recognition and measurement of the balance sheet items are explained below.

Management estimates as to technical and economic feasibility of development projects influence the decision to **capitalize development costs** (Note 15). The valuation of the capitalized development costs depends on the assumptions about amount and timing of expected future cash flows as well as on the discount rates to be applied.

For the accounting of other **intangible assets** and **property, plant and equipment**, the assumptions and estimates essentially relate to the definition of useful lives.

Measurement as well as the determination of the useful lives of assets, liabilities and contingent liabilities to be recognized in the context of acquisitions were primarily made using cash-flow-based estimates. The allocation of purchased goodwill was subject to estimates as regards the amount and the timing of future cash flows resulting from synergies.

In the context of the **impairment tests** (Note 17), assumptions and estimates are used in determining the future cash flows to be expected as well as for defining discount rates. This may have an influence on the values of intangible assets in particular.

The valuation of **current price declines in equity instruments** (Note 13) is subject to judgments as regards the assessment whether price declines are significant and will lead to an impairment.

The assessment of the recoverability of **trade receivables** (Note 10) is subject to judgment as regards the future solvency of the debtors.

In accounting the **deferred tax assets** (Note 7), the assumptions and estimates essentially relate to the likelihood of expected tax reductions actually occurring in the future.

When determining the **outstanding customer charges or credits** (Note 20) in the consolidated financial statements in connection with differences in prices or quantities, assumptions and estimates were made based on ongoing customer negotiations or experience with customers.

The actuarial valuation of provisions for pensions (Note 22) is particularly based on assumption as to discount rates, future pension developments and age shifts.

Determination of warranty provisions (Note 21) is subject to assumptions and estimates which refer to the time period between delivery date and the occurrence of the warranty event, warranty and goodwill periods as well as future warranty burdens.

The determination of provisions for onerous contracts (Note 21) is subject to judgment with respect to the interpretation of supply contracts. In this respect, the major decision criteria are the bindingly defined term of delivery as well as quantities and prices.

Classification of assets and liabilities as Assets held for sale and disposal groups as well as liabilities of disposal groups (Note 23) is subject to judgments as regards the probability of successful sale of assets or business activities.

No other major judgments were made.

In individual cases, actual amounts could differ from these assumptions and estimates. Changes are recognized in profit or loss as soon as better information is available.

When preparing the consolidated financial statements, the underlying estimates were not subject to any major risks; therefore, no major adjustments to the assets and liabilities recognized in the consolidated statement of financial position are expected during the subsequent fiscal year.

Notes to the Consolidated Statement of Profit or Loss

The consolidated statement of profit or loss has been drawn up in accordance with the cost of sales method.

1 Sales

in € million	2017	2016
Domestic	7,692	7,790
Western Europe	7,360	6,859
Eastern Europe	2,342	2,130
North America	10,010	9,681
South America	1,066	845
Asia-Pacific	7,775	7,649
Africa	199	212
	36,444	**35,166**

Sales include €35,754 million (2016: €34,417 million) from the sale of goods and €622 million (2016: €686 million) for the rendering of services as well as €68 million (2016: €63 million) for royalties.

2 Cost of sales

in € million	2017	2016
Cost of materials	21,916	21,158
Personnel expenses	4,669	4,419
Depreciation, amortization and impairment	1,692	1,807
Other	1,618	1,685
	29,895	**29,069**

The item "Depreciation, amortization and impairment" comprises impairment losses for property, plant and equipment in the amount of €3 million (2016: €0 million) as well as reversals of previously recognized impairment losses of €2 million (2016: €4 million).

3 Other income

in € million	2017	2016
Foreign exchange gains	310	337
Income from hedging	72	55
Compensation payment and reimbursement of costs	26	14
Income from the disposal of intangible assets and property, plant and equipment	3	7
Income from rentals and lease payments	4	3
Income from deconsolidations	0	37
Miscellaneous income	79	77
	494	**530**

4 Other expenses

in € million	2017	2016
Foreign exchange losses	340	330
Expenses from hedging	105	112
Changes of allowances for receivables	−2	−5
Losses on the disposal of intangible assets and property, plant and equipment	9	16
Miscellaneous expenses	23	32
	475	**485**

5 Net result from participations

in € million	2017	2016
Income from deconsolidations	0	5
Result from at-equity valuation	49	43
Result from associates	**49**	**48**
Income from participations	2	15
Expenses from loss assumption	−1	0
Write-downs of participations	−2	−1
Income from the disposal of participations	0	4
Expenses from the disposal of participations	0	−2
Other net result from participations	**−1**	**16**
Net result from participations	**48**	**64**

6 Net financial result

in € million	2017	2016
Interest from current financial investments	27	36
Interest from non-current financial investments	3	31
Other interest	55	0
Return on plan assets	8	0
Interest income	**93**	**67**
Foreign exchange gains	72	128
Income from derivative financial instruments	148	153
Income from the disposal of securities	0	110
Other financial income	**220**	**391**
Financial income	**313**	**458**
Interest on financial liabilities	−343	−347
Other interest	0	−19
Interest from pension provisions	−65	−98
Unwinding the discount on other non-current items	0	−5
Interest expenses	**−408**	**−469**
Foreign exchange losses	−89	−86
Expenses from derivative financial instruments	−134	−195
Losses on the disposal of securities	0	−20
Write-downs of financial receivables	1	0
Transaction costs and incidental expenses	−43	−85
Other financial expenses	**−267**	**−386**
Financial expenses	**−675**	**−855**
Net financial result	**−362**	**−397**

7 Income taxes

Income tax expenses are comprised as follows:

in € million	2017	2016
Actual taxes	520	474
Deferred taxes	−278	−117
Income tax expenses	**242**	**357**

Actual income tax expenses included adjustments in the amount of €68 million (2016: €52 million) for current taxes of prior fiscal years. Deferred tax income includes tax income of approximately €300 million (2016: €180 million) in connection with the development of temporary differences.

The actual taxes in Germany were determined on the basis of an overall tax rate of 30%, derived from the corporate income tax rate of 15%, the solidarity surcharge of 5.5% and an average trade tax rate of 14.175%. The actual taxes of foreign subsidiaries are determined on the basis of relevant national tax laws and the tax rate applicable in the country of incorporation. Deferred tax assets and liabilities are measured at the tax rates in Germany and abroad, respectively, which are expected to apply at the time of realizing the asset or discharging the liability.

The (current and deferred) income tax expenses expected on the basis of the German overall tax rate of 30% (2016: 29%) deviate from the reported amounts as set out below:

in € million	2017	2016
Expected income tax expenses	**423**	**371**
Increase/decrease of income taxes due to		
Tax effects due to different national tax rates and taxation systems	−80	−56
Effects of changes in tax laws	−138	−7
Tax effects due to non-recognition and write-down of deferred tax assets and their reversal	−21	−2
Tax effects due to permanent differences	10	11
Tax effects due to prior-period items	57	33
Other	−9	7
Reported income tax expenses	**242**	**357**

As a consequence of the U.S. tax reform, the applicable corporate income tax rate in the USA was reduced from 35% to 21% as of January 1, 2018, and further changes were made with regard to tax provisions. Overall, the U.S. tax reform will result in an income of €144 million in the current year, mainly due to the revaluation of deferred taxes. As the U.S. tax reform was passed on December 22, 2017, changes may occur in the following years due to expected future explanations and clarifications of the regulations. Currently, no essential changes regarding line items set for the reporting date are expected.

The gross amounts of deferred tax assets and liabilities resulted from the following line items:

in € million	2017	2016
Assets		
Non-current and current assets	130	260
Liabilities and provisions	896	1,117
Other	196	112
Tax loss carryforwards and tax credits	326	401
Netting	−776	−1,048
Deferred tax assets	**772**	**842**
Liabilities		
Non-current and current assets	1,089	1,777
Liabilities and provisions	214	200
Other	95	20
Netting	−776	−1,048
Deferred tax liabilities	**622**	**949**
Total deferred tax assets (+)/ liabilities (−) (net)	**150**	**−107**

Based on mark-to-market of securities and cash flow hedges, deferred tax assets are recognized in equity in the amount of €2 million (2016: €24 million). The recognition of actuarial gains and losses for pension provisions in equity without affecting profit or loss leads to deferred tax assets in the amount of €395 million (2016: €480 million). As a result, equity is decreased by €85 million (2016: equity increase of €181 million). Another change of the deferred taxes of €90 million (2016: €−6 million), recognized without effect on profit or loss, is the result of closing-date exchange rate differences. Beyond that, all other changes, except changes due to first-time consolidations and deconsolidations, have been recognized in profit or loss.

At the end of the fiscal year, the company reported tax loss carryforwards which were subject to offsetting restrictions. To that extent, no deferred tax assets were recognized for these since their utilization due to future positive taxable profit is not probable.

No deferred tax assets were recorded for the following matters (gross amounts):

in € million	2017	2016
Deductible temporary differences	349	484
Tax loss carryforwards and tax credits	1,072	1,182
	1,421	**1,666**

Of the unrecognized tax loss carryforwards, €598 million (2016: €545 million) had a limited expiration period of up to 20 years and €474 million (2016: €637 million) were unlimited.

The income resulting from non-recognition and the impairment of deferred taxes (or their reversal) in cases where it is no longer likely (or likely again) that sufficient taxable profit will be available to use the deferred tax asset, either in part or in full, amounts to €21 million (2016: €2 million).

Deferred taxes are to be recognized for temporary differences in relation to subsidiaries if their realization is probable. Deferred tax liabilities of €104 million (2016: €148 million) were recorded for reserves generated by subsidiaries. Apart from that, no deferred taxes have been recognized for the reserves generated by subsidiaries, as the profits are normally not subject to any considerable further taxation or are to be reinvested for an indefinite period of time.

8 Other notes to the consolidated statement of profit or loss

The consolidated statement of profit or loss includes the following cost of materials:

in € million	2017	2016
Cost of raw materials, supplies and merchandise	21,851	21,083
Cost of purchased services	310	309
Other cost of materials	30	28
	22,191	**21,420**

The breakdown of personnel expenses is as follows:

in € million	2017	2016
Wages and salaries	6,045	5,821
Social security and benefits expenses	1,119	1,051
Pension expenses	250	253
	7,414	**7,125**

Personnel expenses include expenses for defined contribution plans in the amount of €358 million (2016: €345 million). The expenses contained for the state plans amounting to €289 million (2016: €270 million) primarily comprise the employer's contribution to the state pension scheme, which is included in the social security expenses.

Termination benefits and other long-term employee benefits of €18 million (2016: €23 million) were recorded in the consolidated statement of profit or loss. They affect severance pay as well as expenses from additions to restructuring provisions.

Impairment losses on intangible assets in the amount of €1 million (2016: €2 million) are included in the research and development costs and in the amount of €2 million (2016: €1 million) in general administrative expenses.

Impairment losses on property, plant and equipment in the amount of €0 million (2016: €2 million) are included in research and development costs, in the amount of €3 million (2016: €4 million) under selling expenses as well as in the amount of €4 million (2016: €2 million) in general administrative expenses in the consolidated statement of profit or loss.

Research and development costs include full or partial reversals of impairment losses on intangible assets in the amount of €1 million (2016: €2 million) as well as reversals of impairment losses in the amount of €1 million (2016: €0 million).

Explanations on the impairments and the reversals of impairment losses are given under Note (17).

Amortization on intangible assets is included in the following consolidated statement of profit or loss items:

in € million	2017	2016
Cost of sales	578	617
Research and development costs	35	27
Selling expenses	201	209
General administrative expenses	28	23
	842	**876**

Depreciation on property, plant and equipment is included in the following consolidated statement of profit or loss items:

in € million	2017	2016
Cost of sales	1,113	1,194
Research and development costs	61	34
Selling expenses	9	10
General administrative expenses	58	54
	1,241	**1,292**

Research and development costs recorded in the fiscal year reached €2,230 million (2016: €1,948 million). This figure includes amortization for capitalized development costs of €19 million (2016: €20 million).

In the fiscal year, payments from operating leases or rental agreements in the amount of €211 million (2016: €207 million) were recognized in the consolidated statement of profit or loss.

Notes to the Consolidated Statement of Financial Position

9 Current financial assets

in € million	Dec. 31, 2017	Dec. 31, 2016
Financial receivables	25	37
Derivative financial instruments	41	57
	66	**94**

The financial receivables do not include any overdue amounts that are not impaired. The financial receivables contain earmarked bank deposits of €8 million (2016: €8 million).

The allowances for the financial receivables amounted to €2 million, unchanged from the previous year. The gross value of the impaired financial receivables is €2 million (2016: €2 million).

As far as the financial receivables are concerned which are neither impaired nor overdue there have, as of the closing date, been no indications that the debtors would not meet their payment obligations

10 Trade receivables

The trade receivables have the following age distribution:

in € million	Carrying amount	Thereof current	Neither impaired nor overdue	Not impaired and overdue for			
				1 to 30 days	31 to 60 days	61 to 360 days	more than 360 days
Dec. 31, 2017	5,303	5,303	4,920	307	24	35	17
Dec. 31, 2016	5,220	5,220	4,834	300	34	45	7

If payment plans have been agreed with customers, and provided that these are adhered to, these receivables are recognized as neither impaired nor overdue.

The allowances for trade receivables have developed as follows:

in € million	2017	2016
Carrying amount as of Jan. 1	**56**	**63**
Net exchange differences	−4	2
Additions	8	11
Utilization	−2	−5
Reversals	−10	−15
Carrying amount as of Dec. 31	**48**	**56**

The gross value of the impaired trade receivables is €48 million (2016: €56 million).

