UNLOCKING OUR POTENTIAL

NAVIGATING CHALLENGES,
SHAPING OPPORTUNITIES.
ANNUAL REPORT 2024

Key Figures

	2024	2023
Sales	**€41,377 million**	**€46,627 million**
Adjusted EBIT	**€1,504 million**	**€2,367 million**
Adjusted EBIT margin	3.6%	5.1%
Net profit or loss before tax	**−€597 million**	**€763 million**
in % of sales	−1.4%	1.6%
Net profit or loss after tax	**−€1,020 million**	**€126 million**
Adjusted free cash flow [1]	**€305 million**	**€1,382 million**
Investment in property, plant and equipment	**€2,252 million**	**€2,235 million**
Equity ratio (Dec. 31)	**19.2%**	**19.7%**
Employees (Dec. 31) [2]	**161,631**	**168,738**

Sales development by region

- 47% EMEA
- 27% North America
- 23% Asia-Pacific
- 3% South America

1) Cash flow from operating activities less cash flow from investing activities, adjusted for M&A activities, securities and cash investments up to 12 months.
2) Direct and indirect employees without temporary workers, apprentices and vacation workers.

73%
Cars and light commercial vehicles <6t

19%
Commercial vehicles >6t

8%
Construction and agricultural machinery, rail drives, marine craft and wind power

€41.4 billion
Sales

€3.6 billion
Expenditure on research and development

51%
Reduction in Scope 1 & 2 CO_2e emissions compared to 2019

Company Profile

FOCUS ON STRENGTHS TO GROW WITH SUSTAINABLE TECHNOLOGIES

ZF is a global technology company. We supply mobility systems for passenger cars, commercial vehicles and industrial technology. ZF offers comprehensive product and software solutions for established vehicle manufacturers and newly emerging transport and mobility service providers.

We are constantly driving our transformation forward with focus and speed. The increasing presence in global growth markets, investments in high-yield products and future technologies as well as an efficient and resilient organizational structure are top priorities.

In short, we are continuously expanding our strengths. This also includes the Group's unique ability in the market to transfer innovations and technologies across segment boundaries.

The ZF Group is represented with 161 production locations in 30 countries. With some 161,600 employees worldwide, ZF reported sales of €41.4 billion in fiscal year 2024.

Our key to success is that we have the broadest product and technology portfolio in the market, paired with the ability to integrate products into system landscapes and our customers' vehicle environment.

With its diverse competencies, ZF covers both current and future mobility solutions.

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Board of Management Letter

Dear Readers,
Dear Employees,

2024 has shown just how much pressure our industry and our company are under. A rapid easing of the situation is not to be expected. Rising costs, geopolitical uncertainties and volatile market developments in both the passenger car and commercial vehicle segments are weighing on our profitability. Added to this is the significantly slower ramp-up of electric mobility. As a result, product launches are delayed or manufacturers change their strategies and order fewer electric platforms than originally planned, which leads to overcapacity for us.

To overcome these diverse challenges, we need determination, strategic foresight and a high degree of agility. The path that we, as the Board of Management, have embarked upon is undoubtedly challenging in places. However, the results achieved so far confirm that we are on the right track to lead ZF successfully into the future. We intend to continue shaping the state-of-the-art mobility of the future.

To do that, our company needs to reduce debt, freeing up funds for future-oriented investments and setting us up successfully for the long term. For this purpose, we had already formulated three clear strategic goals at the beginning of last year:

1. Improve competitiveness and profitability
2. Optimize our portfolio as part of the strategic approach “Strengthening our Strengths – Unlocking our Potential”
3. Adjust the corporate structure and culture

“Only if we are competitive can we secure jobs in the long term.”

Dr. Holger Klein,
Chief Executive Officer

As early as 2023, we launched performance programs for the passenger car and commercial vehicle business as well as an additional project to strengthen the competitiveness of our German locations. Here, we focus on operational improvements, such as in purchasing, production and with capital expenditure for more permanent investment. In addition, we will reduce our overheads and adapt our workforce to the changed circumstances. In this regard, we aim to reduce between 11,000 and 14,000 jobs in Germany by the end of 2028 in a socially responsible manner wherever possible. Through natural turnover, retirement, the expiry of fixed-term contracts and the collective reduction of weekly working hours, we have already reduced personnel capacity in the scope of around 4,000 full-time equivalent positions in this country.

With these performance programs, we are on track. In combination with strict cost discipline and the renegotiation of supply contracts, we managed to sustainably improve our cost structures. However, the savings were offset by sales declines and burdens resulting from the hesitant adoption of electric mobility. We must therefore continue to intensify our efforts to reduce costs and increase profitability this year and in the upcoming years.

I am aware that many of our decisions in Germany are attracting criticism, especially in relation to the structural adjustments of our plants. I take such criticism very seriously. It reflects the justified concerns of our employees and their families for their jobs and, in turn, for their future. Nonetheless, I would like to stress that our program aims to secure long-term competitiveness while constantly meeting our responsibility as an employer. My Board of Management colleagues and I are committed to making jobs fit for the future and securing them sustainably. And we do our utmost to make change as socially acceptable as possible, while creating a solid base for sustainable success.

The foundation has been set for this. Our strategy to optimize the portfolio is bearing fruit and opening up new prospects for us. A key element is the consistent adaptation of the products and services in our divisions to meet the demands of global customers and their markets. Thanks to continuous investments in our core areas, we were able to reaffirm our leadership in innovation last year. A prime example of this approach is ZF ProAI, the most flexible and powerful supercomputer for the automotive industry. Volume production got underway successfully in 2024. At the IAA Transportation in Hanover (Germany) we also presented groundbreaking innovations for the decarbonization, automation, digitalization and safety of commercial vehicles. Highlights included the e-mobility modular drive kit, the TrailTrax e-trailer concept, the cubiX chassis software and the latest version of our OnGuardMAX advanced emergency braking system.

In 2024, we spent a total of €3.6 billion on research and development to further strengthen our leading technological position in our core areas. Despite the challenging market conditions, we continue to invest in our Electrified Powertrain Technology Division. In 2024, around 30 percent of our capital expenditures were directed towards longer-term assets in this sector. Even though the transition is happening more slowly, I am convinced that the future belongs to electric mobility.

The second element for optimizing our portfolios is the strategic realignment of our company. One example is the merger of our Active Safety Systems and Car Chassis Technology divisions into a powerful unit on January 1, 2024: The new Chassis Solutions Division has emerged as a major player in the industry. In areas where we need more flexibility for targeted investments, we will allow greater leeway. In 2024, we successfully established our Passive Safety Systems Division as an independent entity under the name ZF Lifetec. The entrepreneurial independence of this division now also allows for the entry of external partners in order to unlock further market potential and accelerate growth.

We see great potential in partnerships to unleash new growth drivers and strengthen innovative capabilities. This is impressively demonstrated by the newly established software company Qorix, founded with our development partner KPIT Technologies. In early 2025, Qualcomm, one of the world's leading semiconductor manufacturers, joined as a technology partner to further develop our industry-unique middleware stacks. Equally groundbreaking was the transfer of our axle assembly business into a joint venture with our strategic partner Foxconn. The 50/50 joint venture ZF Foxconn Chassis Modules is on a strong growth course, defying the trend in the automotive market.

We are currently in the process of repositioning ZF as a more efficient company with strong core areas and associated units. These units will strengthen our core through technology transfer and additional revenue streams, making the organization more resilient and more agile. For us, "ecosystem player" is much more than just business jargon. It is the justified opportunity to leverage the advantages of digitalization and networking between the strategic core and associated units.

In the next step, we will examine how we can position the divisions for electrified powertrain technology as well as electronics and advanced driver assistance systems more independently to open up strategic options for action and provide impetus for growth. This also includes evaluating partnerships, whether at component or divisional level.

Along with these structural changes, there will be a change in our corporate culture toward more personal responsibility and entrepreneurial thinking. To gear operations more effectively to very different business areas, customer and market segments, we need more agile divisions, flatter hierarchies and divisional management teams that can make decisions independently and without lengthy coordination processes in the matrix. This culture change will take time, but we are pursuing it consistently.

The 2024 financial figures indicate that we must take decisive action. They provide us with a clear mandate to increase our competitiveness as quickly as possible. The 11 percent decline in sales to €41.4 billion, mainly due to the economic situation, had a very negative impact on our results, decreased our adjusted EBIT margin from 5.1 percent last year to 3.6 percent and prevented us from paying down our debt.

We will continue to face major challenges in 2025. The economic and political framework conditions remain uncertain and change continues apace. But it is precisely this uncertainty that provides us with an opportunity. With a clear strategic orientation, a long-term ownership structure and the high level of commitment of our worldwide ZF team, we are ideally positioned to react flexibly to new challenges and decisively seize opportunities.

This is also evident in our approach to dealing with uncertainties regarding the regulatory framework for environmental, social and governance (ESG) reporting. We prepared for the new European Sustainability eporting Standards (ESRS) in accordance with the Corporate Sustainability Reporting Directive (CSRD) at an early stage, even if the application of these standards is not yet mandatory for ZF. With our Sustainability Report, we voluntarily align ourselves with the CSRD requirements and provide transparent information on our ESG progress.

In 2024, ZF proved that taking bold decisions and safeguarding the future sustainably are not incompatible. I am confident that we will successfully continue along this path together. My heartfelt thanks go to all the employees, partners and representatives of the shareholders who contributed to this success. I would like to thank the members of the Supervisory Board for their constructive support over the past year and for the trust they place in me. Let us continue to work together on the future of ZF with determination, innovativeness and trust!

With best regards

Dr. Holger Klein
Chief Executive Officer

The Board of Management

from right to left

Michael Frick
Chief Financial Officer
Finance, IT and M&A
ZF Lifetec

Dr. Holger Klein
Chief Executive Officer
Sales, Research and Development,
System House of Autonomous Mobility Systems
Region of Asia-Pacific
Aftermarket, Electronics and ADAS

Dr. Peter Holdmann
Quality, Region of North and
South America
Chassis Solutions

Dr. Lea Corzilius
Chief Human Resources Officer/
Director of Labor Relations
Human Resources, Corporate Governance
and Sustainability

Mathias Miedreich
Electrified Powertrain Technology

Prof. Dr. Peter Laier
Production, Materials Management
Region of India
Commercial Vehicle Solutions,
Industrial Technology

More information about
the Board of Management.

Report of the Supervisory Board

Dr. Heinrich Hiesinger

Dear Reader,

Our hope of a more stable and more predictable political and economic environment in 2024 has unfortunately not materialized. For several years, geopolitical tensions and conflicts have had a major impact on the markets. The wars in Ukraine and the Middle East have continued relentlessly, while populism has gained traction around the globe. A trend toward protectionist economic policies with increased trade barriers and tariffs, coupled with an increasing rejection of the trend toward globalization seen in recent decades, is evident in some of the major industrialized nations. This hits the industrial location of Germany hard with its export-based business model – especially the globally networked automotive and supplier industry. The companies and locations in Germany also suffer from the lack of a dynamic industrial policy, high energy and wage costs as well as excessive bureaucracy.

This leads to major tensions and distortions in the entire automotive industry. Almost all manufacturers and suppliers had to revise their targets and set up ambitious savings and restructuring programs to meet these challenges. All of these factors also create great uncertainty on the part of consumers, with stifled demand – especially for electric cars – feeding through into negative economies of scale. The repercussions have even seen manufacturers discontinuing entire e-platforms. Overall, the industry is facing enormous challenges with great uncertainties and a fast-changing environment that calls for quick and bold action.

The ZF Board of Management met these challenges in 2024 with consistent measures and actions. The focus was on increasing the resilience of the company to simultaneously invest in the future in such an environment and drive down debt. The latter is the result of strategically important acquisitions in recent years, which have made a major contribution to the further expansion of ZF's leading technology and market position. While debt reduction was on track during the years of growth, this proves much more difficult under the current conditions. For this reason, the Board of Management initiated an efficiency program to increase operational performance as early as 2023, which was pushed forward with full focus in 2024 and supplemented with further measures. In addition, important steps were taken to make ZF's locations in Germany more competitive and, consequently, future-proof. This also requires decisions to cut staff – decisions which are not easy but essential to ensure long-term competitiveness and jobs.

Despite all the challenges, ZF managed to unveil numerous new products in 2024. These include the ZF Annotate validation service based on artificial intelligence, which significantly accelerates the manual development and fine-tuning of complex ADAS and AD sensor systems in passenger cars and commercial vehicles. With this solution, ZF provides another component on the way to the software-defined vehicle. At the beginning of 2024, ZF bundled all technologies for steering, braking and damping systems, including the software, in its new Chassis Solutions Division. ZF's strategy as a supplier of complete software and hardware solutions from a single source is also confirmed by the major order for brake-by-wire brake systems from a leading global vehicle manufacturer for almost five million vehicles.

Thanks to its long-standing experience in the development of hybrid and electric mobility technologies for passenger cars, ZF can leverage its technical and industrial capacities to offer cross-segment emissionreducing mobility solutions through technology transfer. One example of this is the introduction of the hybridized TraXon 2 Hybrid commercial vehicle transmission. It enables vehicle manufacturers to effectively integrate hybrid technology into existing vehicle platforms.

In addition to climate-friendly mobility solutions, ZF is also extensively promoting projects in the field of sustainability internally. Once again, ZF received the German Sustainability Award for these efforts – this year, ZF's far-reaching commitment to a sustainable circular economy was honored. The ZF Aftermarket Division rolled out a system solution for the process of returning used parts for remanufacturing and a new brand for remanufactured products. In 2024, ZF also opened the first zero-emission factory in Klášterec (Czech Republic) which operates entirely without fossil fuels. This approach is the blueprint for the further development of ZF plants worldwide and makes a significant contribution to achieving climate neutrality by 2040.

In 2024, there were the following personnel changes on the Supervisory Board: After more than 15 years as First Mayor of the City of Friedrichshafen and Chairman of the Board of Trustees of the Zeppelin Foundation, Andreas Brand left the Supervisory Board and the Executive Committee as a representative of the main shareholder on December 13, 2024. The new First Mayor Simon Blümcke was elected to the Supervisory Board as his successor. We would like to sincerely thank Mr. Brand for his constructive cooperation over so many years in which important and bold decisions were made for the future viability of ZF and its employees. In addition to this change on the shareholder side, there were two changes on the employee side: The Vice Chairman of the Supervisory Board, Roman Zitzelsberger, resigned as of December 31, 2024. Barbara Resch was appointed as successor to the Supervisory Board on January 31, 2025. Jörg Amon also resigned from the Supervisory Board on October 2, 2024. His successor on the committee is Jens Schäfer. We would like to thank both of them for their prudent and intensive participation on the Supervisory Board and the Executive Committee in order to meet the interests of the company and its employees.

In fiscal year 2024, the Supervisory Board performed the duties as required by the law, our articles of association and code of procedure duly and with great diligence. It continuously monitored the work of the Board of Management and provided advice in the management and strategic further development of the company. The Board of Management promptly and directly involved the Supervisory Board in all issues and decisions of fundamental significance. The Chairman of the Supervisory Board also had regular meetings with the Board of Management, especially the Chief Executive Officer, and received regular reports from him about current and important developments in the company, also outside of committee meetings.

At the end of 2024, as in previous years, the Supervisory Board carried out a self-evaluation with the aim of further optimizing cooperation and efficiency in its own activities. The members provided valuable feedback and suggestions for the further development of committee work, which will be taken up in the new year.

In 2024, the Supervisory Board met for four regular meetings during which the Board of Management alternately reported on business performance and all relevant current and strategically important issues. The Supervisory Board also held two extraordinary meetings.

In its regular meetings, the Supervisory Board extensively discussed with the Board of Management the company's situation, the development of the major sales markets, the sourcing markets, the general political conditions as well as the key financial figures and refinancing. In addition, the Supervisory Board regularly handled personnel decisions of top management.

The reports on the business situation regularly featured the status of the numerous market challenges and measures taken, such as on the reduction of inventories or the status of measures to offset inflation through price negotiations and cost reductions or on HR measures. Furthermore, the Supervisory Board was informed about portfolio measures and location decisions as well as about the status of the preparation of organizational changes, such as the joint venture for car chassis systems with the partner Foxconn.

Other focal points at the Supervisory Board meetings were in-depth reports in the areas of sustainability and technology strategy, on the performance programs, as well as the topics of refinancing, debt reduction and compliance with relevant key financial figures. As an additional element, regular further training measures on technological and regulatory topics were also carried out in 2024 for all Supervisory Board members, for example on the topics of ESG reporting as well as the consolidation and renewal of ERP systems.

At its extraordinary meeting on September 30, 2024, the committee dealt intensively with the reasons for the adjustment of the external outlook, the updated business situation and the impact on the company.

As part of the Group-wide enterprise risk management, the Board of Management reported regularly to the Audit Committee and the Supervisory Board on the main opportunities and risks identified. When analyzing the overall picture of significant risks and opportunities, no risks can be identified which could jeopardize the company's continued existence, either alone or in combination with other risks. Furthermore, the Board of Management reported duly on the effectiveness and further development of the Compliance Management System.

In 2024, two changes were made to the Board of Management team. As successor to Dr. Martin Fischer, Dr. Peter Holdmann joined the Board of Management on May 1, 2024 and assumed responsibility for the Chassis Solutions Division, the Regions of North and South America and Corporate Quality. In addition, Stephan von Schuckmann left the Board of Management on July 31, 2024. His successor, Mathias Miedreich, was appointed to the Board of Management at the October meeting and took up the position of Board of Management member with responsibility for the Electrified Powertrain Technology Division on January 1, 2025.

In its regular meeting in December 2024, the Supervisory Board, after a thorough examination, approved the Group's operational planning after being informed in detail about the objectives at Group and division level.

In its four regular meetings and three extraordinary meetings in 2024, the Executive Committee advised in particular on the strategic alignment of the ZF Group, on restructuring topics as well as relevant legal issues and personnel matters.

The Audit Committee held four regular meetings in 2024. During its meeting on March 19, 2024, the appointed auditor reported in detail to the Audit Committee on the results of the 2023 annual financial statements and the consolidated financial statements, and discussed these with the Board of Management. In the July meeting, the committee discussed the 2024 semi-annual financial statements in detail. At the meeting on December 17, 2024, preparations for the annual financial statements 2024 were discussed. A key element of the committee's work in all the meetings was the Group's corporate governance. To this end, the persons responsible for the four core disciplines Enterprise Risk Management, Internal Control System, Compliance and Corporate Audit presented an integrated Governance, Risk and Compliance (GRC) Report with detailed reports, including the respective implementation and effectiveness status of the measures initiated. Other key topics included regular reporting on the current financial situation, the preparation for the implementation of ESG reporting as well as detailed consideration of cybersecurity risks and measures.

The chairpersons of both committees, Dr. Heinrich Hiesinger and Mr. Axel Strotbek, reported in detail on the activities and essential issues 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 HGB (German Commercial Code) and the consolidated financial statements compiled in accordance with Sec. 315e HGB on the basis of the International Financial Reporting Standards (IFRS), dated December 31, 2024, as well as the corresponding management reports, were audited by EY GmbH & Co. KG Wirtschaftsprüfungsgesellschaft. The company issued its unqualified audit opinion in each case.

The Supervisory Board extensively studied the documentation and examined it themselves; all members of the Supervisory Board had access to the audit reports in good time. The auditor explained the main audit results first to the Audit Committee and then to the Supervisory Board during the board meeting on March 19, 2025. The Supervisory Board had no objections after its concluding audit result.

During this board meeting, the appointed auditor's report as well as the annual financial statements of ZF Friedrichshafen AG were approved and the consolidated financial statements were adopted.

For fiscal year 2024, the Board of Management drew up a report on the relations to affiliated companies (dependent company report) according to Sec. 312 AktG (German Stock Corporation Act). After thorough review of the dependent company report, the Supervisory Board had no objections. The EY GmbH & Co. KG Wirtschaftsprüfungsgesellschaft has audited the report and issued the following audit opinion:

"After our obligatory 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 results of the appointed auditor. According to its concluding audit result, it does not raise any objections with regard to the Board of Management's closing statement contained in the report.

Against the background of the numerous challenges and uncertainties, 2024 demanded a great deal from the Board of Management, all executive managers and the entire workforce. The Supervisory Board would like to thank the Board of Management, the executive managers and all employees for their considerable efforts, dedication and achievements in 2024.

Friedrichshafen, March 2025

On behalf of the Supervisory Board

Dr. Heinrich Hiesinger
Chairman

Strengthening our Strengths – Unlocking our Potential

Our strategic approach of “Strengthening our Strengths – Unlocking our Potential” forms the basis for further developing ZF into a high-performing and sustainable company with a portfolio focused on profitable growth. We want to emerge stronger from the transformation of our industry and the economy as a whole, worldwide. We are consistently implementing three steps to achieve this: improving competitiveness and profitability, optimizing the portfolio and adjusting the corporate structure and culture.

Our Strategy

IMPROVING COMPETITIVENESS AND PROFITABILITY

We need to increase our resilience to external influences in order to successfully master the transformation. To achieve this, we will further reduce our debt and improve our operational performance. The aim is to increase our structural profitability and cash flow while securing investments for the future. We have initiated appropriate measures.

As early as 2023, we launched the performance programs for the passenger car business, the commercial vehicle business and for making our German locations more competitive. Especially in our domestic market, we identify significant potential for improvement due to the low profitability of individual plants. Due to the major acquisitions of TRW and WABCO in recent years, the German location structure has gradually increased and led to considerable inefficiencies. Therefore, we will change the production and development locations in Germany to ensure that they are competitive in the medium to long term. They will be consolidated and transferred to a future-oriented and streamlined network of locations. In this new structure, they will become much more agile and effective, allowing them to respond more quickly to changing customer requirements and market conditions.

STRATEGIC PARTNERSHIPS AND OPTIMIZATION OF OUR PORTFOLIO

Another important measure to strengthen our financial base is the spin-off and sale of parts of the company where we are not among the strongest players in the market or where there are few synergies with other areas of the company. When they are independent, the respective business units are more flexible in terms of further growth opportunities and targeted investments. In 2024, we successfully established our Passive Safety Systems Division as an independent entity under the name ZF Lifetec and launched the ZF Foxconn Chassis Modules GmbH joint venture for our axle assembly business. Both newly established companies have already developed very well in their first fiscal year.

We also lead the field in subsegments of electric mobility for passenger cars and in components for automated driving. To strengthen and further expand these, however, we need to respond even faster and more flexibly to market conditions and trends. In this context, we are opening these two businesses to partnerships and creating what we call ecosystems.

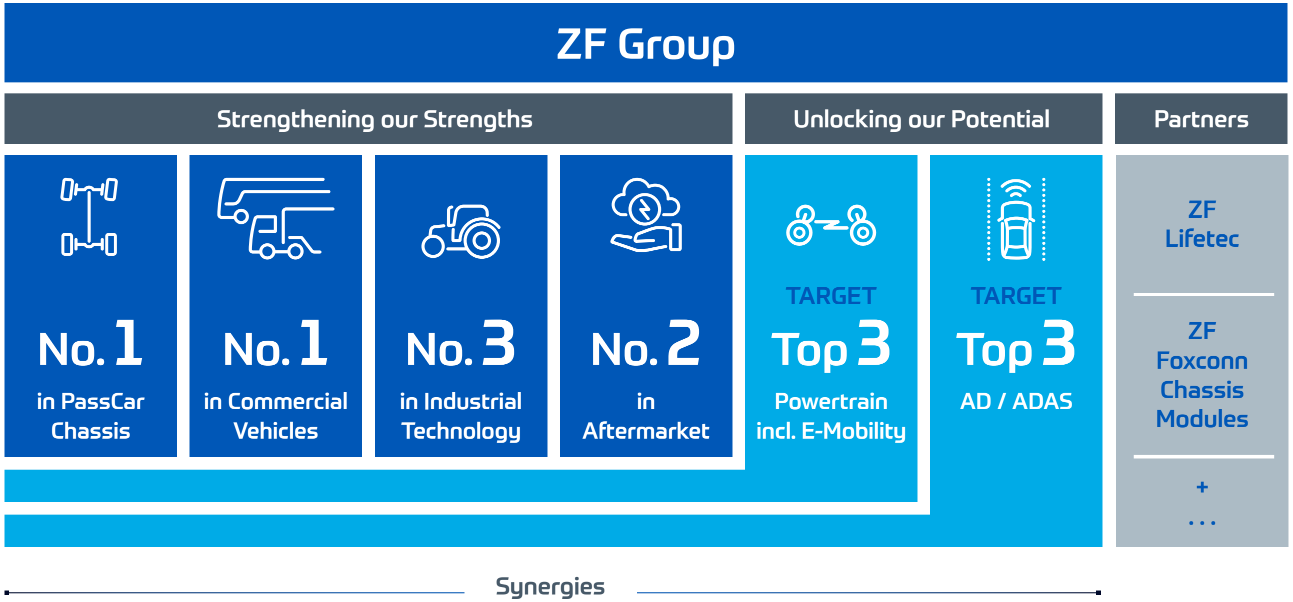
If, on the other hand, the prospects for earnings, sustainable growth and successful partnerships are non-existent, we act consistently and exit from technologies or sell participations. For example, last year we ended the development of an autonomous shuttle vehicle.

FOCUS ON PROFITABLE TECHNOLOGY FIELDS AND MARKET SEGMENTS

For ZF, strengthening strengths means continuing to grow in those market segments where we have a strong market position and see further potential. We are therefore focusing our resources and spending on the core business areas where we are globally already among the top 3 players. In 2024, we once again made significant development and investment decisions in the areas of commercial vehicle technology, industrial technology, car chassis technology and the aftermarket business. With innovative, sustainable product and technology solutions, we were able to unlock additional growth potential. As a result, we will grow significantly faster in these segments than the respective markets.

As a supplier, we lead the commercial vehicle segment worldwide. Our key to success is that we have the broadest product and technology portfolio in the market, paired with the ability not only to deliver products, but also to integrate them into system landscapes and our customers' vehicle environment. In industrial technology, we also rank among the leading suppliers and are one of the top 3 in the key segments – such as construction and agricultural machinery, special vehicles and marine applications. Our Aftermarket Division is the global number 2 in the spare parts and service business for passenger cars, trucks, busses and coaches as well as construction and agricultural machinery. In the spare parts market for commercial vehicles, we are even number 1.

In addition to the commercial vehicle segment, we are also the number 1 in car chassis components and a leader with by-wire technologies. The passenger car business will remain an important segment for ZF in the future, with good development opportunities, and a driver of innovation for technology transfer to other segments. We assume, however, that the share of passenger cars in our total sales, currently around 75 percent, will decrease in the next decade. We will therefore focus even more on high-yield future technologies.



INTEGRATION OF HARDWARE AND SOFTWARE WORLDS

In addition to our innovative capabilities, we have another decisive competitive advantage in future technologies, such as Vehicle Motion Control and by-wire systems: our extensive hardware expertise, which has grown over decades. This means: We conceive and develop hardware and software together. This distinguishes us from new players who typically enter the automotive market coming from the software side. In the future, we will focus even more on integrated solutions for hardware- and software-based vehicle systems.

OUR TECHNOLOGICAL FOCUS IN THE UPCOMING YEARS

ZF will continue to be a leading research and technology company, maintaining a strong focus on innovations within the broader mobility context – but only in those business areas where we have a strong market position. Over the next few years we will focus particularly on:

- Chassis technologies for all vehicle segments – such as electronic damping, brake-by-wire and steer-by-wire systems, which are prerequisites for autonomous driving in the future
- The integration of brakes and electric drive systems
- Electric mobility for passenger cars and commercial vehicles – for example, new electric drives for buses and light commercial vehicles as well as magnet-free motors
- Decarbonization and establishment of a functioning circular economy along the entire value chain
- Software and digitalization of our products
- Widespread use of AI to increase efficiency in research and development and to improve the cost and functionality of our products
- Digital and traditional service models and spare parts (aftermarket)
- Expansion of technology transfer across different segments

ADAPTATION OF CORPORATE STRUCTURE AND CULTURE

We want our business units to develop optimally and achieve a leading competitive position. Therefore, we are evaluating the development potential of each individual division to determine in which configuration they have the best future prospects. This also includes a change in the corporate culture. We need more agile divisions with flatter hierarchies that can make decisions independently – allowing them to better meet the demands of their market segments and customers.

This includes our strategic approach “local for local.” In growth regions such as Asia-Pacific, India and North America, we are further expanding our local production and development activities to respond quickly and efficiently to local market trends and customer requirements. We want to make the individual regions even more independent. The aim is to further increase their share of sales and achieve sustainable growth. Various projects have already started. China, for example, is now a particularly strong and independent region with a total of around 20 locations and its own raw material suppliers.

SUCCESS CRITERIA 2030+

We see transformation as an opportunity. Our goal is to create a company that will manage its portfolio from the 2030s onwards according to three key criteria:

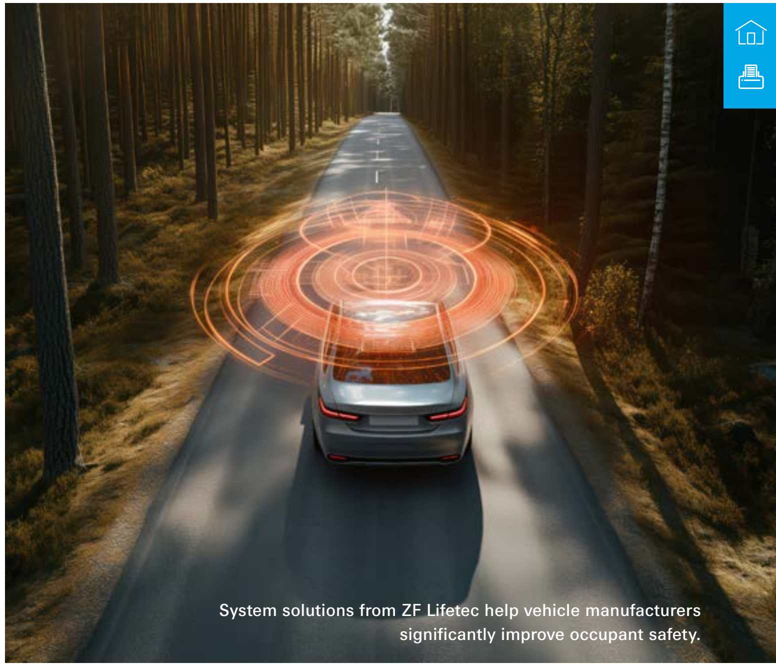
- **Dividend and growth based on financial strength**
- **Global and technological leadership in profitable key markets**
- **Constant value creation based on sustainable and socially positive business development**

Navigating Challenges – Shaping Opportunities

Despite the very dynamic and challenging market environment, we continued our transformation in a targeted manner in fiscal year 2024, achieving key milestones that pave the way for a successful future. We have adapted our corporate structures and our product portfolio even more to global market and customer requirements.

Furthermore, we are working on our efficiency and strengthening the organization by making parts of the company independent and seeking partners for others. Where we continue to collaborate, we want to do so as an "ecosystem player" – we are building a flexible system that leverages the advantages of digitalization and networking between the strategic core and associated parts.

Strategic Partnerships



System solutions from ZF Lifetec help vehicle manufacturers significantly improve occupant safety.

Engaging in partnerships and spinning off parts of the company offer enormous potential to unleash growth forces and create flexibility for targeted investments.

ZF LIFETEC
PIONEERING AUTOMOTIVE SAFETY

No. 2

in passive safety technology

NEW ZF LIFETEC BRAND LAUNCHED

Last year, our Passive Safety Systems Division successfully embarked on its journey towards independence. In its first fiscal year, ZF Lifetec introduced a multitude of innovations in airbag, seat belt and steering wheel systems. With its mission "We save lives," the new brand aims to make daily mobility even safer and more sustainable. Combining a technology-driven approach with leading innovations, the number 2 in passive safety technology continues to strengthen its competitive position and aims to grow faster than the market. The increased entrepreneurial flexibility as an independent brand now allows for more targeted responses to customer needs. In 2024, ZF Lifetec opened a new research and development center in India and two new plants in China for the production of airbags and seat belts.

The market for passive safety systems is less affected by the disruptive developments currently characterizing the automotive industry. According to studies, the total market volume of around 19 billion euros in 2023 is expected to grow by 2030 with a cumulative annual growth rate of around 4 percent. The main drivers of growth are increasing safety regulations and automotive megatrends such as automated driving, electrification and new interior concepts. This opens up additional business areas for ZF Lifetec.

More information about ZF Lifetec

ZF FOXCONN CHASSIS MODULES JOINT VENTURE ON GROWTH PATH

In April 2024, we completed the establishment of our joint venture with Foxconn (Hon Hai Technology Group). Both companies hold a 50 percent stake. ZF Foxconn Chassis Modules (ZFFCN) leads the global market and very successfully leverages the opportunities of e-mobility for the axle business. Despite the current downturn in the automotive market, the newly founded company benefits from attractive growth driven by high order numbers from top manufacturers and the ongoing outsourcing trend. Therefore, ZFFCN expects to double its revenue from the current 4 billion euros to 8 billion euros by 2029, thus bucking the trend. In fall 2024, two new plants in Hungary started pre-production operations for customers in order to strengthen their global presence and tap into new markets. Further new plants are planned, including in North America and China.

The collaboration within the ZF Foxconn Chassis Modules joint venture framework expands ZF's global footprint, particularly in Asia. It also promotes access to advanced manufacturing technologies and enables the development of innovative chassis solutions for electric vehicles. At the same time, it strengthens our market position by opening up new customer segments.

No other competitor can draw on decades of expertise in the axle business and, at the same time, leverage added momentum and economies of scale from the world's largest electronics contract manufacturer. Last year, ZF Foxconn celebrated 30 years of axle system assembly and logistics expertise. Since 1994, a total of 40 million axle sets have been produced worldwide.

With process expertise, ZF Foxconn focuses on the growing market of axle system assembly.

ZF Foxconn Chassis Modules

Learn more about ZF Foxconn

INDEPENDENT SOFTWARE COMPANY QORIX FOUNDED

To further develop and market middleware stacks that are unique in the industry, we have transferred our development cooperation with KPIT Technologies, which has existed since 2021, into the independent software company Qorix. KPIT and ZF each hold an equal share in the newly founded company. Qorix's open and scalable middleware platforms offer vehicle manufacturers the ability to more easily manage the ever-growing software complexity while maintaining full control over the software architecture.

More informationen about Quorix

COOPERATION PROJECT ON AI ALGORITHMS WITH INFINEON

Strategic partnerships provide us with a crucial competitive advantage in shaping the mobility of tomorrow. This is also demonstrated by our cooperation with Infineon Technologies AG as part of the "EEmotion" project, which was funded by the German Federal Ministry for Economic Affairs and Climate Action. We have enhanced our existing software solutions cubiX and Eco Control 4 ACC by AI algorithms and implemented them on Infineon's Aurix TC4x microcontroller (MCU) with integrated Parallel Processing Unit (PPU). The result: algorithms based on artificial intelligence are more efficient. They optimize software and control units for driving dynamics systems.

Learn more about the cooperation with Infineon

Dr. Holger Klein,
Chief Executive Officer of ZF Friedrichshafen AG

“As a broadly diversified technology company, we aim to be among the winners of the transformation in the mobility industry. Our goal is to be among the top 3 global providers in all core areas. In line with our strategic approach “Strengthening our Strengths – Unlocking our Potential,” we are placing particular focus on business areas in which we are strong in order to secure and further expand our market positions.”

Using Resources Strategically

We are increasingly focusing on profitable products and technologies, which helps us become more independent of market fluctuations. That way we generate additional, profitable growth.

POSITION AS A TRENDSETTER IN THE COMMERCIAL VEHICLE INDUSTRY FURTHER STRENGTHENED

With the broadest range of products and solutions on the market, we are the world’s most successful supplier of commercial vehicle technologies. We have made targeted investments to further expand this leading international position of our Commercial Vehicle Solutions Division. Our success is driven by cutting-edge technologies and innovations, along with our technology transfer strategy. We develop technologies and platforms once and use them across various product segments. This allows us to industrialize innovations faster than our competitors, giving our customers a technological advantage.

In fiscal year 2024, we were able to generate numerous new customer orders with our solutions in the areas of chassis technology, safety and decarbonization. We are ascending to become the number one in Europe in the field of electrified driveline technologies for commercial vehicles. The new e-mobility modular drive kit allows manufacturers to configure a drive system tailored to their specific requirements – from medium-duty commercial vehicles to 44-ton trucks. The modular range includes electric motors, matching inverters, a 3-speed transmission and the associated electrical components. This makes the modular kit suitable for the rapid decarbonization of the commercial vehicle industry. The TraXon 2 Hybrid transmission system for heavy commercial vehicles was also newly introduced. Our innovative “TrailTrax” system for the electrification of semi-trailers is attracting growing customer interest as well. The same applies to the cubiX chassis software version specifically developed for commercial vehicles and the new autonomous emergency braking assistant OnGuardMAX, which elevates the standard of active safety in commercial vehicles.

We are developing driveline technologies for the commercial vehicle industry of tomorrow.

CeTrax 2 dual

Award for sustainability

The Commercial Vehicle Solutions Division received the “Sustainability Award in Automotive 2024” for its CeTrax 2 dual electric central drive. The commercial vehicle drive system was awarded the prestigious industry prize for its innovative nature and the implementation of emission-free transport. CeTrax 2 dual is designed in such a way that it corresponds to the installation space of a conventional transmission. This allows manufacturers to electrify existing vehicle model ranges more easily. And they can offer both combustion engines and electric drives in a single vehicle platform. The Sustainability Award is jointly presented by the publishing house of the Springer Nature Group and the international consulting company Arthur D. Little. In doing so, they recognize outstanding examples of sustainable contributions to mobility.

Learn more about our solutions for commercial vehicles

INDUSTRIAL TECHNOLOGY ADVANCING WITH THE WIND, ON THE RAILS AND AT SEA

Our Industrial Technology Division is one of the top 3 global players. We are one of the main suppliers of gearboxes in the global wind power industry, with a market share of around 25 percent. This means we are contributing directly to the transition of the energy sector to renewable power generation. In the growth market of India, we are on our way to becoming the leading provider. Around 50 percent of the wind turbines installed there are already operating with ZF products. Last year we reached a milestone of 50 gigawatts. We anticipate a doubling over the next five years. India currently has the fourth largest installed wind power capacity in the world, with around 47 gigawatts. It is expected to grow to 140 gigawatts by 2030. This requires an annual capacity increase of 10 gigawatts.

100 years ago, transmissions laid the foundation for our company and have been integral to our unique strategy of technology transfer. In 1924, ZF adapted the “Soden Transmission TS18.5,” originally developed for passenger cars, for use in railcars. Even today, we can impress our rail customers by transferring innovative driveline technologies from other areas of application. This establishes us as the preferred technology partner worldwide for making rail mobility more efficient, safer and more sustainable. For example, our new EcoWorld 2 rail transmission can reduce fuel consumption by up to 20 percent. The new digital condition monitoring system “connect@rail” detects damage to the driveline and track infrastructure at an early stage, enabling efficient maintenance.

Efficiency and sustainability are also the focus of our innovations for marine applications. With the new ZF 3000 NRD PTI hybrid transmission, we are extending our expertise for maritime drives to another field of application. We offer a space- and weight-saving solution for realizing hybrid propulsion in waterjet vessels. This enables low-noise and low-emission operation in ports and bays, for example. Initial customer projects have already been successfully implemented. Since last year, patrol boats and fire-fighting vessels in Asia have been operating reliably with our new hybrid transmission.

Learn more about 100 years of ZF Rail Drives

For 100 years, ZF has been a reliable partner and supplier of innovations for rail mobility.

Strengthening the Friedrichshafen location

By investing significantly, we are making the Friedrichshafen location more competitive and future-proof. A second production line for the TraXon transmission system went into operation at one of the plants of the Commercial Vehicle Solutions Division. Friedrichshafen also serves as the central hub for electric mobility for commercial vehicle drives. In addition, the groundbreaking ceremony for the construction of a new logistics center for industrial technology has taken place. It will optimize local material flow and make the infrastructure more efficient. A key component is the new automated small parts warehouse. Its advanced technology significantly boosts efficiency and cuts storage costs by more than one million euros per year. The approximately 3,000 square meter logistics center is scheduled to begin operations in spring 2026.

3,000 m^2

Friedrichshafen logistics center

CLEPA Innovation Awards

CLEPA Innovation Award for magnet-free electric motor

In 2024, the European Association of Automotive Suppliers CLEPA awarded ZF the title of "Top Innovator" in the "Green" category. The award-winning technology is our electric motor, which operates without magnets and thus eliminates the use of rare-earth elements. This reduces dependency on critical raw materials and significantly improves sustainability and efficiency. Eliminating rare earth elements saves valuable resources in production and avoids potentially risky supply chains. With this, the innovative motor sets new standards in electric mobility. The "Top Innovator" is selected by an expert jury from around 80 applications and recognizes groundbreaking innovations in the industry.

POWERHOUSE OF CHASSIS TECHNOLOGY

Regardless of how future mobility evolves, the chassis remains the basis of every vehicle, providing the foundation for driving dynamics, comfort and safety. As a leading supplier in the chassis sector, we already ensure comfort and driving safety in millions of vehicles worldwide with our steering, braking, damping and stabilization systems along with our overarching control software.

The transformation to electric mobility, automated driving and software-defined vehicles also has an impact on the chassis of passenger cars, though. Wheel guidance, damping, steering and braking are becoming even more significant as fundamental changes are taking place in the electric and electronic architecture of new and future vehicle platforms, among other things. In the software-defined vehicle, driving dynamics are increasingly enhanced by the higher-level coordination and interaction of actuators, rather than just by optimizing individual actuators. Comprehensive systems expertise is required here. This is exactly what we have maximized and perfected with our new Chassis Solutions Division.

The division was created in January 2024 by merging the ZF Car Chassis Technology and Active Safety Systems divisions. Since then, the new division has become a global leader in the chassis sector. It offers a portfolio that is unique in the industry, including hardware and software solutions for all dimensions of driving dynamics (longitudinal, lateral and vertical dynamics). This strategy has already achieved notable success within the first year: For example, the innovative active damping technology sMOTION, which significantly improves vehicle comfort and dynamics, was first introduced in series production in premium models of a renowned German sports car manufacturer.

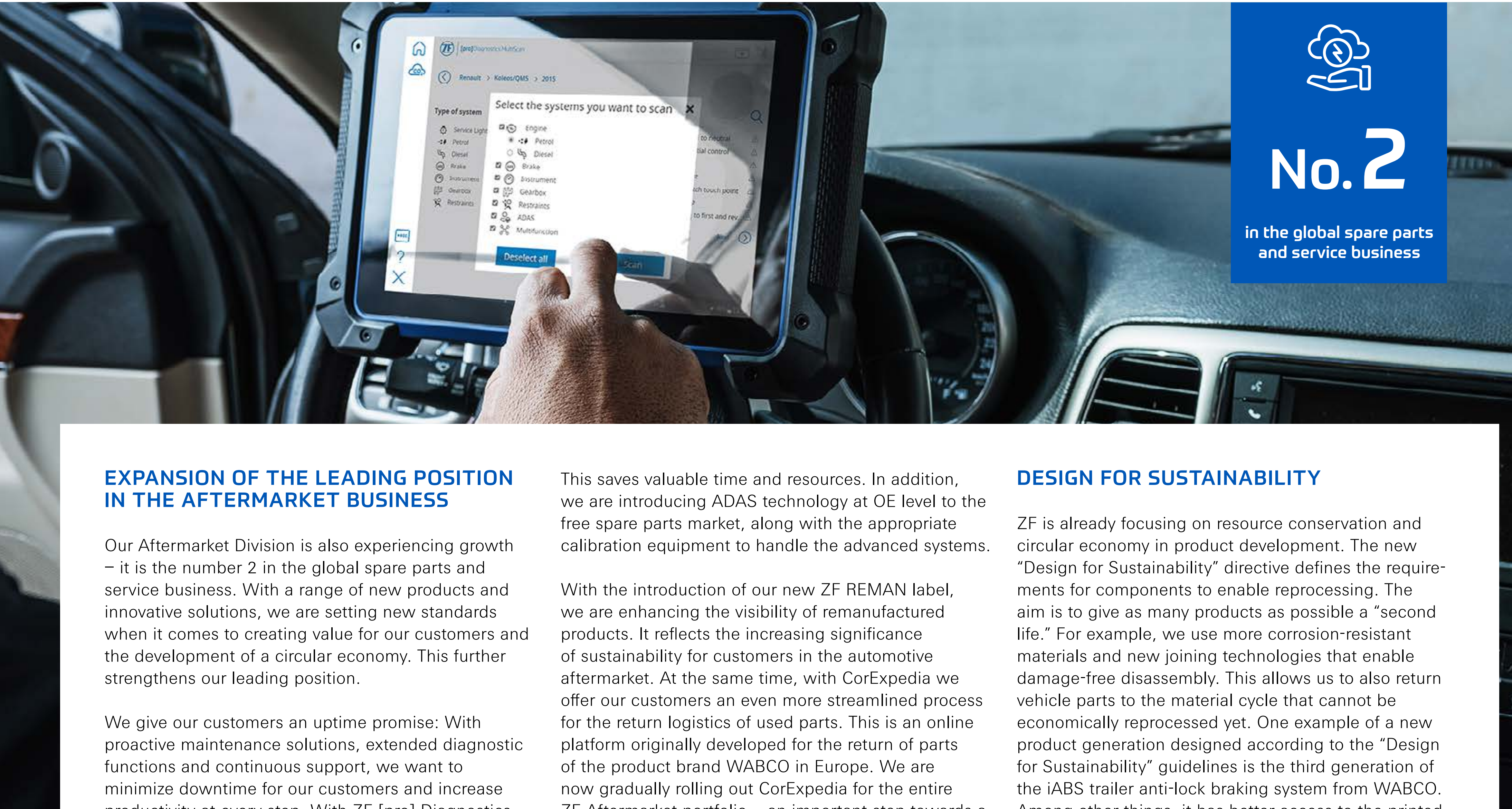
5 million

brake-by-wire systems for a global vehicle manufacturer

As a technology leader, ZF also has the industry's largest portfolio of by-wire technologies that operate without direct mechanical connections or system fluids. Customer interest is high. Our innovative steer-by-wire system is already featured in a vehicle from a North American manufacturer and will go into series production in 2025 with the new premium model ET9 from our Chinese customer NIO. The ET9 is the first model with steer-by-wire technology to receive approval for mass production in China.

Recently, the Group announced the acquisition of an important large order, which – in addition to numerous other chassis products – also includes a brake-by-wire system. Nearly five million vehicles from a leading global vehicle manufacturer will be equipped with this innovative electromechanical braking technology from ZF.

Learn more about our chassis technology portfolio



No. 2
in the global spare parts and service business

EXPANSION OF THE LEADING POSITION IN THE AFTERMARKET BUSINESS

Our Aftermarket Division is also experiencing growth – it is the number 2 in the global spare parts and service business. With a range of new products and innovative solutions, we are setting new standards when it comes to creating value for our customers and the development of a circular economy. This further strengthens our leading position.

We give our customers an uptime promise: With proactive maintenance solutions, extended diagnostic functions and continuous support, we want to minimize downtime for our customers and increase productivity at every step. With ZF [pro] Diagnostics, for example, we offer a new, comprehensive diagnostic solution for passenger cars and commercial vehicles of all fuel types in Europe. Workshops, tire service centers and fleets can identify problems quickly and precisely. This saves valuable time and resources. In addition, we are introducing ADAS technology at OE level to the free spare parts market, along with the appropriate calibration equipment to handle the advanced systems.

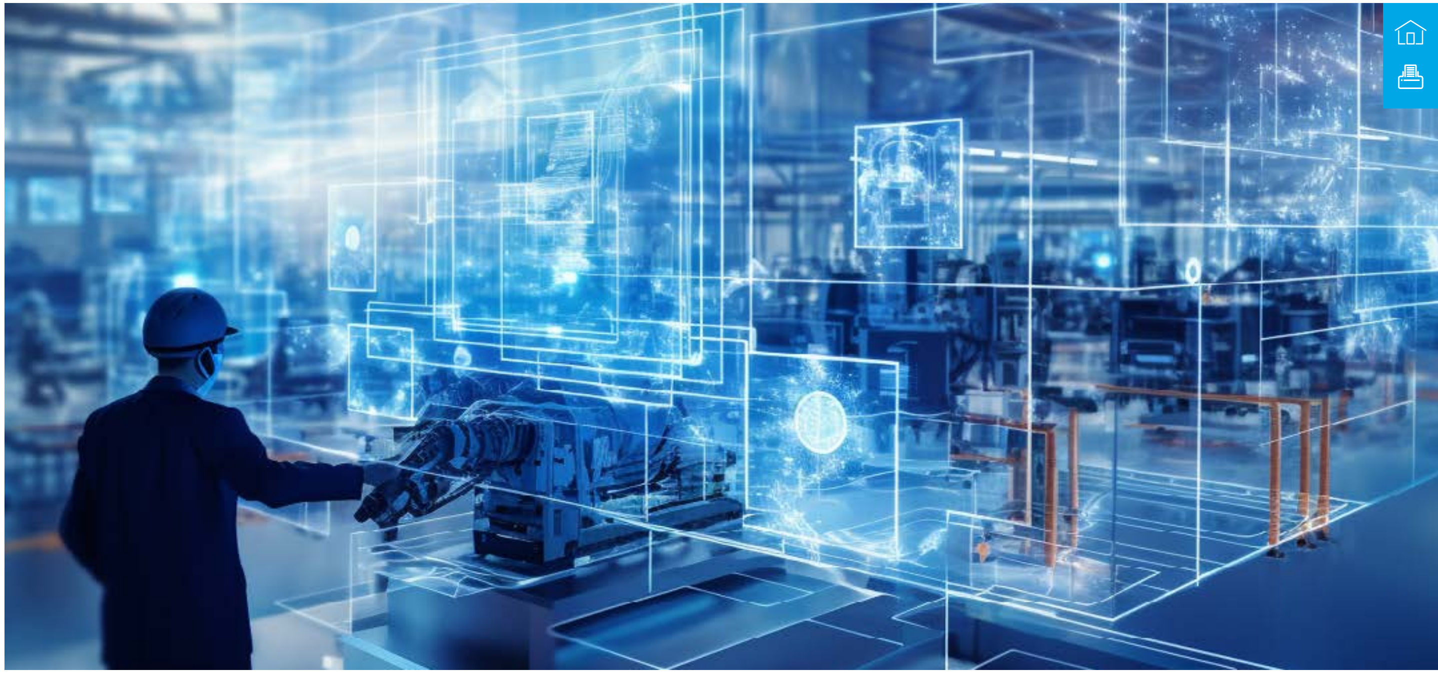
With the introduction of our new ZF REMAN label, we are enhancing the visibility of remanufactured products. It reflects the increasing significance of sustainability for customers in the automotive aftermarket. At the same time, with CorExpedia we offer our customers an even more streamlined process for the return logistics of used parts. This is an online platform originally developed for the return of parts of the product brand WABCO in Europe. We are now gradually rolling out CorExpedia for the entire ZF Aftermarket portfolio – an important step towards a functioning, sustainable circular economy.

Learn more about our Aftermarket business

DESIGN FOR SUSTAINABILITY

ZF is already focusing on resource conservation and circular economy in product development. The new “Design for Sustainability” directive defines the requirements for components to enable reprocessing. The aim is to give as many products as possible a “second life.” For example, we use more corrosion-resistant materials and new joining technologies that enable damage-free disassembly. This allows us to also return vehicle parts to the material cycle that cannot be economically reprocessed yet. One example of a new product generation designed according to the “Design for Sustainability” guidelines is the third generation of the iABS trailer anti-lock braking system from WABCO. Among other things, it has better access to the printed circuit board, which is now also “reflashable.”

Shaping the Future



We want to actively shape the future of technology for mobility and industry. Our aim is to convert today's potential into tomorrow's competitive advantages.

THE FUTURE OF PRODUCTION: CO_2-NEUTRAL, EFFICIENT AND DIGITAL

Our ambitious goal is to become climate-neutral through 2040 across all emissions categories. As we get there, we are working consistently on reducing the CO_2 emissions in our production plants and, where possible, eliminating them entirely. This enabled us to reduce CO_2e emissions by 51 percent compared to 2019, and we are focusing on decarbonizing our supply chain and products in Scope 3. Through late 2025, all plants should be powered entirely using green electricity. In addition, we are expanding renewable energy to generate our own electricity and supply heat on a more sustainable basis. With solar systems, the plants can cover part of their annual electricity needs. Climate-neutral heat pumps are replacing the previous heating systems powered by fossil fuels. A blueprint for all existing and new plants is our factory in Klášterec (Czech Republic). It went into operation last year with a comprehensively decarbonized energy system.

The digital transformation in production is also progressing. More than 60 plants with more than 7,000 machines are already connected to the Digital Manufacturing Platform (DMP) with a central cloud solution. The cross-plant integration and easy scalability of the DMP make us independent of local infrastructure. The result is lower production costs, optimized inventories, increased production performance and quality as well as more efficient personnel planning. Optimized production processes prevent rejects while improved machine run times reduce energy consumption. The plan is to connect all plants to the DMP by 2026.

Learn more on the future of production

EXPANSION OF BATTERY TEST BENCHES IN PASSAU

In Germany, we have opened up a new, additional growth area with the extension of the portfolio of ZF Test Systems to include test benches for batteries. Here, vehicle manufacturers and service providers can test and certify their batteries for electric vehicles – from the cell, to the module, right through to the pack. Given the large demand, we are now going to further expand these test benches in Passau.

Overall, the Test Systems business area is performing very well and will develop additional growth potential with the future international ramp-up of electric mobility. ZF product segments also benefit from this internal testing expertise through a high level of quality assurance, for example, for vibration-free and low-noise electric axles.

ZF Gray Court plant: flexible production of conventional and electric drives


New ZF Campus Monterey: Research and development of new technologies for electric and autonomous vehicles.


ZF sets standards in China: Level 4 test license for highly automated driving in Shanghai

LOCAL FOR LOCAL IN GROWTH REGIONS

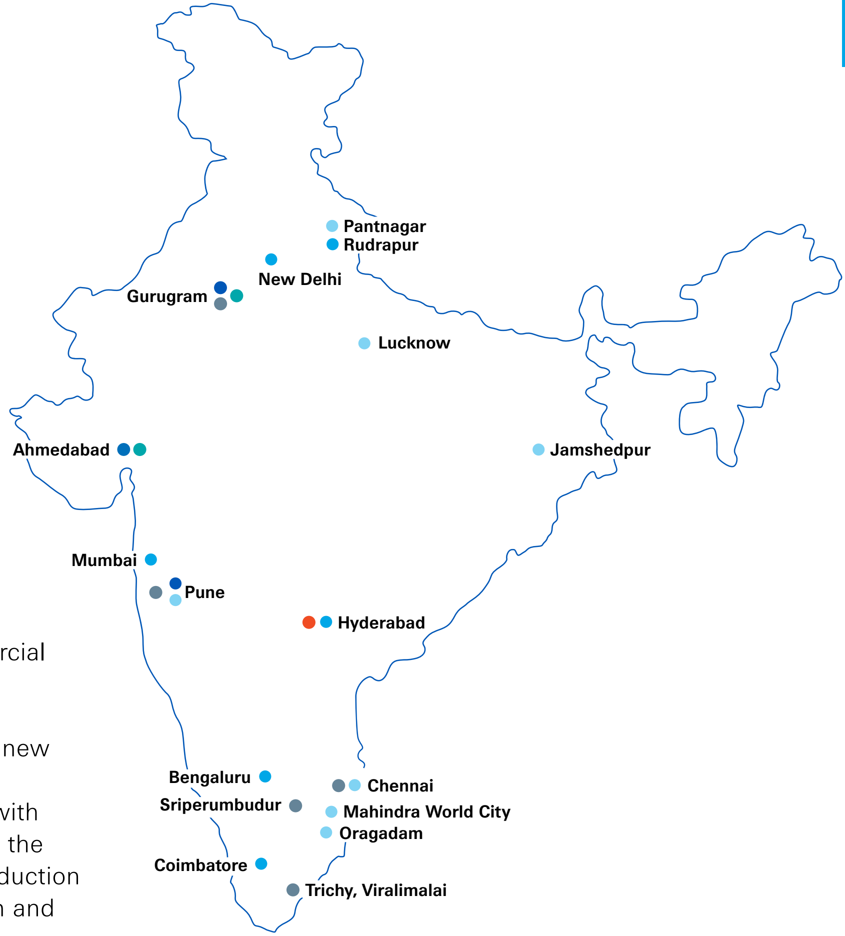
In growth regions such as Asia-Pacific, India and North America, we are expanding our local-for-local activities. The aim is to benefit from the dynamic markets there, grow sustainably and secure new customers.

Last year for instance, we opened our third production plant for electric powertrain technologies in China, currently the world’s largest electric vehicle market. China has developed over decades into a major production and development location for ZF in the Asia-Pacific area. For our advanced ADAS systems, we were the first foreign automotive supplier to obtain a Level 4 test license for highly automated driving in Shanghai.

In North America, we are strengthening our competitiveness by localizing hybrid transmissions at our Gray Court plant in the U.S. and a new R&D center in Monterey, Mexico. The plant in Gray Court, South Carolina, is being converted for the flexible production of conventional and electric drives for passenger cars and commercial vehicles. Production of the 8-speed automatic transmission, which is also suitable for plug-in hybrid vehicles, will begin in 2025. Production of the hybrid-capable PowerLine transmission for medium-duty trucks, buses and pick-ups has already started. Our ramp-up plans already foresee up to 200,000 PowerLine units for 2025. German plants also benefit from this success story. For example, the mechatronics modules come from Saarbrücken and the electronic control units from Auerbach. With the expanded production capacities, we will be able to respond even more flexibly to the wishes of North American customers and the increasing demand for hybrid drives in the future.

The new ZF Campus in Monterey strengthens Group research and development of advanced technologies for electric and autonomous vehicles. The portfolio ranges from software, cybersecurity and algorithms to electric motors. The Campus also has 16 state-of-the-art laboratories that can simulate real-world conditions.

Headquarters of ZF India in Pune.



LEVERAGING THE TREND TOWARD DECARBONIZATION IN THE GROWTH MARKET OF INDIA

India is one of the world's biggest growth markets. Alongside renewable energies, the market for electric mobility is also growing fast. By 2030, the share of electric vehicles is to rise to 30 percent for passenger cars and to as much as 70 percent for trucks and buses. The ZF Commercial Vehicle Solutions and Industrial Technology divisions take advantage of these growth opportunities and further expand their local production.

As the pacesetter of commercial vehicle technology and facilitator of the rapid decarbonization of delivery traffic, ZF opened a new plant in Oragadam (Tamil Nadu Province) last year, where the production of brakes and chassis components started. In a second phase, the plant will be expanded to include the production of electric components such as air compressors for light and medium-duty commercial vehicles.

The Industrial Technology Division invested in a new production plant in Coimbatore to localize the ERGOPOWER M transmission series. Together with the main location in Friedrichshafen (Germany), the new plant in India will create the necessary production capacities for future market growth in the Indian and global construction machinery market.

Today, ZF has a total of approximately 30 production and development locations on the Indian subcontinent. Local production is an important success factor in the long-term growth strategy. It makes it possible to meet customer demand and expectations more flexibly and provide them with easy access to our world-leading technologies with local manufacturing expertise. It also helps to avoid import duties and eliminate transport costs.

“We are clearly committed to Germany as a business location”

Interview with
Dr. Lea Corzilius,
Chief Human Resources Officer and Director of Labor Relations of ZF Friedrichshafen AG

How important will the location Germany be for ZF after the consolidation?

Germany will continue to hold a leading position in the global ZF Group in the future as the base for our headquarters and home to major development and production locations. The consolidation involves making the German plants competitive over the long term so that they can secure new projects and protect jobs. At present we have a fragmented location landscape that results in inefficiencies. That’s why we aim to create lean and strong location networks that enable us to operate successfully as a business on a sustainable footing. That means we are clearly committed to Germany as a location and also intend to continue to invest up to 30 percent here. Being competitive doesn’t necessarily mean having the lowest wage costs, but calls for the smartest manufacturing concepts, the best development processes and the highest quality. For example, the Friedrichshafen location was able to win a second production line for the TraXon transmission system. And in Saarbrücken, we are investing several hundred million euros in a state-of-the-art, flexible production line for two additional electric passenger car axle drives.

The restructuring will make targeted use of the demographic structure of the workforce. How will you ensure that the Group retains its expertise?

Our corporate social responsibility aims to future-proof ZF. This also includes ensuring that the skills of those colleagues that leave ZF are retained and further developed internally. Over the past year we had around 1,750 internal appointments and promotions, thereby further developing the potential and the expertise of our employees in a targeted manner. We are continually investing in further training for our employees and have launched comprehensive training programs. Particularly in the current transformation phase, education and further training constitute a key factor in the ability to innovate and hence the long-term success of our company. Last year for instance, we used a digital learning platform to train over 36,000 employees in the areas of electric mobility, digitalization and sustainability. As part of this approach, it is down to our ZF culture to find solutions together with the employee representatives.

What distinguishes the ZF culture in times of transformation?

It’s all about community. Our transformation program and our value system ZF Way with its five principles define how cooperation and leadership are shaped within the Group. The principles are firmly embedded in the company and provide the framework in which we successfully implement our strategy. These principles are passion, anticipation, diversity, empowerment and accountability. We encourage our employees to be open and respectful, to assume responsibility and contribute their own ideas. We find that diversity inspires, and we are convinced that it creates the ideal conditions for creativity, innovation and permanent success. All over the world, we promote a working environment full of appreciation and equal opportunities. Equally important – especially in times of transformation – is the feedback from our employees. Our second global survey “Hello, ZF Team!” was used by almost 70 percent of employees to express opinions, ideas and concerns – simply and confidentially.

Group Management Report

Basic Principles of the ZF Group

OPERATING ACTIVITIES AND STRUCTURE

- **Internationally positioned: ZF is a technology company with 161 production locations worldwide**
- **Focus on the future: ZF electrifies vehicles and contributes to reducing emissions, protecting the climate and making mobility safer.**

Global technology solutions provider focused on mobility

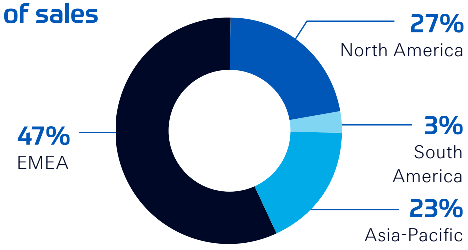
ZF is a global technology company, supplying advanced mobility products and systems for passenger cars, commercial vehicles and industrial technology. Our comprehensive product range is aimed primarily at vehicle manufacturers, mobility providers and start-up companies in the fields of transportation and mobility. ZF electrifies a wide range of vehicle types. With its products, the company contributes to reducing emissions, protecting the climate and enhancing safe mobility. Alongside the automotive sectors – passenger cars and commercial vehicles – we also serve market segments such as construction and agricultural machinery, wind power, marine propulsion, rail drives, special drives and test systems. We sell our aftermarket products under the brands of ZF, Lemförder, Sachs, TRW, WABCO and Boge.

At the end of 2024, ZF employees worldwide numbered 161,631. The ZF Group is represented with 161 production locations in 30 countries.

G. 01 ZF worldwide

161 production locations in **30** countries
20 main development locations in **10** countries
Global service network with more than **20,000** workshop partners

Share of sales



	Total	EMEA	North America	South America	Asia-Pacific
Production locations	**161**	80	28	8	45
Employees	**161,631**	92,580	34,787	5,579	28,685
Sales in € million	**41,377**	19,359	11,179	1,382	9,457

Our main sales markets are Europe, North America and the Region of Asia-Pacific, with China as the core market and India as the growth market.

Corporate structure

ZF Friedrichshafen AG is a corporation headquartered in Friedrichshafen (Germany). The Zeppelin Foundation owns 93.8% of the company. These shares are managed by the city of Friedrichshafen. The remaining 6.2% is owned by the Dr. Jürgen and Irmgard Ulderup Foundation, Lemförde (Germany). The shareholders exercise their voting rights at the ordinary annual shareholders' meeting and/or at extraordinary shareholders' meetings that are held upon requirement.

To keep our business activities as customer-oriented, market-specific and innovative as possible, we are working in a global network consisting of divisions, regions and corporate functions. The corporate functions and divisions are managed by the Board of Management. This also applies to the regions of North America, South America, Asia-Pacific and India. The regions provide local guidelines and services for their respective regions.

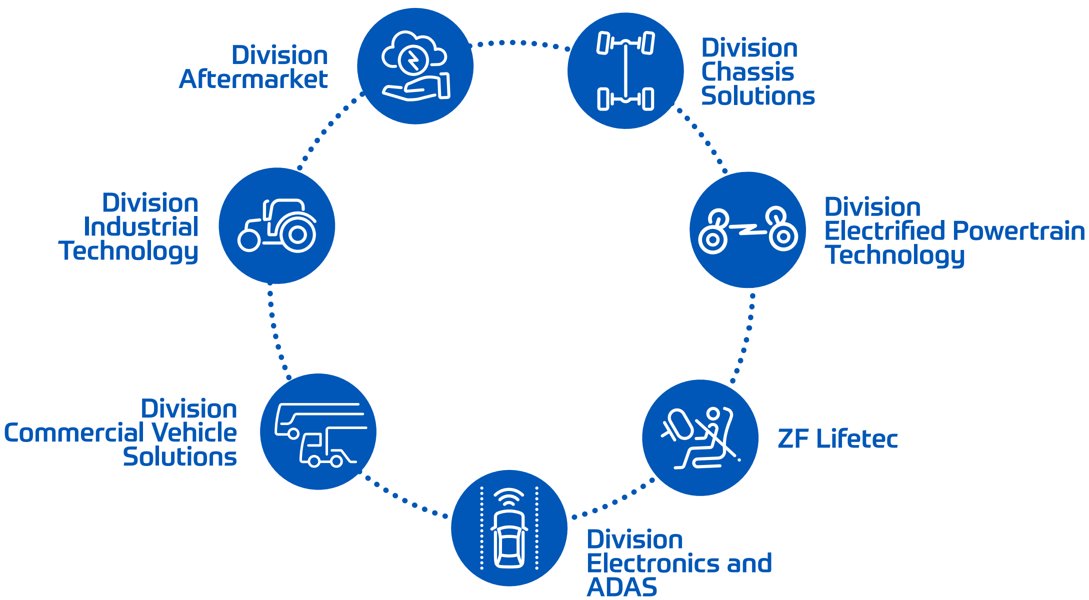
In the ZF Group, business activities by product segments are organized by divisions. The Chassis Solutions, Electrified Powertrain Technology, Electronics and ADAS divisions as well as ZF Lifetec operate in the passenger car and light commercial vehicle sector. The Chassis Solutions Division bundles all competencies relating to chassis, steering and braking technology. The Electrified Powertrain Technology Division combines the expertise for electrifying the powertrain. The Passive Safety Systems Division has been operating under the new brand name ZF Lifetec since March 2024. The business activities were spun off from the ZF Group in fiscal year 2024 in order to leverage strategic options for the future further development of the division for passive safety systems, such as airbags, steering wheels and seat belts. The Electronics and ADAS Division is responsible for driver assistance systems, sensor technologies and integrated electronics.

Our Commercial Vehicle Solutions Division is a systems supplier primarily for truck, bus and trailer manufacturers as well as fleet operators. The core tasks of the division are the development and provision of electric drive solutions for commercial vehicles, the promotion and implementation of technologies for autonomous driving, and the integration of digital solutions to mprove efficiency and safety in transportation.

Activities in the area of industrial applications are pooled in the Industrial Technology Division and include market segments such as construction and agricultural machinery, wind power, marine propulsion, rail drives, special drives and test systems. In addition to the development of transmissions and drive systems in the areas mentioned, the areas of activity include the provision of solutions for the automation of production processes as well as technologies to increase efficiency and sustainability in energy generation and distribution.

The Aftermarket Division makes our OEM expertise available to the aftermarket, drawing on a global service network of more than 20,000 workshop partners. The services include workshop concepts and service offers for fleets, exchange units, maintenance and remanufacturing. Intelligent connectivity solutions for digital mobility management over the entire life cycle of a vehicle complement the range of services.

G. 02 Divisions



CORPORATE MANAGEMENT

Board of Management

ZF Friedrichshafen AG and the ZF Group are managed by the Board of Management. The Board of Management runs the business independently and determines the strategic orientation of the company. The strategy is implemented in close coordination with the Supervisory Board. The Supervisory Board monitors the activities of the Board of Management and receives regular management updates concerning business performance, strategy and opportunities and risks.

In line with our matrix organization, in addition to strategic and functional management, the Board of Management has responsibility for the divisions and regions.

At the end of the 2024 fiscal year, the Board of Management consisted of five members: Chief Executive Officer Dr. Holger Klein, Dr. Lea Corzilius, Michael Frick, Dr. Peter Holdmann and Prof. Dr. Peter Laier.

In March 2024, the Supervisory Board appointed Dr. Peter Holdmann as a new member of the Board of Management with effect from May 1, 2024.
Dr. Martin Fischer and Stephan von Schuckmann left the company at the end of June 2024 and the end of July 2024, respectively. In October 2024, the Supervisory Board appointed Mathias Miedreich to the Board of Management effective January 1, 2025.

Supervisory Board

The Board of Management is overseen by the Supervisory Board, whose members are appointed with equal representation. At the end of the fiscal year, the Supervisory Board comprised 20 members under the leadership of Dr. Heinrich Hiesinger.

The Supervisory Board is supported by an Executive Committee and an Audit Committee, which are both composed of members of the Supervisory Board.

Corporate Governance

The Board of Management and the Supervisory Board are committed to managing and monitoring the company responsibly in accordance with the principles of good corporate governance. These are a prerequisite for sustainable business success and the fundamental standard on which our day-to-day management behavior is based. For the Group, acting according to the principles of responsible corporate management geared to sustainable value creation is an all-encompassing requirement across all areas of the company. Corporate Governance is implemented by means of an integrated Governance, Risk and Compliance (GRC) approach. The aim of the integrated GRC approach is to synchronize and promote the activities and cooperation of the core governance functions. In addition to Group Risk Management, this system includes the Compliance organization, the Internal Control System, and as an independent supervisory body, Corporate Audit. The departments report regularly to the Board of Management and Audit Committee in a joint GRC report.

Enterprise Risk Management

The Group-wide standardized Enterprise Risk Management (ERM) of ZF Friedrichshafen AG ensures the monitoring and management of risks in the divisions, regions and corporate functions. Our risk situation is now more transparent in all dimensions of our matrix organization. We document and manage risks with the help of various tools, taking account of both strategic and operational risks and aggregating the overall risk landscape.

Compliance

Compliance is an integral part of our corporate culture and forms the basis for the trust that customers, business partners and the public put in us. The Board of Management and all employees of the ZF Group are obliged to behave responsibly and to comply with applicable regulations. We expect such behavior also from our business partners along the entire value-added chain.

ZF's Code of Conduct lays down principles of correct, legally compliant and ethical behavior that are mandatory for all ZF employees. In addition, the Business Partner Code of Conduct forms the foundation of partnership-based cooperation. Together, they represent the basic requirements for integrity and summarize our understanding of values.

ZF's Compliance Management System ensures lawful action by the bodies, executive managers and employees at all corporate locations. The focus is on measures preventing corruption, fraud and money laundering risks.

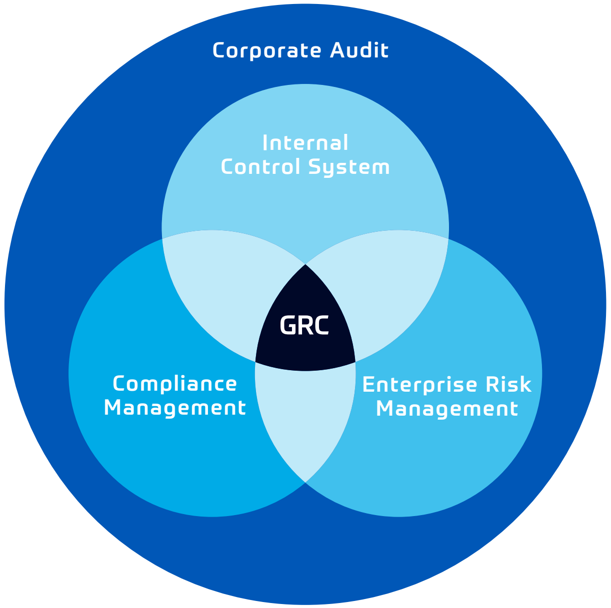
Internal Control System

ZF's Internal Control System (ICS) is intended to ensure the organization's target achievement with regard to relevant business processes, reliable reporting of financial as well as non-financial key figures and compliance. Our standardized ICS approach is based on the tenets of transparency, the principle of dual control as well as the separation of duties. It is implemented throughout the Group. The direct reference of the ICS to the ZF risk catalog enables us to ensure control coverage and to develop it in a targeted manner. The appropriateness and effectiveness of the controls are monitored by the divisions, regions and corporate functions as well as audit procedures on the part of the central Risk & Control Management and Corporate Audit. The Board of Management does not have any information indicating a lack of appropriateness and effectiveness of the ICS as of December 31, 2024.

Corporate Audit

Corporate Audit supports the ZF Group in achieving its objectives by following a systematic and independent audit approach to evaluate and improve the effectiveness and efficiency of risk management, control and other governance processes related to the ZF risk catalog. The audits and, where required, audit-related consulting services are provided on the basis of risk-based audit planning approved by the Board of Management. The timely implementation of measures agreed on the basis of identified risks is monitored by Corporate Audit and escalated in cases of non-compliance.

G. 03 Integrated Governance, Risk & Compliance (GRC)



Equality and equal opportunities

Equality and equal opportunities are important for our company's success. We support diversity in our company and nurture our employees regardless of their personal attributes. ZF promotes an integrative working environment and an open work culture that respects, values and encourages individual differences.

With due consideration for German legislation governing equal representation of women and men in managerial positions in the private and public sectors, the following targets have been defined and are to be met by June 30, 2027:

- The targets of 20% female Supervisory Board members and 10% female Board of Management members are achieved with the current composition.
- At the first managerial level below the Board of Management as well as the second managerial level, the proportion of women is to increase to at least 20%.

↘ You can find more information in the Sustainability Report.

INNOVATION

- **Adaptation of R&D processes and projects to the challenges in the automotive industry, sustainability aspects are gaining in importance.**
- **R&D expenditure of €3.6 billion.**
- **26,954 R&D employees at 20 main development locations in ten countries.**

The automotive industry is undergoing a major transformation. The potential for future innovations lies in combining proven strengths with new technologies. In 2024, the focus was on adapting current products, processes and business areas to meet the challenges of the automotive industry and make them future-proof. The goal is to highlight the unique selling points of our solutions and the added value for our customers.

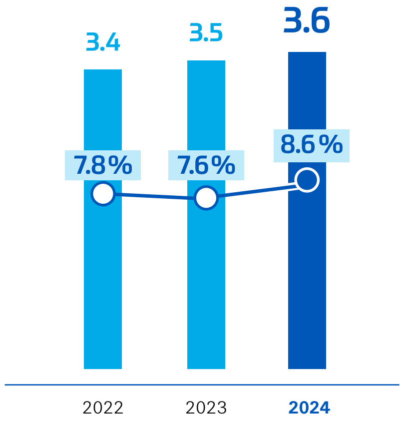
Initiatives of Corporate Research and Development

In fiscal year 2024, the organizational structures in R&D were optimized by relocating departments from Corporate R&D to the divisions in order to reduce interfaces and enforce direct responsibilities. Furthermore, the global software center was strengthened by further centralization in Corporate R&D, especially in terms of platforms, processes and infrastructures. This was done to focus on the central provision of software platforms and the microcontroller base software for the entire Group, thereby realizing synergies. In addition, we have strengthened key Centers of Competence and technology labs with new technological approaches. These lead to further improvements and new innovative solutions for our products.

In 2024, we focused on the further development of applications in artificial intelligence (AI) and of digital twins. The use of virtual releases with the help of digital twins aims to reduce the validation effort in the projects of the product lines by up to 30% in the upcoming years. The use of AI solutions promises productivity increases of between 10% and 30%. Especially in series development projects, AI increases efficiency, reduces development costs and accelerates the time-to-market for products. Some application areas include requirements management, Copilot software development, design, testing and validation.

The application of AI-based software models in the products, such as virtual sensors, holds great potential to make our products more innovative, powerful and cost-effective. In addition, ZF and Infineon Technologies AG set up and implemented AI algorithms for the development and control of vehicle software as part of the “EEmotion” funding project.