As far as the trade receivables are concerned which are neither impaired nor overdue there have, as of the closing date, been no indications that the debtors would not meet their payment obligations.

11 Other assets

	Dec. 31, 2017		Dec. 31, 2016	
in € million	**Total**	**Thereof current**	**Total**	**Thereof current**
Other tax receivables	386	351	349	318
Prepaid expenses	122	74	101	50
Receivables from employees	13	13	11	11
Sundry assets	256	93	229	98
	777	**531**	**690**	**477**

Other tax receivables are, for the most part, sales tax refund entitlements. Sundry assets comprise, in general, payments in advance and reimbursable development costs.

As in the previous year, there were no impaired receivables as of the end of the fiscal year.

12 Inventories

in € million	Dec. 31, 2017	Dec. 31, 2016
Raw materials and supplies	1,428	1,319
Work in progress	559	535
Finished goods and merchandise	1,058	991
Payments in advance	13	19
	3,058	**2,864**

Write-downs of inventories decreased by €15 million (2016: increase of €10 million) to €175 million (2016: €190 million) in the fiscal year 2017.

13 Non-current financial assets

in € million	Dec. 31, 2017	Dec. 31, 2016
Investments in participations	138	52
Financial receivables	66	66
Net assets from defined benefit plans	674	573
Net assets for other performance obligations toward employees	68	58
Derivative financial instruments	14	15
	960	**764**

Investments in participations have developed as follows:

in Mio. €	2017	2016
Carrying amount as of Jan. 1	**52**	**71**
Changes in the basis of consolidation	−6	0
Changes not affecting profit or loss	−15	0
Additions	16	110
Disposals	0	−18
Write-downs	−2	−1
Reclassifications	93	−110
Carrying amount as of Dec. 31	**138**	**52**

The financial receivables include granted loans and direct insurance claims against life insurances of €37 million (2016: €37 million).

The financial receivables also contain non-current earmarked bank deposits and time deposit investments of €1 million (2016: €2 million).

No allowances on financial receivables are recorded as of the reporting date. Concerning the financial receivables, there are no indications that the debtors will not meet their payment obligations.

14 Associates

in € million	Dec. 31, 2017	Dec. 31, 2016
Investments in joint ventures	181	186
Investments in associates	236	200
	417	**386**

The joint ventures and associates, including the shareholding, are set out in the list of shares held.

ZF PWK Mécacentre S.A.S., St. Etienne (France), is classified as associate despite a participation quota of 50%, as the company is not jointly controlled.

The total comprehensive income of the associates is as follows:

in € million	Investments in joint ventures		Investments in associates	
	2017	2016	2017	2016
Net profit or loss after tax	16	18	33	25
Other comprehensive income	0	0	0	0
Total comprehensive income	**16**	**18**	**33**	**25**

15 Intangible assets

in € million	Goodwill	Patents, licenses, software and similar rights and assets	Development costs	Payments in advance	Total
Cost as of Jan. 1, 2016	**4,452**	**6,568**	**230**	**59**	**11,309**
Company acquisitions	−35	0	0	0	−35
Changes in the basis of consolidation	0	−17	0	0	−17
Net exchange differences	84	168	6	−1	257
Additions	0	208	10	91	309
Reclassifications	75	179	0	−41	213
Disposals	0	−240	−1	0	−241
Cost as of Dec. 31, 2016	**4,576**	**6,866**	**245**	**108**	**11,795**
Accumulated amortization as of Jan. 1, 2016	**41**	**1,057**	**32**	**0**	**1,130**
Changes in the basis of consolidation	0	−8	0	0	−8
Net exchange differences	0	42	1	0	43
Additions (amortization)	0	856	20	0	876
Additions (impairments)	0	3	0	0	3
Reclassifications	0	101	0	0	101
Disposals	0	−240	−1	0	−241
Reversals of impairments	0	−2	0	0	−2
Accumulated amortization as of Dec. 31, 2016	**41**	**1,809**	**52**	**0**	**1,902**
Carrying amount as of Dec. 31, 2016	**4,535**	**5,057**	**193**	**108**	**9,893**
Cost as of Jan. 1, 2017	**4,576**	**6,866**	**245**	**108**	**11,795**
Net exchange differences	−345	−684	−25	−4	−1,058
Additions	0	201	0	155	356
Reclassifications	−209	−279	−11	−107	−606
Disposals	0	−245	0	−1	−246
Cost as of Dec. 31, 2017	**4,022**	**5,859**	**209**	**151**	**10,241**
Accumulated amortization as of Jan. 1, 2017	**41**	**1,809**	**52**	**0**	**1,902**
Net exchange differences	0	−175	−5	0	−180
Additions (amortization)	0	823	19	0	842
Additions (impairment)	0	3	0	0	3
Reclassifications	0	−121	−3	0	−124
Disposals	0	−240	0	0	−240
Reversals of impairments	0	−1	0	0	−1
Accumulated amortization as of Dec. 31, 2017	**41**	**2,098**	**63**	**0**	**2,202**
Carrying amount as of Dec. 31, 2017	**3,981**	**3,761**	**146**	**151**	**8,039**

In addition to EDP software acquired in return for payment, tooling subsidies paid to suppliers and capitalized development costs, intangible assets primarily comprise goodwill from the acquisition of companies.

Trademarks included at €416 million (2016: €501 million) are classified as intangible assets with indefinite useful lives since there is no foreseeable delimitation of the period during which the trademarks will presumably generate cash inflows. They are mainly allocated to the Active & Passive Safety Technology Division.

Goodwill

Goodwill from the consolidation of investments in subsidiaries and from the individual financial statements is shown below:

in € million	Dec. 31, 2017	Dec. 31, 2016
Car Powertrain Technology	700	700
Car Chassis Technology	320	320
Commercial Vehicle Technology	354	354
Industrial Technology	186	186
Active & Passive Safety Technology	2,235	2,789
E-Mobility	54	54
ZF Aftermarket	132	132
	3,981	**4,535**

Goodwill mainly represents synergies in the areas of materials purchasing and administrative company organization.

16 Property, plant and equipment

in € million	Land and buildings	Technical equipment and machines	Other equipment, factory and office equipment	Payments in advance and construction in progress	Total
Cost as of Jan. 1, 2016	**2,589**	**8,622**	**2,668**	**933**	**14,812**
Changes in the basis of consolidation	−7	−83	−39	−5	−134
Net exchange differences	19	25	13	5	62
Additions	35	203	190	757	1,185
Reclassifications	101	213	389	−827	−124
Disposals	−6	−131	−86	−2	−225
Cost as of Dec. 31, 2016	**2,731**	**8,849**	**3,135**	**861**	**15,576**
Accumulated depreciation as of Jan. 1, 2016	**914**	**5,210**	**1,832**	**0**	**7,956**
Changes in the basis of consolidation	−2	−51	−26	0	−79
Net exchange differences	5	38	17	0	60
Additions (depreciation)	91	875	326	0	1,292
Additions (impairments)	1	6	0	1	8
Reclassifications	0	−197	110	0	−87
Disposals	−6	−119	−71	0	−196
Reversals of impairments	0	−3	−1	0	−4
Accumulated depreciation as of Dec. 31, 2016	**1,003**	**5,759**	**2,187**	**1**	**8,950**
Carrying amount as of Dec. 31, 2016	**1,728**	**3,090**	**948**	**860**	**6,626**
Cost as of Jan. 1, 2017	**2,731**	**8,849**	**3,135**	**861**	**15,576**
Net exchange differences	−74	−423	−92	−47	−636
Additions	49	204	204	893	1,350
Reclassifications	122	250	11	−760	−377
Disposals	−28	−264	−207	−16	−515
Cost as of Dec. 31, 2017	**2,800**	**8,616**	**3,051**	**931**	**15,398**
Accumulated depreciation as of Jan. 1, 2017	**1,003**	**5,759**	**2,187**	**1**	**8,950**
Net exchange differences	−18	−280	−72	0	−370
Additions (depreciation)	94	833	314	0	1,241
Additions (impairments)	4	4	2	0	10
Reclassifications	25	−158	−17	0	−150
Disposals	−18	−254	−202	0	−474
Reversals of impairments	−1	0	−1	−1	−3
Accumulated depreciation as of Dec. 31, 2017	**1,089**	**5,904**	**2,211**	**0**	**9,204**
Carrying amount as of Dec. 31, 2017	**1,711**	**2,712**	**840**	**931**	**6,194**

As of the reporting date, no assets from property, plant and equipment (2016: €1 million) were pledged as collateral for financial liabilities as well as for possible obligations from finance court cases.

The details on the minimum lease payments under the respective leasing contracts for buildings, technical equipment and machines as well as factory and office equipment are as follows:

in € million	Dec. 31, 2017	Dec. 31, 2016
Total future minimum lease payments		
due within a year	5	5
due between one and five years	17	20
due after more than five years	10	11
	32	**36**
Interest portion included in the future minimum lease payments		
due within a year	0	1
due between one and five years	3	2
due after more than five years	4	5
	7	**8**
Present value of the future minimum lease payments		
due within a year	5	4
due between one and five years	14	18
due after more than five years	6	6
	25	**28**

Property, plant and equipment includes rented buildings in the amount of €10 million (2016: €8 million) that, due to the content of the leasing contracts (finance lease), are considered the economic property of the Group.

17 Impairment tests

In the fourth quarter of 2017, the consolidated ZF Group performed impairment tests to assess the impairment of its assets. These impairment tests were triggered by the macroeconomic environment in individual economies.

Impairments were recognized for property, plant and equipment in the following divisions:

in € million	2017	2016
Car Powertrain Technology	4	0
Car Chassis Technology	1	0
Commercial Vehicle Technology	0	1
Industrial Technology	1	1
Active & Passive Safety Technology	2	6
Central units	2	0
	10	**8**

As part of the process, the assets of individual cash-generating units were measured at fair value less costs to sell.

The impairment losses are distributed by regions as follows:

in € million	2017	2016
Europe	9	6
Asia-Pacific	1	1
South America	0	1
	10	**8**

In the fiscal year 2017, the Car Chassis Technology, Industrial Technology Divisions and central units recorded reversals of impairment losses in the amount of €1 million each. In the previous year, reversals of impairment losses were recognized in the Industrial Technology Division in the amount of €4 million.

Impairment losses for intangible assets were recorded in the Industrial Technology Division in the amount of €2 million and in the ZF Aftermarket Division in the amount of €1 million. In the prior year, impairment losses were recorded in the ZF Aftermarket Division in the amount of €2 million and in the Active & Passive Safety Technology Division in the amount of €1 million.

In the fiscal year 2017, the ZF Aftermarket Division recorded reversals of impairment losses for intangible assets in the amount of €1 million (2016: €2 million).

The annual impairment tests of goodwill and intangible assets with indefinite useful lives (trademark) led to no impairments as in the previous year. In addition, a sensitivity analysis regarding material measurement parameters was conducted in the context of these impairment tests. This involved an analysis to what extent, if assessed on an isolated basis, a reduction of the sustainable operating profit by 10%, a reduction of the sustainable growth rate to 1.0% or an increase in the capitalization rate by 10% would have an effect on the recoverability of goodwill. This sensitivity analysis would not have led to an impairment of goodwill even in all of the scenarios analyzed.

Inter alia, assumptions were made with regard to the development of sales in order to calculate the impairment tests. The assumptions made for the average sales increase in the three-year planning period are as follows:

in %	2017	2016
Car Powertrain Technology	8	12
Car Chassis Technology	4	5
Commercial Vehicle Technology	6	6
Industrial Technology	9	6 to 9
Active & Passive Safety Technology	2	4
E-Mobility	14	13
ZF Aftermarket	4	7

18 Investment property

An expert report on the determination of the fair value for the properties reported in this item was not obtained by the reporting date. It is assumed that the fair values are within a range of 10% compared to their carrying amount.

in € million	2017	2016
Cost as of Jan. 1	3	15
Disposals	0	−12
Cost as of Dec. 31	**3**	**3**
Accumulated depreciation as of Jan. 1	2	10
Additions (depreciation)	1	0
Disposals	0	−8
Accumulated depreciation as of Dec. 31	**3**	**2**
Carrying amount as of Dec. 31	**0**	**1**

19 Financial liabilities

in Mio. €	Carrying amount as of Dec. 31, 2017		Carrying amount as of Dec. 31, 2016	
	Total	Thereof current	Total	Thereof current
Bonds	4,133	52	5,599	63
Bonded loans	1,249	354	2,308	504
Liabilities to banks	970	930	307	205
Other financial liabilities	14	14	20	20
Liabilities from finance leases	25	5	28	4
Derivative financial instruments	55	41	168	130
	6,446	**1,396**	**8,430**	**926**

Under current financial liabilities, non-current loans and bonds are recognized with their redemption installments due within one year. Moreover, current liabilities which serve short-term financing purposes are included under this item. The country-specific interest rates on these short-term loans fluctuate between 2.1% (2016: 0.9%) and 12.5% (2016: 5.7%).

The country-specific interest rate on the loans reported in non-current financial liabilities is between 1.25% (2016: 1.25%) and 4.75% (2016: 4.75%). Most of the financial liabilities have a fixed interest rate. Most of the loans are due at the end of the contractual term.