G. 04 R&D expenditure
in € billion / share of sales in %



Sustainability is an integral part of ZF’s strategy. Our R&D department proactively conducts risk assessments for upcoming projects and has defined measures to minimize the risks associated with the qualification of green materials. This allows the future decarbonization requirements of customers to be met.

Research and Development key figures

	2024	2023
R&D expenditure in € million	3,557	3,543
R&D expenditure ratio in %	8.6	7.6
Number of invention disclosures	2,880	3,431
Number of R&D employees	26,954	27,377

In addition, the ZF PFAS (per- and polyfluoroalkyl substances) Task Force is looking into ways to replace PFAS-containing materials with PFAS-free alternatives.

ZF was one of the first companies in Germany to receive a Level 4 test permit from the German Federal Motor Transport Authority (Kraftfahrt-Bundesamt). The permit relates to electrified and highly automated shuttles featuring ZF's state-of-the-art AD technology. They are being tested by ZF and its consortium partners in the "Real-World Laboratory for Automated Bus Operation in Urban and Rural Public Transport" (RABus) project in Friedrichshafen and Mannheim. The insights gained during the test are incorporated into the technology areas of chassis and high-performance computing, among others.

Highlights from the divisions

Chassis Solutions

A particular focus in 2024 was on connected chassis systems such as steer-by-wire, brake-by-wire, electronic damping systems and smart actuators. The ZF cubiX control software interlinks and coordinates the active and semi-active actuators via a control algorithm. This scalable system is based on a modular design that enables it to be adapted to suit the requirements of every automotive manufacturer. Optimum networking of the individual actuators results in new functions that increase not only comfort but also the dynamics and safety of the vehicle.

Electrified Powertrain Technology

In 2024, the division focused on improving individual products in terms of efficiency, reducing NVH (noise, vibration, harshness) and weight. Reducing weight not only improves driving dynamics and efficiency, but also takes sustainability into account as fewer materials and resources are needed. This year, the focus was also on consolidating the portfolio with an emphasis on electric drive and converter solutions. By focusing on these technologies, resources have been strategically utilized to develop innovative and competitive products. This year's technological highlights include the magnet-free motor (CTR, carbon-taped rotor) and the inverter platform with discrete power module. The magnet-free motor does not require rare-earth elements and thus supports ZF's sustainability strategy in the long term. The inverter platform with discrete power module offers a flexible and scalable solution to cater to customer-specific applications.

ZF Lifetec

Highlights of the division included a steering wheel with a novel, seamless design that allows for adjustments and enhances the user experience. Furthermore, a new driver airbag was presented, which unfolds from the top of the steering wheel instead of from the front as before. This creates space for new features in the steering wheel. Other new products include a driver airbag solution (dual-contour bag) for vehicles aiming at Level 3 and higher autonomous driving, which protects the driver in both normal driving and comfort seating positions. Additionally, an internal side airbag has been developed that can be deployed just before a side impact, creating an additional crumple zone between the side door and the driver in two stages, thereby reducing the risk of injury.

Electronics & ADAS

In the Electronics and ADAS Division, the next generation of the Smart Camera 6 was introduced and further developed. In addition, a parking control unit was developed and introduced to the European market. In order to further advance the progress of ADAS and AD systems, the AI-supported validation service ZF Annotate was developed. ZF Annotate uses artificial intelligence to shorten the development and validation of assistance systems.

System House of Autonomous Mobility Systems

After a little more than three years of series development, the new ZF ProAI central control unit went into volume production in 2024. The ProAI platform serves as a "central nervous system" in the vehicle, networking numerous sensors, other control units and various actuators. As a powerful central control unit, ProAI is capable of processing large amounts of data in real time, which is necessary for controlling modern vehicle systems. Its modular and flexible architecture allows new functions and services to be implemented directly via software, without the need for hardware adjustments. This opens up a wide range of possibilities, such as personalized driving experiences, the use of new digital services and the integration of driving and safety functions, which can be continuously improved and expanded through over-the-air updates (OTA).

Commercial Vehicle Solutions

To reduce emissions and achieve carbonization, electrification is seen as the preferred technology path for most commercial vehicle applications. A platform approach (PI10) is used for fully electrified drive systems. In the field of fuel cells, balance-of-plant technologies (e.g., FC compressor and fuel cell recirculation blower) are being developed. We will also continue to pursue hybrid concepts (TraXon 2 Hybrid) to enable the use of low-emission or zero-emission fuels.

Solutions for the intelligent chassis are also being developed: Hardware and software synergies improve vehicle performance and safety across our chassis technologies and reduce the overall costs of the vehicle, for example, via the e-drive and brake synergies program. Thanks to cross-divisional cooperation, the cubiX control software is also used for vehicle dynamics in commercial vehicles.

For safety and driving automation, the division creates automation platforms based on the Group-wide portfolio of sensors, automotive-grade CPUs and actuators. The OnGuardMAX AEBS solution is being further developed to meet and exceed the strictest safety regulations (e.g., GSR in Europe), thereby protecting more road users in various driving situations. Connectivity and data access solutions, such as the SCALAR Fleet Orchestration Platform, are used to
connect the road transport industry.

Industrial Technology

In addition to the development and production of conventional axles and drive systems for a variety of off-road applications, the focus is on electrified or hybrid solutions as well as digital products and services. The diverse product portfolio includes the following highlights: the all-electric ZF eTRAC drive for agricultural vehicles and construction machinery, digital solutions for special vehicles, e.g., Rescue Connect, new solutions for battery tests as well as integrated gearbox/generator units for the wind segment and the powerful, ultra-compact e-bike drive CentriX.

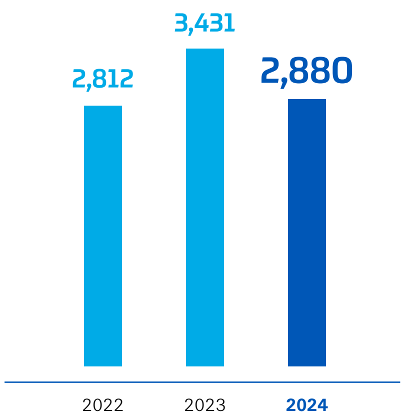
Aftermarket

Together with its partners, Aftermarket aims to enable mobility uptime for dealers, workshops and fleets. With ZF [pro] Diagnostics, the division offers an innovative, brand- and system-independent diagnostic solution for passenger cars and commercial vehicles. This reduces complexity and at the same time increases the service capabilities of the workshops. As part of ZF [pro] Diagnostics, ZF MultiScan offers multi-brand diagnostics for passenger cars, light commercial vehicles, trucks, trailers and buses.

R&D expenditure remains high

In the fiscal year 2024, ZF invested €3.6 billion (2023: €3.5 billion) in research and development. This corresponds to a sales share of 8.6% (2023: 7.6%). Research and development expenditure is defined as research and development costs in accordance with the statement of profit or loss, plus capitalized development costs, less their depreciation.

G. 05 Invention disclosures



By the end of the past fiscal year, the Group employed 26,954 people in research and development (2023: 27,377). 6,179 employees (2023: 6,217) work in the Group’s basic research and divisional project development departments. Worldwide, ZF has 20 main development locations in ten countries.

Patent applications

In the year under review, a total of 2,880 invention disclosures (2023: 3,431) were filed by the Group. The filings led to 1,885 (2023: 2,081) new patent applications.

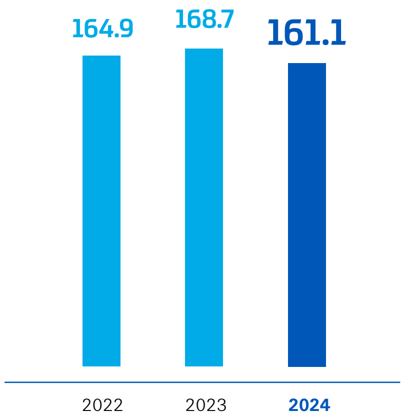
EMPLOYEES

- **The number of employees decreased by 4.2% to 161,631.**
- **Decrease due to M&A transactions and structural adjustments.**

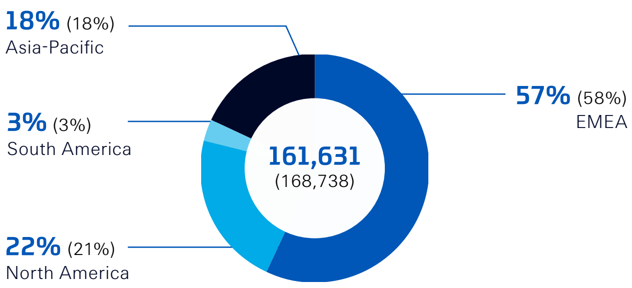
As of December 31, 2024, ZF had a global workforce of 161,631 (2023: 168,738) employees. More than half of the employees (92,580) work in the EMEA region, most of them in Germany (52,027). Staff was primarily reduced in the areas of production, manufacturing and assembly, mainly due to the foundation of the joint venture with the Hon Hai Technology Group (approximately 3,800 employees) and the adaptation of personnel capacities to current market conditions. As a result, the number of employees decreased mainly in the EMEA and Asia-Pacific regions, while it remained generally stable in other regions.

↘ You can find more information in the Sustainability Report.

G. 06 Employees
in thousands

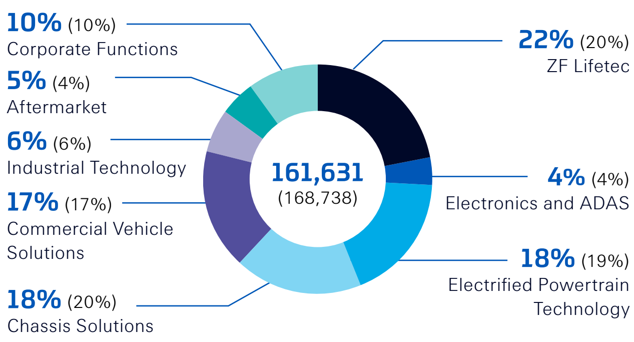


G. 07 Employees by region



Previous year's figures in brackets

G. 08 Employees by division



Previous year's figures in brackets

Economic Report

MARKET AND INDUSTRY ENVIRONMENT

> Global economy is not gaining momentum – unfavorable general conditions and structural problems prevent stronger economic growth.
> The development of ZF's various industries is affected in many ways by negative growth rates due to the sluggish global economy. Only the wind power sector recorded positive growth rates.

Global economy not gaining momentum

The past fiscal year was again influenced by various negative factors. Nevertheless, the global economy has returned to a solid growth path. Alongside emerging markets, the U.S. economy proved robust. Inflation in the major economies continued to decline, moving closer to the respective central bank targets. However, geopolitical tensions, the acts of war in Ukraine and the ongoing conflict in the Middle East had a massive impact on the economic mood.

At 3.1%, the growth of the global economy was above the 3% mark in 2024 as in the three previous years. Currently, the global economy is supported in particular by the service sector. However, global industrial production has also been growing significantly since the summer of 2023. Still, global trade is only slowly catching up with global industrial production. The subdued development of world trade can be attributed, among other things, to the fact that some major economies such as China and the USA produce more goods domestically instead of importing them. In addition, global trade in goods is affected by trade restrictions and geopolitical instability.

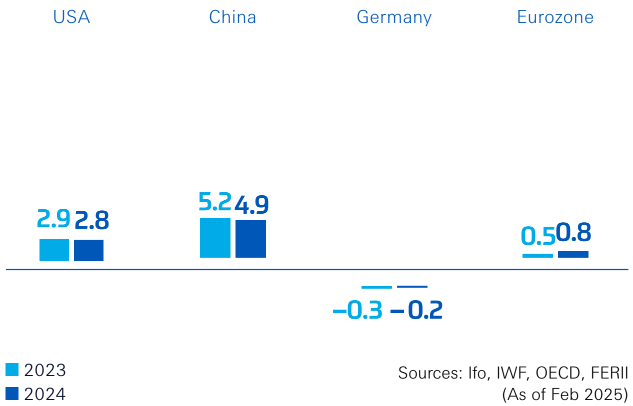
At 2.8%, U.S. growth in 2024 was at a similar level as in 2023 (2.9%). Growth was driven in particular by robust private consumer spending, especially in the service sector, but also by government consumption and private investment.

China closed 2024 with a growth rate of 4.9%, below the prior year's figure of 5.2%. The main reason for the lower growth is weak domestic demand. Weak retail sales in China continue to indicate restraint in private spending, alongside continued tension on the real estate market.

By contrast, Europe (0.8%) and Germany (−0.2%) were again at the bottom of the growth table with their growth rates.

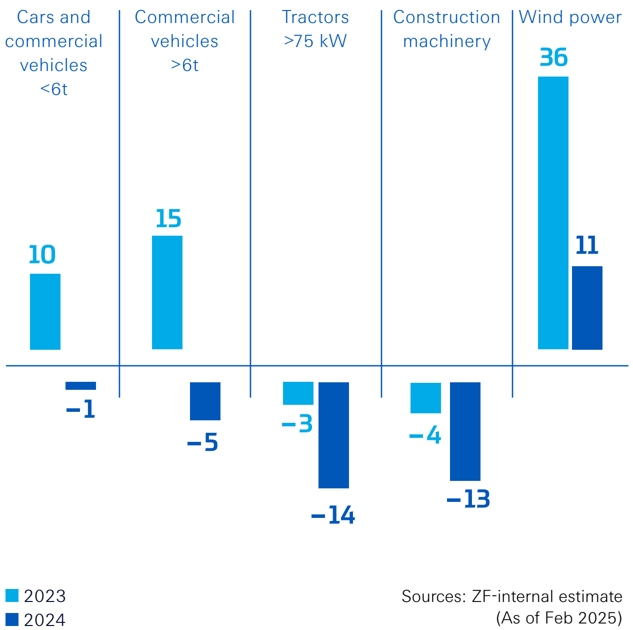
Brazil recorded growth of 3.1%. In India, a respectable growth rate of the gross domestic product was again achieved with an increase of more than 6%.

G. 09 GDP development
in %



Sources: Ifo, IWF, OECD, FERII
(As of Feb 2025)

G. 10 Development of ZF's industries
in %



Sources: ZF-internal estimate
(As of Feb 2025)

Challenging market environment for ZF's industries

Geopolitics remained a major factor in 2024. The war between Russia and Ukraine, which has been going on for three years, the ongoing tensions in the Middle East, as well as the intensified rivalry between China and the USA and the resulting uncertainties led to declines in many of ZF's industries.

After three years of growth (2021: +3%, 2022: +7% and 2023: +10%), the production of passenger cars and light commercial vehicles up to 6 tons decreased by –1% to 89.4 million vehicles produced in 2024. Production was thus around one million below the previous year and around 5.5 million below the peak of almost 95 million units in 2017. Due to the previous increases in production and the difficult market environment, the company was already cautious in its forecast for 2024 and assumed a decline. Europe (–5%) and Japan (–8%) recorded the sharpest declines, while South Korea (–2%), North America (–1%) and South America (–1%) suffered only slight downturns. By contrast, production in South America (+2%) and China (+4%), the largest automotive market, increased to around 30 million vehicles – around one third of all vehicles were thus produced in China. India also increased production by another 4% last year.

Worldwide production of heavy commercial vehicles over 6 tons developed even more negatively. Production fell by –5% in this sector. Europe recorded the strongest decline at –19%, but coming from a peak production volume of 727,000 vehicles in 2023. In North America, the production volume remained stable. The markets in Asia also recorded declines in production in 2024: Japan at –4% and South Korea at –2%. China, the largest commercial vehicle market, was able to keep its production volume stable at 1.1 million commercial vehicles. As with passenger cars, this corresponds to around one third of total production. After three years of significant growth, India experienced a decline of –9% in the year under review. The only region that was able to increase commercial vehicle production was South America at +21%.

The Industrial Technology business units also had to cope with a difficult market environment in 2024. Heavy tractor production recorded a decrease of –14%. This decline in production was caused by the markets of Europe –22%, North America –14% and South America –16%. The markets in Asia only suffered a slight decline of –2%, which is fully attributable to China, whereas the other markets, Japan and South Korea, remained almost unchanged. Construction machinery production, already under pressure in 2023, recorded a further decline of –13% in 2024. Europe in particular experienced a significant decline in production of –25%, as did North America at –15%. South America remained unchanged in the year under review. The markets of Asia, Japan (–12%), South Korea (–28%) and China (–3%), partly also fell significantly below the previous year's figures. India was the only region to report positive growth at +4%. The expansion of wind power fared better with an increase of 11% globally in 2024, thus growing by 14 GW from 117 GW to 131 GW. Only Europe (–9%) and South America (–26%) remained well below 2023 levels. North America increased its capacities slightly (+6%), while the markets in Asia shone with strong growth data: Japan (+35%), South Korea (+73%), China (+18%) and finally India (+34%).

OVERALL DEVELOPMENT OF THE GROUP

> **The ZF Group advanced its strategic realignment.**
> **The financial targets adjusted in September 2024 due to the market decline were met.**

Overview of the business trend and Board of Management overall statement on business performance

In fiscal year 2024, the automotive industry continued to be confronted with difficult economic and political conditions, which also adversely affected the business development of the ZF Group. Subdued economic growth, volatile legislation and the geopolitical situation led to great uncertainty in the automotive market, especially among end users, which was reflected in lower demand for electric vehicles in particular, as well as a sharp decline in customer orders. Global production in the heavy commercial vehicles and industrial technology sectors also decreased more than expected. The resulting decline in sales and earnings, which was primarily due to economic reasons, prompted ZF to adjust its annual forecast in September 2024. Back in 2023, performance programs and projects had been launched to increase the competitiveness of German locations. They showed initial success but were unable to fully offset the effects of the economic slump. Therefore, we cannot be satisfied with the course of the 2024 financial year.

In a declining market environment for the entire automotive supplier industry, the ZF Group generated sales of around €41 billion in the past fiscal year and thus did not reach the sales forecast from the beginning of the year of more than €45 billion. In total, sales decreased by around 11% from €46.6 billion to €41.4 billion. Adjusted for exchange rate and M&A effects, sales fell by approximately 3%. However, sales were in line with the sales forecast revised in September of €40.0 billion to €42.0 billion.

Although the adjusted EBIT margin of 3.6% (2023: 5.1%) is below the forecast range set at the beginning of the year between 4.9% and 5.4%, it is within the revised forecast of between 3.0% and 4.0%. The decline in EBIT is primarily attributable to the deterioration of the market environment, which is reflected in volume-related margin losses. In addition, costs associated with new product launches weighed on the margin.

The adjusted free cash flow of €305 million reached the revised forecast range of over €100 million, but is below the original forecast of over €800 million.

As part of our strategic realignment, we were able to win the Hon Hai Technology Group as a strategic partner for the Chassis Systems and Modules product line in 2023. At the end of April 2024, the ZF Foxconn Chassis Modules GmbH joint venture was founded and has been operating independently on the market ever since. Also part of this strategy is the carve-out of our Passive Safety Systems Division. The ZF Group announced the carve-out in October 2022 to create more strategic options for future development and enable higher growth in sales and profitability. Since March 2024, the division has been operating under the new name ZF Lifetec. The completion of the carve-out on October 1, 2024, was an important milestone. ZF Lifetec can thus embark on the path to becoming an independent company, benefiting from its strong position in a growth market that is less affected by the changes in the automotive industry. Both projects show that we implement our strategy in a focused way and actively shape change.

In the past fiscal year, another focus was placed on actively shaping the maturity profile of financial liabilities and securing the liquidity of the ZF Group. Due to the changed market conditions, ZF has concluded agreements to adjust the upper limit for debt. In fiscal year 2024, ZF repaid debts of €2.3 billion. On the refinancing side, ZF successfully placed approximately €3.0 billion on the capital market, mostly in the form of bonds and bonded loans. In addition, our €3.5 billion revolving credit facility was completely unused at the end of the year, and we successfully extended the term of the credit facility to 2029.

Equity fell compared to the previous year mainly due to the negative result after taxes. Due to the decline, the equity ratio decreased to 19.2% (2023: 19.7%).

The ZF Group rests on a solid financial foundation thanks to its long-term oriented and diversified financing, cash and cash equivalents as well as short-term time deposit investments of €4.6 billion and unused credit lines at Group level of roughly €4 billion.

RESULTS OF OPERATIONS, NET ASSETS AND FINANCIAL POSITION

Results of operations

- **Group sales in 2024 amounted to €41.4 billion. Sales declined by 11% due to the challenging market environment as well as M&A transactions.**
- **The adjusted EBIT margin decreased to 3.6%, mainly due to volume-related margin losses.**

Group sales fell by 11%

In fiscal year 2024, the ZF Group achieved sales of €41,377 million (2023: €46,627 million), which corresponds to a decline in sales of roughly €5 billion or 11% compared to the previous year. Adjusted for negative exchange rate and M&A effects, this results in an organic sales decrease of around 3%.

Sales development in the divisions

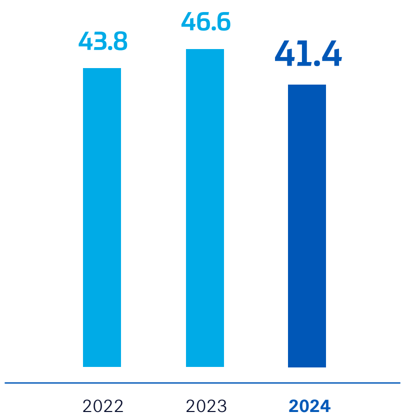
As of January 1, 2024, the former Active Safety Systems Division and the Car Chassis Technology Division were merged into the new Chassis Solutions Division. Sales in the new division amounted to €12,000 million (2023: €15,049 million). It must be taken into account that around €2.6 billion of the decline in sales is attributable to the deconsolidation of the Chassis Systems and Modules product line. The business activities in this product line were integrated into the ZF Foxconn Chassis Modules GmbH joint venture newly founded with the Hon Hai Technology Group with effect from April 30, 2024.

Statement of profit or loss

in € million	2024	%	2023	%
Sales	41,377	100%	46,627	100%
Cost of sales	−34,848	−84.2%	−39,115	−83.9%
Gross profit on sales	**6,529**	**15.8%**	**7,512**	**16.1%**
Research and development costs	−2,958	−7.1%	−2,881	−6.2%
Selling and administrative expenses	−3,520	−8.5%	−3,327	−7.1%
Other income and expenses	−11	−0.1%	115	0.2%
Net result from participations	169	0.4%	86	0.2%
EBIT	**209**	**0.5%**	**1,505**	**3.2%**
Net financial result	−806	−1.9%	−742	−1.6%
Net profit or loss before tax	**−597**	**−1.4%**	**763**	**1.6%**
Income taxes	−423		−637	
Net profit or loss after tax	**−1,020**	**−2.5%**	**126**	**0.3%**

G. 11 Sales development

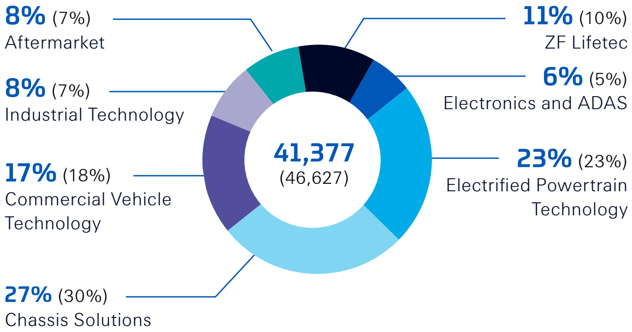
in € billion



Sales in the Electrified Powertrain Technology Division decreased from €11,449 million in the prior year to €10,007 million. The Electrified Powertrain Systems business unit in particular recorded a significant decline in sales as a result of the decline in orders for conventional and partially electrified transmissions, but also for conventional axle drives and fully electric drive axles.

ZF Lifetec (formerly Passive Safety Systems) achieved a slight increase in sales from €4,713 million to €4,790 million. The positive development was mainly driven by higher sales of airbag systems and steering wheels outside Europe.

G. 12 Sales by division



Previous year's figures in brackets/Total sales in € million

With sales of €2,819 million (2023: €2,699 million), the Electronics and ADAS Division achieved sales growth of around 4% despite a challenging market environment.

Sales of the Commercial Vehicle Solutions Division amounted to €7,703 million after €8,678 million in the prior year. This corresponds to a decline in sales of around 11%, mainly affecting the regions of Europe and Asia-Pacific.

In fiscal year 2024, sales of the Industrial Technology Division amounted to €3,280 million (2023: €3,539 million). Sales declines were mainly recorded in the Off-Highway and Wind segments.

The Aftermarket Division benefited from lower new business. In the past fiscal year 2024, sales increased by around 8% to €3,618 million (2023: €3,345 million). Taking into account negative exchange rate effects, the division achieved organic growth of approximately 12%.

Sales development by division

in € million	2024	2023	Change
Chassis Solutions [1]	12,000	15,049	–3,049
Electrified Powertrain Technology	10,007	11,449	–1,442
ZF Lifetec	4,790	4,713	77
Electronics and ADAS	2,819	2,699	120
Commercial Vehicle Solutions	7,703	8,678	–975
Industrial Technology	3,280	3,539	–259
Aftermarket	3,618	3,345	273
Corporate Functions	105	111	–6
Consolidation	–2,945	–2,956	11
Total	**41,377**	**46,627**	**–5,250**

1) In 2024, sales of the sold Chassis Systems and Modules product line will only be included pro rata for four months.

Sales development by region

in € million	2024	2023	Change
EMEA	19,359	20,857	–1,498
North America	11,179	13,122	–1,943
South America	1,382	1,386	–4
Asia-Pacific	9,457	11,262	–1,805
Total	**41,377**	**46,627**	**–5,250**

Regional sales distribution

The distribution of sales by region revealed the following: EMEA remained the strongest-selling region at 46.8% (2023: 44.7%). North America's sales share decreased slightly from 28.1% to 27.0%, as did the share of the Asia-Pacific region, which changed from 24.2% in the previous year to 22.9% in the year under review. The Region of South America has a sales share of 3.3% (2023: 3.0%).

Gross margin at 15.8%

Gross profit on sales amounted to €6,529 million (2023: €7,512 million), which is equivalent to a gross margin of 15.8% (2023: 16.1%). The absolute decrease in cost of sales is mainly attributable to the decline in sales. Personnel costs in this area have increased due to restructuring expenses. Production start-up costs and the underutilization of e-mobility capacities also had an impact on the gross margin.

Research and development costs amounted to €2,958 million (2023: €2,881 million), representing 7.1% of sales after 6.2% in the prior year. The focus was on the consistent implementation of the corporate strategy in terms of strengthening the future technologies of electrification, safety systems, vehicle motion control as well as strengthening our Commercial Vehicle Solutions Division.

Compared to the previous year, sales and administrative expenses increased from €3,327 million to €3,520 million, mainly due to costs related to the transformation and restructuring expenses, corresponding to 8.5% of sales.

Adjusted EBIT margin at 3.6%

EBIT totaled €209 million in the past fiscal year (2023: €1,505 million). Adjusted for the expenses from the purchase price allocation for company acquisitions in the amount of €663 million, restructuring expenses in the amount of €626 million as well as a negative balance from M&A activities and one-time items in the amount of –€6 million, the adjusted EBIT margin amounts to 3.6% (2023: 5.1%).

The organic decline in sales and associated margin losses are the main drivers of the deterioration in profit. In addition, the continued high level of R&D expenditure to further advance our strategy as well as the preproduction and start-up costs for new products had a negative impact on the Group profit.

Adjusted EBIT is defined as EBIT corrected for net effects from the purchase price allocation, including amortization and depreciation, as well as M&A activities and other special items that are considered exceptional or non-recurring in nature.

The net financial result of –€806 million (2023: –€742 million) was impacted by foreign exchange losses in 2024. The increase in interest expenses, however, was offset by higher interest income.

Income tax expenses in 2024 amounted to –€423 million (2023: –€637 million).

Net assets and financial position

> **Active structuring of the maturity profile and early refinancing of the 2025 maturities.**
> **Positive adjusted free cash flow of €305 million.**

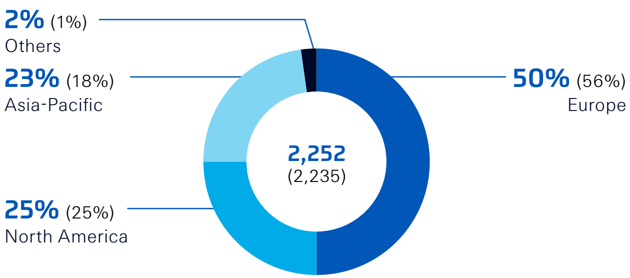
Increase in total assets

Compared to the prior year, total assets increased by €140 million to €39,310 million (2023: €39,170 million).

At €16,610 million (2023: €16,601 million), current assets remained almost at the previous year's level. While financial assets increased due to short-term time deposits, trade receivables, in particular, decreased due to sales.

Non-current assets amounted to €22,700 million after €22,569 million in the previous year. In particular, associates increased due to the inclusion of the newly founded ZF Foxconn Chassis Modules GmbH joint venture in 2024. Intangible assets declined in particular as a result of amortization, while property, plant and equipment increased due to investments made in the fiscal year.

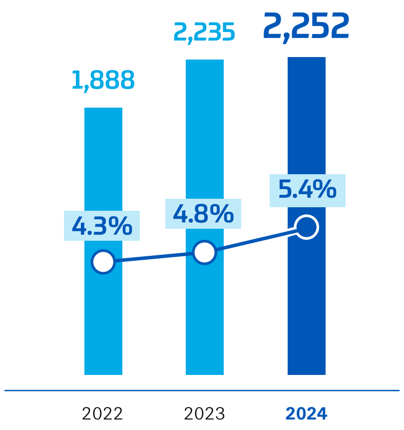
G. 13 Investments by region



Previous year's figures in brackets/Total investments in € million

G. 14 Investments and investment ratio

in € million / share of Group sales in %



Investments at previous year's level

At €2,252 million, investments remained nearly unchanged at the previous year's level. They focused on the technology fields of electric mobility, transmission applications (including hybridization), chassis systems, electronics, damper modules, brakes, steering systems and other safety technology.

Of the capital expenditure, 51.8% was spent on payments in advance and construction in progress, 30.5% on technical equipment and machines, 9.5% on land and buildings and 8.2% on other equipment, factory and office equipment.

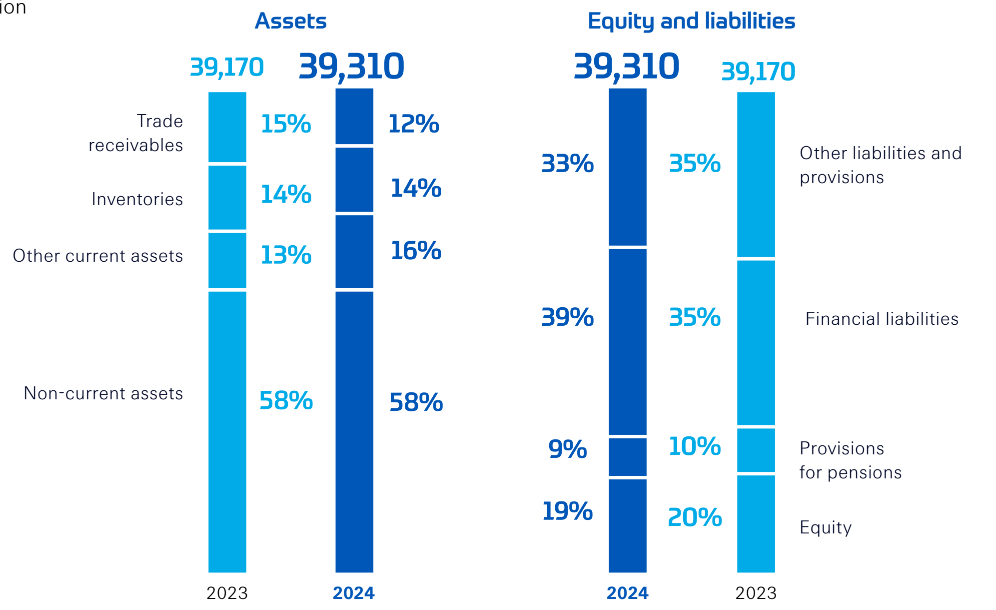
Financing secured early

Current and non-current financial liabilities amounted to a total of €15,166 million as of December 31, 2024 (2023: €13,795 million). Without considering the change of derivative financial instruments, there was an increase in gross debt year-on-year of €1,382 million to €15,065 million.

In January 2024, ZF issued a fixed-interest green euro bond of €800 million with a maturity period of five years under the Debt Issuance Program (DIP). In April 2024, we successfully placed a U.S. dollar bond with a volume of USD 1.5 billion. The bonds issued are divided into two fixed-interest tranches with a volume of USD 800 million and USD 700 million and have maturity periods of six and seven years. The basis for this transaction is the ZF Green Finance Framework, which was introduced in April 2021. The proceeds are used for the development, production and sale of products for battery electric vehicles (clean transportation) and for the development, production and sale of gearboxes for wind turbines (renewable energy).

G. 15 Consolidated statement of financial position

in € million



Furthermore, bonded loans with a total volume of roughly €800 million and maturities of three, four and six years were placed on the market in July.

The remaining financial liabilities largely result from financing the acquisition of TRW in 2015 and the WABCO acquisition in 2020.

In the 2024 fiscal year, debts totaling €2.3 billion were repaid.

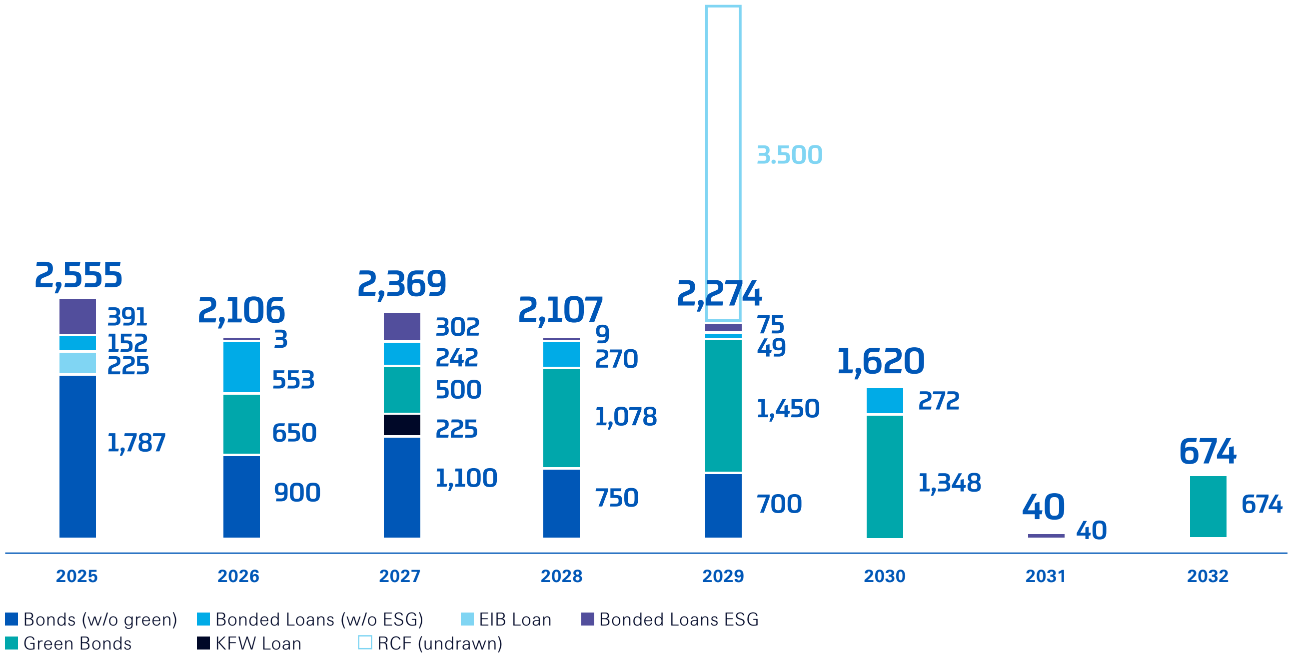
The syndicated loan that was refinanced in 2022 and had a remaining amount of €3.5 billion in the form of a revolving credit facility was unused as of the reporting date. Another contractually agreed extension option was exercised in the year under review, so that the credit line now has a residual term until July 2029. As part of the refinancing, the syndicated loan was provided with an ESG component.

In addition, there are still undrawn loans of €425 million with the European Investment Bank and €90 million with KfW-IPEX.

The revolving credit facility and the loans mentioned also include a financial covenant that ZF has to comply with. Due to the changed market conditions, ZF has concluded agreements to adjust the upper limit for debt.

Against the backdrop of the corporate goal of achieving financial independence, ZF continues to aspire to be assigned a stable investment grade rating. As of the reporting date, ZF had company and bond ratings of Ba2 with a stable outlook from Moody's and BB+ with a negative outlook from Standard and Poor's.

G. 16 **Maturity profile**
in € million



Trade payables fell to €5,607 million (2023: €6,634 million) due to the lower business volumes.

As a result of higher offsetting with plan assets in Germany, provisions for pensions amount to €3,509 million compared to €3,857 million in the previous year.

As of the reporting date, Group equity amounted to €7,532 million (2023: €7,719 million). The net loss after tax is counteracted by the positive result from foreign currency translation and actuarial gains from the valuation of pensions. The sale of shares in an Indian subsidiary also had a positive impact on equity. In the year under review, dividends were paid to the shareholders of ZF Friedrichshafen AG in the amount of €41 million and to holders of non-controlling interests in the amount of €127 million. Taking into account the increase in total assets, the equity ratio was 19.2% (2023: 19.7%).

Adjusted free cash flow at €305 million

Taking into account the effects of changes in exchange rates and the basis of consolidation at the end of the year, the cash position of the year under review is €3,372 million (2023: €3,637 million).

The cash flow from operating activities amounts to €1,721 million (2023: €3,253 million). The decrease is mainly due to lower earnings before income tax and higher income tax payments as a result of the M&A activities.

The cash flow from investing activities amounted to –€2,678 million (2023: –€1,853 million). The decline is mainly due to time deposit investments.

As a result, the free cash flow is –€957 million compared to €1,400 million in the previous year. The free cash flow adjusted for cash inflows and outflows in connection with M&A activities, securities and money market investments amounts to €305 million (2023: €1,382 million).

The cash flow from financing activities amounted to €675 million in the past fiscal year (2023: –€207 million) and is significantly influenced by borrowings. The balance from repayments of financial liabilities and new borrowings totaled €1,220 million (2023: €545 million).