In July 2016, ZF entered into a new syndicated financing with an initial total volume of €3.5 billion. As of the reporting date, the loan still existed in form of a fully unused revolving credit line in the amount of €3.0 billion. Apart from other obligations, the loan agreement also includes a financial covenant that ZF has to comply with. It is defined as the ratio of net financial debt to adjusted, consolidated EBITDA. This financial covenant is tested quarterly and provides for an upper limit of indebtedness of 3.0. ZF met the requirement at all test dates in the past and on the reporting date.

20 Other liabilities

in € million	Dec. 31, 2017		Dec. 31, 2016	
	Total	Thereof current	Total	Thereof current
Liabilities to employees	777	733	719	696
Social contributions	52	52	59	59
Other tax liabilities	259	259	233	232
Tooling subsidies received	579	274	624	274
Prepayments received	83	68	81	61
Professional association	6	6	6	6
Deferred income	25	7	33	13
Sundry liabilities	482	468	522	502
	2,263	**1,867**	**2,277**	**1,843**

Other tax liabilities are mainly sales tax liabilities. Sundry liabilities include, among others, outstanding charges and customer credits, deferred liabilities for legal costs and costs of litigation as well as liabilities for licenses and commissions.

21 Other provisions

in € million	Dec. 31, 2017 Total	Dec. 31, 2017 Thereof current	Dec. 31, 2016 Total	Dec. 31, 2016 Thereof current
Obligations from sales	791	504	817	517
Obligations from personnel	214	43	214	40
Other obligations	298	143	337	168
	1,303	**690**	**1,368**	**725**

in € million	Jan. 1, 2017	Net exchange differences	Addition	Unwinding of the discount	Reclassi-fications	Utilization	Reversals	Dec. 31, 2017
Obligations from sales	817	−39	365	1	−5	−263	−85	791
Obligations from personnel	214	−5	90	2	−1	−75	−11	214
Other obligations	337	−28	37	0	0	−35	−13	298
	1,368	**−72**	**492**	**3**	**−6**	**−373**	**−109**	**1,303**

The provisions for obligations from sales primarily include provisions for warranty, product liability and punitive damages as well as for potential losses from delivery obligations.

The obligations from personnel mainly include provisions for restructuring measures and long-service expenses. Provisions for restructuring measures, above all, contain expenses for severance pay which will arise within the context of plant closures and relocations.

Other obligations include, among other things, provisions for litigation risks, environmental protection measures, other punitive damages as well as other tax risks.

Utilization of all current provisions is expected for the following fiscal year.

Non-current obligations from sales are expected to be utilized at a rate of 99% within the next five years. Also, about 31% of the provisions contained in the non-current obligations from personnel and about 50% of other non-current obligations will presumably be utilized in the next five years.

Expected reimbursements as of December 31, 2017 amount to €53 million (2016: €39 million), of which €53 million (2016: €39 million) was capitalized as assets.

22 Provisions for pensions

The provisions for pensions are broken down as follows:

	Present value of defined benefit plans			Plan assets	Net value	Financial assets	Provisions for pensions
in € million	Unfunded	Funded	Total			Net assets	Net liability
2017							
Germany	3,368	1,751	5,119	−1,748	3,371	64	3,435
United States of America	4	292	296	−248	48	0	48
United Kingdom	87	1,344	1,431	−2,013	−582	599	17
Other	83	88	171	−87	84	11	95
	3,542	3,475	7,017	−4,096	2,921	674	3,595
Obligations from medical care benefits	256	0	256	0	256	0	256
Balance sheet disclosure						**674**	**3,851**
2016							
Germany	3,406	1,812	5,218	−1,591	3,627	9	3,636
United States of America	6	323	329	−270	59	4	63
United Kingdom	118	1,454	1,572	−2,092	−520	550	30
Other	94	83	177	−86	91	10	101
	3,624	3,672	7,296	−4,039	3,257	573	3,830
Obligations from medical care benefits	310	0	310	0	310	0	310
Balance sheet disclosure						**573**	**4,140**

Provisions for pensions are set up for obligations from vested benefits and current pensions for entitled current and former employees of the consolidated ZF Group and their surviving dependents. Various retirement pension fund systems exist that depend on the legal, economic and tax situation in the respective country, which – as a rule – are based on the length of service and emoluments of the employees. A distinction has to be made in connection with company pension schemes between defined contribution plans and defined benefit plans.

Under defined contribution plans, the consolidated ZF Group does not enter into any obligations apart from the payment of contributions into earmarked funds and private pension insurance carriers.

Under defined benefit plans, the obligation of the consolidated ZF Group consists of fulfilling promised benefits to current and former employees, whereby a distinction is made between unfunded and funded pension systems.

Description of plans

The following paragraphs describe the most significant pension and post-employment medical care plans of the consolidated ZF Group. The essential risks for the company lie with the actuarial parameters, particularly interest rate and pension trend as well as mortality rates.

Germany (D)

Until December 31, 1993, defined benefit obligations depending on time of service and salary were granted. These were frozen and since then, they have been further developed according to the cost of living index. As of January 1, 1997, so-called pension modules were promised to pay-scale employees; the amount depends on the pensionable income in relation to the social security contribution ceiling of the statutory pension insurance. Since January 1, 2005, the allocated annual pension modules have been decoupled from the social security contribution ceiling. Since then, the modules' amounts have been calculated on the basis of the remuneration, the length of service, the respective classification of the position within the company hierarchy and the employee's age.

Within the scope of the acquisition of ZF TRW, ZF also acquired unfunded defined benefit plans in Germany. The plans are only open for new entries of executive managers as of a certain grade. The plan benefits depend upon salary, length of service and the cost of living index.

A Group-internal contractual trust arrangement (CTA) was concluded in 2016 to hedge various direct defined benefit obligations. In the context of a trusteeship agreement and to have adequate capital for pension obligations, assets were transferred to ZF Asset Trust e.V., Friedrichshafen, which acts as a trustee. This created plan assets, which are settled with the pension obligations on which they are based in the consolidated statement of financial position. In Germany, there are no legal or regulatory minimum funding requirements.

In the context of the "ZF Rente" pension scheme, employee-financed pension modules are awarded. Under these modules, employees may defer between 1% and 5% of their pensionable remuneration, where deferring at least 1% is compulsory. There are two rates: The first rate includes guaranteed interests of 3.5% for established employees before December 31, 2005. The second rate does not offer guaranteed interests for new employees as of 2006. Up to and including the year 2016, this direct grant was made in form of a participation in a multi-employer plan that constitutes a defined benefit plan. Since January 1, 2017, this is effected in form of a direct grant. The waiver amount is transferred to the assets of ZF Asset Trust e.V., Friedrichshafen, as trust funds.

United States of America (USA)

Due to past acquisitions, ZF maintains defined benefit plans in the USA. These plans are closed for new entrants. Any vesting of further entitlements is normally no longer possible. The plans are mainly funded and comply with the provisions of the U.S. Employee Retirement Income Security Act (ERISA).

In addition, ZF finances several unfunded post-employment medical care plans. These plans are closed for new entrants. The level of the benefits and the contributions for pensioners differ depending on the location. The major risks for grants of medical care benefits are increasing medical care costs as

well as a decreasing participation of the government in these costs. Moreover, these plans are subject to risks typical for defined-benefit grants, particularly the risk from changes in discount rates.

United Kingdom (GB)

ZF maintains funded defined benefit plans that have been closed. The major part of the defined benefit plans result from acquisitions of ZF made in the past. The plans are maintained pursuant to legal provisions and are managed by trust companies. The financing is determined every three years by technical valuations in compliance with local provisions.

Defined benefit plans

Changes in the present value of the defined benefit obligation and the fair value of the plan assets can be based on actuarial gains and losses. These can be caused, among other things, by changes in the calculation parameters, changes in estimates with regard to the risk trend of the pension obligations and differences between the actual and the expected return on plan assets.

The amount of the pension obligations was calculated in accordance with actuarial methods (present value of the defined benefit obligation) for which estimates are unavoidable. In addition to assumptions on life expectancy, fluctuation and expected salary increases, the following premises have a material effect on the amount of the obligation:

	2017		
in %	**D**	**USA**	**GB**
Discount rate	2.1	3.6	2.6
Pension increases	1.3	–	2.1 – 3.1

	2016		
in %	**D**	**USA**	**GB**
Discount rate	1.9	4.2	2.9
Pension increases	1.3	–	2.3 – 3.4

The average maturity period of the defined benefit obligations is as follows:

	2017		
in years	**D**	**USA**	**GB**
Average maturity	20	14	22

	2016		
in years	**D**	**USA**	**GB**
Average maturity	19	15	22

The pension obligations were measured using current mortality tables as of December 31 of the relevant fiscal year. The following mortality tables were used in the significant countries as of December 31, 2017:

D	Heubeck 2005 G mortality tables
USA	Modified RP-2014 tables
GB	2015 VITA Tables (averaged) with CMI2016

The following mortality tables were used in the significant countries as of December 31, 2016:

D	Heubeck 2005 G mortality tables
USA	RP2014, projected by MP2014
GB	S1PMA and S1PFA with CMI2015

The pension obligations resulting under the projected unit credit method are netted in the case of a funded pension system with the plan assets measured at fair value. As soon as the plan assets exceed the pension obligations, an asset is created which is recognized under non-current financial assets.

The development of the present value of the defined benefit obligations and the plan assets at fair value is presented as follows:

	2017				
in € million	**D**	**USA**	**GB**	**Other**	**Total**
Present value of the defined benefit obligations as of Jan. 1	**5,218**	**329**	**1,572**	**177**	**7,296**
Net exchange differences from plans abroad	0	−32	−49	−12	−93
Current service costs	140	0	1	13	154
Past service costs	14	0	0	3	17
Settlements	0	−41	−4	0	−45
Interest expenses	94	13	43	5	155
Contributions by plan participants	69	0	0	0	69
Actuarial gains (−) and losses (+) from the change in demographic assumptions	0	0	−20	0	−20
Actuarial gains (−) and losses (+) from the change in financial assumptions	−252	19	6	−8	−235
Actuarial gains (−) and losses (+) due to experience adjustments	13	15	15	3	46
Pension payments	−139	−7	−133	−6	−285
Other changes	−38	0	0	−4	−42
Present value of the defined benefit obligations as of Dec. 31	**5,119**	**296**	**1,431**	**171**	**7,017**
Plan assets at fair value as of Jan. 1	**1,591**	**270**	**2,092**	**86**	**4,039**
Net exchange differences from plans abroad	0	−32	−72	−9	−113
Settlements	0	−39	−4	0	−43
Expected return on plan assets	29	10	57	3	99
Actuarial gains (+) and losses (−) from the change in financial assumptions	67	35	71	2	175
Employer contributions to the plan assets	15	14	4	9	42
Employee contributions	69	0	0	0	69
Pension payments	−20	−7	−133	−4	−164
Other changes	−3	−3	−2	0	−8
Plan assets at fair value as of Dec. 31	**1,748**	**248**	**2,013**	**87**	**4,096**
Financing status as of Jan. 1	**3,627**	**59**	**−520**	**91**	**3,257**
Financing status as of Dec. 31	**3,371**	**48**	**−582**	**84**	**2,921**

	2016				
in € million	**D**	**USA**	**GB**	**Other**	**Total**
Present value of the defined benefit obligations as of Jan. 1	**4,445**	**321**	**1,361**	**167**	**6,294**
Net exchange differences from plans abroad	0	7	−202	3	−192
Current service costs	115	1	1	15	132
Past service costs	17	0	0	0	17
Settlements	0	−1	4	−3	0
Interest expenses	113	14	43	6	176
Contributions by plan participants	56	0	0	0	56
Actuarial gains (−) and losses (+) from the change in demographic assumptions	−2	0	38	0	36
Actuarial gains (−) and losses (+) from the change in financial assumptions	638	17	373	4	1,032
Actuarial gains (−) and losses (+) due to experience adjustments	−16	0	28	0	12
Additions (+)/disposals (−)	−2	0	0	−13	−15
Pension payments	−138	−30	−54	−4	−226
Other changes	−8	0	−20	2	−26
Present value of the defined benefit obligations as of Dec. 31	**5,218**	**329**	**1,572**	**177**	**7,296**
Plan assets at fair value as of Jan. 1	**494**	**231**	**1,934**	**73**	**2,732**
Net exchange differences from plans abroad	0	8	−281	3	−270
Settlements	0	−1	−20	0	−21
Expected return on plan assets	12	10	65	3	90
Actuarial gains (+) and losses (−) from the change in financial assumptions	6	14	446	3	469
Employer contributions to the plan assets	19	40	5	15	79
Employee contributions	47	0	0	0	47
Transfers to plan assets (+)/transfers from plan assets (−)	0	0	0	−5	−5
Pension payments	−21	−29	−54	−5	−109
Other changes	1,034	−3	−3	−1	1,027
Plan assets at fair value as of Dec. 31	**1,591**	**270**	**2,092**	**86**	**4,039**
Financing status as of Jan. 1	**3,951**	**90**	**−573**	**94**	**3,562**
Financing status as of Dec. 31	**3,627**	**59**	**−520**	**91**	**3,257**

The pension obligations result in expenses recognized through profit or loss of €225 million (2016: €236 million), which are made up of the following components:

	2017				
in € million	**D**	**USA**	**GB**	**Other**	**Total**
Current service costs	140	0	1	13	154
Past service costs	14	0	0	3	17
Curtailments and settlements	0	−2	0	0	−2
Unwinding the discount on net liabilities	65	3	−14	2	56
	219	**1**	**−13**	**18**	**225**

	2016				
in € million	**D**	**USA**	**GB**	**Other**	**Total**
Current service costs	115	1	1	15	132
Past service costs	17	0	0	0	17
Curtailments and settlements	0	0	4	−3	1
Unwinding the discount on net liabilities	101	4	−22	3	86
	233	**5**	**−17**	**15**	**236**

All components of the pension expenses recognized in profit or loss, with the exception of the interest portion, are reported in the functional areas.

The actuarial gains amounting to €384 million (2016: losses of €611 million) are recorded in other comprehensive income with no effect on profit or loss.

The plan assets consist of the following items:

in € million	2017	2016
Cash and cash equivalents	139	157
Securities		
Equity instruments	570	444
Debt instruments	3,015	3,103
Fund shares	911	644
Land and buildings	18	21
Derivatives	−99	−153
Others	−458	−177
	4,096	**4,039**

Securities are measured at prices quoted on active markets. The "Others" item is basically comprised of obligations from current repurchase agreements in the United Kingdom.

According to the best possible estimate, contributions to external pension funds will amount to €61 million for the next year. The 2016 estimate for the fiscal year 2017 was €69 million.

Pension payments until 2065 (2016: until 2060) are as follows:

in € million	2017	2016
within the upcoming fiscal year	215	228
between 2 and 5 years	864	856
between 5 and 10 years	1,328	1,408
due after more than 10 years	12,096	10,894

The calculation presents the actual pension payments and not just the pension modules earned by employee service rendered as of the closing date, i.e. pension modules that are to be allocated in future are also considered. In addition, it was assumed that the number of active employees remains constant. For the other calculation assumptions, the same parameters were used as for the determination of the defined benefit obligations.

The effect of a change in significant assumptions on the defined benefit obligations is shown in the following:

	2017				
in € million	D	USA	GB	Other	Total
Discount rate					
−0.25%	+252	+11	+79	+4	+346
+0.25%	−234	−10	−73	−4	−321
Pension increases					
−0.25%	−122	0	−47	0	−169
+0.25%	+128	0	+56	0	+184
Life expectancy					
−1 year	−192	−7	−40	−1	−240
+1 year	+191	+7	+40	+1	+239

	2016				
in € million	D	USA	GB	Other	Total
Discount rate					
−0.25%	+292	+12	+89	+14	+407
+0.25%	−215	−12	−81	−13	−321
Pension increases					
−0.25%	−160	0	−61	0	−221
+0.25%	+167	0	+66	0	+233
Life expectancy					
−1 year	−200	−7	−20	−11	−238
+1 year	+198	+7	+65	+12	+282

For the sensitivity analysis, pension obligations were remeasured. It was assumed that all other factors remain unchanged. For calculating the sensitivity of life expectancy, it was assumed that the average life expectancy of a 65-year-old individual will be increased and/or reduced by one year.

Disclosures on medical care benefits

Certain foreign subsidiaries, particularly in the USA and Canada, grant post-retirement benefits to their employees if specific conditions as to age and period of employment are met.

The average maturity period of the defined benefit obligations is 9 years (2016: 11 years).

The development of the present value of the defined benefit obligations and the plan assets at fair value is presented as follows:

in € million	2017	2016
Present value of the defined benefit obligations as of Jan. 1	**310**	**303**
Net exchange differences from plans abroad	−33	11
Current service costs	1	0
Interest expenses	9	12
Contributions by plan participants	1	1
Actuarial gains (−) and losses (+) from the change in demographic assumptions	0	−2
Actuarial gains (−) and losses (+) from the change in financial assumptions	−6	17
Actuarial gains (−) and losses (+) due to experience adjustments	−3	−5
Pension payments	−23	−27
Present value of the defined benefit obligations as of Dec. 31	**256**	**310**
Plan assets at fair value as of Jan. 1	**0**	**0**
Employer contributions to the plan assets	22	26
Employee contributions	1	1
Pension payments	−23	−27
Plan assets at fair value as of Dec. 31	**0**	**0**
Financing status as of Jan. 1	**310**	**303**
Financing status as of Dec. 31	**256**	**310**

The premises for discounting for the purpose of calculating the obligations for medical care benefits vary depending on the circumstances in the individual countries. As of December 31, 2017, the valuation factors for discounting were between 2.2% and 3.5% (2016: 1.9% and 3.4%).

The net expenses of the obligations for medical care benefits are comprised of as follows:

in € million	2017	2016
Current service costs	1	0
Unwinding the discount on net liabilities	9	12
	10	**12**

The actuarial gains amounting to €9 million (2016: losses of €10 million) are recorded in other comprehensive income with no effect on profit or loss.

The effect of a change in significant assumptions on the medical care obligations is shown in the following:

in € million	2017	2016
Discount rate		
−0.25%	+6	+7
+0.25%	−6	−6
Life expectancy		
−1 year	−14	−16
+1 year	+14	+16

23 Assets held for sale and disposal groups

in € million	2017	2016
Current assets		
Cash and cash equivalents	9	0
Trade receivables	125	0
Other assets	9	0
Inventories	43	0
Non-current assets		
Financial assets	0	108
Other assets	1	0
Intangible assets	528	0
Property, plant and equipment	181	0
Deferred taxes	8	0
Assets of disposal groups	**904**	**108**
Current liabilities		
Trade payables	91	0
Other liabilities	43	0
Income tax provisions	2	0
Other provisions	4	0
Non-current liabilities		
Other liabilities	28	0
Provisions for pensions	40	0
Other provisions	2	0
Deferred taxes	5	0
Liabilities of disposal groups	**215**	**0**

On August 30, 2017, ZF concluded an agreement with Luxshare Limited to sell its Body Control Systems Business Unit after the Supervisory Board of ZF Friedrichshafen AG had granted its consent. The full transfer of the business activity is expected to be completed in the first half of 2018. The Body Control Systems Business Unit, with its headquarters in Radolfzell (Germany) employs 6,000 people worldwide at 16 locations in eleven countries. The business activity develops and manufactures interior control components and supplies customers in Europe, Asia – China in particular – as well as North and South America. Its products for the automotive industry comprise switches, steering column control modules, electronic control panels, climate control systems as well as electrical and mechanical steering locks. In accordance with the rules set out in IFRS 5, the business activities put for sale qualify as disposal group and were reclassified accordingly as of September 1, 2017.

The asset reported under this item in the previous year was comprised of the shares held by ZF in Haldex Aktiebolag, Stockholm (Sweden). The Haldex shares were reclassified in the fiscal year 2017 to investments in participations, which are shown under the "non-current financial assets" line item. Initially, ZF acquired the Haldex shares as part of a takeover bid in 2016. As another company made a higher bid, ZF withdrew its bid and offered its shares for sale. In 2017, this bid was rejected due to antitrust law reasons. Since there was no immediate intention for disposal, there is no reason to report the asset as held for sale.

24 Equity

Subscribed capital

At the end of the fiscal year, the subscribed capital still amounts to €500 million. As of December 31, 2017, the subscribed capital is divided into 500,000,000 registered shares. All shares are fully paid in.

Capital reserve

At the end of the fiscal year, the capital reserve still amounts to €386 million. The capital reserve comprises the premium on the issuance of shares. It is subject to the restrictions of § 150 AktG (German Stock Corporation Law).

Other retained earnings

Other retained earnings contain the legal reserve of ZF Friedrichshafen AG and the accumulated earnings of the companies included in the consolidated financial statements to the extent that such accumulated earnings are not distributed. Asset and liability differences resulting from the capital consolidation in accordance with the book value method and the previously used accounting policies are also accounted for in this line item. Other components include the reserves from the first-time adoption of IFRS and the cumulative currency translation adjustments, which were reclassified when changing over to IFRS.

Foreign currency translation differences

The line item contains amounts not affecting profit or loss that result from the currency translation of the financial statements from foreign subsidiaries (non-euro area) recognized starting from the date of the first-time adoption of IFRS.

The change in equity resulting from foreign currency translation differences amounting to €–716 million (2016: €–28 million) is attributed to non-controlling interests with €–14 million (2016: €–11 million).

Mark-to-market of securities and cash flow hedges

This line item includes the post-tax effects of the financial instruments valuation that do not affect profit or loss.

Actuarial gains and losses

This line item contains the actuarial gains and losses from employer pension plans after tax, with no effect on profit or loss.

Deferred taxes on equity items not affecting profit or loss

	2017			2016		
in € million	**Before income tax**	**Income tax**	**After tax**	**Before income tax**	**Income tax**	**After tax**
Foreign currency translation differences	–716	0	–716	–28	0	–28
Mark-to-market of securities	–30	1	–29	–46	4	–42
Mark-to-market of cash flow hedges	79	–23	56	–60	8	–52
Actuarial gains and losses	393	–85	308	–621	181	–440
Other comprehensive income	**–274**	**–107**	**–381**	**–755**	**193**	**–562**

Dividends

ZF Friedrichshafen AG has proposed a dividend payout of €195 million for the fiscal year 2017 (€0.39 per share). In the fiscal year, a dividend of €50 million (€0.10 per share) for 2016 was paid.

25 Disclosures on capital management

The primary objective of capital management at the consolidated ZF Group is to ensure the financial stability and independence of ZF and to meet the requirements of the shareholders and lenders. Ensuring a sufficient equity ratio is an important basis for achieving this objective. The net financial position and the debt-equity ratio (net debt in relation to EBITDA) are central parameters for capital management at ZF with regard to external financing. The credit rating by the commissioned rating agencies is another vital indicator. The objective is to receive and maintain a solid Group rating in the investment grade range.

To achieve the named objectives, ZF seeks a further redemption of the financial liabilities borrowed in connection with the acquisition of ZF TRW.

In order to determine the equity ratio, the equity disclosed in the consolidated statement of financial position is used

	Dec. 31, 2017	Dec. 31, 2016
Equity in € million	6,785	6,115
Equity ratio in %	24	21

ZF Friedrichshafen AG is not subject to by-laws-based capital requirements.

Notes to the Consolidated Statement of Cash Flows

26 General

The consolidated statement of cash flows shows how the cash position of the consolidated ZF Group changed during the fiscal year due to the inflow and outflow of funds. A distinction is drawn between cash flows from operating, investing and financing activities.

The cash position presented in the consolidated statement of cash flows covers all cash and cash equivalents reported in the consolidated statement of financial position, i.e. cash on hand and cash at banks, available at any time for use by the consolidated ZF Group.

Cash is comprised as follows:

in € million	Dec. 31, 2017	Dec. 31, 2016
Cash and cash equivalents	1,315	1,627
Cash and cash equivalents of asset groups held for sale	9	0
	1,324	1,627

The cash flows from investing and financing activities are determined on the basis of payments. The cash flow from operating activities, on the other hand, is indirectly derived from the net profit or loss before income tax.

Dividends and interest received are assigned to the cash flow from investing activities. Interest and transaction costs paid for borrowings are included in cash flow from financing activities. To this end, the net profit or loss before income tax in the cash flow from operating activities is adjusted by the net result from participations and the financial result.

As part of the indirect calculation, the changes in financial line items taken into account in conjunction with the operating activities are adjusted for effects from the translation of foreign currencies and changes in the basis of consolidation. Changes in the respective financial line items can therefore not be reconciled to the corresponding values on the basis of the published consolidated statement of financial position.

27 Proceeds from the sale of consolidated companies

The divestments in assets and liabilities from the share deals relate to the following:

in € million	2017	2016
Current assets	0	639
thereof cash and cash equivalents	0	11
Non-current assets	0	69
Current liabilities	0	219
Non-current liabilities	0	22

In the previous year, the sales price amounted to €501 million, €498 million of which was paid in cash.

28 Changes of financial liabilities

The change in financial liabilities from financing activities due to cash and non-cash effects is as follows:

			Non-cash changes			
in € million	Carrying amount as of Jan. 1	Change in cash	Reclassification	Currency effects	Other	Carrying amount as of Dec. 31
Current financial liabilities	792	234	337	21	−34	1,350
Non-current financial liabilities	7,442	−1,685	−337	−444	40	5,016

The presentation does neither consider liabilities from finance lease contracts nor derivative financial instruments. Changes in cash involve taking on and extinguishing financial liabilities. Other non-cash changes are comprised of changes in deferred interests (partly cash items) as well as cancelation of loan-raising costs.

Other Disclosures

29 Contingent liabilities

No provisions were set up for the following contingent liabilities, which are recognized at nominal values, because the probability of a claim is deemed to be low:

in € million	Dec. 31, 2017	Dec. 31, 2016
Guarantees	24	55
thereof for participations	1	2
Other	148	168
	172	**223**

The guarantees are due within a year when fully utilized. The other contingent liabilities essentially refer to potential liabilities from procurement and personnel as well as from litigation and other taxes. Like in 2016, there were no collaterals for contingent liabilities during the fiscal year.

30 Other financial obligations

In addition to liabilities, provisions and contingent liabilities, other financial obligations result in particular from rental and leasing agreements, investment projects launched and procurement agreements initiated.

in € million	Dec. 31, 2017	Dec. 31, 2016
Rental and leasing payments	678	631
Purchase commitments	776	736
Payment obligations on participations	17	14
	1,471	**1,381**

The purchase commitments account for €211 million (2016: €209 million) for intangible assets and €565 million (2016: €527 million) for property, plant and equipment.