The net financial position increased by €485 million and amounted to –€10,467 million (2023: –€9,982 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 and money market investments up to twelve months recorded as financial assets.

Consolidated statement of cash flows

in € million	2024	2023
Cash flow from operating activities	1,721	3,253
Cash flow from investing activities	–2,678	–1,853
Free cash flow	**–957**	**1,400**
Cash flow from financing activities	675	–207
Net change in cash	**–282**	**1,193**
Cash position at the beginning of the fiscal year	3,637	2,530
Other changes in cash and cash equivalents	17	–86
Cash position at the end of the fiscal year	**3,372**	**3,637**

Opportunities and Risks

- **Risks are managed within the framework of our Enterprise Risk Management (ERM) system where they arise.**
- **We address the transformation risks by (re-) focusing on our strengths and core competencies.**
- **Geopolitical conflicts can continue to cause unplanned problems and jeopardize previously stabilized supply chains.**
- **Our priorities "Sustainable and Digital" provide us with new sales opportunities.**

ORGANIZATION OF THE OPPORTUNITY AND RISK MANAGEMENT SYSTEM

ZF defines risks as any internally or externally occurring events or developments that may result in a negative deviation from the business plan, whereas opportunities may result in a positive target deviation.

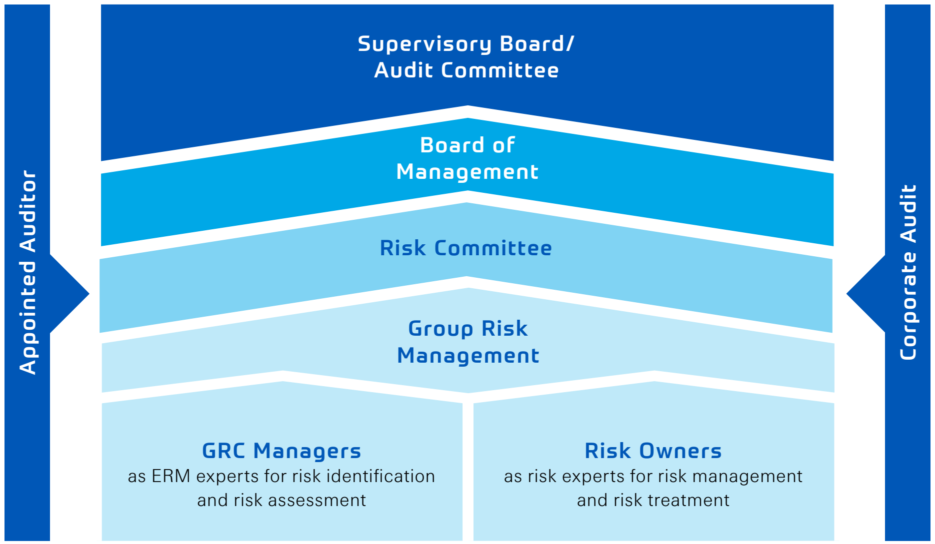
Through established processes and responsibilities, our risk management system involves all pillars of the ZF Group matrix organization, consisting of corporate functions, divisions and regions. The objective is to identify and analyze opportunities and risks early on and to take measures to manage risks and seize opportunities.

As a governance and assurance function at Group level, Group Risk Management provides structures and methods for the implementation of the ERM process. The existing ERM Directive is addressed to all employees.

The Board of Management bears overall responsibility for the risk management system. At least three times a year, it informs the Audit Committee and the Supervisory Board comprehensively about the opportunities and risks of the ZF Group and the respective control measures initiated and planned. The Group risk report is part of the integrated Governance, Risk & Compliance (GRC) report.

At Group level, the cross-functional Risk Committee, chaired by the Chief Financial Officer, is tasked with evaluating ZF's risk situation – regularly or ad hoc if necessary – and ensuring its active management. The continuous further development of corporate governance aspects within the framework of the GRC approach is another essential task of the Risk Committee.

G. 17 Risk management at ZF



Within the scope of its control obligation, the Audit Committee deals with the effectiveness of the risk management system. Among other things, Corporate Audit is responsible for regularly checking and evaluating the efficiency of the risk management system, including the implementation of the underlying ERM Directive. Within the context of the annual or consolidated financial statements audit, the auditor appointed by the Supervisory Board also assesses whether the Board of Management has set up suitable measures for the establishment of a monitoring system in order to detect early on whether there is any development that may threaten the existence of the company. Insights from these regular audits are integrated into the continuous further development of the ERM, including our risk culture and risk strategy.

At least every three months and ad hoc, if required, the operational and strategic risks within the matrix organization are identified and reported. Risk identification is supported by the ZF risk catalog, which is applicable Group-wide and subject to regular review by the GRC managers in the corporate functions, divisions and regions.

The risks are chiefly assessed quantitatively, differentiated according to their gross (before risk treatment) and net risk value (after risk treatment), and the indication of a probability of occurrence range (%). The possibility of qualitative risk assessment using our GRC consequence matrix enables us to also consider and manage not (yet) quantifiable or difficult-to-quantify risks in our risk landscape.

Significant risks for the Group are identified for Group reporting by means of thresholds defined by the Board of Management with regard to expected extent of damage and probability of occurrence. We include opportunities if they have a direct material link to a risk.

To manage a risk, the responsible risk owner defines measures which are documented and tracked in a central risk database. Interdependencies between individual risks and aggregation effects are taken into account. ZF’s risk landscape aggregated using the Monte Carlo method is compared with the risk-bearing capacity of ZF.

KEY RISKS COMMENTARY

Based on our current assessment, the risks we classed as significant to the future development of the company are described below. Risk reporting generally covers a whole year.

In the reporting period, we currently see no relevant risks in the “Social and Environmental” risk category, which includes risks from the areas of environmental protection, health and safety at work and sustainability in the broader sense.

Market and customer

As a global player we essentially face location-, country- and region-specific risks arising, among other things, from economic, geopolitical and domestic political developments, which affect both sales and procurement.

In the short and medium term, weak economic growth, the risk of recession in some countries, volatile legislation and the associated uncertain circumstances in particular can have a negative impact on demand for our products and services. This makes it more difficult for us to predict our sales volumes and there is a risk that our production facilities are underutilized. Should the markets, however, grow faster than expected, there could be capacity bottlenecks with the result that customer demands cannot be fully met. This risk is exacerbated by a shortage of qualified specialists, particularly in Europe and the USA. Our logistics early-warning system and customer-oriented production planning based on continuous communication enable us to respond flexibly to fluctuations in demand.

The automotive industry is an important customer base for ZF and faces major challenges worldwide, especially in Germany and Europe. Strict environmental regulations and sustainability goals, discussions about the end of the internal combustion engine as well as announced or already enforced driving bans are major sources of uncertainty for the entire automotive industry. This leads to changes in consumer behavior, which is also reflected in stagnating global vehicle sales. We expect the share of hybrid and battery electric vehicles to continue to rise steadily, while the transition to electric mobility will be slower than expected. ZF adapts existing products and components to new vehicles and no longer pursues new developments in the traditional passenger car and commercial vehicle sectors that are exclusively suitable for pure combustion-engine vehicles.

We are increasingly observing the expansion of dedicated market access barriers worldwide. Countries such as the USA and Mexico have increased tariffs on selected imports, e.g., steel and aluminum, to boost the competitiveness of their domestic industries. The European Union, on the other hand, has raised tariffs on battery-powered electric vehicles from China to offset state subsidies for Chinese OEMs. These protectionist measures complicate international trade and can negatively impact market growth and consumer behavior due to higher product prices.

The current framework conditions lead to redistributions among customers and competitors. Global volume shifts, in particular to Chinese OEMs and suppliers due to their increased technological competitiveness and cost advantage, could weaken ZF's position across industries in the long term. Through market research activities and the continuous monitoring of sales markets, we strive to identify changes in market structures at an early stage and thereby proactively combat the associated sales risks. Localization analyses in specific markets provide us with a focused and sustainable approach to new business ventures.

Risks may also ensue from the ramp-up of new products and the breakthrough of disruptive technologies. As a supplier, we are facing high investments and massive cost pressure, which, while coping with scarce resources, calls for stringent cost management to compensate for price reductions. Failure to do so could result in major challenges regarding prices and costs, which then could significantly affect the profitability of customer projects.

Our portfolio management approach allows us to focus on technologies that reinforce our leading position now and in the future. Here, we can draw on a network of partnerships and participations. As a general principle, targeted diversification measures are also taken to reduce our dependence on the automotive business.

Changing political conditions, structural deficits and the economic downturn in some countries may lead to declining sales and payment defaults. In addition to our activities in the traditional markets, we want to continue to proactively position ourselves in previously underrepresented markets in order to realize sales opportunities from potential growth impulses and diversification. In this way, ZF can compensate for market slowdowns in individual regions by shifting volumes to other markets.

Purchasing, suppliers and supply chain

Procurement markets also remained under pressure in 2024. Rising geopolitical tensions, violent conflicts and the expansion of existing conflicts between individual countries and regions may lead to further strains for the ZF Group. Due to the ongoing attacks by Houthi rebels on international merchant ships, they are still avoiding the Red Sea. This results in longer transit routes between Asia and Europe and increased freight costs. We try to minimize the risk as much as possible by negotiating with carriers and customers. Cross-divisional task forces and working groups are closely monitoring the situation in the crisis regions. They derive appropriate measures to ensure that deliveries are continued, our employees stay safe, business activities remain compliant and that international sanctions are observed, where relevant. We also see potential economic and security-related conflicts between the USA and China, including potential reciprocal sanctions that threaten the international movement of goods. In this context, we are analyzing the potential implications of the new U.S. administration for our business activities, e.g., in the areas of taxes, trade and customs regulations. Corresponding measures are taken into account directly in the decentralized strategies and processes. Scenario analyses allow us to also evaluate any potential aggravation of the situation in East Asia and, if necessary, we will derive measures to maintain robust supply chains and avoid critical dependencies.

According to ZF's purchasing strategy, raw materials and components are to be procured from a variety of different suppliers in different regions. Nevertheless, we cannot always avoid being dependent on individual suppliers. Delays in delivery and supply shortages (e.g., due to natural disasters, cyber attacks on suppliers, financial imbalances of suppliers and even insolvency) as well as the consequences of strikes or insufficient quality can lead to production and delivery interruptions at ZF. Volumes have declined, purchase prices and costs have gone up in recent years. Since there are only limited possibilities to pass on these price increases within the value chain, this poses a particular burden on medium-sized companies in Europe. In the area of production materials, this primarily affects casting suppliers.

Our Supplier Risk Management systematically works to avoid interruptions in deliveries due to financial instability or market introduction, quality and logistics problems at suppliers and to reduce our procurement risk position to a minimum by identifying supply alternatives. In order to reduce the risk of successful cyber attacks, suppliers who have access to confidential and sensitive ZF information are obliged to provide evidence of an effective information security management system in accordance with the TISAX (Trusted Information Security Assessment Exchange) oder ISO 27001 standard. In the area of casting, it is our aim to limit the risk of business interruptions by implementing a new, comprehensive ZF casting strategy. Experts of Financial Risk Management also check and coordinate support services for critical suppliers.

ZF responds to these challenges of the procurement side by continuously monitoring the markets, in particular the raw material and energy markets, by staying in close contact with customers and suppliers, and by adapting the supply chains. Although procurement prices for raw materials have fallen in the last twelve months, the procurement level is still above the pre-crisis level (2019). A suitable bottleneck control system, e.g., in the case of electronic parts and semiconductors, is intended to reduce and ideally prevent negative effects. Increasing costs for products and components must be compensated for by improving productivity, establishing synergies or distributing costs to the upstream and downstream supply chains. If this does not succeed, there may be price-related declines in demand and losses in profitability.

Research and development including quality

Our business in the automotive industry in particular is subject to market developments and technical trends to which we must respond quickly and with innovations. This entails operational and strategic development and technology risks, e.g., in the fields of electric mobility, digitalization or vehicle motion control. Opportunities and risks also arise from the increasing awareness of the markets for ESG-related aspects as well as stricter or upcoming new regulations to limit potentially negative effects of our business activities and products on the environment. Our customers' expectations with regard to new technologies and sustainability require flexible and rapid adaptation of product development, which is usually associated with high investments. Potential cuts in capital expenditure, which we are still maintaining at a consistently high level, could weaken our competitiveness in the long term. We address these transformation risks among other things by (re-)focusing on our strengths and core competencies and identifying dependencies between individual transformation projects. For example, we are continuously reducing our dependence on combustion technology-related products. On the one hand, this is due to the fact that a significant part of our product portfolio is used in vehicles both with combustion engines and with electric drives, and our sales of these products are developing in line with the market which is experiencing a higher penetration of electric mobility. On the other hand, we are continuously growing with electric mobility-related products.

We also focus on building strategic partnerships. In order to leverage synergies in development throughout the Group, we follow the modular principle and operate across divisions via agile competence centers and global tech centers. This allows us to provide both external and internal customers with system solutions for any application according to their needs and market requirements.

Both product development and product optimization processes generally involve a variety of risks. These include possible time delays, which in the worst case jeopardize the start of production (SOP) of our customers' products, as well as cost overruns, especially in long-term development projects. Furthermore, risks arise from possible intellectual property violations as well as (cyber) risks within the context of networked products and the increased use of the artificial intelligence of things (AIoT) and cloud solutions.

We take responsibility for our products and thus for their impact on society, our business partners and the environment. Non-compliant internal or external components or functions can lead to time and cost-intensive corrective measures as well as recalls, resulting in losses regarding customer and market acceptance. This is especially true in light of the fact that many of our products are important components that contribute to the overall safety, durability and performance of our customers' final products.
For products that do not comply with customer specifications or (supposedly) exhibit malfunctions, ZF may face warranty and product liability claims which cause considerable costs due to investigations or proceedings.

We strive for the highest quality. This goal is anchored in the Group-wide “ZF DNA of Quality” quality strategy. ZF established a certified quality management system according to IATF 16949 with standardized quality controls as well as regularly optimized process workflows, as we want to maintain our product quality at the highest level despite the increasing product complexity. The close cooperation between the Corporate Quality team, quality management of the divisions and Corporate Research and Development is to ensure that quality problems are identified as early as possible and the associated risks can be promptly addressed and mitigated. In addition, ZF has established a Product Safety and Regulatory Office and operates a comprehensive Product Compliance Management System to record, interpret and fulfill technical legal and regulatory requirements that are relevant to ZF products.

Cybersecurity including information security

We are highly dependent on IT systems and networks for our business and production processes as well as products and services. Since these systems and the products themselves are becoming more and more networked, they are fundamentally exposed to risks of cyber attacks and other disruptions or failures. With rising geopolitical tensions, we expect an increase in targeted, partly state-sponsored cyberattacks on critical infrastructure in companies worldwide, including ZF. This could result in considerable disadvantages for us. As a fundamental measure, ZF operates an extensive threat and vulnerability management system. Our comprehensive cybersecurity strategy aims at protecting people and their assets, business and personal information and data as well as ZF’s physical and intangible assets. Our integrated Information Security Management System (ISMS) based on ISO 27001 covers not only IT but also development, production, staff security, compliance, physical safety as well as legal and customer requirements. This ISMS is regularly checked by independent authorities.

Through technical and organizational measures, we protect data streams and processing in our infrastructure, both on-premise (operated on site) and off-premise (e.g., in the cloud). Our security culture is a central element of ZF’s resilience. For this reason, we regularly carry out awareness-raising measures worldwide, such as our Security Awareness Campaigns and phishing simulations, and we provide mandatory training for our employees. Partners and suppliers handling ZF information are committed to comply with our security policy and to provide proof of an effective ISMS. We use internal and external sources of information to monitor the global cybersecurity situation. Alarm processes and crisis management are in place for security incidents, enabling us to react immediately to emergency situations with corresponding contingency plans and specific crisis response teams. The functioning of these processes is checked regularly. A cross-divisional Cybersecurity Advisory and Decision Panel monitors and manages ZF’s cyber risk situation across all risk categories.

As vehicles are now highly connected and digitalized, a particular focus in product development is given to the implementation of the ISO/SAE 21434 international standard on cybersecurity in vehicles. Our cybersecurity development processes meet this standard and thus form a cybersecurity management system that enables our customers to homologate their vehicles in accordance with the mandatory UNECE R 155 regulation. A central team of cybersecurity assessors has been set up to support product releases. In addition, a Red Team monitors the automotive-specific threat situation and initiates reactions to possible security incidents. In parallel, a Blue Team is working centrally on advance development for emerging technologies. The product cybersecurity management system was successfully certified according to the VCSA (Vehicle Cyber Security Audit) standard in 2023.

Finance

As part of central financial risk management, we monitor and control liquidity, foreign currency, interest rate and counterparty risks as well as credit risks in order to safeguard our financial stability. Provisions regarding the individual risk types have been put in place which determine how to assess and manage the particular risk. Where required, we hedge financial risks using appropriate instruments. Wherever possible and expedient, we use derivative financial instruments to manage interest and currency risks in particular. ZF controls and hedges currency risks with a standardized model to hedge underlying transactions in foreign currencies and a uniform system landscape.

High reference interest rates in currencies relevant to us and high risk premiums (spreads) in combination with higher gross debt can lead to an increase in interest expenses. In the year under review, measures were taken that may be beneficial in the future, such as early refinancing to secure refinancing interest rates.

The deterioration of the economic environment and the associated significant decline in customer demand have had a negative impact on our earnings and cash flow positions, resulting in an adjustment of the ratings. This could result in higher refinancing costs and more difficult access to the capital market for ZF, and lead to a reduction in credit insurance limits. The latter could also have a negative impact on the risk assessment of factoring providers.

Here, active cash and cost management helps us to stabilize our liquidity. A revolving credit of €3.5 billion is still fully available as a liquidity reserve. In addition, central cash pooling with sufficient cash and committed credit lines contributes to the necessary financial flexibility.

Among other obligations, the bank loans from the EIB and KfW, as well as the revolving credit facility, contain a financial covenant which has to be complied with throughout all quarters. A breach of this financial covenant would mean that, in the event of a respective claim, the creditor could demand immediate repayment of the financing or terminate the credit line. Thanks to the measures implemented to secure liquidity and by adapting the financial covenant, ZF Friedrichshafen AG was always able to comply with the financial covenant in 2024, also as of the balance sheet date. From a current perspective, ZF has no reason to believe that these obligations will be breached in future.

In order to reduce counterparty risks within finance, we only transact with banks that have first-class financial stability and within stipulated limits. The credit rating of our suppliers and customers is continually checked.

A further risk is the need to recognize impairments on financial assets. If company participations or business units do not develop sustainably in accordance with the underlying business plan, we could be forced to make significant balance sheet depreciations.

In the course of audits, tax laws and relevant contracts or events could be interpreted and assessed in a different manner by local tax authorities than by ZF. This poses the risk of a claim for back taxes based on an adjustment to the tax base. Furthermore, tax law initiatives can influence future tax expenses or tax payments.

ZF is subject to high pension obligations, particularly in Germany and Great Britain. These pension obligations are covered to a varying extent completely or in part by plan assets. We invest the plan assets in a variety of asset classes that are exposed to corresponding value fluctuation risks. A change in key parameters, such as the discount rate or other factors dependent on macroeconomic or regulatory developments, could lead to negative effects on ZF's earnings and equity.

Legal and compliance risks

Due to the complexity of our business model with economic activities on all continents, we are generally exposed to the risk of legal disputes in areas such as product liability, competition law, export control regulations, environmental protection and taxation. Particularly in the USA, we are involved in proceedings whose outcome may have a substantial negative impact on our earnings. Accounting provisions for legal risks are made in accordance with the applicable accounting regulations.

In addition, it cannot be completely ruled out that individual employees significantly harm the company intentionally or unintentionally by violating applicable law in connection with their work activities, e.g., due to ignorance of complex antitrust regulations. This may result in payment or other obligations as well as damage to our reputation. In the event of investigations, we cooperate fully with the relevant authorities. ZF has created corresponding structures in order to ensure as far as possible that the different country-specific legal provisions are complied with and to monitor and minimize legal risks. Key elements are our global Compliance Organization, the ZF Code of Conduct and the Code of Conduct for Business Partners, especially suppliers, the anonymous notification system for internal and external compliance notifications, and a comprehensive mandatory training concept. Our membership in the Responsible Supply Chain Initiative (RSCI) e.V. also supports our efforts to fulfill due diligence obligations in supply chains and thus contributes to reducing risks in the area of human rights.

KEY OPPORTUNITIES COMMENTARY

Industry and company-specific opportunities

In the partly disruptive industries in which we operate, we continuously see new opportunities that we take into account for our plans and forecasts, provided they have a sufficient probability of occurrence. We use systematic scenario analyses to record long-term market and technology trends. Using trend and environmental analyses and maintaining close contact with customers, we are continuously working on identifying where there is potential to improve our products' design, production efficiency, effect on humans and the environment, market performance as well as our cost structure.

One example is our Wind Power business unit, where we are strengthening cooperation with partners (customers, suppliers and other stakeholders) with what we call the "System Co*Operation." By bundling the innovative power of our products, services and expertise, ZF is to become more flexible in adapting to the changing environment and transformation of the energy sector.

The chassis business is an important component of the ZF product range. In the Chassis Solutions Division, ZF has been pooling all competencies in the field of braking and steering systems as well as damping since January 2024 and can thus offer its customers a comprehensive chassis portfolio with innovative hardware and software solutions that address major automotive megatrends.

After the rebranding of our Passive Safety Systems Division to ZF Lifetec in March 2024, the carve-out was successfully completed on October 1, 2024. This marks a milestone in turning ZF Lifetec into an independent company and underscores the entire Group's capability in transforming our business. With the autonomy gained, ZF Lifetec can now flexibly adapt to market changes and customer requirements and pursue growth opportunities that contribute to its strategic mission: "Saving lives through technology."

ZF took another important step in the transformation process in April 2024 by establishing a joint venture with Foxconn, the world's largest electronics manufacturer. This partnership allows us to tap additional resources for profitable growth, new customer access and additional development fields beyond the growing core market of chassis systems and modules.

We will continue to leverage opportunities through collaborations and strategic partnerships in order to adapt to changing market perspectives and persistently high competitive pressure.

Sustainability

We rely on an integral approach to achieve climate neutrality and the transition to a circular economy. This creates many opportunities for us: from the development of environmentally friendly technologies, the increased application of renewable energies, the use of green steel or the remanufacturing of products. The annual internal ZF Excellence Award Sustainability recognizes the importance of sustainability in the company as well as our employees' commitment in this regard. This contest recognizes outstanding projects throughout the company that, for example, reduce our environmental footprint or improve working conditions.

Our Bielefeld location has already received the German Sustainability Award twice. This prestigious award particularly recognizes ZF's comprehensive commitment to the sustainable use of resources. For example, Bielefeld specializes in remanufacturing powertrain modules for vehicle manufacturers and the global aftermarket.

The EU's CO_2 fleet target regulation requires vehicle manufacturers to reduce fleet consumption in their vehicle and drive mix. With our further growing portfolio of systems and components for plug-in hybrids and electric vehicles, we are already providing solutions for passenger cars and commercial vehicles that support customers in complying with the legal framework regarding emissions.

Our customers have also set themselves ambitious sustainability goals. These go beyond their own carbon footprint and that of their suppliers. Among other things, they focus on energy and water consumption in production and use, the materials used and their origin, as well as circular product requirements. The fact that ZF is also prepared for this is demonstrated by the important innovation award from the automotive supplier association CLEPA in the "Green" category for our rare-earth-free electric motor.

Consistently sustainable entrepreneurial action, including by strengthening the activities for an improved circular economy, also opens up opportunities to attract and retain employees. Our sustainability performance also has a direct impact on how the ESG rating agencies evaluate ZF. Therefore, it is an important element of our financing strategy with banks and investors.

↘ **More impacts, risks and opportunities and the respectively derived strategies are presented in the Sustainability Report.**

Research & Development

ZF relies on the three pillars of technological openness, innovation and flexibility to successfully shape technological change in the mobility industry. Innovations such as the cubiX platform or strategic partnerships for the development of silicon carbide components aim to provide ZF with new market opportunities.

To promote competitiveness, ZF has optimized its global research and development. In the process, corporate structures were streamlined and competencies within the divisions were strengthened to better meet our customers' requirements. The new Global Software Center 2.0 also stands for a stronger customer focus and aims at improved scalability in software development with a modern, flexible organizational structure. All divisions are given clear performance priorities, from the microcontroller platform to OEM-specific basic software.

ZF provides state-of-the-art technology to support autonomous driving functions. The RABus project, for example, uses a highly automated system for driving in mixed operation. Test operations for autonomous shuttles with up to ten passengers were launched in Friedrichshafen and Mannheim in 2024. With this, ZF was one of the first companies in Germany to receive a Level 4 test permit from the Kraftfahrt-Bundesamt (German Federal Motor Transport Authority).

In the Wind Power business unit, ZF acts as a global strategic partner on the path to a sustainable future across all phases of the product life cycle. In 2024, ZF established its first Thrive partnership, offering customizable service packages for gearboxes worldwide.

In the Commercial Vehicles segment, the newly introduced TraXon2Hybrid transmission is leading the decarbonization revolution in the commercial vehicle industry. The underlying modular system is not limited to specific technologies and allows OEMs to easily transform their conventional vehicle platforms into hybrid platforms. It complies with current and future global CO_2 regulations and enables extended ranges for logistics companies and fleets.

2024 was an extraordinary year for ZF Rail Drives: What began in 1924 with the development of the first drive system for railcars is now one of the world's leading suppliers of innovative solutions for sustainable rail vehicle technology. Therefore, among other things, a letter of intent was signed with Irish Rail in October 2024 for a new repowering project from 2025. The goal is to modernize and improve the efficiency of the existing rail vehicle fleet.

Digitalization

Digitalization offers us numerous opportunities along our entire value chain. For this reason, our transformation also focuses on the digitalization and networking of actuators and sensors necessary for software-defined vehicles and their chassis and drive systems. We are also driving forward the digitalization of our own processes in all areas of the company, which is reflected in 168 projects submitted for this year's ZF Excellence Award in the "Processes and Digitalization" category. The winning project used artificial intelligence (AI) to implement intelligent inventory management, which will be rapidly rolled out and scaled across the Group due to significant savings potential.

Generative AI, or "Gen AI" for short, offers numerous new opportunities for ZF to gain competitive advantages and expand our skills in order to become more productive, efficient and effective, e.g., more differentiated and innovative. For example, ZF uses proven, licensed software products such as GitHub Copilot to support development and programming. In addition, we rely on pre-trained LLMs (Large Language Models) and use them as a basis to further develop customized solutions for "Service Desks" or "Knowledge Management." Our AI Ethics Council supports the introduction of AI solutions and, as part of its monitoring function, ensures that they comply with ZF's ethical values and principles.

In Production, the cloud-based Digital Manufacturing Platform (DMP) offers a high level of transparency for all process data in order to further increase the efficiency and flexibility of the plants. Meanwhile, we have connected several plants and their machines in all regions and turned them into a smart factory. As part of this platform, for example, employees use a "DMP app" during their shop floor routine to define measures that can improve the availability, quality and performance of production machines. As a result, quicker intervention is possible in the event of malfunctions.

ZF is also expanding its digital business models beyond the automotive sector. A successful example with continuously increasing numbers of customers and applications is ZF Rescue Connect from the Industrial Technology Division. ZF Rescue Connect connects and digitalizes all rescue services in Europe in one ecosystem with harmonized connectivity solutions. With the help of this intelligent ecosystem, fire and rescue services can get to the scene faster. Once there, incident commanders can keep an eye on all vehicles, emergency services, equipment and patients as well as recorded data on a real-time situation map.

The first Catena-X consortium project was successfully completed in the summer of 2024 with the introduction of the first automotive data room. This marks the start of numerous forward-looking projects with the aim of further expanding the Catena-X ecosystem. For ZF, the Catena-X use cases promote digitalization and offer solutions to specific business challenges, such as providing the carbon footprint for products, receiving field data from vehicles, or strengthening supply chains. With Catena-X and other industrial data rooms such as Factory-X, Process-X and Energy-X, the Federal Ministry for Economic Affairs and the industry have reached another milestone in cross-company data exchange and communication.

OVERALL STATEMENT ON THE OPPORTUNITY AND RISK SITUATION

The ZF Group works to counter the above risks using a decentralized risk management system that is embedded in an integrated GRC approach. Risks are managed where they arise; in this way, we ensure that the process experts and those who have the knowledge take the lead in the corresponding risk category and that the risks are managed competently. The Opportunities Report represents a consolidated observation of significant opportunities in the period under review. Wherever cost-effective and within our sphere of influence, we do our best to develop these opportunities.

Based on currently available information as well as the individual risks illustrated in the financial statement and set out in this report, we can identify no additional risks which may substantially influence the ZF Group's results of operations, net assets and financial position in fiscal year 2025. Despite the deteriorating general conditions, the financial situation of the Group is stable after successfully renegotiating the financial covenant with the banks. The need for financial means is covered by existing liquidity and available credit lines. By refinancing already in 2024, the loan maturities for 2025 were secured.

Given our market position and the precautions we have taken, we are confident in our ability to control these risks and meet the resulting challenges. When analyzing the overall picture of significant risks and opportunities, no risks can be identified which could jeopardize the Group's continued existence, either alone or in combination with other risks.

Forecast Report

INDUSTRY ENVIRONMENT TRENDS

- **Uncertainty about future trade policy – slowed economic momentum.**
- **No noticeable recovery expected in ZF industries.**

No noticeable economic recovery in sight

The outlook for fiscal year 2025 remains cautious. Only the development of inflation is viewed optimistically. Most economies are expected to meet or come very close to their inflation targets by the end of 2025. Nevertheless, uncertainties remain due to newly elected governments and the associated possible changes in trade and fiscal policy. Regional conflicts and geopolitical tensions can continue to severely affect trade and cause raw material, energy and food prices to rise again, hampering growth prospects.

After the global economy grew by 3.1% in 2024, slightly reduced growth of 3.0% is expected in 2025. In Europe and particularly Germany, performance is likely to turn out weak in this environment. Growth of 1% is forecast for the eurozone. With expected growth of 0.4%, Germany remains at a low level. The USA was once again robust in 2024, with weaker growth of just over 2% expected for 2025 due to a tightening of fiscal policy, a cooling labor market and a resulting decline in consumption. China is expected to support growth by an increase in government spending. Growth backed by industrial production and exports is limited by the continued weakness of the real estate sector and low consumer confidence. Growth in China is expected to decline from 4.9% to 4.5%.

Situation in ZF's industries remains tense

Given the still difficult general conditions, the forecasts for 2025 are not overly optimistic. As in the previous year, prospects are characterized by a weak economic environment, geopolitical tensions, ongoing wars and, in addition, geo-economic fragmentation; more and more trade is taking place within geopolitical blocs. The transformation pressure for ZF industries continues, with different priorities as new governments form. All this leads to a cautious, conservative assessment of the growth prospects for the ZF industries.

Global production of passenger cars and light commercial vehicles up to 6 tons is expected to be at a level below the prior year, which means production of around 87.5 million vehicles. Negative growth rates are predicted for almost all markets in 2025: Europe (–5%), North America (–4%), Japan (–2%), South Korea (–3%), China (–2%). Only South America at +6% is expected to a show positive trend. India is forecast to be at the previous year's level.

A further decline (–2%) is also expected for the commercial vehicle industry. After the significant decline in the prior year, production of heavy commercial vehicles is expected to fall again in 2025 in almost all markets. Especially in North America, a substantial decrease is predicted at –10%, but coming from a high production volume (>600,000). The markets of Asia, Japan (–2%), South Korea (–2%) and also China (–4%) are all expected to show negative growth rates. After the significant decline in 2024, a slight recovery of +2% is expected for Europe. The outlook for South America (+9%) and India (+8%) is positive.

Forecasts differ in the various industrial sectors. Global tractor production is expected to be at the same level as in the previous year, thus remaining significantly below the volumes of 2022 and 2023 after the slump in 2024. The predicted decline is caused by China (–2%); for all other regions, a production volume at the prior year's level is expected. Only for South America (+1%) the outlook is slightly positive. A further decline of –6% is expected for the construction machinery sector in 2025. With the exception of South America at +2% and India at +2%, all markets record a decline of between –3% and –15%. Wind power is expected to be positive again. Global new installations show a growth potential of +19%. India at +37% and North America at +22% as well as China at +24% are the drivers of growth in this sector.

This clearly shows that both manufacturers and suppliers across all industries supplied by ZF will face major challenges in 2025.

DEVELOPMENT OF THE GROUP

> We are advancing the transformation of ZF with more speed and focus.
> To achieve a better quality of results, ZF will further adapt organizational and corporate structures to market developments.

Forecast

Given stable exchange rates, we expect Group sales of more than €40 billion in 2025. We do not expect any significant change in sales compared to the previous year.

In the passenger car and light commercial vehicle sectors, we expect sales to be slightly below the prior-year level due to market uncertainties. For the Chassis Solutions Division, we expect a decline in sales, since the sales of the Chassis Systems and Modules product line were still included proportionately in 2024. We expect a slight increase in sales in the Electrified Powertrain Technology Division, especially in connection with new product launches. We also expect a slight increase in sales for ZF Lifetec, especially in North America.

For the Commercial Vehicle Solutions Division, we expect slightly higher Group sales. In addition to the expected market recovery in Europe, new product launches in North America will also contribute to the increase in sales.

We expect sales to be at the prior-year level in the Industrial Technology Division.

After the increase in sales in 2024, we anticipate stagnating sales in the spare parts and service business of the Aftermarket Division.

With the expected development of the sales and procurement markets in conjunction with a corresponding control of the cost structures, we consider an adjusted EBIT margin between 3.0% and 4.0% to be attainable.

For the fiscal year 2025, we assume that the adjusted free cash flow will slightly improve. Adjusted for corporate transactions, we expect a free cash flow of more than €500 million. The estimate is based on the planned development of operational business, the continuation of consistent working capital management and scheduled investments.

For the fiscal year 2025, we expect a slight increase in the number of employees, especially in Asia-Pacific – resulting from the expansion of business in India and China – as well as North America. In Europe, especially in Germany, an adjustment of the number of employees to current market conditions is expected.

The general conditions in 2025 remain challenging. Effects on the forecast with regard to uncertainties, in particular due to the dynamic development of markets and geopolitical crises as well as the explained risks such as possible changes in the trade and fiscal policy of newly elected governments, cannot be ruled out.

Financial forecast

	FORECAST 2025	REPORTED 2024
Sales in € billion	>40	41.4
Adjusted EBIT margin in %	3.0 - 4.0	3.6
Adjusted free cash flow in € billion	>0.5	0.3

ZF faces up to the transformation in the automotive industry, continuing to adapt its structures in order to increase its competitiveness and meet the changes in the mobility sector. The presence in global growth markets, investments in high-yield products and technologies as well as an efficient organizational structure continue to be top priorities on our agenda.

Supported by the trust of our customers, the close cooperation with our suppliers and business partners as well as our employees' commitment and willingness to change, we are convinced that ZF will successfully master the current challenges.

Friedrichshafen, March 14, 2025

ZF Friedrichshafen AG
The Board of Management

Sustainability

General Information

FUNDAMENTAL PRINCIPLES

In the Sustainability Report 2024, ZF Friedrichshafen AG voluntarily discloses the progress made by the company in the areas of environmental, social and corporate governance (ESG) in the year under review. The report is based on the European Sustainability Reporting Standards (ESRS), which are the framework for the Corporate Sustainability Reporting Directive (CSRD). It is derived from the first results of an ongoing process which we are using to prepare for CSRD reporting obligations for the year under review. Since we are applying ESRS requirements voluntarily in this report, there may be deviations.

We have prepared this Sustainability Report on a consolidated basis. The basis of consolidation corresponds to that of our financial reporting. Accordingly, the consolidated quantitative data of the environmental, social and corporate governance dimensions include the parent company and the subsidiaries controlled by ZF. Associates and joint ventures are not included. Further information can be found in the ↘ **Notes to the Consolidated Financial Statements.** In addition, the Sustainability Report covers our own business area as well as our upstream and downstream value chains.

In the Sustainability Report, ZF explains management approaches and procedures for fulfilling due diligence obligations. We describe how we integrate due diligence into our governance structures, our strategy and our business model. We also report on how we involve affected stakeholders in important steps of due diligence. In the individual chapters, we present our respective management approaches as well as procedures and measures for fulfilling due diligence obligations.

We use assumptions and estimates to report on data points, which are regularly reviewed on the basis of experience or current developments in ESG reporting, for example. We applied the valuation methods consistently for the comparative figures in the fiscal year.

ORGANIZATION AND SUSTAINABILITY STRATEGY

Strategy, business model and value chain

We produce advanced mobility products and systems for passenger cars, commercial vehicles and industrial technology. Further information on the corporate structure can be found in the ↘ **Group Management Report**.

ZF's sustainability strategy "Acting now. Sustainability@ZF" takes into account the dimensions of environment, society and governance and is embedded in our corporate strategy. Around 60% of ZF's total value added is generated in the upstream value chain. Trusting and reliable collaboration with our suppliers is therefore important to us. In the field of the environment, the focus is on climate protection and the development of circular products and business models. With regard to the social impact, we want to offer our employees an inclusive work culture, valuing diversity and promoting continuous learning and personal development. The safety of all employees is just as important as that of our products. We work towards ensuring that human rights are observed in our own business area and along the entire value chain. In the field of governance, good and responsible corporate management for us means compliance with applicable laws and regulations and to create lasting values.

With our membership in the UN Global Compact (UNGC), we express our intention to promote the ten principles of the UNGC in our sphere of influence. We are committed to integrating these principles into our corporate strategy, culture and daily business. This commitment includes participating in collaborative projects that promote the general goals of the United Nations and, in particular, the achievement of the United Nations Sustainable Development Goals.

In order to integrate the sustainability strategy into our daily business, all three dimensions are implemented not only in core processes, but also as important components of ZF's corporate strategy. Besides "climate and nature" – and the goal of complete climate neutrality by 2040 – we also focus on the dimensions "all people" and "lasting values."