The total future minimum lease payments from non-cancelable rental agreements and operating leases by maturities are as follows:

in € million	Dec. 31, 2017	Dec. 31, 2016
Nominal total future minimum lease payments		
due within a year	157	147
due between one and five years	378	344
due after more than five years	143	140
	678	**631**

The major rental agreements refer to production, warehousing and office buildings with terms of up to 44 years. Besides price adjustment clauses that provide for an annual fixed percentage increase, some contracts also contain agreements that are aligned with a change in the defined consumer price indexes. Most agreements include extension options or automatic contract extensions. For some leased objects, the option to acquire them is part of the agreement. Additional leasing contracts refer to fleet, machines, computer hardware and software as well as other factory and office equipment with terms of up to ten years.

For some of these contracts, extension options or automatic contract extensions are available, as well as options to acquire the object leased at the end of the contractual period at market value.

31 Litigation

For a pending antitrust case at ZF TRW, a provision for the risk of an antitrust penalty existing in this context has been recorded. The point of time at which the suit will be completed as well as the outcome of the procedure are uncertain.

In the fiscal year 2014, the premises of a ZF subsidiary were searched in connection with an ongoing antitrust investigation procedure. The reason for the investigation was the suspected involvement of the subsidiary in illegal antitrust price agreements. ZF is fully cooperating with the investigating authorities in another procedure at one of its subsidiaries. The duration and outcome of the procedures are uncertain.

In addition, the premises of ZF were searched in 2016 in connection with another antitrust investigation procedure. The reason for this investigation was the suspicion of the Bundeskartellamt [Federal Cartel Office] that ZF was involved in agreements regarding steel purchasing that violate antitrust law. In this case, ZF again fully cooperates with the investigating authorities. The duration and outcome of the procedure are uncertain.

Apart from that, ZF is involved in ongoing arbitration proceedings for which adequate provisions were made.

In a pending action in the USA against several companies from the automotive industry, ZF is mentioned together with other OEMs and suppliers. The pending action is not directed against ZF, though.

In addition, neither ZF nor any of its Group companies are engaged in current or foreseeable court or arbitration proceedings, which have had in the past or could have a significant impact on the economic situation of the consolidated ZF Group.

32 Disclosures on financial instruments

Carrying amounts of the financial instruments by categories

The following table shows the recognized financial assets and liabilities by measurement categories:

in € million	Dec. 31, 2017	Dec. 31, 2016
Assets		
Loans and receivables	6,709	6,950
Available-for-sale financial assets	138	52
Financial assets held for trading	24	0
Derivative financial instruments (hedge accounting) [1]	31	72
	6,902	**7,074**
Liabilities		
Financial liabilities at amortized cost	12,376	13,595
Liabilities from finance leases [1]	25	28
Financial liabilities held for trading	25	8
Derivative financial instruments (hedge accounting) [1]	30	160
	12,456	**13,791**

[1] No IAS 39 measurement categories.

Fair values

The fair values of the financial assets and liabilities are presented below. Provided that financial assets and liabilities are recognized at amortized cost, the fair value is compared to the carrying amount.

The following table shows the carrying amounts and the fair values of the financial assets and liabilities recognized at amortized cost. Due to short maturities, the carrying amounts of the current financial instruments recognized at cost approximate the fair values.

in € million	Dec. 31, 2017		Dec. 31, 2016	
	Carrying amount	Fair value	Carrying amount	Fair value
Assets				
Loans and receivables				
Cash and cash equivalents	1,315	1,315	1,627	1,627
Financial receivables	91	91	103	103
Trade receivables	5,303	5,303	5,220	5,220
	6,709	**6,709**	**6,950**	**6,950**
Liabilities				
Financial liabilities at amortized cost				
Bonds	4,133	4,412	5,599	5,889
Bonded loans	1,249	1,337	2,308	2,382
Liabilities to banks	970	970	307	300
Other financial liabilities	14	14	20	20
Trade payables	6,010	6,010	5,361	5,361
Liabilities from finance leases [1]	25	25	28	28
	12,401	**12,768**	**13,623**	**13,980**

[1] No IAS 39 measurement categories.

In the following, the financial instruments are allocated to the three levels of the fair value hierarchy based on the input parameters drawn on for the valuation. The classification as well as the need to perform reclassifications is reviewed on the reporting date. Level 1 covers those financial instruments for which prices for identical assets and liabilities quoted on active markets are available. Allocation to level 2 occurs if input parameters are drawn on for valuating the financial instruments that are directly (e.g. prices) or indirectly (e.g. derived from prices) observable on the market. In level 3, financial instruments are accounted for whose valuation is based on information that is not observable on the market.

The following table shows the allocation of the fair values of the financial instruments recognized at amortized cost to the three levels of the fair value hierarchy:

in € million	Dec. 31, 2017			
	Level 1	Level 2	Level 3	Total
Assets				
Loans and receivables				
Cash and cash equivalents	0	1,315	0	1,315
Financial receivables	0	91	0	91
Trade receivables	0	5,303	0	5,303
	0	**6,709**	**0**	**6,709**
Liabilities				
Financial liabilities at amortized cost				
Bonds	4,412	0	0	4,412
Bonded loans	0	1,337	0	1,337
Liabilities to banks	0	970	0	970
Other financial liabilities	0	14	0	14
Trade payables	0	6,010	0	6,010
Liabilities from finance leases [1]	0	25	0	25
	4,412	**8,356**	**0**	**12,768**

[1] No IAS 39 measurement categories.

in € million	Dec. 31, 2016			
	Level 1	Level 2	Level 3	Total
Assets				
Loans and receivables				
Cash and cash equivalents	0	1,627	0	1,627
Financial receivables	0	103	0	103
Trade receivables	0	5,220	0	5,220
	0	**6,950**	**0**	**6,950**
Liabilities				
Financial liabilities at amortized cost				
Bonds	5,889	0	0	5,889
Bonded loans	0	2,382	0	2,382
Liabilities to banks	0	300	0	300
Other financial liabilities	0	20	0	20
Trade payables	0	5,361	0	5,361
Liabilities from finance leases [1]	0	28	0	28
	5,889	**8,091**	**0**	**13,980**

[1] No IAS 39 measurement categories.

Except for bonds, the market values of assets and liabilities were calculated using the net present value method. Here, the future cash flows were discounted with the current risk-free interest rates matching the maturities plus a ZF-specific credit risk markup. Bonds were calculated using the fair value on the market.

Financial liabilities from finance lease contracts are recognized considering the contractually agreed interest rate. The fair value was determined according to the standard market interest rate.

The following table shows the financial instruments recognized at fair value. Of the fair value of investments in participations, which amount to a total of €138 million, the amount of €58 million cannot be determined reliably because there is no active market for these participations and their fair value cannot be determined reliably. The investments in participations are included in the available-for-sale financial assets category.

in € million	Dec. 31, 2017	Dec. 31, 2016
Assets		
Available-for-sale financial assets		
Investments in participations	80	2
Financial assets held for trading		
Derivative financial instruments	24	0
Derivative financial instruments (hedge accounting)[1]	31	72
	135	**74**
Liabilities		
Financial liabilities held for trading		
Derivative financial instruments	25	8
Derivative financial instruments (hedge accounting)[1]	30	160
	55	**168**

[1] No IAS 39 measurement categories.

In the following, the financial instruments recognized at fair value are allocated to the three levels of the fair value hierarchy based on the input parameters drawn on for the valuation:

	Dec. 31, 2017			
in € million	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Investments in participations	80	0	0	80
Derivative financial instruments	0	55	0	55
	80	**55**	**0**	**135**
Liabilities				
Derivative financial instruments	0	55	0	55

	Dec. 31, 2016			
in € million	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Investments in participations	2	0	0	2
Derivative financial instruments	0	72	0	72
	2	**72**	**0**	**74**
Liabilities				
Derivative financial instruments	0	168	0	168

In the fiscal year, no reclassification took place between levels 1 and 2 of the fair value hierarchies.

Investments in level 1 participations which are traded on an active market are recognized at share prices of the stock exchange of the respective country.

The level 2 derivative financial instruments concern non-tradable derivatives. Fair values are determined on the basis of fixed prices quoted on approved stock exchanges discounted for the remaining term (foreign currency exchange rates, interest rates and raw material price indexes).

The following table illustrates the development of securities assigned to level 3 of the fair value hierarchy:

	Securities	
in € million	**2017**	**2016**
As of Jan. 1	**0**	**17**
Fair value changes recognized through profit and loss	0	−1
Fair value changes recognized through other comprehensive income	0	1
Purchases	0	15
Sales	0	−32
As of Dec. 31	**0**	**0**

Gains and losses recognized in profit or loss are recognized in other financial income and financial expenses. Gains not affecting profit or loss are recognized in the market valuation of securities or market valuation of cash flow hedges.

Net gains and losses by measurement categories

in € million	Interests	Impairments	Other net gains and losses	Total net gains and losses
2017				
Loans and receivables	29	2	−40	**−9**
Available-for-sale financial assets				
recognized at fair value	0	0	−30	**−30**
recognized at cost	0	−2	1	**−1**
Financial liabilities at amortized cost	−343	0	−13	**−356**
2016				
Loans and receivables	37	−10	57	**84**
Available-for-sale financial assets				
recognized at fair value	19	−5	51	**65**
recognized at cost	0	−1	18	**17**
Financial assets at fair value through profit or loss	0	0	2	**2**
Financial instruments held for trading	0	0	6	**6**
Financial liabilities at amortized cost	−349	0	−6	**−355**

Other net gains and losses related to “Loans and receivables” primarily contain exchange rate gains and losses from foreign currency receivables as well as expenses derived from the derecognition of receivables.

The other net gains and losses in the "Available-for-sale financial assets (recognized at fair value)" measurement category include unrealized fair value losses. Income from the disposal of securities was reported in 2016. The gain or loss recognized in other comprehensive income during the reporting period as well as the amount reclassified from equity to profit or loss is shown in the consolidated statement of comprehensive income.

The other net gains and losses in the "Available-for-sale financial assets (recognized at cost)" measurement category essentially include the dividend income from participations.

The other net gains and losses of the "Financial assets recognized at fair value through profit or loss" measurement category in 2016 included, in particular, the fair value gains and losses from securities in this category as well as exchange rate gains and losses.

The other net gains and losses from the "Financial liabilities at amortized cost" measurement category primarily contain exchange rate gains and losses from foreign currency liabilities as well as income from derecognized liabilities.

Offsetting financial assets and financial liabilities

Financial assets and liabilities which are subject to settlement agreements, enforceable master netting arrangements and similar agreements:

	Dec. 31, 2017		
in € million	**Gross amount**	**Offsetting**	**Net amount**
Offset items			
Trade receivables (current)	5,396	93	5,303
Trade payables (current)	6,029	93	5,936
Eligible for offsetting in the event of insolvency			
Derivative financial instruments (assets)	55	41	14
Derivative financial instruments (liabilities)	55	41	14

	Dec. 31, 2016		
in € million	**Gross amount**	**Offsetting**	**Net amount**
Offset items			
Trade receivables (current)	5,303	83	5,220
Trade payables (current)	5,418	83	5,335
Eligible for offsetting in the event of insolvency			
Derivative financial instruments (assets)	72	57	15
Derivative financial instruments (liabilities)	168	57	111

The framework contracts concluded with the banks for financial futures regulate, among other things, that in the event of insolvency of a contracting party, existing contracts will have to be terminated and settled at the respective market value. Provided that several transactions are settled for a contracting party, positive and negative market values are offset and only the remaining difference is settled. As of December 31, 2017, no risk arises from this regulation due to the excellent credit rating of our banks.

33 Risks from financial instruments

Management of financial risks

The risk management system of ZF's Finance Department covers counterparty and credit risks with customers and suppliers, liquidity and interest rate risks as well as currency and raw material price risks.

Reports on the essential risk positions of the consolidated ZF Group are presented to the Board of Management and the Supervisory Board on a regular basis. Compliance with the guidelines is audited by the internal auditors. The foreign currency risk is measured based on a value-at-risk analysis. The value-at-risk indicates only the potential risk of loss, which with defined probability will not be exceeded within a specifically determined time frame (holding period). However, the method does not provide any information as to the time such a threshold might be crossed or the amount of the expected loss in case the value-at-risk is exceeded. As a result, the actual development may deviate from the result of the value-at-risk analysis.

The companies of the consolidated ZF Group (excluding ZF TRW companies) hedge their interest rate, foreign currency and raw material price risks at prevailing market conditions either through ZF Cash Management at ZF Friedrichshafen AG or directly with banks. Derivative financial instruments with plain vanilla character are used. These are used exclusively to hedge existing underlying or forecast transactions. At the ZF TRW companies, the above-mentioned risks are hedged with banks via the responsible treasury hub based on predetermined rules. Only derivative financial instruments with plain vanilla character are used here as well.

Risk items of ZF Cash Management are hedged externally at banks with excellent credit rating taking into account prescribed risk limits. Hedging transactions are concluded in accordance with uniform corporate policies and in line with bank regulations on the operating of trading business. They are subject to stringent monitoring, which is ensured in particular by the strict separation of duties between trading, settlement and control.

Credit and counterparty risk

Credit risk is the risk that contractual partners in the areas of financial investments, financial receivables, and trade receivables will not meet their payment obligations.

In order to reduce the counterparty risk for financial investments and derivatives, all financial transactions are carried out only with banks with a first-class credit rating within the framework of defined limits. These limits are reviewed monthly and adjusted, if necessary.