G. 01 Material sustainability topcis

Acting for climate and nature

- Air, water, soil pollution
- Biodiversity & ecosystems
- Circular economy
- Climate adaptation & climate protection
- Energy
- Hazardous substances
- Use of resources
- Water

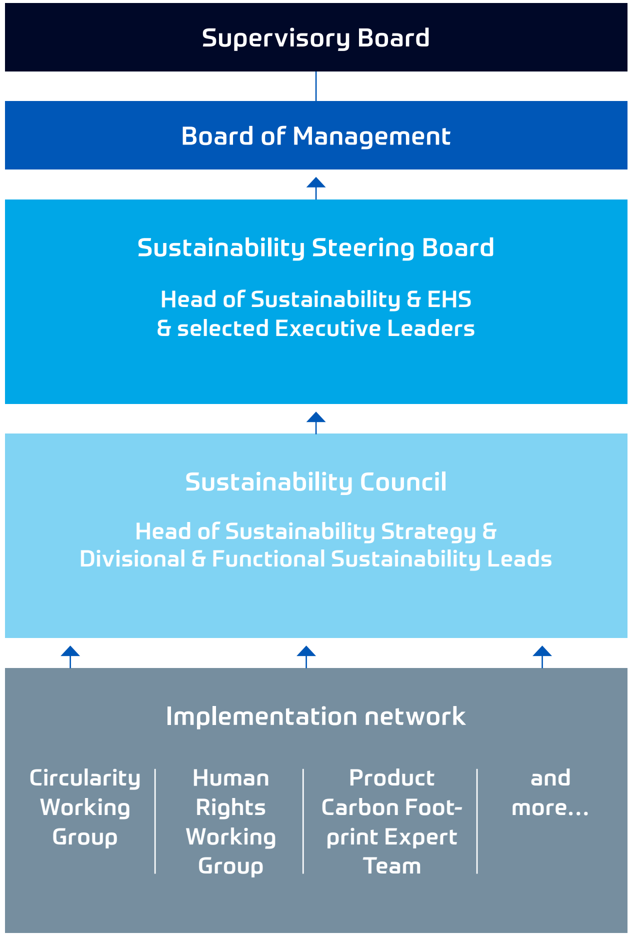
Acting for all people

- Affected communities
- Consumers & (end) users
- Equality & non-discrimination
- Other work-related rights
- Workers in the value chain
- Working conditions

Acting for lasting values

- Anti-competitive behavior & lobbying
- Business conduct culture
- Corruption & bribery

G. 02 Sustainability organization



Further information on the corporate strategy and on how we implement our strategy is presented in the ↘ **Strategy** chapter. The breakdown of total sales can be found in the ↘ **Group Management Report.**

Management and supervisory bodies

Our Board of Management takes the lead and has the highest decision-making authority with regard to sustainability at ZF. It has overall responsibility for the strategy and management of the sustainability strategy “Acting now. Sustainability@ZF.”

Our Chief Financial Officer is responsible for ZF’s financial strategy and financial management. The company aligns its financing decisions with the corporate strategy. As part of the corporate strategy, the sustainability strategy is further promoted through targeted investments. The CFO is also responsible for Enterprise Risk Management and the Internal Control System.

Our Chief Human Resources Officer is responsible for Human Resources, Legal and Compliance as well as Sustainability.

The Supervisory Board continuously monitors the work of the Board of Management and advises management. Moreover, the Supervisory Board supports the strategic further development of the company, including the ZF sustainability strategy.

The ZF Sustainability Steering Board is the highest steering committee for sustainability topics. It consists of representatives of the senior management from the divisions, regions and functions and has the following tasks:

- Supporting the Board of Management in monitoring relevant sustainability and corporate social responsibility aspects,
- Regularly reviewing the effectiveness of the sustainability strategy as well as the agreed targets and measures,
- Ensuring that the sustainability strategy is anchored in relevant processes and structures of the company,
- Checking at regular intervals if key topics are up to date.

The ZF Sustainability Council is also made up of representatives from the divisions and functions. This body is responsible, in particular, for integrating the sustainability strategy into core processes and business activities. For specific topics, the Sustainability Council can set up working and project groups as well as campaigns.

The central Sustainability Department is responsible for developing the Group-wide sustainability strategy across all divisions, regions and functions. It is also the contact point for any questions about sustainability and steers the stakeholder dialogue. In addition, the department also assumes responsibility for individual topics, such as decarbonization and the development of the circularity strategy. The Sustainability Department also centrally provides methods for the analysis and control of product-related sustainability. To this end, it develops and supports the implementation of instruments and procedures to evaluate and improve the ecological impact of a product over its entire life cycle.

Integration of sustainability performance into incentive plans

We use clearly defined structures to ensure fair and competitive remuneration throughout the Group. The remuneration of managers is based on a global job evaluation system and a benchmarking of local regulations and market practices of the relevant labor markets. The incentive plan comprises a fixed basic salary and two variable salary components, each consisting of short- and long-term incentives. While the short-term incentive (STI) is based on the achievement of targets in the respective preceding fiscal year, the long-term incentive (LTI) is determined by reference to the business performance over a three-year period. The aim is to promote innovation, motivation and sustainable action for the company.

The Supervisory Board approves the STI and LTI components for members of the Board of Management on a yearly basis. The Board of Management annually approves the STI and LTI components for the executive managers.

The LTI is applicable to the Board of Management and senior executives. It consists of a financial performance indicator (KPI) and two non-financial ESG performance indicators. The financial KPI is weighted at 80%, while the two non-financial KPIs are each weighted at 10%. For the long-term incentive program, we have selected the following non-financial KPIs:

1. **CO_2e emissions**
   10% of the total LTI is linked to our climate targets. The LTI's share of the total remuneration is linked to the achievement of the greenhouse gas emission reduction targets (Scope 1 and 2). In the year under review, it was decided to additionally include upstream Scope 3 emissions as of 2025.

2. **Gender diversity**
   10% of the total LTI is linked to our gender diversity targets. ZF pursues the strategic goal of increasing the proportion of people of underrepresented genders in management positions. ZF measures the gender diversity among managers in relation to the total number of managers in the ZF Group. The proportion of gender diversity is calculated as a percentage of those managers who do not belong to the most commonly represented gender.

Risk management and Internal Control System

ZF has implemented an integrated Governance, Risk and Compliance (GRC) approach for which the Board of Management is responsible. The GRC approach is based on the pillars of Enterprise Risk Management, Internal Control System, Compliance and Corporate Audit. ESG risk and control implications are integrated into the GRC approach.

ZF is guided by the current framework of the Committee of Sponsoring Organizations (COSO), which is a recognized standard for the systematization and integrated consideration of Internal Control Systems (ICS). We implement a system of performance indicators (KPIs) based on the company's own sustainability goals. In order to be able to track and effectively manage the goals, ZF is establishing a system-integrated control environment. The use of central GRC software helps us to collect and report reliable information on the risk situation and the effectiveness of the ICS. ZF ensures the completeness and correctness of the KPIs through the risk-oriented implementation of controls so that process risks in the sustainability-related process framework are avoided or reduced.

Information on the most important features of our Risk Management and Internal Control Systems can be found in the ↘ **Group Management Report under Corporate Management and Organization of the Opportunity and Risk Management System**.

Stakeholder communication and management

Our sustainability ambitions require holistic thinking. We are convinced that cooperation is the key to successful sustainable development. We therefore engage in various exchange formats with our stakeholders to be able to take into account their specific perspectives and to achieve balanced solutions. We report on stakeholder communication to the Supervisory Board and the Board of Management. In the year under review, 2024, topics such as climate protection, respect for human rights and the implementation of the German Supply Chain Due Diligence Act (LkSG) continued to determine ZF's exchange with and activities in the industry.

As an active member of the Automotive Industry Dialogue, a multi-stakeholder dialogue in the context of the National Action Plan on Business and Human Rights (NAP), ZF participates in measures and campaigns to help companies improve their compliance with human rights due diligence obligations along their value chains. On top of this, ZF participates in local and international sustainability campaigns. These include the Responsible Supply Chain Initiative (RSCI), the UN Global Compact (UNGC) and the European Association of Automotive Suppliers (CLEPA), where ZF is a member of the Energy and Environment Working Group. Furthermore, in the CLEPA Task Force for Taxonomy & CSDDD (Corporate Sustainability Due Diligence Directive) ZF works together with other members to further the evolution of the taxonomy legislation. As part of our membership in the German Association of the Automotive Industry, we actively participate in the Environment and Nature Committee (VDA UN). In addition, we are an active member of the Value Balancing Alliance and the ad-hoc group "Decarbonization of the Automotive Value Chain" within the expert group "Transformation of the Automotive Industry" of the German Federal Government. ZF is also active in the following associations:

- German Federal Digital Industry Association (Bundesverband Digitale Wirtschaft (Bitkom e. V.)),
- Mexican National Auto Parts Industry (Industria Nacional de Autopartes (INA)),
- German Mechanical Engineering Industry Association (Verband Deutscher Maschinen- und Anlagenbau e. V. (VDMA)).

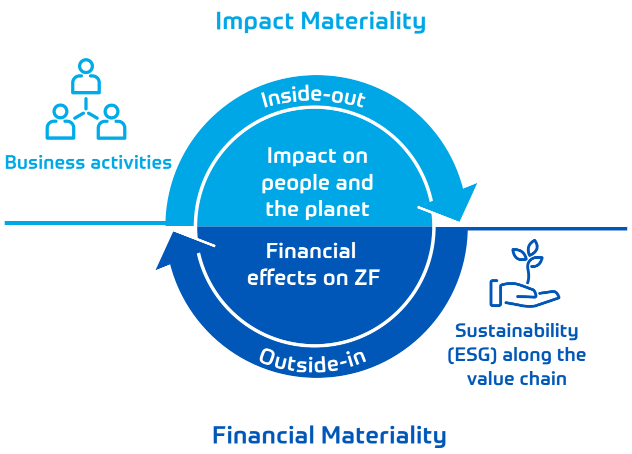
Stakeholder communication channels

Stakeholder groups	Media and formats
Employees	Zoom (intranet including various news channels and the sustainability-specific chatbot TERRA, blogs from the CEO, CHRO and other members of the Board of Management), face-to-face and virtual town hall meetings, webinars, skip-level meetings, innovation challenges, pitch events and virtual marketplaces, team communities, ZF BarCamp, New Work, management calls and internal target group mailings, notices, poster campaigns and on-screen information at the plants, family days, ZF website, social media and ZF hilft e.V.
Potential employees and educational institutions	Collaborations with universities and schools, combined Annual and Sustainability Report, advertisements, ZF website, participation in trade fairs, events, sponsoring, social media and employee ambassadors
Customers including end customers	Combined Annual and Sustainability Report, ZF website, brochures, advertisements, face-to-face or virtual customer days, participation in trade fairs, key account management, social media
Suppliers and partners	Combined Annual and Sustainability Report, ZF website, participation in trade fairs, advertisements, supplier days, key purchasing strategy, ZF Global Supplier Summit, social media, webinars
Politicians, associations, interest groups	Combined Annual and Sustainability Report, ZF website, Associations & Politics Department: topic-related discussions, round-table events/webinars, on-site visits, association work, social media
Press and other media	Combined Annual and Sustainability Report, ZF website, press releases, face-to-face and virtual press conferences, on-site and virtual test drives, social media
Communities	Press, ZF website, advertisements, sponsoring, social commitment at the locations, regional events, social media
Investors, analysts and other capital market participants	Combined Annual and Sustainability Report, annual and semi-annual conference calls with analysts and investors, capital market days, face-to-face meetings, trade fairs, ZF IR website

Materiality analysis

In preparation for CSRD reporting, we are updating the Double Materiality Analysis (DMA), which we had already carried out in 2023 in line with the requirements of the CSRD. Accordingly, we will report on the impacts, risks and opportunities (IROs) in the Sustainability Report for the fiscal year 2025.

G. 03 Materiality analysis



The assessment currently used is based on our reviously used materiality approach, which already takes into account the impacts on the environment, employees and communities (inside-out) and the business and stakeholder relevance (outside-in).

As a pilot project, ZF first analyzed the impacts in the upstream value chain and its own business area. This impact assessment was based on the methodology of the Value Balancing Alliance, which uses scientifically proven indices for the upstream value chain or real values from its own business area to analyze the impact of individual indicators. Thus, the subjective statements from the stakeholder survey can be supplemented by objective data, and risks can be better assessed.

At the same time, internal and external stakeholders were called upon to provide their assessments in an online survey. The results of both processes formed the basis for evaluating the topics that we identified as potentially material for reporting during internal expert workshops.

In addition to internal technical experts and managers, we have involved external stakeholder groups, including suppliers, NGOs and associations, banks, investors as well as insurance companies, research partners and the media. In addition to content, we also paid attention to a geographical coverage of our activities.

We evaluated relevant topics based on the risk assessment thresholds of ZF's Enterprise Risk Management, whereby we considered the ESRS parameters severity, likelihood and impact. If a topic received multiple assessments, we included the highest value in the consolidation.

For the voluntary Sustainability Report 2024, we have identified the following topics as material:

- Impacts related to climate change (E1)
- Impacts related to pollution (E2)
- Impacts related to water (E3)
- Impacts related to biodiversity and ecosystems (E4)
- Impacts related to resource use and circular economy (E5)
- Impacts related to our workforce (S1)
- Impacts related to workers in the value chain (S2)
- Impacts related to affected communities (S3)
- Impacts related to consumers and end-users (S4)
- Impacts related to corporate management (G1)

Climate Change

Mobility is an essential element of modern life. At the same time, automotive suppliers bear a particular responsibility in this regard. With the "Acting for climate and nature" element from our sustainability strategy, we are living up to this responsibility. The production of essential components consumes resources, and the released product emissions cause substantial changes to the climate worldwide. That is why we are following an ambitious climate strategy and working to reduce our impact on the environment and climate as much as possible. At the same time, it is important for our company in the long term to be prepared for the consequences of climate change and to adapt our business model, management and processes for this purpose. The basis for our activities is the climate risk analysis.

APPROACH AND METHODOLOGY OF ZF'S CLIMATE RISK ANALYSIS

In 2024, we further developed our scenario analysis, which was created in 2022 following the TCFD recommendations, in order to determine the physical risks, transition risks and opportunities of climate change for ZF's operating activities. The process was based on various cross-divisional and cross-functional prioritization workshops. ZF's risk management formed the basis for the analytical approach and for assessing our resilience to future challenges.

For the categorization of climate-related impacts, ZF followed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in the analysis.

As part of this analysis, ZF considered various climate scenarios and time horizons. We performed the analysis based on geographic coordinates for all ZF units and locations worldwide.

To identify and evaluate physical climate risks, ZF used the Shared Socioeconomic Pathways (SSPs) of the Intergovernmental Panel on Climate Change (IPCC). We considered two climate scenarios: a scenario with very high emissions that could lead to a warming of 4.8°C (Representative Concentration Pathway, RCP 8.5, SSP5) and a scenario that reflects the impacts of current policies and assumes a warming of 2.7°C (RCP 4.5, SSP2). With respect to the time horizons, ZF considered the short term (2025/current), medium term (2030) and long term (2050). The emission scenarios predict the respective increase in the global average temperature up to the year 2100 compared to pre-industrial levels. Emissions and their impacts are modelled up to the year 2050 in the scenarios.

TARGETS

The results of the climate risk analysis are incorporated into ZF's climate strategy. With this strategy, ZF sets itself the long-term goal of achieving climate neutrality by 2040. In addition, there are other targets, as shown in the chart.

Climate targets at a glance

- ZF undertakes to reduce its absolute Scope 1 and 2 GHG emissions by 80% by 2030, with 2019 as the base year.
- ZF undertakes to reduce its Scope 3 GHG emissions by 40% per million euro sales by 2030, with 2019 as the base year.
- ZF undertakes to increase its annual procurement of electricity from renewable sources from 10% in 2019 to 100% by 2025.

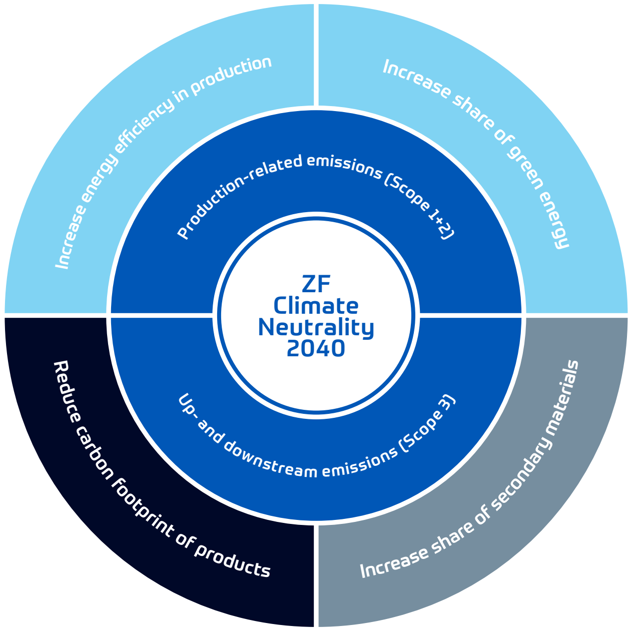
An essential lever for achieving our goals is the use of renewable energies. In 2024, we increased our share of green electricity to 43% and set the course to achieve our goal of 100% green electricity globally by the end of 2025 as set out by our "ZF Green Power Strategy."

ZF defined these science-based targets as early as in 2021. They were validated by the Science Based Targets initiative (SBTi) in January 2022 and are thus in line with the Paris Climate Agreement.

MANAGEMENT APPROACH

Transition plan for climate change mitigation

G. 04 Climate strategy and implementation (Scope 1, 2 and 3)



Climate protection is of strategic importance for ZF; the commitment to climate neutrality in all three emission scopes by 2040 is an integral part of the corporate strategy.

ZF shareholders endorse this strategic claim and fully support the associated measures.

The climate targets are integrated as parameters in ZF's strategic and operational planning. We want to achieve them mainly by taking energy efficiency measures, increasing our purchases of electricity from renewable sources and implementing further measures in the transition plan. These include the development of products for emission-free mobility, increasing the proportion of secondary materials, supply chain-related measures such as the use of green electricity by suppliers, and the use of "green steel."

Concepts related to climate change mitigation and adaptation

ZF wants to avoid negative environmental impacts and reduce existing environmental risks to contribute to an environmentally friendly society. Therefore, the efficient, environmentally friendly and safe operation of our plants as well as the responsible use of resources are essential parts of our environmental strategy. The strategy defines our requirements with respect to climate change mitigation, the environmental impact of production, environmentally friendly product design and environmental performance improvement. The planning, implementation and control of corresponding measures in these areas is regulated by our worldwide, binding EHS (Environmental, Health and Safety) management system. The EHS management structure and the EHS policy are described in detail under "Strategies and guidelines" in the ↘ **Pollution** chapter.

In addition, frameworks provide detailed specifications with respect to energy and Scope 1 and 2 emissions and are thus decisive drivers for addressing our environmental impact through greenhouse gas emissions (GHG).

Our Green Power Standard forms the basis for the purchase of green electricity and certificate management, demonstrating the credibility of our transition to green electricity. It is therefore crucial for the external verification of Scope 1 and 2 emission targets.

As part of our climate change mitigation strategy, we attach particular importance to the reduction of Scope 3 emissions, which is monitored decentrally in the various business units. The Materials Management and Research and Development departments as well as Sustainability Management work closely together to achieve common binding goals. These include increasing the proportion of secondary materials and "green steel" as well as supply chain-related measures such as the use of green electricity by our suppliers.

Steel and aluminum account for over 50% of ZF's upstream Scope 3 emissions. Reducing their CO_2e share is essential to achieve our climate target.
A sustainability classification introduced in 2023 supports the selection of materials and simplifies communication with suppliers and customers.
Based on this classification, ZF implemented a CO_2e indication in the ZF Materials Warehouse in the year under review. The central ZF materials database maps the portfolio of released and preferred ZF construction materials and provides relevant material data. The Materials Warehouse supports the comparison and selection of materials and offers a guided workflow for the material release process.

Our approach is cross-divisional, regional and functional and includes the corporate functions.

Measures and means related to climate concepts

In the year under review, we continued to advance the achievement of our climate targets. To this end, we have intensified the conversion of our locations to electricity from renewable sources as well as a series of energy efficiency measures and signed letters of intent with suppliers on the purchase of CO_2-reduced materials.

As far as the emission reduction of our own business activities is concerned, we purchase 100% green electricity for almost all locations in Europe. In Spain, we initiated a virtual power purchase agreement (PPA) in which two solar farms will supply almost 70 megawatts of solar energy. As a result, a significant proportion of the electricity demand for our plants in Germany, Spain, the Czech Republic and Hungary will be covered by green electricity for the next nine years.

In addition, we have already partially or completely converted more than 20 of our locations to green electricity in Germany alone. This conversion was made possible by a second PPA, which supplies about 200 gigawatt hours (GWh) of green electricity per year. In addition to these measures, we initiated various photovoltaic projects and have already implemented some of them. For example, as of next year, our plant in Thyrnau (Germany) will produce its own solar power through a photovoltaic system with almost 4,600 kilowatts peak.

We also implemented new photovoltaic projects in France and Italy. In 2024, we also converted the first locations in South Africa and Türkiye to green electricity due to customer requirements.

At our plants in Michigan (USA), we have also been purchasing a growing share of green electricity from a local supplier since 2024, which is secured by a long-term PPA. The green electricity share was already 25% in the first year. In addition, we converted more than ten other plants in various states of the USA and Mexico to 50% or 100% green electricity in accordance with our strategy.

We carried out similar projects in the Asia-Pacific region, where we have already partially or completely converted more than 20 Chinese locations to green electricity. In addition to China, we have already converted selected locations in Malaysia, Thailand, Vietnam and Japan to green electricity. In India, we completed several renewable energy projects, including rooftop photovoltaic systems with a total capacity of just under 4,000 kilowatts peak, as well as off-site solar and wind farm PPAs that provide an additional 10 GWh of green electricity per year.

On top of that, more than 980 energy efficiency measures were carried out in 2024, which led to total savings of approximately 144 GWh.

We do not only carry out measures in our own business area. We also work closely with our suppliers to reduce impacts on climate change and ensure lower emissions. The Sustainability – Supply Chain Department, in collaboration with our Corporate Purchasing and Production Planning and with further cross-functional support from Materials Management, is therefore continuously promoting various initiatives to reduce carbon emissions.

We ask our suppliers to use green electricity when they produce parts for the manufacturing of components and products for ZF. ZF suppliers are obliged to provide ZF insight into their implementation planning for green electricity. We make suppliers aware of set goals that are not achieved and conduct supplier talks with them.

In addition, we work more intensively with those suppliers who play a key role in achieving our green electricity targets. In training courses on green electricity, we impart the necessary knowledge on renewable energies together with external experts and invite suppliers to share their implementation experience. Furthermore, we support the acquisition of green electricity certificates and the implementation of procurement mechanisms, supplemented by training and the communication of applicable ZF policies and directives.

In 2024, we implemented a central tracking tool that enables us to measure and monitor target achievement at various organizational levels during the year.

We capture Product Carbon Footprint (PCF) values during procurement to ensure our suppliers have the lowest possible carbon footprint. In this way, we are reducing our upstream emissions (Scope 3) and, consequently, the Group’s overall carbon footprint. If the values do not correspond to the defined targets, we enter into dialogue with the suppliers concerned.

KEY FIGURES

Energy consumption and energy mix

in MWh	2024	2023	2019 Baseline
Total consumption of fuel	**1,085,761**	**1,172,533**	**1,954,370**
fuels from non-renewable sources [1]	1,081,762	1,169,369	1,954,370
thereof natural gas	944,623	1,019,886	1,850,571
fuels from renewable sources [2]	3,998	3,164	-
Consumption of purchased electricity	**2,613,375**	**2,712,864**	**2,558,830**
thereof from mixed sources [3]	1,501,507	1,971,343	2,295,835
thereof from renewable sources [4]	1,111,867	741,521	262,995
Consumption of self-generated electricity from renewable sources	**23,254**	**12,500**	**742**
Total share of green power (%) [5]	**43**	**28**	**10**
Consumption of purchased heat	**139,153**	**150,651**	**161,241**
Energy sold	**–194**	**–168**	**–188,888**
Total energy consumption within the organization	**3,861,485**	**4,048,548**	**4,486,295**
thereof renewable sources	1,142,071	759,081	263,737
thereof non-renewable sources	2,719,414	3,289,467	4,222,558
Energy intensity			
Energy intensity (in MWh per € million of sales)	93	87	123
Reduction of energy consumption	**144,000**	**166,000**	**39,000**

1) Natural gas, gasoline, diesel, fuel oil, liquified petroleum gas (LPG) , compressed natural gas (CNG), acetylene, methanol.
2) Biomass, biodiesel, bioethanol.
3) Standard electricity mix from public grid.
4) According to certified green power contracts.
5) With respect to the green electricity ratio, not all evidence was available at the reporting date; we therefore determined the ratio based on existing green electricity contracts and the empirical values from previous years.

Gross GHG emissions of Scope 1, 2 and 3 and total GHG emissions

in million tons (CO_2-aquivalent)	2024	2023	2019 Baseline
Scope 1 [1]	**0.229**	**0.247**	**0.406**
Scope 2 [1]			
location-based [1]	1.144	1.184	1.437
market-based [1]	0.649	0.805	1.371
Scope 1 + Scope 2 emissions (market-based)	**0.878**	**1.052**	**1.777**
Emission Intensity Scope 1 + 2 market based (in tCO_2e per € million of sales)	**21.220**	**22.562**	**48.661**
Scope 3	**67.205**	**82.456**	**102.719**
1 Purchased goods and services [1]	12.345	15.169	21.688
2 Capital goods [1]	1.418	1.528	1.485
3 Fuel- and energy-related emissions (not included in Scope 1 or 2) [1]	0.230	0.263	0.222
4 Upstream transportation and distribution [1] [2]	0.986	1.082	1.127
5 Waste [1]	0.123	0.132	0.131
6 Business travel [1]	0.049	0.041	0.113
7 Employee commuting [1]	0.151	0.158	0.149
9 Downstream transportation and distribution	0.363	0.398	0.415
10 Processing of sold products	0.060	0.060	0.060
11 Utilization phase	51.363	63.487	77.235
– direct	5.190	7.633	8.414
– indirect	46.173	55.854	68.821
12 End-of-life treatment of sold products	0.113	0.135	0.071
15 Investments	0.004	0.003	0.022
Emission Intensity Scope 3 upstream (in tCO_2e per € million of sales) [1]	**369.820**	**394.042**	**682.266**
Net revenue (€ million)	41,377	46,627	36,518

1) In 2024 audited with limited assurance by EY.
2) In the reporting year, the calculation for transport emissions was simplified by summarizing emission factors. As a result, comparability with previous years is only possible to a limited extent.

Pollution

Environmental protection is firmly embedded in our corporate culture. ZF is aware of the significant risks that pollution poses to human health and nature. We therefore continuously work to minimize these risks both in our own business area and in the supply chain and to reduce environmental impacts.

TARGETS

Our ambition is not only to meet legal obligations, but also to implement and improve our own high standards. We use regular reviews, transparent reporting and involve relevant stakeholders to achieve this.

MANAGEMENT APPROACH

Concepts related to pollution

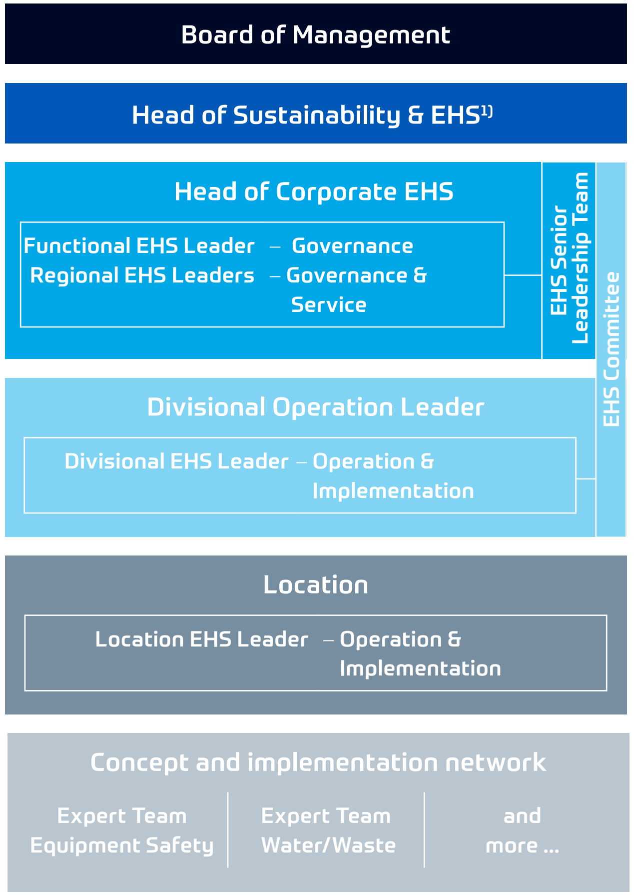
ZF pursues a comprehensive environmental strategy aimed at sustainability and continuous improvement. With preventive measures and careful environmental management, we strive for the best possible protection of people and the environment.

ZF's EHS management system ensures consistent implementation and compliance with legal requirements. Its effectiveness in the field of environmental management is proven by certification according to ISO 14001.

EHS organization

ZF's EHS organization covers all divisions, regions and individual locations. The Corporate Environmental Management Officer is responsible at Group level, and the environmental, occupational safety and health managers are appointed at division level. At plant level, location EHS managers are responsible for monitoring compliance with the environmental management system and continuously improving it. Regional EHS managers help to comply with the provisions in their region and implement the ZF standards. Systematic environmental management according to ISO 14001 is the standard for all production and main development locations. The coverage rate in terms of employees is about 90%. External inspections and audits confirm an effective EHS management system and compliance with current legislation by the ZF locations. A management review is conducted twice a year with the global Head of EHS and the responsible member of the Board of Management. The management review assesses the extent to which locations achieve their targets and manage EHS effectively. In addition, it is evaluated whether the environmental management system is adequate for fulfilling current customer and management requirements. Compliance-relevant processes as well as incidents and violations must be reported. Information on the ZF Trustline can be found in the Corporate Management section.

G. 05 Environment, health and safety



1) Environment, Health & Safety

EHS policy

The EHS policy defines major fields of action such as climate change mitigation, environmental impacts of production, environmentally friendly product design and environmental performance improvement. It is an integral part of our corporate culture and strategy and is binding for all ZF locations. The EHS policy includes all relevant international standards. Due to various local requirements, legal developments are monitored and evaluated – where necessary – measures are initiated at all locations and levels of the ZF Group.

The policy determines our business operations and defines our mission and goals:

- Minimizing EHS risks and impacts both in our own business area and in the supply chain
- Achieving EHS excellence through the implementation of company-wide standards and the integrated EHS management system
- Protecting health and promoting the well-being of our employees worldwide
- Promoting energy efficiency, using resources responsibly and minimizing our impact on the environment, including climate change considerations
- Considering the impacts of EHS aspects on the life cycle of our products – from development to production and use
- Continuously measuring and improving EHS systems and performance

The policy regulates how EHS management is to be implemented throughout the company:

- Preparing, implementing and complying with strategic plans in the EHS area
- Using a holistic approach (procedural, technical and behavioral elements) to identify and mitigate EHS risks
- Building up and continuously improving health promotion and health management
- Promoting individual responsibility, leadership and personal accountability of management
- Involving and empowering all employees to actively participate in achieving excellent EHS performance
- Empowering a global EHS team for the topics of leadership, governance and service
- Sharing company-wide resources, knowledge, best practices and experience with respect to EHS
- Measuring and verifying company-wide compliance with EHS performance targets using meaningful EHS metrics
- Continuously working on, further developing and evaluating company-wide conformity

All ZF employees worldwide, including external service providers who work for ZF, are obliged to comply with the provisions of the EHS policy. Management at all levels is responsible for the implementation of this policy in their respective areas of responsibility and is required to ensure compliance with EHS standards through exemplary conduct and commitment. The Board of Management bears overall responsibility for the EHS policy. It delegates the authority to manage and measure its implementation to the EHS function. The EHS policy can be viewed both internally and externally on our website.

All locations follow the “prevention before reaction” and precautionary principle. Our policies and directives are designed to prevent incidents and emergency situations through standardized procedures, trained employees, clear communication as well as optimized and maintained systems and our emergency plans. Therefore, as set out by our EHS policy, each location has an emergency organization. Emergency response teams are provided with all the necessary equipment and procedures. Mock emergency drills are carried out on a regular basis. Technical installations for dealing with events such as floods or fires are also part of the company standard. Our policies and directives help us control and limit negative impacts on people and the environment. In addition, there is a Group-wide reporting obligation in the event of an emergency situation, such as the release of hazardous substances.

Business Partner Code of Conduct

We also expect our business partners to comply with environmental standards in their own business area and along their value chain. These principles are set out in our Business Partner Code of Conduct, to which our partners commit when cooperating. The Code of Conduct contains standards for environmental sustainability and – in the case of business partners working in environmentally relevant industries – the obligation to certify environmental management systems. Further information on our Business Partner Code of Conduct is presented in the ↘ **Corporate Management** chapter.

Global Supplier Quality Directive

In our Global Supplier Quality Directive (QD83), we have defined product-related environmental and Safety Data Sheet requirements. All deliveries must comply with the applicable legal, environmental and import provisions according to the EU Regulation on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), the EU Directive on End-of-Life Vehicles and the ZF Company Standard for the Control of Prohibited and Regulated Substances. Upon request, suppliers must provide recycling and disposal concepts. Additional information (e.g., energy consumption and emissions) may also be requested for the life cycle assessment of ZF products. Suppliers must submit Safety Data Sheets (SDS) for materials and mixtures in accordance with the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and the European Regulation on the Classification, Labelling & Packaging (CLP) of substances and mixtures. For products classified as dangerous goods, the supplier must provide Safety Data Sheets or similar information so that ZF can meet the handling and transport requirements. This applies, for example, to pressurized shock absorbers, pyrotechnic articles or lithium batteries.

Measures and means related to pollution

As a global technology company, ZF strives for state-of-the-art production processes using the best available technology. This approach allows us to both improve our environmental performance and comply with legal and regulatory requirements at all times. The activities of all ZF locations are subject to our ISO 14001-certified environmental management system and follow accordingly managed processes in order to minimize and prevent environmental pollution. Moreover, our employees are trained and we strive to further optimize our processes by applying the hierarchy of controls, also referred to as the 'STOP-principle' (Substitution, Technical controls, Organizational measures and Personal protective equipment).

ZF records environmentally relevant emissions in air and water at all locations worldwide and ensures compliance with local legal thresholds.

In order to minimize potential environmental pollution, specific regulations and measures apply when handling hazardous substances. Relevant processes with the potential risk of releasing hazardous substances include surface treatment, machining with cooling lubricants and painting. We therefore ensure professional handling of hazardous substances at all times. Through preventive technical measures in place at the locations we guarantee that hazardous substances cannot seep into the ground and endanger groundwater, even in the event of a release, for example resulting from an incident. Threshold values are monitored by ZF and the authorities. A Group-wide standard ensures that substances hazardous to water are stored and handled in such a way that soil, groundwater and surface water are protected from contamination. Any hazardous waste is disposed of in a professional and traceable manner.

Our operating activities as well as the activities along our upstream and downstream value chains associated with environmental impacts are monitored by supply chain management and our customers' product audits. Corrective actions are implemented sustainably and tracked through our continuous improvement process. The effectiveness of the implemented measures is checked on site by internal and external auditors. An internal database (SoFi/AIC) helps us to create transparency. It contains comprehensive EHS data and forms the basis for detailed analyses and reports.

Water

Water is an essential resource, but at the same time it is increasingly negatively impacted by human and economic activities. One possible consequence is an increased risk of water scarcity. ZF is aware of its corporate and social duty to manage water resources responsibly. Therefore, ZF's environmental strategy, policies, directives and clearly defined goals and measures aim to conserve natural resources and reduce the ecological footprint of the company.

TARGETS

For our production sites in areas of water-stress, ZF has defined the goal of reducing water withdrawal by 2% annually relative to sales. For all other locations, ZF aims at a 1% reduction on an annual basis. The base year for both targets is 2019. All water sources, including, for example, rivers and groundwater as freshwater sources, are considered when assessing target achievement. Progress is monitored and managed in line with ZF's environmental management system at individual locations and at Group level. Management audits the locations every six months to review progress. The member of the Board of Management responsible for EHS and the location management evaluate the effectiveness of the management system and the achievement of targets. In addition, it is regularly evaluated whether the environmental management system is adequate for fulfilling legal and customer requirements. The goals for the responsible use of water were defined by ZF itself, and the company committed itself to complying with these goals in corresponding guidelines such as the EHS policy and the ZF Circularity Framework. The goals are not based on legal requirements.

MANAGEMENT APPROACH

Concepts for the responsible use of water

The efficient, environmentally friendly and safe operation of our plants as well as the responsible use of resources are essential parts of our environmental strategy. With the following guidelines and concepts, ZF wants to ensure that we meet the requirements for our use of water resources defined in the environmental strategy.

EHS management system

The requirements of the environmental strategy are implemented through our Group-wide and globally binding EHS management system. At the same time, the Group-wide EHS policy clearly stipulates that the locations are obliged to ensure the responsible use of water and to reduce negative impacts on the environment. The EHS management system and our EHS policy are described in detail in the ↘ **Pollution** chapter.

Business Partner Code of Conduct

We also expect our business partners to comply with environmental standards in their own business areas and along their value chain.

ZF expects its suppliers to manage water resources sustainably as part of their environmental management. Further information on our Business Partner Code of Conduct can be found in the ↘ **Corporate Management** section.

Measures and means for the responsible use of water

For ZF, water withdrawal is a central environmental issue, especially at production locations in areas with water scarcity. This is why every location is obliged to constantly monitor and improve water efficiency on site. This requirement is defined in the ZF sustainability strategy, the EHS management system, the water reduction targets as well as in the continuous improvement process according to ISO 14001 certification. The locations identify, plan and implement appropriate measures so as to minimize the environmental impacts of their operations.

ZF uses water treatment technologies to reduce freshwater withdrawal and wastewater volumes. Production processes use recycled water for washing, rinsing and cleaning operations and for the application of cooling lubricants. Wastewater at ZF is usually discharged into the public sewer system and treated in local wastewater plants. Direct drainage into surface water only occurs at a few locations where public infrastructure is lacking or where ZF is allowed to use the corresponding surface water for cooling purposes. In these cases, water is treated using state-of-the-art technology and is drained directly with the approval of the authorities.

Water withdrawal for production is a major environmental issue for ZF at all locations since the use of freshwater is increasingly restricted, for instance due to the impacts of climate change on water resources. All water sources are considered when assessing target achievement. The framework also takes into account production sites in areas with water scarcity.

ZF uses semi-open cooling circuits. They operate more efficiently because part of the water evaporates in these circulatory systems. As a result, the remaining water is cooled and can then be reused. However, this requires continuous cleaning of the systems (esalination) to avoid contamination and encrustations. As a result of this process, water demand increases again. Targeted measures should therefore desalinate the supplied cooling water before it enters the cooling towers. One of the locations that we identified as relevant with respect to water risks in 2020 has installed a reverse osmosis system for this purpose. This enables deeper concentration cycles, which reduce the need for newly supplied cooling water. The calculated savings amount to more than 7,500 m³ of water per year. This increase in efficiency significantly reduces the operation's impact on the water catchment area.

KEY FIGURES

Water

in m³	2024	2023	2022
Absolute water withdrawal	**9,699,192**	**9,720,705**	**9,687,209**
Ground water	917,309	937,115	853,062
Surface water	5,312,886	5,174,675	5,184,005
Water from third parties	3,468,997	3,608,914	3,650,142
Withdrawal in water-stress areas	**67,601**	**79,226**	**79,601**
Ground water	1,179	1,251	1,064
Surface water	0	0	0
Water from third parties	66,422	77,975	78,537
Water discharge	**8,429,356**	**8,423,978**	**8,314,945**
Surface water	5,003,656	4,869,207	4,861,286
Ground water	0	0	0
Seawater	0	0	0
Third-party water	3,425,700	3,554,771	3,453,659
Total water consumption	**1,269,836**	**1,296,727**	**1,372,264**
thereof in water-stress areas	33,129	41,608	39,903

Biodiversity and Ecosystems

Biodiversity and ecosystems are central to sustaining the livelihoods of our planet and preserving a livable environment for its inhabitants. But despite continued efforts, biodiversity is decreasing worldwide. ZF recognizes the need to promote biodiversity more systematically in the future.

TARGETS

Effective protection of biodiversity and ecosystems requires decisive action. Given the social urgency of the issue, we must not postpone the measures that have been identified as necessary, especially in those areas with the greatest levers. ZF endorses the objectives of the EU Biodiversity Strategy and supports the goals of the Kunming-Montreal Global Biodiversity Framework. For ZF, this means intensifying its efforts for biodiversity and consistently reducing the negative impacts of our operating activities.

Further information on our environmental goals and the measures taken to implement them are described in detail in the ↘ **Climate Change** and ↘ **Resource Use and Circular Economy** chapters.

MANAGEMENT APPROACH

According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, progressing climate change, environmental pollution, changes in land use, changes in freshwater and marine use, the direct exploitation of organisms and the introduction of invasive alien species are among the main drivers of biodiversity loss. With our goals for the protection of climate and nature, we want to minimize the impact of our business activities on biodiversity and ecosystems, contribute to the stabilization of ecosystems and help contain the progressive loss of species.

Transition plan and consideration of biodiversity and ecosystems in our strategy and business model

In addition to conventional environmental protection, ZF has begun to analyze the correlation between dependencies and impacts on nature. In this way, we want to support the goals of the Kunming-Montreal Global Biodiversity Framework. The measures to be planned should be in line with the EU Biodiversity Strategy for 2030, take into account the limits of the planet, preserve the integrity of the biosphere and reduce changes in land systems.

Operating activities of ZF and its business partners are to ensure the permanent protection of ecosystems and in particular key biodiversity areas impacted by these business practices. Above all, it is important to avoid deforestation and to bring land use in line with international biodiversity regulations, including the Resolutions and Recommendations on Biodiversity of the International Union for Conservation of Nature (ICUN). Moreover, business partners should also be encouraged to monitor their impact on soil quality to prevent soil erosion, nutrient depletion, subsidence and contamination.

ZF is working on integrating its risk analyses and assessments on climate change, biodiversity and other ESRS- and ESG-relevant topics into its Governance, Risk & Compliance approach. As part of the climate scenario analysis, we have started to assess the impacts of climate change, which is a major driver of biodiversity loss. In addition, we use the WWF Biodiversity Risk Filter (WWF BRF) for further analyses. When applying the Value Balancing Alliance method, we used a set of environmental indicators that also incorporate the drivers for biodiversity loss into our assessment methodology. The time horizons of the assessment are based on the Global Biodiversity Framework. The medium-term horizon extends to 2030 and the long-term horizon to 2050.

Concepts related to biodiversity and ecosystems

The diversity of species and ecosystems has long played an important role for ZF, as the activities of ZF and its partners in the value chain depend on this diversity and can influence it. Our policies and directives include biodiversity and ecosystems and reflect these interactions.

ZF is gradually integrating biodiversity requirements into its processes, adapting them accordingly. For example, our environmental management according to ISO 14001:2018 is implemented at all production and main development locations. Detailed explanations of the EHS management structure and the EHS policy of ZF can be found in the ↘ **Pollution** chapter. Information on the circular economy and our Circularity Framework is presented in detail in the ↘ **Resource Use and Circular Economy** chapter.

ZF also expects its business partners to analyze their dependencies and impacts on biodiversity. In its usiness Partner Code of Conduct, ZF asks business partners to set an adequate level of ambition for their business to support the targets of the Kunming-Montreal Global Biodiversity Framework. Further information on our Business Partner Code of Conduct can be found in the Corporate Management section.

Measures and means related to biodiversity and ecosystems

ZF is continuously working to reduce the burden on ecosystems. The focus of our measures against biodiversity loss is on the areas of climate change and resource consumption. With our climate strategy and commitment to massively reduce our greenhouse gas emissions by 2030 and achieve net zero in greenhouse gas emissions by 2040, we want to help reduce pressure on ecosystems. One important driver in this area is the increased use of secondary materials. Moreover, we also plan to implement the concept of the circular economy even more consistently to reduce the consumption of raw materials in our value chain. In this way, we can contribute to reducing the extraction of raw materials and the associated damage to ecosystems, for example through deforestation or changes in land use, thus mitigating key drivers of biodiversity loss along the value chain.

To better understand our local impacts, we assess the significance of locations within or near protected areas. This helps us to embed the aspects of biodiversity and ecosystem services in existing processes and deepen our understanding of the impacts of our own business and our supply chain on biodiversity. These processes are currently being set up.

ZF has well-established processes in place to reduce or prevent negative environmental impacts as far as possible. Here, all locations follow the “prevention before reaction” and precautionary principle. According to the mitigation hierarchy, the priority here is to avoid harmful impacts before minimizing them. Restoration is the third step. Adherence to this mitigation hierarchy is critical to limit negative impacts on biodiversity along our entire value chain.

On a project basis and in voluntary activities, we work together with environmental protection organizations and associations at a local level. ZF also incorporates the knowledge of indigenous communities into biodiversity and ecosystem measures.

Resource Use and Circular Economy

In view of the world's increasingly scarce natural resources, it is important for ZF to use them responsibly. For this reason, circular economy is firmly embedded in the "Acting for climate and nature" element of our sustainability strategy. Our business model is linked to resource- and energy-intensive production and development processes. As a result, our production requires the use of large quantities of steel, aluminum and plastics, among other things. We are aware of our responsibility for the sustainable use of resources and are therefore pursuing approaches to promote a circular economy in which growth is as independent as possible from the consumption of raw materials.

TARGETS

Closing material cycles is one of ZF's central sustainability goals. We are working towards moving from a currently predominantly linear economy to a circular economy. This means that we want to promote an economic system in which resources are used sustainably and products are manufactured in such a way that products and materials can be reused or recycled after use. We also strive to decouple our economic development as far as possible from additional resource consumption. For this reason, ZF has set itself the target for all ZF locations of reducing the waste for disposal volume by 1% annually relative to sales. The base year for the target is 2019. Reducing hazardous waste is also a goal in waste management.

MANAGEMENT APPROACH

Concepts related to resource use and circular economy

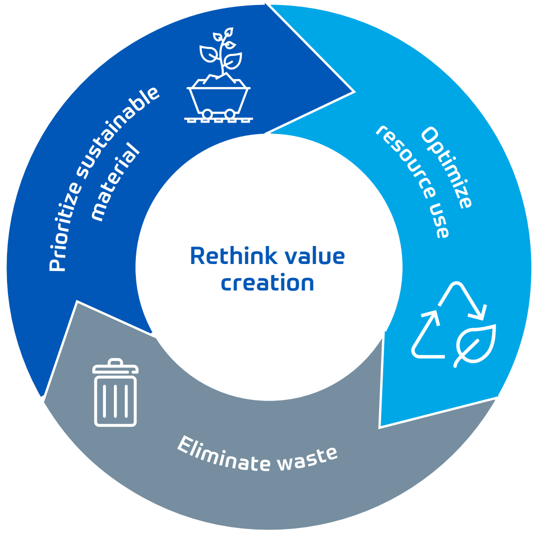
We want to firmly embed the principles of the circular economy in our company and are pursuing a systematic approach that aims to save resources and at the same time use the necessary resources longer and more than once. In our Circularity Framework, we describe how we implement this approach.

ZF Circularity Framework

The ZF Circularity Framework is based on the principles of the circular economy. In the ZF Circularity Framework, we have formulated the central principles and strategies with which we want to ensure that the materials and resources used are kept in the economic cycle for as long as possible. The central building block and foundation of the ZF Cirularity Framework is to "Rethink value creation." In order to promote the transition to a circular economy also beyond our company boundaries, circular business models and product portfolios need to be expanded or developed. We are convinced that the key to this lies in a circular ecosystem with various stakeholders: Together with them, materials and resources are to be reused and recycled so that no waste is generated and the environment is protected. To this end, we are entering into new collaborations and deepening existing ones. In partnerships and funding projects such as Catena-X, we are working on solutions for a functioning, circular ecosystem that can operate within planetary boundaries.

The ZF Circularity Framework is based on the principles explained in the following section:

G. 06 ZF Circularity Framework principles



Prioritizing sustainable materials

Reducing raw material consumption and selecting sustainable materials is of central importance for an optimized use of resources and further waste reduction. Based on the total material volume, ZF has developed a concept to test and evaluate materials produced with new process technologies and higher recyclate contents. The results form the basis of a ZF-wide roadmap that includes alternative material concepts and production routes for main material groups. Accordingly, we have initiated sub-projects to validate the resulting changes in material properties and to use more sustainable materials in ZF products.

We take sustainability aspects into account already during product development in order to be able to use materials more efficiently, to keep products in circulation for longer and thus to conserve natural resources.

In the year under review, the R&D sustainability managers focused on implementing and applying company standard 9005 (ZFN 9005) for sustainable product design. The standard specifies rules and requirements for the consideration of circular design criteria (ecodesign), thus supporting the development of resource-saving products. An evaluation tool included in the standard is used to assess aspects such as sustainable material selection, critical raw materials, modularity, durability, repairability, remanufacturing and recyclability. The use of the tool in product development at ZF helps to strengthen the focus on sustainability in all development departments. With the help of the evaluation results, the development teams can make conscious decisions about the most suitable, sustainable and circular design. In addition, the results can be used for reporting to other functions, contributing to greater transparency.

In 2023, for the first time, we released a significant portion of the budget of ZF's internal innovation process exclusively to support the most effective sustainability projects. In 2024, the budget provided financial support for technologies and product solutions in strategic key areas of sustainability.

Rethinking value creation and optimizing resource use

We are continuously developing existing circular business models such as ZF remanufacturing. We have been active in the field of industrial remanufacturing for many decades. Our aftermarket activities with 20 remanufacturing locations in 15 countries cover more than 250 product families.

Remanufacturing is an industrial process in which used parts are restored to their original functional state through advanced techniques and rigorous testing. Remanufacturing at ZF is implemented through a quality-tested and customer-oriented process. The basis for remanufacturing are used parts, also known as cores.

Products from Bielefeld (Germany), one of the leading remanufacturing locations at ZF, are certified in accordance with the cradle-to-cradle (C2C) standard. In order to achieve certification, aspects such as material health, product circularity, use of renewable energy, mindful water management and social fairness need to be evaluated. To develop this approach, the ZF Group collaborates with various working groups and universities on energy-saving measures and environmental protection.

Currently, remanufacturing does not make sense for all product types. To improve this share, ZF established a global expert group that contributes its expertise on new design concepts for remanufacturing.

Eliminating waste

ZF channels a high percentage of waste from production into recycling processes. This applies, for instance, to scrap metal and metal chips, waste oil, paper and cardboard as well as wood.

We also operate a comprehensive environmental management system aimed at continuously reducing the amount of waste generated. The EHS management system is described in detail in the ↘ **Pollution** chapter.

Careful handling of critical materials and substances of concern

The handling of critical materials and substances of concern is another important aspect for us. This concerns, for example, substances that pose potential hazards to human health and the environment according to the REACH regulation. Substances that are on the Global Automotive Declarable Substance List (GADSL) and whose use must be reported due to various environmental and health concerns are also included. For products containing critical substances, we are working to reduce their share and to extend the usage phase of the affected products as much as possible.

Measures and means related to resource use and circular economy

ZF is continuously working to make existing processes and structures more efficient and is developing recycling concepts to avoid waste and use finite resources more responsibly. We pursue a systemic approach that encompasses the entire life cycle of the products, facilitates repairs and the remanufacturing of used products and includes the recyclability of the products. Important levers are also increasing material efficiency and extending the service life of our products.

Developing a circular economy strategy

In fiscal year 2024, we developed definitions, metrics and standards for future circular economy solutions based on the ZF Circularity Framework. In this context, we started a cross-divisional and cross-functional project in which employees identified relevant and meaningful circularity indicators. In addition, we carried out status quo analyses based on the selected indicators, which now serve as central building blocks for further strategy development. They help us identify the opportunities and risks in the further implementation of the circular economy and develop targets for the topics of the ZF Circularity Framework.

Rethinking value creation – remanufacturing in new-product quality

In 2024, ZF combined its remanufacturing activities under the name ZF REMAN. The new ZF REMAN label reflects the increasing significance of sustainability for customers in the automotive aftermarket. Behind the label are ZF's industrial remanufacturing processes, with which we offer our customers and users the same quality and functionality as with new parts, while at the same time reducing raw material consumption throughout the supply chain.

The basis for remanufacturing is the return of cores from workshops to the manufacturer via wholesale. This reverse logistics process must be as simple, fast and efficient as possible so that workshops and wholesalers can use it without any problems. The ZF solution to these challenges is CorExpedia, an intuitive and user-friendly online platform for the global return of cores.

In 2023, ZF was involved in the EU project SUSMAGPRO, which dealt with the recycling of rare earth magnets based on neodymium-iron-boron (NdFeB). In the year under review, we continued to work with partners from science and industry to develop recycling approaches for motors and magnets and then test recycled NdFeB magnets in our products. Recycling can reduce the demand for neodymium as a primary raw material and thus reduce the environmental impact of its extraction and processing.

Sustainable materials

Steel is one of the most widely used materials at ZF. The focus is therefore on switching from steel produced in traditional blast furnaces to "green steel" produced in electric arc furnaces (EAF). This is an important measure for us, as steel production in the EAF causes far lower greenhouse gas emissions and allows for a higher proportion of recycled material. Since accompanying elements can be introduced into the steel due to the higher scrap input, their influence on the material properties is investigated to ensure a high quality of the steel. In preparation for the use of flat steel from EAF routes with a higher proportion of recycled materials, production tests were carried out in various plants in Europe to assess its usability on the basis of selected products.

From 2026 onwards, ZF will receive up to 250,000 tons of "green steel" annually. This volume accounts for approx. 10% of current steel requirements and will save around 475,000 tons of CO_2e emissions. The steel that we purchase from Stegra (formerly H2 Green Steel) enables savings of up to 80% in the carbon footprint compared to a conventional blast furnace. In 2024, we further expanded the "green steel" strategy and continued the dialogue with steel manufacturers. In this context, further Memorandums of Understanding (MoUs) were signed with steel manufacturers worldwide, promoting cooperation between the manufacturers and ZF to decarbonize the steel used.

Optimizing resources

Water management measures are explained in more detail in the ↘ **Water** chapter.

Eliminating waste

At ZF, waste reduction measures are recorded and tracked in a central reporting system by the EHS location officers. In 2024, the Zhangjiagang Braking plant in China took over a vacuum distillation system with downstream reverse osmosis to treat waste water contaminated with cooling lubricants and waste water from cleaning processes. Before operating the system, they disposed of approximately 1,455 tons of industrial wastewater as hazardous waste each year. With the help of this system, about 68% of the water can be recycled and then reused in production, which has greatly reduced the amount of hazardous waste to be disposed of and the need for freshwater in production.

KEY FIGURES

Resource inflows

Every year, the ZF Group purchases approximately 2.6 million tons of steel including cast iron and 418,000 tons of aluminum. These quantities do not include the purchase of aluminum and steel, where the supplier is determined by our customers (directed buy). In addition to raw materials, ZF also purchases large volumes of assembled parts and products that contain different materials.

Resource outflows

As a result of their material composition and design, ZF products are highly recyclable and thus also contribute to meeting the recycling quotas stipulated in the EU Directive on End-of-Life Vehicles.

In 2024, the total amount of waste at ZF increased by 5.2%. The specific amount of waste for disposal (tons per € million sales) was again lower in 2024 than in the previous year, and meeting the annual reduction target. The recycling rate was 88%.

Waste

in tons	2024	2023	2022
Total amount of waste (diverted from disposal)	**534,768**	**557,626**	**523,461**
Thereof total amount of non-hazardous waste (diverted from disposal)	501,380	526,450	493,123
Thereof total amount of hazardous waste (diverted from disposal)	33,388	31,176	30,338
Total amount of waste (directed to disposal)	**46,865**	**55,930**	**57,329**
Thereof total amount of non-hazardous waste (directed to disposal)	27,350	29,411	31,376
Thereof total amount of hazardous waste (directed to disposal)	19,515	26,520	25,953
Total	**581,633**	**613,557**	**580,790**
Hazardous waste (diverted from disposal) [1]	**33,389**	**-**	**-**
thereof preparation for reuse [1]	1,064	-	-
thereof recycling [1]	23,302	-	-
thereof other recovery operations [1]	9,023	-	-
Non-hazardous waste (diverted from disposal) [1]	**501,382**	**-**	**-**
thereof preparation for reuse [1]	3,910	-	-
thereof recycling [1]	483,724	-	-
thereof other recovery operations [1]	13,748	-	-
Hazardous waste (directed to disposal) [1]	**19,515**	**-**	**-**
thereof incineration [1]	7,164	-	-
thereof landfill [1]	3,421	-	-
thereof other disposal operations [1]	8,930	-	-
Non-hazardous waste (directed to disposal) [1]	**27,351**	**-**	**-**
thereof incineration [1]	3,308	-	-
thereof landfill [1]	22,809	-	-
thereof other disposal operations [1]	1,234	-	-
Percentage of non-recycled waste [1]	**12.0%**	**-**	**-**
Total amount of non-recycled waste [1]	**69,635**	**-**	**-**
Total amount of hazardous waste [1]	**52,905**	**-**	**-**

1) Data was first collected in 2024.

Our People

Responsibility and commitment characterize what ZF stands for as an employer. The "Acting for All People" element of ZF's sustainability strategy means that all measures, concepts and strategies are geared not only to the long-term economic success of the company, but also to the people affected. The company lives a culture that strengthens cooperation, leadership and responsibility, and provides a working environment that rewards good performance and teamwork. Fairness means benefits for both employees and ZF as an employer. ZF is convinced that this approach promotes commitment and ultimately helps improve economic results. It is based on the five principles of our transformation program "ZF Way" – passion, anticipation, diversity, empowerment and accountability.

TARGETS

ZF wants to protect, preserve and promote the safety, health and well-being of employees. To this end, the company has defined concrete goals that in some cases go beyond legal requirements and are in line with human rights.

We are committed to equal professional opportunities and strive for diversity by basing career opportunities on qualifications and performance, regardless of race, gender, age, veteran status, national origin, nationality or disability.

Diversity and equal opportunities

Our target is to increase the share of female managers to at least 20% by 2030 through a commitment to fair, merit-based and skills-driven selection processes. Due to restrictive external recruitment, we extended the time horizon from 2028 to 2030. The share of female managers at both the first and second managerial levels below the Board of Management is to be increased to at least 20% by mid 2027. Our management teams are committed to expanding talent pipelines, ensuring equal access to career development and maintaining a selection process based on merit, skills and performance. In addition, ZF strives for greater internationality in the management teams in order to reflect the diversity of ZF.

Occupational safety and health

A key long-term target of ZF is to reduce the LTAR (accidents with working days lost per one million working hours) to 2.0 from 2021 to 2025. Other goals include reducing the severity of accidents and achieving a low ergonomic risk profile for 90% of the workplaces by 2025. Hazard assessments and improvement measures are to be implemented according to global standards, such as those of the National Institute for Occupational Safety and Health (NIOSH) or the Key Indicator Method. We are also currently working on targets for the following years.

It is key for ZF to optimize working conditions and firmly integrate suitable preventive measures. That is why one of the company's goals is to appoint local occupational health professionals at all our locations by 2025 to ensure that occupational health expertise is available on site at all times.

In order to prevent work-related illness and promote the well-being of our employees, all ZF locations are obliged to implement at least one campaign per year on a health promotion topic defined by Corporate Health Services.

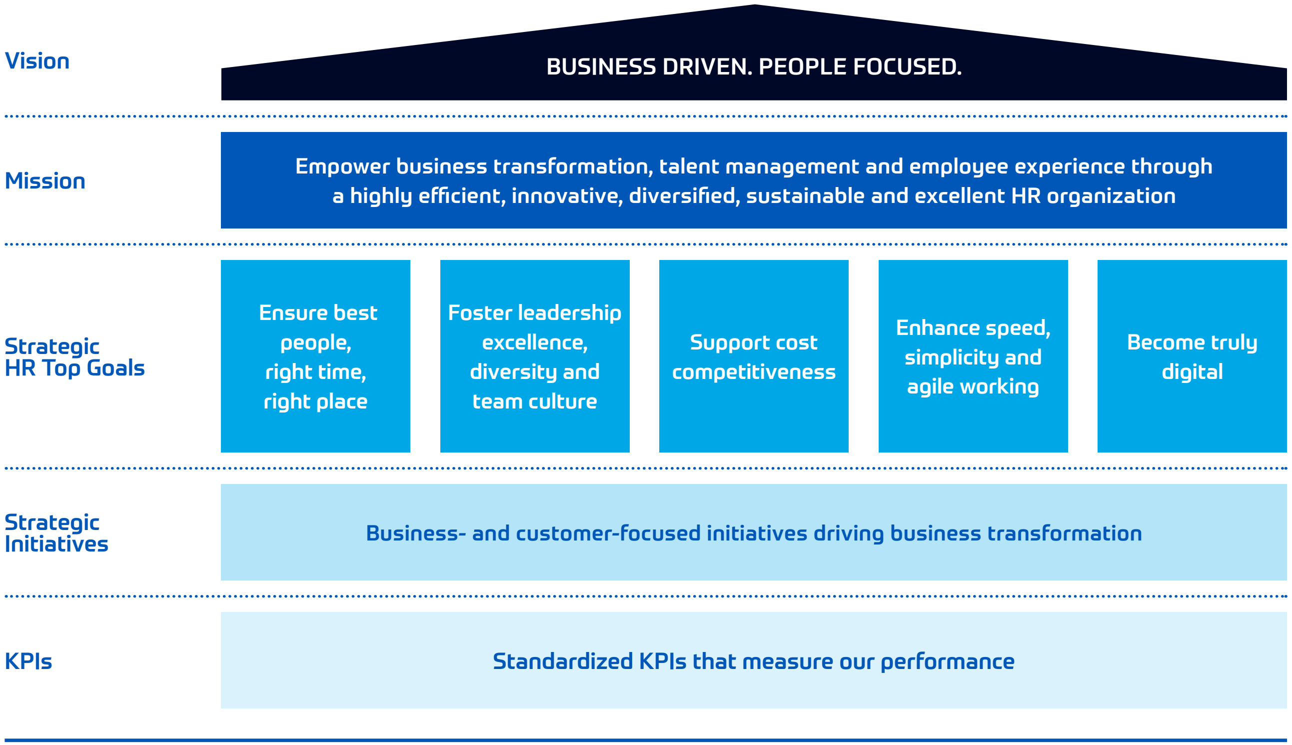
MANAGEMENT APPROACH

Concepts related to the company's workforce

Our global HR strategy defines approaches, goals and processes for the management and promotion of all employees. It also identifies strategic initiatives and the key figures for measuring progress.

In Human Resources, we have established policies and directives to consistently regulate working conditions, equal treatment, equal opportunities and other work-related rights.

G. 07 HR Strategy



Code of Conduct

Our Code of Conduct emphasizes the importance of integrity and responsibility in day-to-day business and is binding for all employees and executive managers at ZF. Detailed information on our Code of Conduct can be found in the ↘ **Corporate Management** section.

Fair remuneration

The remuneration of managers is based on a global job evaluation system and a benchmarking of local regulations and market practices of the relevant labor markets. Below the management levels, remuneration is based either on collective agreements or local job classification systems and is also benchmarked to local market conditions. Job evaluations, classification systems and collective agreements are to ensure fair treatment of employees, including gender equity regarding remuneration.

ZF has set up incentive plans to promote decision-making by managers that is consistent with the company’s objectives. ZF offers all executive managers a global, short-term incentive plan (STI). Senior executives are also incentivized under a global, long-term incentive plan (LTI) to promote innovation, motivation and sustainable action for the company. The selection of performance indicators and targets is transparent and takes place within the framework of a standard process.

Since ZF is a foundation-owned corporation, neither employees nor managers receive shares of ZF Friedrichshafen AG. For this reason, ZF offers incentive programs to a majority of its employees also outside management levels. All employees with part-time, full-time, permanent or fixed-term employment contracts have access to additional benefits with a focus on health and insurance. These are decided locally and follow the applicable regulations and market practices. Additional benefits for contract workers and agency-based temporary workers are also designed depending on local regulations. With our globally harmonized and digital Annual Salary Review (ASR) process for managers and employees whose remuneration is not based on a collective agreement, we have so far recorded around 42,000 employees in 38 countries. The program supports aspects of equal pay and equal opportunities since it enables a central analysis and detection of potential issues as well as appropriate reactions of the Group.

Respecting human rights

Respecting human rights and protecting the environment are key priorities for ZF. We put people at the center of our actions and feel responsible as a company for our employees as well as for the people who work with and for us along the value chain. The health, safety and well-being of all our employees and our efforts to protect the environment are crucially important to ZF, and we have made them an integral part of the way we operate based on nationally and internationally recognized standards. We believe that sustainable business practices are only successful if they involve the entire value chain. As a result, we expect not only all our employees but also our business partners to comply with applicable laws and regulations as well as internationally recognized human rights and environmental standards.

The ZF Policy Statement on Respect for Human Rights is a globally valid document that was jointly approved by the Board of Management and the employee representatives. Various forms of dialogue with stakeholders, including our own workforce, trade unions and associations, are used to identify human rights risks and assess the effectiveness of these measures to prevent and correct adverse human rights impacts. The Policy Statement reaffirms our common commitment to society and the environment, illustrates our strategic approach and provides an insight into the responsibilities and processes we use in order to foster the protection and promotion of human rights in all our business activities. The Policy Statement is published in 17 languages. In 2024, we also developed a plan that includes mandatory training to be conducted in 2025.

In the Policy Statement, we clearly commit ourselves to the following internationally recognized human rights standards and guidelines:

- The Universal Declaration of Human Rights
- The United Nations Guiding Principles on Business and Human Rights
- The Ten Principles of the United Nations Global Compact
- The International Covenant on Civil and Political Rights
- The International Covenant on Economic, Social and Cultural Rights
- The International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work
- The OECD Guidelines for Multinational Enterprises

Diversity and equal opportunities

The diversity strategy consists of three pillars: awareness, empowerment and processes.

The first pillar seeks to create awareness of the different dimensions of diversity. We would like to achieve this through the joint celebration of various events such as International Women's Day, Diversity Week or Mental Health Day. In addition, there are Employee Resource Groups (ERGs) in all regions that create know-how and awareness of specific target groups. We also cooperate with external partners. These partners strengthen ZF's commitment and provide support through resources, best practice examples and networking opportunities.

The second pillar, empowerment, includes training to educate our employees about fostering collaborative and inclusive workplaces. On-demand training is also available on topics such as "Why Diversity, Equity, Inclusion & Belonging Matter" and "How to Eliminate Bias." At ZF, equity means ensuring all employees have equal access to opportunities, resources and support needed to succeed. We ensure promotions are based on merit, skills and qualifications. In addition, we offer mentoring programs that support talent development across diverse backgrounds, including female talents and leaders, fostering a culture of inclusion and professional growth.

Furthermore, the diversity team has set itself the goal of embedding diversity in all processes. This constitutes the third pillar.

The global diversity team, which also has regional responsibilities, promotes the further development of the diversity strategy as well as the implementation of global and regional activities and initiatives. It is supported by diversity managers, experts and various employee initiatives worldwide. ZF focuses on the following action fields to meet strategic challenges and contribute to enhancing the Group's competitiveness:

- A balanced gender ratio,
- Cultural background and internationality of the workforce,
- A wide range of experience and expertise as well as
- Responses to demographic change.

The action fields are systematically analyzed on a regular basis and the results are reported to the Board of Management.

EHS policy

With our EHS policy, we ensure the protection and promotion of our employees' health and well-being worldwide. The ZF EHS policy is explained in the ↘ **Pollution** section.

Placement policy

The Internal Placement Policy stipulates Group-wide principles, responsibilities and processes for the filling of positions. It refers to two existing approaches:

- The internal recruiting process tries to fill positions with current employees through internal recruitment (for executive managers).
- The internal application process serves to ensure career opportunities for employees within the organization and to reduce the risk of employee churn due to external career opportunities. This Policy Statement provides the parties involved (e.g., Global Talent Acquisition or executives) with clear and binding regulations and obligations regarding their roles.

Procedure for involving ZF employees in occupational safety and health and employee matters

ZF offers employees a wide range of opportunities to contribute their views to corporate processes and to actively participate in process improvements. Direct communication is possible, for example, via the intranet "Zoom," where corporate processes and projects are communicated proactively at an early stage. Regular skip-level meetings enable communication across hierarchies between employees and senior HR managers. In addition, ZF includes the interests of the workforce in the due diligence process. Further communication channels and approaches are explained below. For the continuous further development of these formats, ZF relies on exchanges in multi-stakeholder dialogues to ensure low-threshold and accessible offers.

Employee surveys

In the year under review, 2024, we also conducted the Global Employee Engagement Survey. The focus was on aspects such as employee satisfaction, identification and affiliation with the company as well as employer attractiveness. At 69 points, the engagement index was close to the previous year's figure of 72 points. As in the previous year, we closely follow up on the processing of the results and findings – at all levels of the organization as well as within the individual teams. While the survey showed some positive trends, such as the dimensions of brand, feedback and prioritization, there are other areas that require further work.

The follow-up process mainly focuses on the areas of communication, growth, care, inclusive leadership and recognition. For example, in 2024, we developed an internal program for executive managers on the topic of "inclusive leadership," recognition programs for employees and a holistic approach to mental well-being, which were rolled out throughout the organization. Progress and experience will be reported regularly.

In addition, we implemented two lifecycle surveys, which record employee experiences during critical phases such as onboarding or company exit and should also suggest improvement measures. The onboarding survey aims to improve the onboarding period. With the exit survey, ZF wants to identify reasons for voluntary termination in order to derive measures from it.

Involving employees in occupational safety

The co-determination principle for occupational safety and health of employees is important for ZF. Employee representatives in Germany, for example, have a right to co-determination when it comes to certain occupational safety and health regulations.

Our EHS management system defines a minimum standard for occupational safety and health, which in some countries is even stricter than local legislation. The works councils of the locations and the Group Works Council cooperate closely to implement these standards. According to the EHS management system, the managers of all global locations are encouraged to actively motivate employees and their representatives to participate in EHS initiatives. Management defines the scope of participation to meet legal requirements and involve employees in EHS programs, which are supported by bodies and teams such as EHS committees and ergonomics teams.

The "ENGAGEtobeSAFE" initiative, which we launched in 2022, was successfully completed in April 2024. It included a global information campaign, implementation measures and follow-up by EHS management. The focus was on safety in forklift traffic and the prevention of finger and hand injuries. We have identified over 2,500 improvement measures and put them into practice. For locations with significant deviations, we introduced a monthly reporting process in which location managers report on measures to improve occupational safety. Since its first implementation, 28 locations have gone through this process. In 2024 alone, we tracked over 200 measures and 18 locations were released from the monthly review due to significant improvements.

The initiative was accompanied by Safety Leadership workshops and site visits by the global EHS team. We continued the Safety Excellence Program in the areas of Safety Leadership, Behavior-Based Safety and continuous improvement of the EHS management system. In order to raise executive managers' awareness of their outstanding role in safety work, we have had an interdisciplinary team develop Mindset Essentials, which will be applied worldwide as of 2025. All employees are involved in the continuous improvement of occupational safety and health and undergo regular qualification. Employees are encouraged to report near misses and unsafe situations and to participate in risk assessments and workshops for the development of ideas and measures according to the Kaizen method. Employee participation is also subject to corporate audits. Deviations or complaints can be reported anonymously via the ZF Trustline.

Employer/employee relationship

Approximately 75% of ZF employees are covered by national, regional or local collective agreements. Within the company, they are represented either by trade unions, works councils or both. Temporary workers or service providers are subject to their employer's collective agreements, in which they are represented by employee representatives such as works councils, if applicable. ZF informs the elected employee representatives in good time and comprehensively about any changes in the company as well as matters of business development. The employee representatives thus have the opportunity to articulate the interests of the workforce. The German Occupational Health and Safety Act stipulates that occupational health and safety committees (ASA) are to be organized at all German locations, in which the works council is also represented. The ASA meets at least once every quarter and makes proposals and recommendations. The ASA itself is not a decision-making body; the decision-making authority lies with the employer and the works council.

ZF respects the right of its employees to form associations and conduct collective bargaining on working conditions. Employees should also exercise their right to strike in accordance with applicable national and international law. In the event of disagreements, ZF cooperates with the employee representatives for the benefit of the workforce and the company. Being affiliated or unaffiliated with a trade union or employee representative body does not lead to any preference or disadvantage.

In Germany, workers and staff meetings take place quarterly, in which the company and the works council inform the workforce about relevant processes and employees also have the opportunity to voice concerns. In order to safeguard co-determination rights, relevant information is passed on to the economic committees and the works councils within the respective deadlines.

Further information on the involvement of the workforce

The participation processes and dialogues usually result in the conclusion of company wage agreements or works agreements with the respective committees. In the period under review, we concluded 33 central works agreements with the Group Works Council on key issues affecting all employees in Germany.

The European Works Council of ZF Friedrichshafen AG regularly exchanges information to promote a transnational dialogue with and between the respective employee representatives. The economic, social and environmental challenges at the European level are discussed and managed in these meetings.

For the ZF locations in China, the labor-related provisions are defined in accordance with labor law and employment contract regulations of the People's Republic of China. This is done through consultation and enactment by the trade union or employee representatives. A significant part of the workforce is covered by collective agreements and is a member of the trade union. Together with employee representatives, it plays an important role in negotiating working conditions.

The social dialogue and involvement of ZF employees in the India region is also subject to local laws. The provisions cover the cooperation with employees and their representatives on working conditions, health and safety, freedom of association, consultation and co-determination rights as well as negotiations with trade unions on collective agreements. These regulations are laid down in the Factories Act, Industrial Dispute Act, Contract Labor (Regulation and Abolition) Act and other laws.

In the Region of North America with USA and Mexico, as well as Brazil, ZF respects the right of its employees to self-organization, accession or support of labor organizations, collective bargaining by representatives of their choice and other concerted activities for the purpose of collective bargaining or other mutual aid or protection or omission of all such activities.

In Brazil, trade unions have representation, with each entity having employee representatives associated with the local trade union. In addition to representing employees in collective agreements, the trade unions also have the task of monitoring working conditions, including health, safety and well-being, and are in dialogue with our responsible functions for this purpose. The local trade union and its representatives have the right to conduct member campaigns and hold regular meetings at companies to communicate agreements and the trade union's stance on labor issues. Information about employees' rights is provided by both the company and the trade union.

The plants of ZF Mexico have established bipartite committees consisting of employee and union representatives as well as management representatives. These committees have monthly meetings and audits to ensure safe working conditions, investigate accidents, propose preventive measures, carry out monitoring and supervision, identify risks and ensure training. Those who are not unionized follow the same procedure. They choose a group of employees to be represented in the wage/benefits agreement. In addition, the plants in Mexico hold quarterly or semi-annual information meetings with all employees, informing them about the achievements and challenges of the organization, as well as topics related to employee safety and working conditions. These meetings are organized by HR and involve the trade union representatives of each location. Semi-annual meetings with our HR officers and the union representatives or employee committee serve to review the quality of services and benefits for employees and to gather concerns and areas for improvement from each location.

By closely involving representative bodies for disabled employees in operational co-determination, ZF wants to protect the special needs and rights of people with disabilities.

Procedures for the safety, health and satisfaction of employees as well as channels through which employees can voice concerns

We provide various channels and processes for employees through which they can voice concerns regarding safety, health and well-being and actively participate in improvements. In the further development of complaint mechanisms, ZF relies on exchanges in multi-stakeholder dialogues to ensure low-threshold and accessible offers.

Occupational safety and health

Locations in which ZF holds a majority share manage their activities in alignment with the global EHS management system. Further information on the EHS management system can be found in the ↘ **Pollution** chapter.

The EHS management system is aligned with internationally recognized standards such as ISO standards. ZF locations can be certified in accordance with the international ISO 45001 standard voluntarily or to meet customers' requests. Certification is primarily carried out in the matrix certification process to ensure uniform implementation of ZF standards. Divisional EHS
experts coordinate relevant aspects of these certifications. in 2024, 111 locations (2023: 110) used a matrix certification and 49 locations an individual certification according to ISO 45001 or equivalent local standards. The prior-year figures had to be updated due to previously disregarded structural changes in the ZF Group. Certified locations evaluate the effectiveness of the ISO management system through corporate and external audits and report major deviations to the responsible corporate functions in a cycle of six months. The results of the audits are integrated into a continuous improvement process with which we want to continuously identify and address risks and prevent them in the long term.

HR development

Continuous further development of our employees is an essential factor for the power of innovation and the long-term success of our company, especially in the current transformation phase of our industry. ZF uses a holistic HR development approach: We place our employees at the core of our activities to attract the best talent, to promote education and further training and to be the employer of choice for internal and external talents.