The financial assets of the consolidated group lead to a maximum credit risk if one counterparty defaults, amounting to the carrying amount of the respective financial line item without considering collaterals received (plus the maximum utilization for financial guarantees as well as loan commitments to third parties).

The amount of outstanding trade receivables mainly concerns passenger car, commercial vehicle, off-road machinery and wind turbine manufacturers worldwide.

In order to reduce the credit risk, the credit worthiness of customers as well as our receivables are subject to continuous monitoring in the context of an SAP-based credit management. In some instances, credit risks are reduced by appropriate hedging measures such as trade credit insurances. The carrying amount of trade receivables covered by trade credit insurances is €378 million (2016: €279 million). In addition, trade receivables are sold to a small extent. The major risks are transferred to the purchaser upon the assignment of such receivables, and the receivables are therefore derecognized.

The creditworthiness of our strategic suppliers is constantly monitored in order to secure our value added chain. By concentrating new contract awarding decisions on creditworthy suppliers, the portfolio quality of our suppliers is continuously improved.

Liquidity risk

The expected future outflow of funds due to principal and interest payments for financial liabilities and trade payables is contained in the medium-term liquidity planning.

The following table lists the maturity structure of principal and interest payments for the financial liabilities and trade payables:

	Carrying amount as of Dec. 31, 2017	Cash outflow		
in € million	**Total**	**2018**	**2019 to 2023**	**2024 and beyond**
Bonds	4,133	141	3,719	962
Bonded loans	1,249	356	961	0
Liabilities to banks	970	938	40	1
Other financial liabilities	14	18	0	0
Trade payables	6,010	5,936	72	2
Liabilities from finance leases	25	5	17	10
	12,401	**7,394**	**4,809**	**975**

	Carrying amount as of Dec. 31, 2016	Cash outflow		
in € million	**Total**	**2017**	**2018 to 2022**	**2023 and beyond**
Bonds	5,599	203	3,955	2,733
Bonded loans	2,308	515	1,442	483
Liabilities to banks	307	237	91	10
Other financial liabilities	20	20	0	0
Trade payables	5,361	5,335	26	0
Liabilities from finance leases	28	5	20	11
	13,623	**6,315**	**5,534**	**3,237**

The financial liabilities derive primarily from the financing of the ZF TRW acquisition in May 2015 and are largely fixed interest-bearing. The euro and USD bonds issued in this context have final maturities ranging from 2019 to 2025 and notional amounts as of the reporting date of €2,225 million and $2,247 million, respectively (2016: €2,250 million and $3,377 million, respectively). The decrease of the outstanding nominal amount of USD bonds is the result of a buy-back completed in December 2017 and a partial premature termination. The transaction was refinanced in part through a short-term bank loan which amounted to $700 million as of the reporting date. ZF plans to redeem this bridge financing using the proceeds from the sale of the Body Control Systems Business Unit. The bonded loans outstanding as of the reporting date have final maturities ranging from 2018 to 2022 and a nominal amount totaling €1,218 million (2016: €2,274 million). In the past fiscal year, ZF terminated prematurely three tranches of its bonded loans with final maturity originally in the time frame between 2018 and 2022 and in the total amount of €991 million. The tranche due in 2018 has a volume of €325 million and has already been repaid as scheduled in January 2018. The syndicated loan was refinanced in 2016 and had a remaining amount of €3.0 billion in form of a revolving credit line, which was completely unused as of the reporting date. A contractually agreed extension option was exercised, so that the loan now has a residual term until July 2022.

Foreign currency risk

The foreign currency risk is the risk that the fair values or future cash flows of monetary items are negatively influenced due to exchange rate changes.

As a result of its international orientation, the ZF Group carries out transactions in different currencies. Hedging measures for planned foreign currency sales from the volume production business are carried out in the consolidated ZF Group within the framework of prescribed hedging ranges and within defined maximum limits. The net principle applies to foreign currency hedging, i.e. hedging takes place for the net items from bilateral cash flows. Foreign currency hedging is carried out mainly via forward exchange options.

Individual hedging is carried out for the project business (gross principle).

The translation risk from the measurement of line items is not hedged – the risks thereof will be controlled and gradually reduced via consistent localization of our main activities.

The expected cash outflow from derivative financial instruments results from the following presentation:

in € million	Market value	Cash outflow		
		Total	Within a year	1 to 5 years
Dec. 31, 2017				
Foreign currency hedging contracts				
Assets	55	1,604	1,246	358
Liabilities	−55	1,510	1,094	416
Dec. 31, 2016				
Foreign currency hedging contracts				
Assets	72	1,383	1,020	363
Liabilities	−168	2,778	2,143	635

As of December 31, 2017, there are derivative financial instruments held as assets in the amount of €29 million (2016: €19 million) and derivative financial instruments held as liabilities in the amount of €30 million (2016: €111 million) that are used to hedge future cash flows. The hedged cash flows will come into effect between 2018 and 2022. If the prerequisites of hedge accounting are met, market value changes recognized with no effect on profit or loss are reclassified to profit or loss for the period and/or are recognized in the acquisition costs.

For fair value hedges, changes in value from hedging transactions amount to €2 million (2016: €−3 million) as well as changes in value from underlying transactions of €−2 million (2016: €3 million).

In the ZF Group, the currency risk is currently monitored using a value-at-risk analysis, without taking into account ZF TRW. At the end of the fiscal year 2017, the largest amount of the hedging volume was allocated to the US dollar, so the value at risk analysis is limited to exchange rate fluctuations of the US dollar as a substantial currency risk.

With no change in relation to the prior year, the value-at-risk is calculated based on a variance-covariance method under the assumption of a confidence level of 84.1% with a holding period of twelve months. Based on the analysis available as of the reporting date, the potential maximum risk of loss amounts to €29 million (2016: €21 million). The calculation was based on an average exchange rate volatility of 7.33% (2016: 10.65%) as well as a target price of $1.20 per euro. The method applied does not account for effects from favorable exchange rate changes and assumes a uniform open US dollar position. Deviating from the maximum potential risk of loss as of the reporting date, the average maximum potential risk of loss in fiscal year 2017 amounted to €26 million.

The maximum risk of loss is calculated taking into account the average exchange rate volatility of the past twelve months in relation to the open US dollar position from operational business. The open US dollar position is calculated based on the amount of cash and loans in US dollars as of the closing date that are administered by ZF Cash Management and net incoming payments expected to be received in the following twelve months based on current corporate planning, taking into account the hedged amounts. To limit the risk of loss, an upper limit was agreed upon with the Board of Management.

Since the open US dollar positions include, as of the reporting date, the net incoming payments expected based on the current corporate planning, the analysis is not representative for the US dollar balance as of the reporting date.

ZF TRW follows a central and systematic approach to hedge foreign currency sales using defined hedging targets based on a quarterly rolling 2-year forecast of foreign currency cash flows.

The following table shows the hypothetical effects on equity and profit or loss (in both cases excluding tax effects) if the US dollar increases or decreases in value by 10% against the major currencies of ZF TRW:

in € million	Effect on equity	Effect on profit or loss
Appreciation of the US dollar by +10%	−10	0
Devaluation of the US dollar by −10%	+10	0

Raw material price risk

The raw material price risk is the risk that the acquisition cost from the purchase of production equipment and operational materials will change.

Derivative financial instruments are used to a minor extent at the consolidated ZF Group to reduce raw material price risks. The risk from these hedging transactions can be rated as insignificant for the fiscal year. Therefore, a sensitivity analysis for such derivative financial instruments is dispensed with.

Interest rate risk

The interest rate risk is the risk that the fair values or future cash flows of financial instruments will fluctuate due to changes in the market interest rate.

The interest rate risk is hedged on a case-by-case basis. The market values of the interest swaps can be rated as insignificant for the fiscal year.

An increase by 60 (2016: 30) base points in the average interest rate for financial liabilities in US dollars on a floating rate basis, which are not covered by interest hedging transactions, would influence the net profit or loss before income tax in the amount of €−11 million (2016: €−7 million). A decrease of the average interest rate by 60 (2016: 30) base points would raise the net profit or loss before income tax by €11 million (2016: €0 million). With financial liabilities denominated in euro, neither an increase nor a decrease by 30 base points would have a material effect on the net profit or loss before income tax.

Both in case of an increase in the average interest rate for financial investments in euro by 30 (2016: 30) base points and in case of a decrease by 30 (2016: 30) base points, the interest rate for financial investments in euro would be below 0%. As ZF did not have to pay any negative interest for financial investments in the past, both the interest rate increase and the interest rate reduction would not have any material effect on net profit or loss before income tax due to the contractual arrangements.

The sensitivity analysis was drawn up under the assumption that the amount of loans from banks and of financial investments as well as the ratio of fixed and variable interest rates will remain at the same level. Due to the most recent interest rate development, the base points used for the calculation were changed compared to the previous year for financial liabilities in US dollars with variable interest rates.

34 Government grants

In the fiscal year 2017, €18 million (2016: €18 million) in government grants was received. They were divided as follows:

in € million	2017	2016
Investment grants	10	12
Expense subsidies	8	6

Investment grants were basically received for investments at various locations in the USA, Germany, Belgium, Russia and Australia.

Expense subsidies mainly comprise research subsidies and subsidies for education and vocational training.

35 Related party transactions

In accordance with IAS 24, persons or companies that control or are controlled by the consolidated ZF Group have to be disclosed to the extent that they are not already included in the consolidated financial statements of ZF Friedrichshafen AG as a consolidated company. Here, control is exercised if a shareholder holds more than half of the voting rights or is able, by virtue of terms in the by-laws or contractual agreements, to govern management's financial and operating policies. In addition, the disclosure obligations under IAS 24 extend to transactions with associates and transactions with persons who exercise a significant influence over the financial and operating policies, including close members of the family or interposed companies. A significant influence on the financial and operating policies of the consolidated ZF Group can be based on a shareholding of 20% or more in ZF Friedrichshafen AG, a seat on ZF Friedrichshafen AG's Board of Management or Supervisory Board, or another key position in management.

Accordingly, the related parties of ZF Friedrichshafen AG include joint ventures, associates and enterprises in which ZF Friedrichshafen AG holds at least 20% of the shares, the Zeppelin Foundation as a special fund of the City of Friedrichshafen, the Dr. Jürgen and Irmgard Ulderup Foundation as well as its affiliated companies.

Transactions with related companies and the receivables and liabilities existing on the reporting date result without exception from the ordinary business activities and are displayed as follows:

in € million	Joint ventures	Associates	Other participations
2017			
Supplies and services rendered			
Sale of goods	95	3	7
Services	8	4	11
Other services	4	0	0
Supplies and services received			
Sale of goods	18	108	5
Services	0	3	49
Other services	0	0	4
Receivables	28	22	13
Liabilities	2	17	12

in € million	Joint ventures	Associates	Other participations
2016			
Supplies and services rendered			
Sale of goods	68	4	28
Services	2	0	1
Other services	5	0	12
Supplies and services received			
Sale of goods	9	86	17
Services	0	1	45
Other services	0	0	3
Receivables	20	17	13
Liabilities	1	11	23

A transaction beyond ordinary business activities as of the reporting date includes a loan of €1 million (2016: €2 million) granted by ZF Friedrichshafen AG to Internationale Bodensee-Messe Friedrichshafen GmbH, Friedrichshafen (Germany). This loan bears an interest rate of 4.0% p.a. (2016: 4.0%).

36 Board of Management and Supervisory Board compensation

The current emoluments of the active members of the Board of Management for the fiscal year 2017 amount to €10.3 million (2016: €13.4 million). Payments for pension rights acquired in the fiscal year for the active members of the Board of Management total €2.4 million (2016: €2.6 million). The claim to contingent other long-term benefits attributable to the fiscal year amounts to €6.4 million (2016: €12.4 million).

Total emoluments thus amount to €19.1 million (2016: €28.4 million).

The emoluments of former members of the Board of Management and their surviving dependents amount to €14.1 million (2016: €5.8 million). The pension provisions for former members of the Board of Management and their surviving dependents amount to €63.6 million (2016: €65.8 million).

The emoluments of the Supervisory Board for the fiscal year 2017 amount to €2.5 million (2016: €1.4 million).

Moreover, the companies of the consolidated ZF Group have not carried out any reportable transactions whatsoever with members of the Board of Management or the Supervisory Board of ZF Friedrichshafen AG and 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.

37 Personnel

The annual average number of employees was 142,857 (2016: 137,258), of whom 75,863 were direct employees (2016: 72,369) and 66,994 were indirect employees (2016: 64,889). At the end of the year, the consolidated ZF Group had 146,148 (2016: 136,820) employees. Direct employees are employees whose activities depend on the production volume and can be allocated directly to the products.

38 Appointed auditor fees

Fees of the consolidated Group's auditing firm, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, recorded in the consolidated statement of profit or loss amount to €3 million for auditing services. The total consolidated Group-wide fees of Ernst & Young amount to €11 million for auditing services and €3 million for tax advisory services. Apart from Ernst & Young, other auditing companies work for the consolidated Group.