Talent promotion

Our talent development strives to attract and retain high-performance talent and starts with the Performance Potential Succession process. This includes the evaluation of performance, discussion of development measures and assessment of the potential for more responsible positions. In order to promote talent, ZF offers a large number of "Global Strategic Talent Pools:" The "MobilizeZF" program enables top talents worldwide to develop themselves for a management position with greater responsibility. The "Plant Manager Development Program" is aimed at employees who are prepared to manage a ZF plant. The "Finance Top Talent Pool" aims to prepare finance managers for a role in top management.
In order to increase the percentage of women in management positions, there is the "Empower, HerPower" program for women in the pay-scale sector, as well as "Empower, HerPower – Next Level" for

women in middle management. With “Digital Game-Changers,” we support digital talents in networking and developing their skills.

Training and development

At ZF, a vast range of training opportunities is available to employees of all functions and levels. A standardized apprenticeship management system enables apprentices and trainers to access jointly developed content and control all apprenticeship processes digitally. On a global level, the “Skills Hub” platform offers around 92,000 employees with PC access the opportunity to understand career prospects and learn independently. The Skills Hub is a digital place of learning for megatrends. After the topics of e-mobility and digitalization in previous years, we focused on the topic of sustainability in 2024. In addition to entertaining units for independent learning, the comprehensive range also offers interactive formats for exchange with internal and external experts. In 2024, the platform recorded over 36,000 active users. The rate of completed course modules is about 90%.

ZF Trustline

The ZF Trustline provides a notification system that employees, customers, business partners and third parties can use to report potential compliance violations. This is described in detail in the ↘ **Corporate Management** chapter.

Human Rights Due Diligence (HRDD) approach

Respect for human rights is an integral part of ZF’s organizational culture and shared values. Our Human Rights Due Diligence approach (HRDD) is explained in the Workers in the Value Chain section.

Measures to implement effective occupational safety and health and to promote equal opportunities

In the year under review, ZF implemented specific measures to promote effective occupational safety and health, equal opportunities and the reconciliation of work and private life.

Diversity and equal opportunities

As part of our diversity strategy, we have planned and implemented measures in each pillar.

“Awareness” pillar: In 2024, during our annual diversity events, we presented diversity toolkits for the locations as well as our “Allyship Guide,” which provides guidance for allies of disadvantaged groups. In India, we successfully introduced the “Tab Talks” this year, which offer groups a protected place for difficult conversations.

“Empowerment” pillar: In 2024, we introduced the “ZF Inclusive Leadership Program,” an online learning program that shows executive managers how they can lead more inclusively, from hiring to evaluating employee performance. This is also supported by a large number of ambassadors, who empower managers and teams in the corresponding areas with workshops about the program.

“Processes” pillar: Here, we set ourselves new goals in 2024. We made adjustments to the recruiting process to ensure broad outreach, encourage diverse talent participation and maintain a selection process rooted in qualifications and skills. Global or regional policies and directives also strengthen the embedding of our principles and values and keep the organization sustainably committed to applying and implementing them.

In the recruiting process, we introduced a further improvement. We optimized the system-based tracking of candidates to ensure that personnel decision-making processes are as transparent as possible. To raise awareness of this topic, we provided accompanying training offers for recruiters and hiring managers.

The implementation of our strategy is also carried out with the help of the Top Management Diversity Community, which we introduced to ensure the involvement and commitment of executive managers and to obtain feedback on new pilot programs. This approach enables top executives to learn, contribute and share proven diversity, equity and inclusion practices. Looking forward, we want to attract more executive managers as sponsors for diversity initiatives.

Occupational safety and health

Experts in occupational safety and health support and train managers in the implementation of regular risk assessments using methods such as FMEA (failure mode and effects analysis) and applying the hierarchy of controls (Substitution, Technical controls, Organizational measures and Personal protective equipment). The company reduces systematic risks through binding measures and requirements defined in an annual update of the EHS management system.

In 2024, we launched a Group campaign to promote physical activity. Based on recent developments in sports psychology, it is intended to involve people who are less physically active on their own initiative in preventive campaigns and inspire them to be more active. The global kick-off to this campaign took place in July 2024 and the campaign will continue in 2025.

Work-life balance

The ZF locations Friedrichshafen, Passau, Schweinfurt, Saarbrücken and Lemförde have been certified in Germany as family-friendly companies. As part of the "work&family" ("berufundfamilie") audit, we have firmly established family-related targets and measures. In addition to flexible working hours, current measures also include practical solutions in shift operation as well as Group agreements such as "ZF Parental Leave" and "ZF Sabbatical." Our "Shared Leadership" initiative allows two employees to share a management position.

KEY FIGURES

Employees of the company

As of December 31, 2024, ZF employees worldwide numbered 161,631. By the end of 2024, ZF had hired a total of 27,555 new employees, of whom 10,841 were women, 16,713 were men and one was listed as diverse. Almost half of them were hired in North America (47.2%), followed by Europe (23.4%).

Employees by contract

	2024	2023	2022
ZF Group	**161,631**	**168,738**	**164,869**
Female	45,109	45,819	44,232
Male	116,519	122,915	120,312
Diverse / unknown [1]	3	4	325
Number of permanent employees	**152,544**	**155,197**	**151,895**
Female	42,944	42,530	40,904
Male	109,597	112,663	110,666
Diverse / unknown [1]	3	4	325
Number of non-guaranteed hours employees [2]	**0**	**0**	**0**
Female	0	0	0
Male	0	0	0
Diverse / unknown	0	0	0
Number of limited employees	**9,087**	**13,541**	**12,974**
Female	2,165	3,289	3,328
Male	6,922	10,252	9,646
Diverse / unknown	0	0	0
Number of full-time employees	**150,292**	**163,137**	**158,933**
Female	40,892	42,235	40,427
Male	109,398	120,898	118,181
Diverse / unknown [1]	2	4	325
Number of part-time employees [3]	**11,339**	**5,601**	**5,936**
Female	4,217	3,584	3,805
Male	7,121	2,017	2,131
Diverse / unknown	1	0	0
Number of apprentices, interns and external agency workers			
Apprentices	2,285	2,351	2,343
External agency workers	16,448	19,588	17,409
Interns	894	1,219	1,180

1) Data 2022 was incomplete.
2) There are only employees with hourly contracts.
3) Collective reduction of working hours in Schweinfurt (GER) in December 2024.

Employees by country [1]

	2024	2023	2022
ZF Group	**161,631**	**168,738**	**164,869**
Germany	52,027	54,447	53,265
Mexico	25,042	24,539	23,668
China	15,497	16,931	15,997
India	11,238	11,032	10,804
Poland	11,037	10,963	10,387
United States	9,414	10,696	10,985
Brazil	5,166	5,085	5,153
Romania	4,506	4,691	4,600
Slovakia	3,863	3,947	3,929
Czechia	3,753	3,899	3,732
Rest	20,088	22,508	22,349

1) Number of employees per headcount.

Employee turnover

in %	2024	2023	2022
ZF Group	**7.8**	**8.5**	**9.7**
By gender			
Female	11,2	12.0	13.3
Male	6,4	7.1	8.3
By age group			
Under 30 years	20,8	20.2	23.1
30–50 years	5,5	7.1	8.2
Over 50 years	3,8	3.2	3.6
By region			
EMEA	4,1	4.4	4.5
thereof Germany	2,0	1.9	1.9
North America	19,2	21.3	23.7
South America	3,6	3.1	4.5
Asia-Pacific	6,3	7.8	11.9

External workers of the company

To be more flexible and attract the required skilled talent, ZF also employs temporary workers. We make sure that their working conditions are appropriate and fair. For example, external employees are included in all regular employee communication activities, they are subject to the same rules for occupational safety and health and have the same access to plant facilities such as cafeterias. Cooperation with recruitment agencies is regulated Group-wide by standardized supplier agreements, which include strict requirements in line with our Code of Conduct and our business ethics. If recruitment fees apply, they are paid by the company and not the candidate.

Key diversity figures

Demographic change takes many different forms in different regions of the world. While western industrialized countries are primarily confronted with the challenges of an aging population, developing and newly industrialized countries have far younger populations. ZF is represented at 304 locations in 40 countries. The age structure of the workforce is thus very heterogeneous and strongly influenced by the respective locations. The percentage of older employees is much higher in Europe, where the average age is 43.2 years, whereas the workforce in other regions tends to be younger on average. In India, for example, the average age is 34.4 years.

Appropriate remuneration

All employees receive appropriate remuneration that complies with local regulations (including minimum wages, if applicable) and local market wages. ZF acquires market data for this purpose and uses it as a benchmark for determining internal pay grades.

Diversity metrics

	Women			Men		
	2024	2023	2022	2024	2023	2022
Top Management						
Under 30 years	5	5	7	9	13	16
30–50 years	713	700	673	3,018	3,104	3,172
Over 50 years	340	309	309	2,873	2,902	2,897
Top Management (in %)						
Under 30 years	0.5	0.5	0.7	0.2	0.2	0.3
30–50 years	67.4	69.0	68.1	51.1	51.6	52.1
Over 50 years	32.1	30.5	31.2	48.7	48.2	47.6
Employees						
Under 30 years	9,622	10,045	9,651	20,912	24,197	23,690
30–50 years	24,905	25,380	24,530	63,192	66,017	64,157
Over 50 years	9,527	9,380	9,062	26,515	26,682	26,380
Employees (in %)						
Under 30 years	21.9	22.4	22.3	18.9	20.7	20.7
30–50 years	56.5	56.7	56.7	57.1	56.5	56.2
Over 50 years	21.6	20.9	21.0	24.0	22.8	23.1

Social security coverage

	Sickness		Unemployment		Employment injury and acquired injury		Parental leave		Retirement	
Country	Statutory	ZF	Statutory	ZF	Statutory	ZF	Statutory	ZF	Statutory	ZF
Germany	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Mexico	Yes	Yes	Yes	No	Yes	No	No	No	Yes	No
China	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No
Poland	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
India	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	No
USA	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Brazil	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Romania	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Slovakia	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Czech Republic	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes
Spain	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	No
Türkiye	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	No
Protugal	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes
United Kingdom	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes
Hungary	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Serbia	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No
Italy	Yes	No	Yes	No	Yes	No	No	No	Yes	No
Belgium	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	No
Austria	Yes	No	Yes	No	Yes	No	No	No	Yes	No
France	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	No
South Korea	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes

Social security coverage

All employees are protected against loss of income due to illness, unemployment, accidents at work, occupational diseases and retirement. In the case of loss of income due to parental leave, there are country-specific exceptions, which can be found in the table.

People with disabilities

Since 2006, ZF Friedrichshafen AG has been compliant with the statutory requirements for employees with disabilities and has met the required rate for Germany. Accordingly, ZF also implements the necessary measures to integrate employees with disabilities. These employees are supported by a global EHS team. In 2024, the proportion of employees with disabilities amounted to 5.9% (2023: 5.4%) in Germany. We thus exceeded the minimum 5% stipulated by legislation.

Key figures for further training and competence development

Around 26% of our total workforce participate in the regular Performance Potential Succession process. This is 44,000 out of 161,631 employees. 8,400 of our employees have a development plan. A total of 1,490,322 training hours were attended in the year under review. The average number of training hours per person was around 14 hours in the period under review.

Health and safety [1)]

	2024	2023	2022
Employees ISO 45001 certified [in %] [2)]	**67**	**-**	**-**
Fatalities	**0**	**1**	**1**
own workforce	0	1	1
other workers	0	0	0
Work-related accidents			
Number of recordable work-related accidents [3)]	693	862	921
Rate of recordable work-related accidents (injuries per million hours worked) (LTAR) [in %]	2.0	2.4	2.8
EMEA	2.1	2.7	3.1
thereof Germany	5.8	6.3	7.1
thereof Europe (excluding Germany)	2.1	2.7	3.1
North America	0.6	0.9	1.0
South America	1.1	1.7	1.8
Asia-Pacific	0.2	0.3	0.3
Hours worked	**340,789,536**	**353,325,642**	**331,496,171**
Number of days lost to work-related injuries and fatalities from work-related accidents	**17,201**	**20,512**	**22,124**

1) Figures include temporary workers, interns and student trainees.
2) Data was first collected in 2024.
3) With related lost working days >1 day.

Occupational safety and health

The most important figure for occupational safety at ZF is the Lost Time Accident Rate (LTAR). This indicator puts the number of accidents with at least one day lost in relation to the hours worked and converts it to one million working hours. We record temporary workers like our own employees, documenting accidents and working hours as a whole. Accidents of external companies or contractors are recorded at the locations, but are not included in the company's key figures.

In the year under review, ZF's LTAR for work-related accidents resulting in lost working days amounted to 2.0. Following an improvement of 14% in the previous year, the accident rate was again reduced significantly by 15% in 2024, thus exceeding the self-imposed target.

In 2024, the total number of accidents with working days lost was reduced by 3,311 injuries (16%).

In 2024, 148 recognized occupational diseases were reported at ZF worldwide. Most cases (61%) were diseases of the musculoskeletal system. Since these develop over a longer period of time, it is important to design the workplaces ergonomically to prevent future diseases.

Key figures on work-life balance

Use of family-related leave [1) 2)]

in % of employees	2024	2023	2022
ZF Group	**2,38%**	**-**	**-**
Female	3,37%	-	-
Male	1,97%	-	-
Diverse / unknown	0,00%	-	-

1) Family reasons: maternity leave, paternity leave, parental leave and leave for caregivers granted under national law or collective agreements.
2) Data was first collected in 2024.

Incidents, complaints and serious impacts related to human rights

During the reporting period, 63 cases of discrimination, including harassment, were reported. No cases of serious human rights violations were reported.

Workers in the Value Chain

Respect for human rights and employee rights at ZF and at our business partners is an indispensable foundation for our actions. We put people at the center and take responsibility as a company for the well-being of our employees as well as for the people who work with and for us along the value chain. “Acting for All People” is a central element of our sustainability strategy. In this way, we express that we want to gear all measures, concepts and strategies not only to the long-term economic success of the company, but also to the interests of the people affected.

ZF stands for fair working conditions, equal rights and performance-based payment along the value chain. We support the abolition of modern slavery, forced labor and child labor. Through internal and external communication, but also by participating in stakeholder dialogues, we contribute to the further promotion of human rights in society.

ZF recognizes the need to include all employees in the value chain who may be significantly affected by our activities in our Human Rights Due Diligence (HRDD) process. We have conducted a comprehensive assessment to identify these employees and to learn about their views, whether through our notification systems or through legitimate representatives in the form of NGOs.

TARGETS

As part of our procurement practices, we have established procedures to ensure transparent and sustainable purchasing decisions. We expect the same from our partners in the value chain.

MANAGEMENT APPROACH

Concepts related to workers in the value chain

Respect for human rights is an integral part of ZF’s organizational culture and the common understanding of values of all people who work for the company. Employees, management and business partners worldwide are required to comply with the associated Policy Statement and to ensure that their professional activities are in line with the principles set out there as well as with the principles in the ZF Code of Conduct and the Business Partner Code of Conduct.

Human rights in the supply chain

To determine the impact of its operating activities on human rights, ZF pursues a comprehensive Human Rights Due Diligence (HRDD) approach. It consists of five core elements, as shown in the graphic, and is intended to ensure that ZF recognizes and avoids potential negative impacts on human rights at an early stage through proactive risk management.

G. 08 Elements of the Human Rights Due Diligence (HRDD) approach

G. 09 ZF approach in line with the OECD Due Diligence Guidance for Minerals

Establish strong corporate management systems

- Responsibilities in Corporate Functions and central team
- Company-wide conflict minerals sourcing policy
- Official information letters to ZF suppliers
- Cooperation with a service provider to manage all supply chain data regarding conflict minerals
- Implementation of a program that actively engages smelters to encourage participation in conflict-free certification

Identify and assess risks in the supply chain

- Definition and calculation of the supplier scope. Focus on production material suppliers
- Identification of contact information and contact persons of all relevant suppliers
- Inquiry, information gathering and processing through a tool-based solution
- Review and evaluation of supplier feedback

Design and implement a strategy to respond to identified risks

- In-depth assessment of suppliers with non-conflict-free smelters, included in the ZF Conflict Minerals Report
- Inquiry as to whether any volume delivered to ZF is affected by critical smelters
- Regular reminder and campaigns to receive supplier feedback
- Communication and distribution of status reports and supplier dashboards to see progress of the conflict minerals process

Third-party audit of smelters/refiners' due diligence practices

- Preparation for an independent audit → Voluntary auditing

Report annually on supply chain due diligence

- Annual creation of the ZF Conflict Minerals Report
- Distribution and communication of the ZF Conflict Minerals Report

ZF has defined several policies, directives and sustainability requirements for suppliers including human rights. These policies and directives are integrated into various frameworks and instruments, as described below, and define measures that are to be taken in the event of expected or actual negative impacts on human rights.

ZF Business Partner Code of Conduct
Our Code of Conduct requires business partners to comply with applicable national and international laws and regulations, conventions and guidelines, including those relating to labor law and human rights.

Self-assessment questionnaire
A standardized questionnaire from a leading provider of risk management solutions helps us identify and assess risks related to human rights, labor practices and environmental impacts within the supply chain.

Sustainability Score (SUS Score) and benchmarking
With the SUS Score, we measure our suppliers' sustainability performance against various criteria, including labor practices, environmental impacts and ethical behavior, providing our business partners with a benchmark to understand their performance compared to industry standards and competitors.

Sustainable procurement terms
Sustainability criteria integrated into the procurement process are intended to ensure that suppliers meet ZF's standards for ethical and sustainable practices.

Further information on the Business Partner Code of Conduct, SUS Score and supplier management can be found in the ↘ Corporate Management section.

Policy Statement on Respect for Human Rights
Our commitment to respect human rights worldwide, including labor rights, is set out in our Policy Statement.

Details of our Policy Statement on Respect for Human Rights are explained in the ↘ Our People section.

Procedure for the inclusion of workers in the value chain

We have set up a cross-functional Human Rights working group to continuously monitor what has been achieved and to adapt objectives. It works on the further development and implementation of the HRDD approach. The group also has an advisory role and acts as a multiplier within the Group.

An important part of our HRDD approach is the involvement of stakeholders and people potentially affected by human rights violations in the value chain. One of the instruments we use in this context are on-site audits carried out by independent third parties. The standardized audits are intended to create a high level of transparency and comparability among manufacturers and suppliers with regard to sustainable working conditions.

We also work with employees in the value chain or their legitimate representatives (such as NGOs) to ensure greater transparency, accountability and continuous improvements in social working conditions on the ground. Our approach includes a variety of mechanisms and initiatives aimed at effectively addressing and resolving risks and challenges.

In the pre-operational phase for the approval of new suppliers and the awarding of new contracts, we evaluate to what extent the providers comply with our standards, e.g., with respect to working conditions. If the evaluation is positive, the operational phase can begin in which we further develop the supplier relationship. For this purpose, we conduct on-site audits and employee surveys, train ZF employees and suppliers specifically on human rights, provide complaint mechanisms and participate in industry initiatives. The frequency of exchange can range from individual interactions to regular formats.

Procedures for promoting human rights and sustainability in the value chain and channels for reporting complaints and infringements

As part of our HRDD approach, we train our employees and suppliers and provide remedial action if negative impacts on workers in the value chain become apparent. These measures are based on our Business Partner Code of Conduct. In the event of violations of the human rights and environmental standards defined therein, ZF may draw legal consequences and terminate business relationships. This also applies if business partners do not cooperate appropriately or fail to take necessary or agreed measures. In these cases, we suspend business relationships or exclude the companies concerned from future procurement.

Further information on our Business Partner Code of Conduct can be found in the ↘ Corporate Management section.

ZF strives to ensure that recognized health and occupational safety standards are complied with along the entire value chain. This applies above all to contractors providing services at the locations. Among other things, ZF requires proof that they are able to perform safety-critical activities without endangering people present. We also ensure that the contractors work closely with trained ZF coordinators during execution, e.g., when discussing risk assessments and control measures. Experience has shown that this can significantly improve the safety of their employees. In addition, a final evaluation of the external companies is intended to ensure that only those companies that perform well in occupational health and safety receive follow-up orders.

ZF Trustline and other notification systems

Our Trustline is available to all employees, business partners and other parties involved if they wish to report suspected misconduct with regard to rules, regulations or laws. We explicitly ask for reports of irregularities in connection with child or youth labor, forced labor, debt bondage and slavery, employee rights, employee participation, complaint mechanisms, working hours and pay, fire protection and emergency evacuation, health and safety at work, chemicals and hazardous substances or the environment (deforestation, pollution, habitat destruction, waste management, etc.).

Since 2020, ZF has been participating in an industry dialogue led by the Federal Ministry of Labor and Social Affairs (BMAS). This initiative seeks to improve human rights conditions along the global supply and value chains of the automotive industry. Together with other leading companies, NGOs, trade unions and the German Institute for Human Rights, we have developed a cross-company complaint mechanism in Mexico, the Mecanismo de Reclamación de Derechos Humanos (MRDH), to address and mitigate human rights risks, especially in the automotive supply chain. This mechanism is intended to pool resources, serve as an early warning system and improve access to relief for those affected.

ZF is also involved in a globally unique pilot project for the development of a Turkish complaint mechanism or notification system. Other automotive suppliers, Turkish and German trade unions as well as the IndustriALL Global Union, industry associations, government representatives and civil society organizations participate in this.

As part of our Compliance Management System (CMS), we continuously monitor the effectiveness of our notification systems. In addition, we have regulated the protection of whistleblowers, in particular against retaliation, and made our employees aware of this topic. Further information on our ZF Trustline is presented in the ↘ Corporate Management chapter.

Pilot project: Copper supply chain guide

In January 2024, a new guideline for the copper supply chain was published. It is the result of joint efforts in the sector dialogues initiated by the Federal Ministry of Labour and Social Affairs. The aim of the project was to use the example of the copper supply chain to show companies how they can appropriately integrate voluntary sustainability standards into their own due diligence processes and identify complementary measures for their raw material supply chains.

Monitoring and periodic review

In exercising due diligence for employees in our value chain, we rely on strong partnerships and mutual support. To ensure that participation processes are effective and lead to meaningful improvements, we evaluate the effectiveness of our measures for employees in the value chain with the help of various methods, including audits and reporting:

- Employee surveys according to audit standards: The audits we carry out or commission serve as instruments for us to gain direct insights into the working conditions in the value chain and to evaluate the effectiveness of our stakeholder engagement activities. They are implemented according to internationally recognized standards such as the RSCI standard. The audits carried out by ZF also include structured employee surveys.
- Internal and external reporting: The ZF Head of Sustainability Supply Chain ensures that sustainability is systematically incorporated into the strategy, processes and decisions of Materials Management. This role includes the regular provision of updates and reports to the Head of Sustainability Materials Management and to the ZF Human Rights Officer. Externally, ZF reports to the Federal Office for Economic Affairs and Export Control (BAFA) as part of the Supply Chain Due Diligence Act (LkSG) reporting, and reports on human rights in its value chain as part of sustainability reporting.

HRDD findings 2024

During the reporting period, we identified an incident of serious human rights violation in our indirect supply chain. Immediate remedial actions were taken regarding the violation, and further preventive measures were initiated to minimize future risks.

Measures for implementing human rights due diligence, more sustainable procurement and equal opportunities in the supply chain

In the year under review, we were able to implement numerous measures to strengthen the human rights of employees in the value chain.

Introduction of the ZF Sustainability Score as a binding criterion

With the SUS Score introduced in 2023, ZF has a binding set of instruments for evaluating all suppliers with regard to their sustainability performance. In the year under review, 2024, the determined SUS Scores formed the basis for further measures, including the newly introduced “Responsible Spend” KPIs. Furthermore, we started to gradually develop a new training platform for ZF suppliers, offering courses on tools, processes and requirements with respect to sustainability in the supply chain. In addition, we are developing the HuR due diligence training for suppliers who do not comply with our social standards. We invite them to various training sessions that address human rights in the supply chain and responsible procurement. The training program for suppliers is scheduled to start in February 2025.

Our measures aim to prevent or minimize potential and real negative impacts on human rights. When defining priorities and action plans, we are guided by the criterion of appropriateness: In order to prevent human rights violations in our sphere of influence along our value chain, we use formalized controls within the framework of our Internal Control System (ICS). Where our influence is rather limited, we enter into cooperative relationships with other parties. These include industry and multi-stakeholder initiatives.

The implementation of due diligence measures in purchasing helps us to adequately identify and effectively monitor, minimize or prevent risks and violations. Further information on this topic, including our Business Partner Integrity Management System, can be found in the ↘ Corporate Management chapter.

Diversity and the promotion of women and minorities

For ZF, diversity also means including providers with special characteristics in its supplier pool.

One example is the ZF North America Supplier Diversity Program, in which women-owned business enterprises (WBE) are registered. This certification is awarded by the Women Owned initiative. The ZF North America team is involved in various activities there. In addition, WBE companies are specifically recruited for the ZF supply chain.

ZF North America is also looking for various suppliers that are certified according to the standards of the National Minority Supplier Development Council (NMSDC). The NMSDC advocates for profit-oriented companies that, regardless of their size, are owned, operated and managed by people from minority groups. Minority groups include United States citizens of African American or Hispanic American origin as well as Native Americans, Asian-Pacific Americans and Asian-Indian Americans. The NMSDC’s support is aimed at companies that are physically located in the United States or its trust territories.

Affected Communities

As a global technology and manufacturing company, ZF depends on the procurement and processing of raw materials and products. Although we strive to carry out these process steps as carefully as possible, violations of economic, social and cultural rights as well as the civil and political rights of communities and indigenous peoples may still occur. We are currently looking into our impacts, risks and opportunities along the entire value chain. Within this context, we would also like to systematically review the topic of affected communities to identify the need for action and derive measures.

Consumers and End-users

As an international company, we place great importance on the satisfaction and safety of our customers, who are also consumers in the sense of ESRS. We continuously work to prevent potential harm to customers and therefore place product quality and safety at the center of our processes. Despite increasing complexity, this enables us to meet the highest standards in terms of reliability and sustainability as well as all regulatory requirements. In this context, data protection and digital responsibility also play a decisive role in ensuring the security of our customers in an increasingly networked world.

ZF aims to ensure product quality and safety by using targeted prevention strategies and measures that should also help minimize penalties and reputational risks in the event of any incidents. We want to strengthen both the trust of our customers and the long-term competitiveness of our company.

TARGETS

ZF strives to fulfill the needs and expectations of its customers while preventing any harm to them. Based on our “DNA of Quality” strategy, we have created framework plans with all divisions. These plans include individual excellence targets and related initiatives as well as a “DNA of Quality” assessment that determines the progress of implementation.

MANAGEMENT APPROACH

Concepts related to consumers and end-users

ZF uses the following concepts, policies, directives and approaches to ensure the quality, safety and reliability of its products and services in the interest of its customers.

ZF quality management system

To ensure maximum product quality, we use a certified quality management system based on the IATF 16949 standard for quality management in the automotive industry. Accordingly, we carry out consistent quality controls and regularly optimize processes. These processes are the responsibility of the Product Safety and Regulatory Office which analyzes, evaluates and tracks all relevant quality incidents and associated risks. The office reports directly to the member of the Board of Management responsible for Quality.

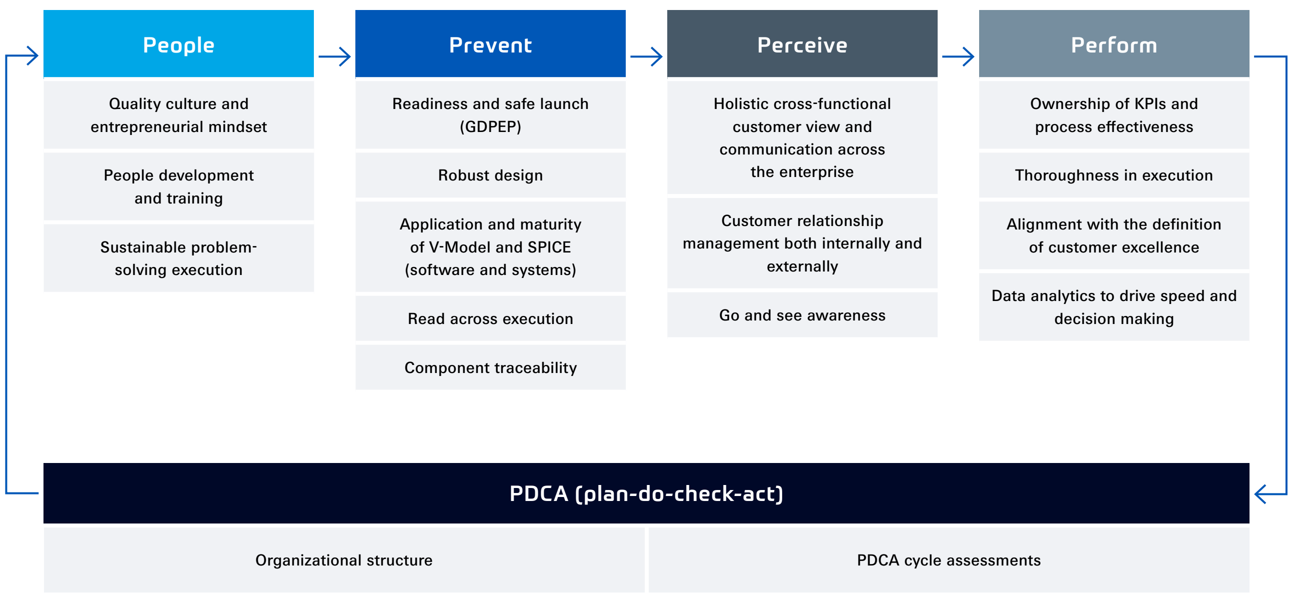
“DNA of Quality” strategy

In addition, we have implemented various strategies to ensure customer satisfaction and protect us from reputational risks. This includes the “DNA of Quality” strategy, which is derived from the Group strategy and forms the framework for the ZF quality management system. The core of the strategy consists of five principles which support a zero-defect philosophy: people, prevent, perceive, perform and the PDCA approach (plan, do, check, act). The implementation of the quality excellence strategy is supported by a training portfolio jointly created by the Quality Function, the HR Department and the ZF internal quality academy.

Product Compliance Management System (PCMS)

ZF’s top priority along the entire value chain is that its products and services comply with applicable regulatory requirements. ZF uses a Product Compliance Management System (PCMS) that supports our technical teams with regard to product-related regulatory topics. The PCMS defines structured management of the specific risks and controls in the area of product compliance.

G. 10 **ZF DNA of Quality – Guiding principles**



Development of reliable vehicle safety systems according to current standards and norms

ZF develops active and passive safety systems that can prevent accidents or mitigate their consequences. These systems monitor the vehicle, issue warnings and, if necessary, intervene in a corrective or protective manner. ZF systems are developed according to current safety standards – in particular the ISO 26262 standard for functional safety in road vehicles. This is also stipulated in the internal directive DCF 23-0070. ZF carries out various hazard, error and risk analyses with the aim of being able to present a reliable safety case so that a vehicle with the tested products installed will receive the required road release. This Group Directive is regularly adapted to the latest developments. ZF has established a functional safety expert team at Group level that organizes the further development of processes and a company-wide exchange of information. Since January 2023, for example, the directive has taken into account the new SOTIF standard ISO 21448 (Safety of the Intended Functionality). For ZF, these requirements are particularly relevant to highly complex sensors and autonomous driving.

Employees are trained for the development of products with functional safety at the internal training academy. The academy provides in-depth knowledge of methods and their application for typical products of the Group. In this way, it contributes to strengthening the established safety culture and keeping the responsible developers constantly aware of the topic.

Digital responsibility and data protection

Our company attaches great importance to digital responsibility and data protection. We have implemented binding policies and directives that ensure the availability, confidentiality and integrity of our products and protect our customers' data. The aim of all these measures is to protect the company and our products from cyber attacks and strengthen the resilience of our entire value chain.

With our data protection management system (DPMS), we want to make sure that data protection obligations are met. For example, data protection standards are incorporated in our products and services, we conclude contracts stipulating strict security requirements with third-party providers and carry out regular corporate audits for continuous quality improvement. Our Data Privacy Policy defines the principles for data protection in our company. It also describes the roles and responsibilities along the entire organizational structure, including the regional and local levels.

In addition to our DPMS, the information security management system (ISMS) is a central component of our digital responsibility. Sensitive corporate information can be systematically managed via this framework. It includes policies, directives and processes aimed at minimizing risks, such as data loss, data breaches and IT security risks, as well as meeting legal and customer requirements.

Our ISMS complies with internationally recognized standards. It is regularly reviewed in external audits to ensure its effectiveness and compliance with the latest security requirements. This proactive approach enables us to identify potential vulnerabilities at an early stage and to take preventive action. As we have integrated ISMS into our business processes, we have made sure that our information is secure and our customers and business partners can trust in our digital practices.

ZF has also established a Center of Competence for Cybersecurity, bundling the development tasks for cybersecurity internally. It offers development and testing services to both the divisions and our customers, assumes operational tasks in a large number of projects and participates in internationally funded research projects.

Procedures and measures to promote product quality and security as well as channels for reporting complaints and infringements

Due to the increasing digitalization of the automotive industry, our targets are focused on measures to ensure data protection and information security with regard to our customer's security.

Safety of vehicle systems

Our ZF Security Policy prioritizes cybersecurity in product development, which includes technological measures to prevent cyber attacks or make the perpetration of such attacks significantly more difficult. For this purpose, ZF conducts, among other activities, threat, risk and vulnerability analyses. Depending on the result, appropriate measures are implemented. These include for example:

- Control unit software signatures check to ensure that they originate from authorized sources,
- Authentication of diagnosis access to the control units, e.g., in workshops, by product development employees or for the analysis of return parts,
- Access-proof storage of key and certificate material within the products,
- Authentication of vehicle-internal data communication (ZF also uses microprocessors featuring co-processors with a specific focus on cryptography).

The effectiveness of these measures is confirmed by comprehensive security testing of our products.

Through its membership in the Automotive Information Sharing and Analysis Center (Auto-ISAC), ZF regularly receives new information about hacker attacks on products and technologies that are relevant to the company. In the event that third parties identify possible weaknesses in our products, they can notify the Product Security Incident Response Team via e-mail.

In addition to the product evolution process, ZF has established continuous processes for event monitoring and incident response. The aim is to be able to respond quickly and legally to system attacks. In 2022, external audits rated ZF as well-positioned in product cybersecurity and we were awarded the “Vehicle Cybersecurity” label of the European Network Exchange Association in 2023. This label is valid until mid-2025 and confirms to ZF a certified management system according to ISO/SAE 21434, UN R-155 and ISO PAS 5112.

Data protection and information security procedures

We organize annual security awareness weeks and have an ethics policy for trustworthy AI to sensitize our employees to the topics of data protection and information security. Measures in this area include our incident and crisis management, monitoring of the external threat landscape, on-site inspections at ZF locations and regular tests and penetration tests of our systems carried out by external testers (red teams). Crisis management exercises and effective partner management complement these measures.

In the event of incidents and emergency situations, our ISO 27001-certified management system for information security (ISMS) takes effect. It includes over 170 Trusted Information Security Assessment Exchange certifications and is regularly independently audited.

Reporting of data protection and compliance incidents

Data protection incidents can be reported to our Chief Data Privacy Officer. Compliance violations can also be reported at any time via our ZF Trustline. Information on the ZF Trustline is explained in the ↘ **Corporate Management** chapter.

Corporate Management

The ZF Group has earned the recognition and trust of its customers through its responsible corporate governance and high-quality products and services.

TARGETS

Our goal is to maintain and further increase the company's commitment and the high esteem it has earned – in line with the principle of "Acting for lasting values" of our sustainability strategy.

MANAGEMENT APPROACH

Corporate culture and corporate governance

We regard compliance as the foundation of successful corporate governance and therefore as a core value of our corporate culture. It supports reliable and respectful engagement with all stakeholders and thus forms the basis for lasting cooperation in an atmosphere of trust. As a globally active company, ZF constantly works to ensure compliance with relevant laws, regulations and guidelines. This applies especially to the current substantial rise in regulations in the fields of climate protection and human rights. We promote honest, law-abiding and responsible behavior of employees throughout the Group.

Compliance Organization and Compliance Management System (CMS)

With our Compliance Organization and the associated policies, we anchor and implement our corporate values on a daily basis. The ZF CMS is based on three pillars: prevention, detection and response. The main objective of the CMS is to ensure compliance with internal and external regulations. It focuses on preventing and investigating potential violations by employees and business partners in the following areas:

- Antitrust law,
- Anti-money laundering,
- Corruption/bribery, including the handling of gifts and entertainment,
- Conflicts of interest,
- Data protection,
- Foreign trade,
- Human rights.

ZF has a comprehensive and well-documented compliance risk assessment process. The assessment covers several risk areas, including potentially anti-competitive practices, and takes place at regular intervals. The process includes a specific analysis of the probability of occurrence of the risk and the impact of potential risk realization for each of the risk areas covered. Based on the results of this evaluation, appropriate corrective measures and controls are introduced. The Board of Management bears overall responsibility for the risk management system. At least every three months, it informs the Audit Committee and the Supervisory Board comprehensively about the opportunities and risks of the ZF Group and the respective control measures initiated and planned. The Group risk report is part of the integrated "Governance, Risk & Compliance (GRC)" report. The report also covers the progress made in refining the ZF CMS, details of significant investigations conducted, known violations of law, imposed sanctions and corrective and/or preventive measures that have been put into place. All significant ongoing investigations are also reported to these two bodies. Moreover, each substantiated investigation is reported to the member of the Board of Management in charge.

ZF Compliance Organization

Prevent	Detect and respond
Risk analysis	Reporting violations
Regulations	Investigation
Communication	Sanctioning misconduct
Training	Actions monitoring
Compliance Helpdesk	Continuous improvement
Business partner due diligence	

The effectiveness of the CMS, including the adequacy of internal policies, directives and processes, is regularly reviewed; the performance of the CMS in terms of operational efficiency and effectiveness in daily operations is monitored continuously. Depending on the risk-oriented audit plan such audits are performed regularly, both by Corporate Audit and by external service providers. The goal of the ZF Group for consolidated joint ventures is the implementation of ZF's own or a comparable CMS. To further develop its Compliance Management System, ZF also includes results from ESG ratings.