39 Listing of the shares held as of December 31, 2017

Consolidated subsidiaries

Domestic	Share in capital in %
FTU Beteiligungsverwaltung GmbH, Auerbach, Germany	100.0 [1]
GAT – Gesellschaft für Antriebstechnik mbH, Alsdorf, Germany	100.0 [1]
Lemförder Electronic GmbH, Espelkamp, Germany	100.0 [1]
Lucas Automotive GmbH, Koblenz, Germany	100.0 [1]
Lucas Automotive Grundstücksverwaltungs AG & Co. KG, Koblenz, Germany	100.0
Lucas Varity GmbH, Koblenz, Germany	100.0 [1]
Lucas Varity Grundstücksverwaltungs AG & Co. KG, Koblenz, Germany	100.0
TRW Airbag Systems GmbH, Aschau am Inn, Germany	100.0 [1]
TRW Airbag Systems Grundstücksverwaltungs AG & Co. KG, Aschau am Inn, Germany	100.0
TRW Automotive Electronics & Components GmbH, Radolfzell, Germany	100.0
TRW Automotive Electronics & Components Grundstücksverwaltungs AG & Co. KG, Radolfzell, Germany	100.0
TRW Automotive GmbH, Alfdorf, Germany	100.0 [1]
TRW Automotive Grundstücksverwaltungs AG & Co. KG, Alfdorf, Germany	100.0
TRW Automotive Holding GmbH & Co. KG, Alfdorf, Germany	100.0
TRW Automotive Holding Verwaltungs GmbH, Alfdorf, Germany	100.0
TRW Automotive Mexico GmbH, Alfdorf, Germany	100.0
TRW Automotive Safety Systems GmbH, Aschaffenburg, Germany	100.0 [1]
TRW Automotive Safety Systems Grundstücksverwaltungs AG & Co. KG, Aschaffenburg, Germany	100.0
TRW Deutschland Holding GmbH, Koblenz, Germany	100.0 [1]
TRW KFZ Ausrüstung GmbH, Neuwied, Germany	100.0 [1]
TRW Logistics Services GmbH, Überherrn, Germany	100.0 [1]
TRW Receivables Finance GmbH, Eschborn, Germany	100.0 [1]
ZF Asia-Pacific Holding GmbH, Friedrichshafen, Germany	100.0 [2]
ZF Aurelia GmbH, Friedrichshafen, Germany	100.0 [2]
ZF Auslandsverwaltungs GmbH, Friedrichshafen, Germany	100.0
ZF Cassiopeia GmbH, Friedrichshafen, Germany	100.0 [2]
ZF Europa Beteiligungs GmbH, Friedrichshafen, Germany	100.0 [2]
ZF Getriebe Brandenburg GmbH, Brandenburg, Germany	100.0 [1] [2]
ZF Gusstechnologie GmbH, Nuremberg, Germany	100.0 [1] [2]
ZF Industrieantriebe Witten GmbH, Witten, Germany	100.0 [1] [2]
ZF Luftfahrttechnik GmbH, Calden, Germany	100.0 [1] [2]
ZF NewCo II GmbH, Friedrichshafen, Germany	100.0
ZF Nürnberg Trading and Asset GmbH & Co. KG, Nuremberg, Germany	100.0 [1]
ZF RACE ENGINEERING GmbH, Schweinfurt, Germany	100.0 [1] [2]
Zukunft Ventures GmbH, Friedrichshafen, Germany	100.0 [1] [2]

[1] The company lays claim to exemption from disclosing the annual financial statements according to § 264, Section 3, HGB (Commercial Code).
[2] There is a profit and loss transfer agreement.
[3] 100 % voting rights
[4] Control is exercised through influence-dependent management.

Foreign	Share in capital in %
Alfaro Brakes S.L.U., Corella, Spain	100.0
Autocruise Limited, Shirley, Great Britain	100.0
Autocruise S.A.S., Plouzane, France	100.0
Automotive Holdings (Spain) S.L.U., Vigo, Spain	100.0
Automotive Holdings (UK) Limited, Shirley, Great Britain	100.0
Bryce Berger Limited, Shirley, Great Britain	100.0
Cityday Limited, Shirley, Great Britain	100.0
Compagnie Financière de ZF SAS, Andrézieux-Bouthéon, France	100.0
Dalphi Metal España, S.A., Vigo, Spain	78.4
Dalphi Metal Internacional, S.A., Madrid, Spain	39.9 [4)]
Dalphi Metal Portugal, S.A., Vila Nova de Cerveira, Portugal	39.9 [4)]
Dalphi Metal Seguridad, S.A., Vigo, Spain	39.9 [4)]
DalphiMetal Tunisie S.A.R.L., Ben Arous, Tunisia	78.4
Duly & Hansford Pty Limited, Zetland, Australia	100.0
Eurofren Investment, S. de R.L. de C.V., Cienega de Flores, Mexico	100.0
Eurofren Systems S.L.U., Mutliva Baja, Spain	100.0
Fortuna Assurance Company, Burlington, USA	100.0
Frenos y Mecanismos, S. de R.L. de C.V., Santa Rosa de Jarequi, Mexico	100.0
Friction Materials Group North America, Inc., Livonia, USA	100.0
Girling Limited, Shirley, Great Britain	100.0
HANSEN DRIVES LIMITED, Hong Kong, China	100.0
HANSEN DRIVES PTE. LTD., Singapore Central, Singapore	100.0
ID Information Systems Limited, Shirley, Great Britain	100.0
Joseph Lucas Limited, Shirley, Great Britain	100.0
Kelsey-Hayes Company, Livonia, USA	100.0
Kelsey-Hayes Holdings Inc., Livonia, USA	100.0
Kelsey-Hayes Mexico LLC, Reynosa, Mexico	100.0
KH Holdings, Inc., Livonia, USA	100.0
Les Minquiers Limited, Shirley, Great Britain	100.0
Liuzhou ZF Machinery Co., Ltd., Liuzhou, China	51.0
Lucas Automotive Limited, Shirley, Great Britain	100.0
Lucas Automotive SDN. BHD., Senai, Malaysia	100.0
Lucas Export Services Limited, Shirley, Great Britain	100.0
Lucas Industries Limited, Shirley, Great Britain	100.0
Lucas Investments Limited, Shirley, Great Britain	100.0
Lucas Limited, Shirley, Great Britain	100.0
Lucas Service UK Limited, Shirley, Great Britain	100.0
Lucas Support Services Limited, Shirley, Great Britain	100.0
LucasVarity (M) SDN. BHD., Bukit Beruntung, Malaysia	100.0
LucasVarity (Thailand) Co., Ltd., Rayong, Thailand	100.0
LucasVarity Automotive Holding Company, Livonia, USA	100.0
LucasVarity Langzhong Brake Company Limited, Langfang, China	70.0
LucasVarity, Shirley, Great Britain	100.0

Foreign	Share in capital in %
Mercant Comércio e Serviços Ltda., Sorocaba, Brazil	100.0
Midwest Lemförder Limited, Darlaston, Great Britain	100.0
No. 1 Deansgate (Residential) Limited, London, Great Britain	100.0
OOO ZF Kama, Naberezhnye Chelny, Russia	51.0
OOO ZF Russia, Saint Petersburg, Russia	100.0
Openmatics s.r.o., Plzeň, Czech Republic	100.0
PT. ZFAG Aftermarket Jakarta, Jakarta, Indonesia	100.0
Qingdao FMG Asia Pacific Co., Ltd., Qingdao, China	100.0
Revestimientos Especiales de México, S. de R.L. de C.V., Cienega de Flores, Mexico	100.0
Roadster Automotive B.V., Amsterdam, Netherlands	100.0
Roadster Holdings (Canada), ULC, Calgary, Canada	100.0
Sachs Automotive Components & Systems Shanghai Co., Ltd., Shanghai, China	100.0
Safebag - Indústria Componentes de Seguranca Automovel S.A., Ponte de Lima, Portugal	78.4
Safe-Life - Indústria de Componentes de Seguranca Automovel S.A., Ponte de Lima, Portugal	78.4
Shanghai Sachs Huizhong Shock Absorber Co., Ltd., Shanghai, China	60.0
SISTEMAS DE CHASSIS IRACEMÁPOLIS LTDA., Iracemápolis, Brazil	100.0
Thompson Ramo Wooldridge Inc., Livonia, USA	100.0
TRW (Suzhou) Automotive Electronics Co., Ltd., Suzhou, China	74.2
TRW Aftermarket Asia Pacific PTE LTD, Singapore Central, Singapore	100.0
TRW Aftermarket Japan Co., Ltd., Tokyo, Japan	100.0
TRW Airbag Systems S.R.L., Roman, Romania	100.0
TRW Asia Pacific Co., Ltd., Shanghai, China	100.0
TRW Asiatic (M) SDN BHD, Selangor, Malaysia	51.0
TRW Asiatic Co., Ltd., Bangkok, Thailand	51.0
TRW Australia Holdings Pty Ltd, Zetland, Australia	100.0
TRW Australia Pty Ltd, Zetland, Australia	100.0
TRW Auto B.V., Amsterdam, Netherlands	100.0
TRW Auto Holdings Inc., Livonia, USA	100.0
TRW Autoelektronika s.r.o., Benesov, Czech Republic	100.0
TRW Automotive (LV) Corp., Livonia, USA	100.0
TRW Automotive (Slovakia), s.r.o., Nove Mesto nad Vahom, Slovakia	100.0
TRW Automotive Australia Pty Ltd., Zetland, Australia	100.0
TRW Automotive Bonneval S.A.S., Bonneval, France	100.0
TRW Automotive China Holdings Ltd., Ebene, Mauritius	100.0
TRW Automotive Components (Shanghai) Co., Ltd., Shanghai, China	100.0
TRW Automotive Components (Suzhou) Co., Ltd., Suzhou, China	100.0
TRW Automotive Components Technical Service Shanghai Co. Ltd., Shanghai, China	100.0
TRW Automotive Czech s.r.o., Jablonec nad Nisou, Czech Republic	100.0
TRW Automotive Distribution France S.A.S., Paris, France	100.0
TRW Automotive España S.L.U., Pamplona, Spain	100.0
TRW Automotive Holding Company, Livonia, USA	100.0
TRW Automotive Holding Italia S.r.l., Torino, Italy	100.0

Foreign	Share in capital in %
TRW Automotive Holding Mexico LLC, Reynosa, Mexico	100.0
TRW Automotive Holdings (France) S.A.S., Paris, France	100.0
TRW Automotive Inc., Livonia, USA	100.0
TRW Automotive India Private Limited, Haryana, India	100.0
TRW Automotive Italia S.r.l, Torino, Italy	100.0
TRW Automotive J.V. LLC, Livonia, USA	100.0
TRW Automotive Japan Co. Ltd., Yokohama, Japan	100.0
TRW Automotive Korea Co. Ltd., Ansan, Korea (Republic)	100.0
TRW Automotive LLC, Moscow, Russia	100.0
TRW Automotive Ltda., Limeira, Brazil	100.0
TRW Automotive Portugal Lda., Santos Domingos de Rana, Portugal	100.0
TRW Automotive Research And Development (Shanghai) Co. Ltd., Shanghai, China	100.0
TRW Automotive Safety Systems SRL, Timisoara, Romania	100.0
TRW Automotive Safety Technologies (Zhangjiagang) Co., Ltd., Zhangjiagang, China	100.0
TRW Automotive Services SDN BHD, Shah Alam, Malaysia	100.0
TRW Automotive Sweden AB, Arvidsjaur, Sweden	100.0
TRW Automotive Technologies (Shanghai) Co., Ltd., Shanghai, China	100.0
TRW Automotive U.S. LLC, Livonia, USA	100.0
TRW Braking Systems Polska Sp. z o.o., Gliwice, Poland	100.0
TRW Brazil LLC, Livonia, USA	100.0
TRW Canada Limited/TRW Canada Limitee, Woodstock, Canada	100.0
TRW China Holdings Ltd., Grand Cayman, Cayman Islands	100.0
TRW Coöperatief W.A., Amsterdam, Netherlands	100.0
TRW Delplas, S. de R.L. de C.V., El Marqués, Mexico	100.0
TRW Dongfang (Xi'an) Airbag Inflator Co., Ltd., Xi'an, China	90.0
TRW Electronica Ensambles, S. de R.L de C.V, Reynosa, Mexico	100.0
TRW Employees Benefit Trust Limited, Shirley, Great Britain	100.0
TRW FAWER Automobile Safety Systems (Changchun) Co., Ltd., Changchun, China	60.0
TRW FAWER Commercial Vehicle Steering (Changchun) Co., Ltd., Changchun, China	55.0
TRW Integrated Chassis Systems LLC, Livonia, USA	100.0
TRW Intellectual Property Corp., Livonia, USA	100.0
TRW International Holdings B.V., Amsterdam, Netherlands	100.0
TRW Investment Management Company Limited, Shirley, Great Britain	100.0
TRW Limited, Shirley, Great Britain	100.0
TRW LucasVarity Electric Steering Limited, Shirley, Great Britain	100.0
TRW LucasVarity Limited, Shirley, Great Britain	100.0
TRW Occupant Restraints de Chihuahua, S. de R.L. de C.V., Chihuahua, Mexico	100.0
TRW Occupant Restraints South Africa Inc., Livonia, USA	100.0
TRW Odyssey Inc., Livonia, USA	100.0
TRW Odyssey Mexico LLC, Reynosa, Mexico	100.0
TRW Otomotiv Dagitim ve Ticaret A.S., Istanbul, Turkey	99.7
TRW Overseas Inc., Livonia, USA	100.0

Foreign	Share in capital in %
TRW Paris S.A.S., Paris, France	100.0
TRW Pensions Trust Limited, Shirley, Great Britain	100.0
TRW Polska Sp. z o.o., Czestochowa, Poland	100.0
TRW Safety Systems Inc., Livonia, USA	100.0
TRW Safety Systems Mexico LLC, Reynosa, Mexico	100.0
TRW Sistemas de Direcciones, S. de R.L. de C.V., El Marqués, Mexico	100.0
TRW Sistemas de Frenado S. de R.L. de C.V., El Marqués, Mexico	100.0
TRW Steering & Suspension Co., Ltd., Rayong, Thailand	100.0
TRW Steering Co. Ltd., Ansan, Korea (Republic)	71.0
TRW Steering Systems Limited, Shirley, Great Britain	100.0
TRW Steering Systems Poland Sp. z o.o., Czechowice-Dziedzice, Poland	100.0
TRW Steering Wheel Systems de Chihuahua, S. de R.L. de C.V., Chihuahua, Mexico	100.0
TRW Systèmes de Freinage S.A.S., Bouzonville, France	100.0
TRW Systems Limited, Solihull, Great Britain	100.0
TRW U.K. Limited, Shirley, Great Britain	100.0
TRW Vehicle Safety Systems de Mexico, S. de R.L. de C.V., Reynosa, Mexico	100.0
TRW Vehicle Safety Systems Inc., Washington, USA	100.0
TRW-Carr s.r.o., Stara Boleslav, Czech Republic	100.0
Varga Servicos Automotivos Ltda., Limeira, Brazil	100.0
ZF (China) Investment Co., Ltd., Shanghai, China	100.0
ZF (Thailand) Limited, Bangkok, Thailand	100.0
ZF ANSA Lemförder S.L. (Sociedad Unipersonal), Burgos, Spain	100.0
ZF Argentina S.A., San Francisco, Argentina	100.0
ZF Asia B.V., Amsterdam, Netherlands	100.0
ZF Asia Pacific Pte. Ltd., Singapore Central, Singapore	100.0
ZF Axle Drives Marysville, LLC, Marysville, USA	100.0
ZF BAIC (Beijing) Chassis Systems Co., Ltd., Beijing, China	51.0
ZF Boge Elastmetall España S.A. (Sociedad Unipersonal), Santa Perpètua de Mogoda, Spain	100.0
ZF Bouthéon SAS, Andrézieux-Bouthéon, France	100.0
ZF Chassis Components, LLC, Newton, USA	100.0
ZF Chassis System (Rayong) Co., Ltd., Rayong, Thailand	100.0
ZF Chassis Systems (Beijing) Co., Ltd., Beijing, China	100.0
ZF Chassis Systems Chicago, LLC, Chicago, USA	100.0
ZF Chassis Systems Duncan, LLC, Duncan, USA	100.0
ZF Chassis Systems Sdn. Bhd., Padang Serai, Malaysia	100.0
ZF Chassis Systems Tuscaloosa, LLC, Tuscaloosa, USA	100.0
ZF Chassis Systems Zatec s.r.o., Plzeň, Czech Republic	100.0
ZF Chassis Technology S.A. de C.V., Toluca, Mexico	100.0
ZF Chassistech Commercial Vehicles (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Danmark ApS, Tåstrup, Denmark	100.0
ZF do Brasil Ltda., Sorocaba, Brazil	100.0
ZF Dongfeng Shock Absorber Shiyan Co., Ltd., Shiyan, China	51.0

Foreign	Share in capital in %
ZF Drivetech (Hangzhou) Co., Ltd., Hangzhou, China	100.0
ZF Drivetech (Suzhou) Co., Ltd., Suzhou, China	100.0
ZF Electronic Systems Juárez, S.A. de C.V., Juárez, Mexico	100.0
ZF Electronic Systems Pleasant Prairie, LLC, Pleasant Prairie, USA	100.0
ZF Electronics (Zhuhai) Co., Ltd., Zhuhai, China	100.0
ZF Electronics Klášterec s.r.o., Klásterec nad Ohrí, Czech Republic	100.0
ZF Engineering Plzeň s.r.o., Plzeň, Czech Republic	100.0
ZF Europe B.V., Amsterdam, Netherlands	100.0
ZF Faster Propulsion Systems Co., Ltd., Kaohsiung, Taiwan	100.0
ZF FAWER Chassis Technology (Changchun) Co., Ltd., Changchun, China	51.0
ZF FOTON Automated Transmission (Jiaxing) Co., Ltd., Jiaxing, China	51.0
ZF Gainesville, LLC, Gainesville, USA	100.0
ZF Holding Austria GmbH, Steyr, Austria	100.0
ZF Holding Dover, Inc., Northville, USA	100.0
ZF Holdings Australia Pty. Ltd., Dingley Village, Australia	100.0
ZF Holdings B.V., Amsterdam, Netherlands	100.0
ZF Hungária Ipari és Kereskedelmi Korlátolt Felelösségú Társaság, Eger, Hungary	100.0
ZF India Pvt. Ltd., Pune, India	100.0
ZF Inmobilaria S.A. de C.V., Saltillo, Mexico	100.0
ZF International B.V., Den Haag, Netherlands	100.0
ZF Italia Holding S.p.A., Selvazzano Dentro, Italy	100.0
ZF Italia S.r.l., Assago, Italy	100.0
ZF Japan Co., Ltd., Tokyo, Japan	100.0
ZF Lemforder (Thailand) Co., Ltd., Rayong, Thailand	100.0
ZF Lemförder Achssysteme Ges.m.b.H., Lebring, Austria	100.0
ZF Lemförder Aks Modülleri Sanayi ve Ticaret Anonim Sirket, Izmir, Turkey	100.0
ZF Lemforder Australia Pty. Limited, Edinburgh, Australia	100.0
ZF Lemforder Automotive Systems (Shenyang) Co., Ltd., Shenyang, China	100.0
ZF Lemförder Chassis Technology Korea Co., Ltd., Gumi, Korea (Republic)	59.3
ZF Lemförder Métal France S.A.S., Florange, France	100.0
ZF Lemförder SA (Pty.) Ltd., Rosslyn, South Africa	100.0
ZF Lemforder Shanghai Chassistech Co., Ltd., Shanghai, China	76.0
ZF Lemförder TLM Dış Ticaret Limited Şirketi, Izmir, Turkey	100.0
ZF Lemförder TVA, S.A.U., Ermua, Spain	100.0
ZF Lemforder UK Limited, Darlaston, Great Britain	100.0
ZF Marine (Zhuhai) Co., Ltd., Zhuhai, China	100.0
ZF Marine Krimpen B.V., Krimpen aan de Lek, Netherlands	100.0
ZF Marine Propulsion Systems Miramar, LLC, Miramar, USA	100.0
ZF México, S.A. de C.V., Guadalajara, Mexico	100.0
ZF Middle East FZE, Dubai, United Arab Emirates	100.0
ZF North America Capital, Inc., Northville, USA	100.0
ZF North America, Inc., Northville, USA	100.0

Foreign	Share in capital in %
ZF Occupant Safety Systems de la Laguna, S. de R.L. de C.V., Durango, Mexico	100.0
ZF Österreich Gesellschaft m.b.H., Vienna, Austria	100.0
ZF Padova S.r.l., Selvazzano Dentro, Italy	100.0
ZF Philippines, Inc., Manila, Philippines	100.0
ZF Powertrain Modules (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Powertrain Modules Saltillo, S.A. de C.V., Ramos Arizpe, Mexico	100.0
ZF Powertrain Systems (Beijing) Co., Ltd., Beijing, China	100.0
ZF Sachs España S.A. (Sociedad Unipersonal), Bilbao, Spain	100.0
ZF Sachs Italia S.p.A., Candiolo, Italy	100.0
ZF Sachs Korea Co., Ltd., Changwon, Korea (Republic)	91.5
ZF Sachs South Africa Proprietary Limited, Alberton, South Africa	100.0
ZF Sachs Süspansiyon Sistemleri Sanayi ve Ticaret A.Ş., Gebze, Turkey	100.0
ZF Sales and Service (Malaysia) Sdn. Bhd., Petaling Jaya, Malaysia	100.0
ZF Services (China) Co., Ltd., Shanghai, China	100.0
ZF Services (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Services Australia Pty. Ltd., Arndell Park, Australia	100.0
ZF Services Belgium N.V.- SA, Brussels, Belgium	100.0
ZF Services España S.L.U., Sant Cugat del Vallès, Spain	100.0
ZF Services France S.A.S., Antony, France	100.0
ZF Services Hong Kong Limited, Hong Kong, China	100.0
ZF Services Korea Co., Ltd., Incheon, Korea (Republic)	100.0
ZF Services Middle East Limited Liability Company, Dubai, United Arab Emirates	49.0 [3)]
ZF Services Nederland B.V., Delfgauw, Netherlands	100.0
ZF Services Schweiz AG, Volketswil, Switzerland	100.0
ZF Services South Africa (Proprietary) Ltd., Johannesburg, South Africa	100.0
ZF Services Türk San. ve Tic. A.Ş., Istanbul, Turkey	100.0
ZF Services UK Limited, Nottingham, Great Britain	100.0
ZF Services, LLC, Vernon Hills, USA	100.0
ZF Services, S.A. de C.V., Guadalajara, Mexico	100.0
ZF Slovakia a.s., Trnava, Slovakia	100.0
ZF South America Holdings B.V., Amsterdam, Netherlands	100.0
ZF Staňkov s.r.o., Stankov, Czech Republic	100.0
ZF Steyr Ges.m.b.H., Steyr, Austria	100.0
ZF Steyr Präzisionstechnik GmbH, Steyr, Austria	100.0
ZF Suspension Technology Guadalajara, S.A. de C.V., Guadalajara, Mexico	100.0
ZF Taiwan Ltd., Taipei, Taiwan	100.0
ZF Transmissions Gray Court, LLC, Gray Court, USA	100.0
ZF Transmissions Shanghai Co., Ltd., Shanghai, China	51.0
ZF TRW Automotive Holdings Corp., Livonia, USA	100.0
ZF Wind Power (Tianjin) Co., Ltd., Tianjin, China	99.7
ZF Wind Power Antwerpen NV, Lommel, Belgium	100.0
ZF Wind Power Coimbatore Private Limited, Coimbatore, India	100.0
ZF YTO (Luoyang) Axle Co., Ltd., Luoyang, China	51.0

Consolidated companies accounted for using the equity method

Domestic	Share in capital in %
Astyx GmbH, Ottobrunn, Germany	44.5
doubleSlash Net-Business GmbH, Friedrichshafen, Germany	40.0
Ibeo Automotive Systems GmbH, Hamburg, Germany	40.0

Foreign	Share in capital in %
ABC Sistemas e Modulos Ltda., São Bernardo do Campo, Brazil	33.3
Brakes India Private Limited, Chennai, India	49.0
CSG TRW Chassis Systems Co., Ltd., Chongqing, China	50.0
Evercast, S.A. de C.V., Saltillo, Mexico	30.0
Exponentia S.A.S., Paris, France	50.0
FOTON ZF LCV Automated Transmission (Jiaxing) Co. Ltd., Jiaxing, China	40.0
Rane TRW Steering Systems Private Limited, Chennai, India	50.0
S.M. Sistemas Modulares Ltda., Taubate, Brazil	50.0
Shanghai Sachs Powertrain Components Systems Co., Ltd., Shanghai, China	50.0
Shanghai TRW Automotive Safety Systems Company Ltd., Shanghai, China	50.0
SOMIC ZF Components Private Limited, New Delhi, India	50.0
TH Braking Company S.A.S., Puteaux, France	50.0
TRW Sun Steering Wheels Private Limited, New Delhi, India	49.0
ZF Fonderie Lorraine S.A.S., Grosbliederstroff, France	49.0
ZF Hero Chassis Systems Private Limited, New Delhi, India	50.0
ZF Liuzhou Axle Co., Ltd., Liuzhou, China	50.0
ZF PWK Mécacentre S.A.S., Saint-Étienne, France	50.0

40 Company bodies

The members of the Supervisory Board and the Board of Management are listed on page 25.

Friedrichshafen, February 28, 2018

ZF Friedrichshafen AG
The Board of Management

Wolf-Henning Scheider

Michael Hankel

Jürgen Holeksa

Dr. Franz Kleiner

Peter Lake

Wilhelm Rehm

Dr. Konstantin Sauer

Independent auditor's report

To ZF Friedrichshafen AG

Report on the audit of the consolidated financial statements and of the group management report

Opinions

We have audited the consolidated financial statements of ZF Friedrichshafen AG, Friedrichshafen and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2017, the consolidated statement of profit or loss, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the fiscal year from January 1 to December 31, 2017, and notes to the financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of ZF Friedrichshafen AG for the fiscal year from January 1 to December 31, 2017.

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 Sec. 315e 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, 2017 and of its financial performance for the fiscal year from January 1 to December 31, 2017, 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.

Pursuant to Sec. 322 (3) 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 opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the 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 opinions on the consolidated financial statements and on the group management report.

Other information

The supervisory board is responsible for the "report of the supervisory board" included in the annual report. In all other respects, the executive directors are responsible for the other information. The other information comprises the other parts of the annual report that will probably not be provided until after this date, with the exception of the audited consolidated financial statements and group audit report as well as our auditor's report.

Our 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 opinion or any other form of assurance conclusion thereon.

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

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

Responsibilities of the executive directors and the supervisory board for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec 315e (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

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

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our 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 Sec. 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 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 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 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 Sec. 315e (1) HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express 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 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 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.

Stuttgart, 2 March 2018

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Meyer
Wirtschaftsprüfer

Scheufele
Wirtschaftsprüfer

The Annual Report is available in English and German;
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