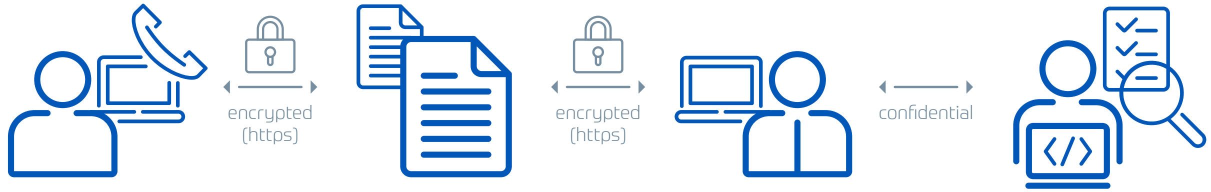
Compliance tools
Various tools, procedures, policies and training measures form the basis for systematically identifying, clarifying and documenting compliance issues.

Compliance Helpdesk
ZF employees can contact the Compliance Helpdesk whenever they are faced with a compliance-related issue in their day-to-day business activities.

ZF Trustline and whistleblower protection
The ZF CMS is complemented by the ZF Trustline, a digital notification system for reporting suspected misconduct. This notification system is currently available in 14 languages. Notifications can be made anonymously: 24/7, in writing via the company website or by phone via a hotline. Our notification system is aimed at internal and external stakeholders. For example, they can report potential violations of competition and antitrust law, cases of corruption and bribery, conflicts of interest, violations of product and regulatory requirements as well as requirements regarding anti-money laundering, data protection as well as export laws, environment, health and safety regulations, fraud and financial reporting concerns, employment-related matters, violations of human rights and other material violations of policies or law.

Our suppliers are made aware of our notification system in the Business Partner Code of Conduct, among other means. We do not tolerate retaliation

G. 11 ZF Whistleblower Process



Whistleblower/ Reporter
- Reports concerns, risks and irregularities
- Can stay anonymous if desired
- An inbox can be set up to communicate with the Examiner (anonymously, if desired)
- Receives acknowledgement of receipt within 7 days and feedback/update within 3 months

ZF Trustline System
- Web- and telephone-based whistleblower system
- Guarantees technical security (to protect the whistleblower)
- Protects reports from third-party access

Examiner
- Processes reports (plausibility check, categorization, scope definition and further handling)
- Communicates with the whistleblower and provides feedback (if an inbox was set up)

Investigation handling
- Investigator or expert department (e.g., HR) conducts the investigation (interviews, data analysis, etc.)
- Defines and follows up on measures as necessary
- Provides feedback to Examiner for communication with the whistleblower

against individuals who submit reports of potential violations in good faith and expect the same of our business partners.

The ZF Trustline is the responsibility of the Senior Vice President Corporate Compliance & Security, Foreign Trade as well as of the Chief Compliance Officer (CCO).

All incoming complaints are checked centrally by the ZF Compliance Department and its independent experts within the legal requirements and deadlines. The Compliance employees report to the Chief Compliance Officer, who is in contact with our Board of Management and Supervisory Board.

We take all notifications seriously and check them carefully. The Compliance Case Management Department collects the necessary information and can also forward cases internally to responsible departments or externally to authorities. During the investigation, relevant documents are reviewed and witnesses are interviewed. All parties involved must adhere to certain rules of conduct to ensure fairness and confidentiality and to protect the whistleblowers. At the end of the investigation, the results are summarized in a report and forwarded to relevant stakeholders. ZF protects whistleblowers from retaliation and informs them of the measures taken.

The process we have implemented also ensures that all investigations are carried out independently if the investigating individuals are biased or if there could be a conflict of interest.

ZF has developed external complaint mechanisms together with other companies and stakeholders. These are presented in the ↘ Workers in the Value Chain chapter.

ZF Code of Conduct

Our Code of Conduct defines mandatory principles for correct and ethical behavior, emphasizes the importance of integrity and responsibility in day-to-day business and serves as an orientation for all employees and executive managers at ZF. The Code of Conduct presents the base requirements for each individual to behave with integrity and provides an overview of ZF's understanding of values.

It covers topics such as fair competition, anti-discrimination, equal opportunity and the compliance with human rights, anti-corruption activities, economic and social responsibility, product compliance, occupational safety and health, data protection and transparency. The Code of Conduct is a core element of the CMS and is available in 27 languages. Furthermore, employees receive information on how to ask questions about the ZF Code of Conduct and how to report possible violations. The Code of Conduct has been adopted by our Board of Management and is made available to all employees via the intranet and to external stakeholders via our website.

In addition to the ZF Code of Conduct, there are regulations, work instructions, directives and policies that primarily cover the following areas:

- Ban on corruption,
- Business partner integrity (Business Partner Code of Conduct),
- Handling favors, gifts and hospitality (regulated in an internal work instruction for the granting and accepting of gratuities),
- Correct behavior in competition,
- Conflicts of interest,
- Contacting the Corporate Compliance Office and reporting incidents,
- Responsibilities, tasks and authority of the compliance organization,
- Money laundering.

Sponsorship and donations are also regulated in accordance with our directives and policies. Favors, gifts and hospitality for the following individuals and organizations are prohibited accordingly:

- Politicians and political parties, with the exception of donations made through political action committees (PACs) in the United States (these are in strict compliance with applicable law). Also, the distribution of such donations must reflect neutrality regarding parties and candidates. Payments to private accounts or in cash are prohibited.
- Individuals or organizations that are not charitable.
- Organizations that discriminate third parties on the basis of skin color, gender, age, nationality, origin, religion, sexual orientation, disability or other legally prohibited grounds.

Measures and means related to corporate culture

Awareness measures for compliance topics

We conduct regular training and awareness programs; targeted compliance training takes place Group-wide every three years, e.g., the “Anti-Bribery and Corruption (ABC)” training. In addition, compliance training is mandatory for employees and executive managers at the beginning of their employment at ZF. New ZF regulations, directives and policies are sent to all relevant target groups in a monthly newsletter.

Our learning management system, myHRSuite, enables all employees to independently track their training progress. For mandatory training, we have established an escalation process in cooperation with the HR Department. Employees can also use the intranet independently and on a voluntary basis to obtain information on many topics. Training in other formats, such as in-person training on key topics, is provided in a targeted manner based on region, job function and risk category.

Management of supplier relationships

Maintaining fair business relationships with our suppliers is crucial for us, as they strengthen the integrity of our partnerships and make a significant contribution to making our supply chains more sustainable.

ZF integrates sustainability criteria into the procurement process and ensures that suppliers meet its standards for ethical and sustainable practices. We evaluate bids and contracts not only based on cost and quality but also based on sustainability performance, including labor practices and human rights. We incorporate sustainability requirements into contracts with suppliers, making compliance a binding obligation.

ZF has set up a cross-functional procurement committee to manage these requirements: The Sourcing Decision Board (SDB) is the highest decision-making body for procurement at ZF. It makes sure that ecological, social, qualitative, technical, logistics and price requirements are equally met when selecting a supplier. Target conflicts are also resolved within the SDB.

Business Partner Code of Conduct

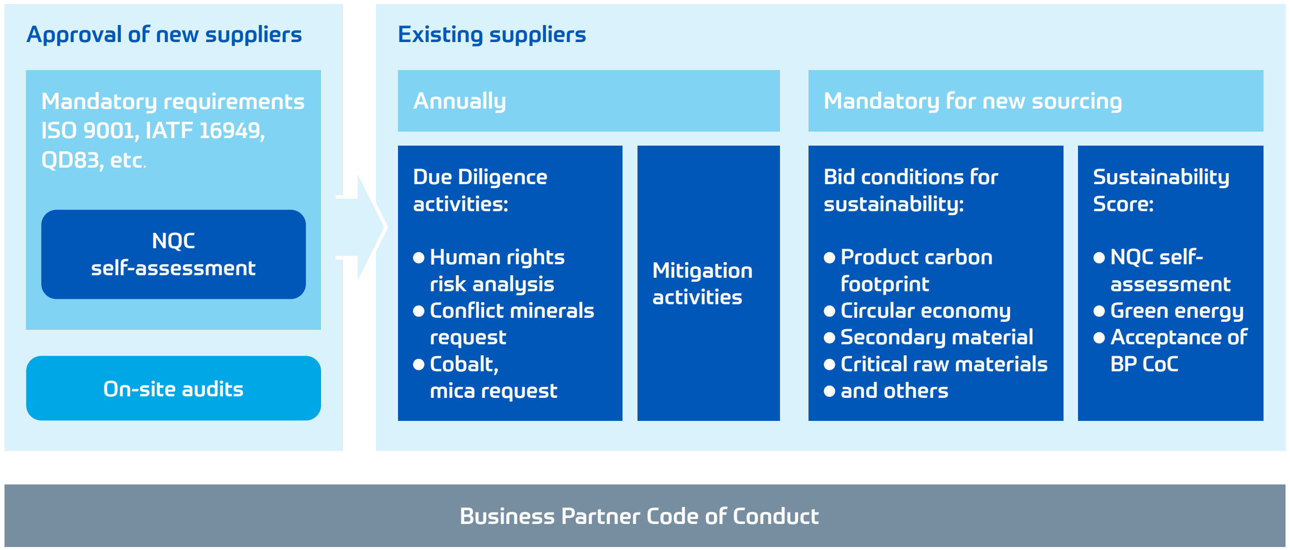
Our requirements for suppliers are defined in the Business Partner Code of Conduct (BP CoC). It contains the central requirements for a value-based cooperation with us. This includes topics such as human rights, labor standards, occupational safety and health, environmental protection, business ethics and compliance. The BP CoC conform to principles and conventions, such as the UN Global Compact, the OECD Guidelines for Multinational Enterprises, the Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights and Conventions of the International Labor Organization (ILO).

All suppliers must endorse the principles defined in the CoC. We expect our business partners to reject any form of slavery, forced labor and child labor, to respect the freedom of association and the right to form interest groups as well as to offer fair remuneration and working hours in accordance with applicable law. We also expect them to take effective action to reduce their direct and indirect CO_2 emissions and to work on continuous improvements. Both the consumption of raw materials (particularly when using energy and water resources) and the generation of waste are to be reduced to a minimum in every business activity. Recyclables must always be separated and in the best case reused or recycled. Hazardous substances, chemicals and substances must be labeled, and their safe handling, movement, storage and reuse must be ensured. Our suppliers must also ensure that minimum environmental standards are met in accordance with the ISO 14001 requirements.

Suppliers must comply with all applicable laws and ensure that these values and laws are also respected in their supply chains. In some areas, we go beyond national law and additionally require compliance with international guidelines and industry standards. The acceptance of the BP CoC is mandatory when awarding contracts and for the registration of new suppliers. We reserve the right to scrutinize business relations and take action if violations are identified. The CoC complies with the requirements of the Supply Chain Due Diligence Act (LkSG) and EU regulations, such as the EU Chemicals Regulation (REACH).

We have specific processes in place to ensure that business partners uphold the core values laid out in the CoC. In the event of violations of international human rights and environmental standards, we initiate appropriate remedial measures and reserve the right to terminate business relationships as a last resort. This also applies if business partners do not cooperate or fail to take necessary measures.

G. 12 Supplier approval and sourcing of production material



Implementation and monitoring

We verify the implementation of these specifications in procurement using the following means:

- Regular audits: We regularly audit our suppliers to ensure compliance with our policies, directives and standards.
- Training and capacity building: We provide training for our suppliers and support them in understanding and meeting our requirements.
- Complaint mechanisms: We establish mechanisms through which employees can report violations of labor rights and other problems without fear of retaliation.
- Stakeholder engagement: We work with stakeholders, including employees, municipalities and industry groups, to continuously improve practices and address emerging risks.
- Business Partner Integrity Management System: With our Business Partner Integrity Management System, we can identify and minimize legal and other compliance risks. This is based on a workflow that allows risk-based due diligence of ZF's business partners in an efficient, detailed and documented manner. In addition, the system enables continuous monitoring and has been designed to establish a clear definition of internal roles and responsibilities. Similarly, the extensive coverage of risk areas, such as anti-money laundering, anti-bribery/corruption, human rights, personnel security, antitrust or sanctions, is part of the Business Partner Integrity Management System.
- ZF Sustainability Score (SUS Score) for suppliers: Our Sustainability Score (SUS Score) requires compliance with social and environmental standards and measures sustainability performance based on three key metrics: the share of green electricity in 2025, the result of the Supplier Sustainability Questionnaire via NQC and the acceptance of the Business Partner Code of Conduct. Suppliers must achieve an SUS Score of over 65%. If the value is below 65%, the supplier must work on improvement measures in order to reach the minimum score. In addition, we have defined minimum requirements for each topic. With regard to social compliance, for example, we have defined minimum requirements for our supplier base and would like to minimize potential negative impacts and human rights violations by implementing preventive measures. We require at least the following preventive measures from our suppliers: A guideline for working conditions and human rights, a guideline on health and safety at work as well as a guideline or a code of conduct to define and pass on sustainability and human rights expectations to suppliers.
- NQC self-assessment questionnaire: The Non-Quality Cost Questionnaire (NQC) helps ZF identify and assess risks related to human rights, labor practices and environmental impacts within the supply chain. Suppliers are evaluated on the basis of their compliance with ZF standards, and areas of improvement are identified.

Prevention and detection of corruption and bribery

One focus of our CMS is on preventing and investigating potential violations in the areas of corruption and bribery, including the handling of gifts and entertainment. We take notifications of corruption and bribery seriously and address them within the scope of our CMS. Training on the prevention of corruption and bribery also takes place as part of our CMS training.

KEY FIGURES

To track the effectiveness and performance of our compliance measures, we document them continuously and publish key figures below.

Incidents related to corruption or bribery

76 compliance-relevant notifications were received in the reporting period. In 2024, we investigated 37 (2023: 31) compliance incidents, of which 19 (2023: 15) were substantiated. Based on these incidents, we derived and implemented measures, such as terminations or written warnings, and process improvements. ZF was not fined for any violations of corruption and bribery regulations during the reporting period.

Compliance-relevant notifications

	2024	2023	2022
Fraud	x	24	21
Bribery/Corruption	x	14	8
Conflicts of interest	x	24	7
Other	x	54	9
Total	**xx**	**116**	**45**

Political influence and lobbying

The transformation to a sustainable economy requires collective efforts and cooperation. As a globally operating company, we therefore place great importance on representing our interests in industry associations and communicating with political decision-makers. The Head of External Affairs, who maintains our national and international relations, is responsible for representing our interests. He works in close coordination with the Board of Management during this process.

The key topics in our political communication during the reporting period concerned various legislative proposals at national, European or international level. Our areas of interest are topics that affect companies and industry, particularly in the areas of climate protection, competition, consumer protection, but also energy, transport and trans-European transport networks. Our activities addressed the following regulations, for example:

- EU Green Deal,
- Revision of CO_2 fleet targets for passenger cars, light and heavy commercial vehicles,
- Type approval regulation (UN ECE & EU),
- RePower EU,
- Taxation of company cars in Germany,
- Tax credit for e-mobility in the USA,
- Fuel consumption and emission standards in the USA,
- EU taxonomy (delegated act on climate protection),
- Eurovignette;
- Environmental Protection Agency standards for greenhouse gas emissions (light, medium, and heavy-duty vehicles),
- California Air Resources Board (CARB),
- Advanced Clean Cars II (ACCII),
- Advanced Clean Trucks (ACT),
- Advanced Clean Fleets (ACF).

Transparency in our representation of interests

Transparency is one of our corporate values, which is why we disclose the nature and extent of our respective representation of interests in the Lobby Register of the German Bundestag and in the Transparency Register of the European Commission. ZF is listed in the EU Transparency Register under the identification number 194094423131-36 and in the Lobby Register of the German Bundestag under the register number R001500.

Consolidated Financial Statements

Contents

Consolidated Statement of Profit or Loss

ZF FRIEDRICHSHAFEN AG FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2024

in € million	Notes	2024	2023
Sales	1	41,377	46,627
Cost of sales	2/9	34,848	39,115
Gross profit on sales		**6,529**	**7,512**
Research and development costs	9	2,958	2,881
Selling expenses	9	1,805	1,741
General administrative expenses	9	1,715	1,586
Other operating income	3	916	945
Other operating expenses	4	927	830
Result from associates	5	167	74
Other net result from participations	5	2	12
EBIT		**209**	**1,505**
Financial income	6	968	1,201
Financial expenses	7	1,774	1,943
Net profit or loss before tax		**–597**	**763**
Income taxes	8	423	637
Net profit or loss after tax		**–1,020**	**126**
thereof shareholders of ZF Friedrichshafen AG		–1,153	–31
thereof non-controlling interests		133	157

Consolidated Statement of Comprehensive Income

ZF FRIEDRICHSHAFEN AG FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2024

in € million	Notes	2024	2023
Net profit or loss after tax		**–1,020**	**126**
Line items that will be reclassified in the consolidated statement of profit or loss			
Foreign currency translation differences			
Gains (2023: losses) arising during the year		390	–458
Reclassification adjustments for gains/losses included in profit or loss		7	0
Mark-to-market of cash flow hedges			
Losses (2023: gains) arising during the year		–59	141
Reclassification adjustments for gains/losses included in profit or loss		–78	–57
Income taxes		37	–4
		297	**–378**
Line items that will not be reclassified in the consolidated statement of profit or loss			
Losses on equity instruments		–30	–9
Actuarial gains (2023: losses) from pension obligations		424	–398
Income taxes		–14	–56
		380	**–463**
Other comprehensive income after tax	25	**677**	**–841**
Total comprehensive income		**–343**	**–715**
thereof shareholders of ZF Friedrichshafen AG		–496	–843
thereof non-controlling interests		153	128

Consolidated Statement of Financial Position

ZF FRIEDRICHSHAFEN AG AS OF DECEMBER 31, 2024

Assets

in € million	Notes	Dec. 31, 2024	Dec. 31, 2023
Current assets			
Cash and cash equivalents		3,372	3,637
Financial assets	10	1,419	213
Trade receivables	11	4,768	5,817
Contract assets	12	537	538
Other assets	13	886	788
Income tax receivables		96	42
Inventories	14	5,532	5,566
		16,610	**16,601**
Non-current assets			
Financial assets	10	707	579
Associates	15	436	122
Contract assets	12	458	462
Other assets	13	182	196
Intangible assets	16	10,884	11,536
Property, plant and equipment	17	9,216	8,868
Deferred taxes	8	817	806
		22,700	**22,569**
		39,310	**39,170**

Liabilities and equity

in € million	Notes	Dec. 31, 2024	Dec. 31, 2023
Current liabilities			
Financial liabilities	20	3,320	2,553
Trade payables		5,596	6,628
Contract liabilities	21	1,653	1,742
Other liabilities	22	1,757	1,803
Income tax provisions		519	601
Other provisions	23	1,091	878
		13,936	**14,205**
Non-current liabilities			
Financial liabilities	20	11,846	11,242
Trade payables		11	6
Contract liabilities	21	684	561
Other liabilities	22	212	182
Provisions for pensions	24	3,509	3,857
Other provisions	23	1,103	821
Deferred taxes	8	477	577
		17,842	**17,246**
Equity			
Subscribed capital	25	500	500
Capital reserve	25	386	386
Retained earnings	25	6,035	6,280
Equity attributable to shareholders of ZF Friedrichshafen AG		**6,921**	**7,166**
Non-controlling interests		611	553
	25	**7,532**	**7,719**
		39,310	**39,170**

Consolidated Statement of Cash Flows

ZF FRIEDRICHSHAFEN AG FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2024

in € million	Notes	2024	2023
Net profit or loss before tax		–597	763
Depreciation and amortization/impairments		2,544	2,354
Results from first-time consolidation and deconsolidation		–208	87
Net result from participations and net financial result		637	656
Results from the disposal of intangible assets and property, plant and equipment		–9	–6
Other non-cash changes		21	0
Income taxes paid		–770	–433
Changes in non-current provisions made through profit or loss		332	–23
Increase in inventories		–237	–66
Decrease in trade receivables		642	0
Increase in other assets		–196	–95
Decrease in trade payables		–548	–262
Increase in other liabilities		110	278
Cash flow from operating activities		**1,721**	**3,253**
Expenditures for investments in			
intangible assets		–64	–78
property, plant and equipment		–2,028	–2,061
associates and other participations		–17	–14
financial receivables		–1,241	–11
securities		–98	–106
Proceeds from the disposal of			
intangible assets		4	10
property, plant and equipment		62	68
associates and other participations		9	115
financial receivables		106	11
securities		120	89

in € million	Notes	2024	2023
Cash inflow from the sale of consolidated companies and business units	28	278	19
Cash outflow from the acquisition of consolidated companies		–7	0
Dividends received		9	2
Interest received		189	103
Cash flow from investing activities		**–2,678**	**–1,853**
Dividends paid to ZF Friedrichshafen AG shareholders		–41	–41
Dividends paid to non-controlling interests		–127	–117
Disposal of non-controlling interests		358	0
Repayments of borrowings	29	–2,329	–2,387
Proceeds from borrowings	29	3,549	2,932
Interest paid and transaction costs		–735	–594
Cash flow from financing activities		**675**	**–207**
Net change in cash position		**–282**	**1,193**
Cash position at the beginning of the fiscal year		3,637	2,530
Effects of changes in the basis of consolidation on cash		–9	0
Effects of exchange rate changes on cash position		26	–86
Cash position as of the closing date	27	**3,372**	**3,637**

Consolidated Statement of Changes in Equity

ZF FRIEDRICHSHAFEN AG FOR THE PERIOD DATING JANUARY 1 TO DECEMBER 31, 2024

			Retained earnings							
in € million	Subscribed capital	Capital reserve	Other retained earnings	Foreign currency translation differences	Equity instruments	Mark-to-market of cash flow hedges	Actuarial gains and losses	Equity attributable to shareholders of ZF Friedrichshafen AG	Non-controlling interests	Group equity
Jan. 1, 2023	**500**	**386**	**7,531[1]**	**–47**	**9**	**25**	**–351[1]**	**8,053**	**542**	**8,595**
Net profit or loss after tax			–31					–31	157	126
Other comprehensive income after tax				–416	–9	67	–454	–812	–29	–841
Total comprehensive income	**0**	**0**	**–31**	**–416**	**–9**	**67**	**–454**	**–843**	**128**	**–715**
Changes in the basis of consolidation				–3				–3		–3
Dividends paid			–41					–41	–117	–158
Dec. 31, 2023	**500**	**386**	**7,459**	**–466**	**0**	**92**	**–805**	**7,166**	**553**	**7,719**
Jan. 1, 2024	**500**	**386**	**7,459**	**–466**	**0**	**92**	**–805**	**7,166**	**553**	**7,719**
Net profit or loss after tax			–1,153					–1,153	133	–1,020
Other comprehensive income after tax				408	–33	–131	413	657	20	677
Total comprehensive income	**0**	**0**	**–1,153**	**408**	**–33**	**–131**	**413**	**–496**	**153**	**–343**
Changes in the basis of consolidation			–7					–7	–12	–19
Dividends paid			–41					–41	–127	–168
Sale of non-controlling interests			253					253	44	297
Other changes			46					46		46
Dec. 31, 2024	**500**	**386**	**6,557**	**–58**	**–33**	**–39**	**–392**	**6,921**	**611**	**7,532**

1) The figures have been adjusted compared to the Annual Report 2023. Actuarial results from deconsolidation in the past were reclassified to other retained earnings (€36 million).

Notes to the Consolidated Financial Statements

OF ZF FRIEDRICHSHAFEN AG FOR 2024

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 March 14, 2025, and forwarded them to the Supervisory Board.

The consolidated financial statements, which were prepared as of December 31, 2024, as well as the Group management report will be announced in the Business Register.

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, plan assets, securities and investments in participations that are recognized at fair value.

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 Sec. 315e para. 3 HGB (German Commercial Code).

The consolidated financial statements are in accordance with the IFRS Accounting Standards and Interpretations valid on the reporting date and issued by the International Accounting Standards Board (IASB), London, as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e para. 3 in conjunction with para. 1 HGB (German Commercial Code).

In fiscal year 2024, the following amended standards were applied for the first time:

- Amendments to IAS 7 and IFRS 7 "Supplier Finance Agreements"
- Amendments to IAS 1 "Classification of Liabilities as Current or Non-Current and Non-Current Liabilities with Covenants"
- Amendments to IFRS 16 "Lease Liability in a Sale and Leaseback"

The initial adoption of the amendments to IAS 7 and IFRS 7 resulted in new information regarding liabilities from supplier financing agreements and the associated cash flows.

The amendments to IAS 1 affect the classification of liabilities as current or non-current for which certain credit terms (covenants) have been agreed upon. Accordingly, only those covenants that a company must comply with on or before the reporting date are relevant for the classification of the liability. The changes also introduce additional disclosure requirements for non-current liabilities with covenants.

Standard/ Interpretation	Title	Applicable pursuant to IFRS as of	Endorsement by EU	Expected impact
IAS 21	Amendments to IAS 21 “Lack of Exchangeability”	Jan. 1, 2025	Yes	None
IFRS 9 and IFRS 7	Amendments to IFRS 9 and IFRS 7 "Classification and Measurement of Financial Assets"	Jan. 1, 2026	No	Under review
IFRS 9 and IFRS 7	Amendments to IFRS 9 and IFRS 7 "Contracts Referencing Nature-dependent Electricity"	Jan. 1, 2026	No	Under review
IFRS 18	Presentation and Disclosure in Financial Statements	Jan. 1, 2027	No	Under review
IFRS 19	Subsidiaries without Public Accountability: Disclosures	Jan. 1, 2027	No	None

Further standards and interpretations issued or revised by the IASB were not yet applied by ZF in fiscal year 2024 because either the application of these standards and interpretations was not yet mandatory or the European Union had not yet endorsed them. ZF will not adopt any of these standards or standard amendments earlier.

The amendments to IFRS 9 and IFRS 7 “Classification and Measurement of Financial Instruments” clarify the timing of the recognition and derecognition of certain financial assets and liabilities, with a new exception for financial liabilities settled through an electronic payment system. In addition, the application guidelines for assessing whether a financial asset exists are specified and further notes are introduced. It is currently being investigated which effects this will have on the consolidated financial statements.

The IASB has also published amendments to IFRS 9 and IFRS 7 “Contracts Referencing Nature-dependent Electricity.” The amendments affect, on the one hand, the clarification of the criteria for the own use exception for contracts providing for the physical supply of electricity. On the other hand, they make adjustments to the regulations for accounting for hedging transactions with the possibility of designating variable quantities of nature-dependent electricity as a hedged item. In addition, additional disclosure requirements are introduced. Possible effects thereof on the consolidated financial statements are still being investigated.

IFRS 18 “Presentation and Disclosure in Financial Statements” will replace IAS 1 “Presentation of Financial Statements” in the future. The new standard leads to changes in the presentation in the statement of profit or loss and defines further binding subtotals in the statement of profit or loss. In addition, company-specific key performance indicators are to be disclosed in the notes and limited amendments are made to IAS 7 “Statement of Cash Flows.” It is currently being investigated which effects the initial adoption of IFRS 18 will have on the consolidated financial statements.

The Group currently does not expect that the other changes in the new or amended standards in their current form will have a significant impact on the presentation of financial statements.

Basis of consolidation

In addition to ZF Friedrichshafen AG, 49 German and 293 international 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, 2024	First-time consolidations	Legal changes	Deconsolidations	Dec. 31, 2024
Subsidiaries	360	15	−2	−31	342
of which German	55	2	0	−8	49
of which international	305	13	−2	−23	293
Joint ventures	3	3	0	−1	5
Associates	17	0	0	−3	14

Company disposals

In July 2023, ZF concluded an agreement with the Hon Hai Technology Group on the sale of 50% of the shares in the ZF Chassis Systems and Modules product line and its continuation as part of a joint venture. The Chassis Systems and Modules product line of the Chassis Solutions Division supplies global premium and volume manufacturers and is represented at 25 locations worldwide. It has a workforce of approximately 3,800 employees; thereof, 100 employees are working in Germany. The sale of the shares in the Chassis Systems and Modules product line, headquartered in Osnabrück (Germany), was completed with effect from April 30, 2024. The disposal led to a deconsolidation income of €211 million that was recognized under other operating income. This also includes the sale of the assets and liabilities that were reported as assets and liabilities held for sale as of June 30, 2024, as well as a subsequent purchase price adjustment. The remaining 50% of the shares have been included in the consolidated financial statements according to the at-equity method with a carrying amount of €300 million. The revaluation of the at-equity participation resulted in an income of €172 million, which was recognized in the result from associates.

Consolidation principles

The consolidation of investments in subsidiaries is carried out according to the purchase method. When control is 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 operating 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, 2024, 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 which has not yet been consolidated are revalued at 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 fully 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 operating income or expenses, respectively. Remaining interests are recognized at fair value under associates or accounted for as other participations in accordance with IFRS 9.

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 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 operating 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 toward a foreign operation, the settlement of which is neither planned nor likely in the foreseeable future, the translation differences are recognized 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, 2024	Dec. 31, 2023	2024	2023
U.S. dollar	1.0389	1.1050	1.0829	1.0811
British pound	0.8292	0.8691	0.8469	0.8699
Chinese renminbi	7.5833	7.8509	7.7898	7.6571
Brazilian real	6.4253	5.3618	5.8231	5.4025
Mexican peso	21.5504	18.7231	19.8187	19.1953

For reasons of materiality, in fiscal year 2024, Türkiye is classified as a hyperinflationary economy for the first time within the meaning of IAS 29 “Financial Reporting in Hyperinflationary Economies.” Activities in Türkiye are recognized in the balance sheet adjusted for the effects of inflation and not on the basis of historical cost. For Türkiye, the consumer price index of the statistics institute TURKSTAT is used, which stood at 2,684.55 on December 31, 2024 (2023: 1,859.38). The initial application resulted in an effect of €45 million after tax, which was reported in retained earnings.

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 are recognized in accordance with IFRS 15 at the date when control over the product or the service is obtained by the customer. The assessment is made separately for each type of performance promise. The amount of sales is determined by the contractual agreement. To the extent that the purchase price refers to multiple sales transactions, the transaction price is allocated appropriately to the individual sales transactions.

Sales from selling products and tools as well as the reimbursement of development expenses are recognized at a point in time, i.e., once ownership or control is transferred to the customer. Income from service and license contracts are recognized either at a point in time or over a period of time, depending on the respective contractual structure. Sales are reported net of cash discounts, price reductions, customer bonuses and rebates.

Additional explanation regarding revenue recognition in accordance with IFRS 15 can be found in the notes on judgments and uncertainties in connection with estimates.

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 are recognized 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. If the criteria for hedge accounting are met, they are accounted for as fair value hedges, cash flow hedges or hedges of a net investment in a foreign business.

If hedge accounting is not applicable, the derivative financial instruments are measured at their fair values and changes in fair value are recognized through profit or loss in the net financial result.

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 fair value adjustment on 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 designated as well as not designated 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.

In the case of hedges of a net investment in a foreign operation, the changes in the value of the designated hedging instrument are recognized in the foreign currency translation differences item in other comprehensive income of the statement of comprehensive income, analogous to the hedged item. The cumulative currency effects of the hedging instrument are not reclassified into the consolidated statement of profit or loss until the net investment in a foreign operation is sold or liquidated.

The profit and loss derived from hedging in connection with hedging operating transactions is recognized under other operating income and expenses or as part of acquisition costs. 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

In general, the classification of current and non-current financial assets in accordance with IFRS 9 is based on the following three measurement categories:

- at amortized cost (AC)
- at fair value through other comprehensive income (FVtOCI) or
- at fair value through profit or loss (FVtPL)

The classification into the relevant measurement category is determined by the business model based on the management of the respective financial asset and by the contractual cash flow characteristics of the financial asset.

If the financial asset can be allocated to the “Hold” business model and if the cash flows collected are solely payments of principal and interest, the asset is measured at amortized cost (AC). The initial measurement is based on the fair value including transaction costs or, for trade receivables, on the transaction price, while subsequent measurement is based on amortized cost. This measurement category primarily includes trade receivables held to maturity as well as financial receivables and cash and cash equivalents.

If the financial asset can be allocated to the “Hold and Sell” business model and if the cash flows collected are solely payments of principal and interest, the asset is measured at fair value through other comprehensive income (FVtOCI). Fair value changes recognized in other comprehensive income are reclassified to the statement of profit or loss upon the disposal of the financial asset, except in the case of equity financial instruments. The initial measurement is based on fair value including transaction costs, while subsequent measurement is based on fair value. This measurement category may be used for trade receivables to the extent that these are held to maturity or sold prior to maturity.

To avoid mismatches in terms of recognition or measurement, a financial asset that falls within the scope of one of the two measurement categories mentioned above may, alternatively, be measured at fair value through profit or loss (FVtPL). This is currently not in use.

Financial assets that do not meet the above-mentioned criteria regarding business model and cash flow characteristics are recognized at fair value through profit or loss (FVtPL). Both initial measurement and subsequent measurement are based on fair value. Among other things, this measurement category includes securities, investments in participations, derivative financial instruments as well as a share of other receivables.

Alternatively, if certain prerequisites are met, assets within the scope of this measurement category may also be measured at fair value through other comprehensive income (FVtOCI). ZF uses this option for equity instruments not held for trading; for example, for instruments held in the portfolio for strategic reasons. Subsequently, all future changes in fair value have to be recognized in other comprehensive income; after the derecognition of the financial instrument, these changes remain within equity. Only dividend income is recorded through profit or loss.

Financial instruments measured at amortized cost mainly comprise current receivables. Impairments on these receivables are determined using the simplified model for the recognition of expected credit losses (loss allowance based on creditworthiness). This results in an earlier recognition of losses since not only incurred losses are taken into account, but also losses expected for the future. For this purpose, ZF applies a rating-based model to determine loss rates of receivables and contract assets. This involves the classification of customers into four risk categories. This risk classification is based on credit metrics provided by the external rating agency (Allianz Trade) and takes into account both past and forward-looking information. Changes in the customers' creditworthiness are recorded within the framework of a regular monitoring process. The basis for the calculation of the general credit-based loss allowances are the respective gross receivables, less credit-based specific loss allowances and the expected probability of default.

Cash and cash equivalents are normally not reviewed in more detail as to a potentially existing credit risk.

A significant increase in credit risk is assumed to exist when the risk category has deteriorated.

Risk category	Risk	Probability of default	Definition of category
Risk category 1	Low risk	0.10–0.175%	Customers have a small credit risk and a strong ability to meet their payment obligations.
Risk category 2	Medium risk	0.375–1.50%	Customers have a medium credit risk and a good ability to meet their payment obligations.
Risk category 3	High risk	3.00–8.25%	Customers have an increased credit risk and a sufficient ability to meet their payment obligations.
Risk category 4	Not credit-worthy/insolvent	14.00%	Customers have a high credit risk. It can be expected that the customers cannot meet their payment obligations in whole or in part.

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 once it is established that the trade receivables as well as financial receivables are uncollectible.

Contracts to buy or sell non-financial items that ZF entered into and continues to hold for the purpose of the receipt or delivery of a non-financial item in accordance with the expected purchasing, sale or usage requirements, are not part of the scope of IFRS 9. Instead, these contracts are accounted for as pending business in accordance with IAS 37.

Inventories

As a general rule, raw materials and supplies as well as merchandise are measured at their average cost taking into consideration the lower net realizable value. Work in progress and finished goods, including development expenses to be reimbursed by customers, 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.

Contract assets

Contract assets comprise contingent customer receivables. This includes development expenses, which are being reimbursed through the component price within the framework of volume production delivery. After the transition of the development results to the customer, these expenses are derecognized from inventories and recognized as contingent customer receivables in contract assets. Furthermore, this item contains contingent receivables arising from price agreements with customers.

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, and income and expenses related to such shares are 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.

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 asset can be reliably determined.

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

Development costs that are not reimbursed by the customer are capitalized at cost of conversion in as far as 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 one to eight 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 to 10
Customer relations	3 to 30

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 and allocated to the function costs. 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.

Right-of-use assets are capitalized and a corresponding lease liability is recognized at the inception of a lease in which ZF acts as the lessee. The lease liability is recognized at the present value of the future lease payments and discounted using the interest rate implicit in the lease. If this cannot be determined, ZF’s incremental borrowing rate for matching maturities and currencies is used. This rate is derived from observable credit spreads and swap rates. Lease liabilities are measured at the updated carrying amount using the effective interest method.

Amounts that are expected to be paid due to a residual value guarantee as well as extension, termination and purchase options – to the extent reasonably certain – are taken into account in the measurement of future payments.

In addition to the present value of the future lease payments, the cost of the right-of-use asset is determined by taking into account any payments made before the commencement date, lease incentives and initial direct costs, if applicable. Furthermore, the estimated costs for retirement obligations assumed are included in the measurement. The capitalized right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term or the expected useful life. By exercising the corresponding option, agreements with a term of up to one year and agreements regarding assets that can be used independently and are of low value are recognized directly in profit or loss, not affecting the statement of financial position. ZF does not apply IFRS 16 to transactions involving intangible assets (including software and licenses). These are accounted for in accordance with IAS 38.

The capitalized right-of-use assets are reported in the statement of financial position as a part of property, plant and equipment in the respective asset classes to which the asset underlying the lease is to be allocated. Lease liabilities are included in the line item “Financial liabilities”. The interest expense is part of the net financial result.

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. This does not include reimbursements for employer contributions to social security in the context of short-time work. These are offset against the personnel expenses.

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, and the group is available for immediate sale in its current state. 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 Accounting Standards. Subsequently, the disposal group is measured at the lower of its carrying amount or fair value less costs to sell. In the event of depreciation, expenses are recognized in other operating expenses.

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 are subject to an annual impairment test.

To perform the impairment test, the recoverable amount is determined. This corresponds to the asset’s or the smallest cash-generating unit’s fair value less any costs to sell. 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 fair value is determined based on the 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. Based on an upstream strategic planning with a seven-year planning horizon and downstream one-year budget planning, this extended projection period formed the basis for determining the fair value according to the discounted cash flow method. The extended planning horizon is better suited to reflect the long-term development of ZF's business and its strategic prospects against the backdrop of the transformational changes in the automotive industry – which require longer projection periods, in particular for research and development as well as investment planning – and the longer product life cycles, especially in the commercial vehicle sector. 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 and strategic 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 fair value of the cash-generating units is determined assuming a discount factor before tax of 11% (2023: 12%) and a sustainable growth rate of 1% (2023: 1%). For perpetuity going beyond the planning horizon, the cash flows are extrapolated taking into account the respective sustainable expected margin of the individual cash-generating units. In order to determine the recoverable amount, any costs to sell are deducted from the fair value.

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. An impairment test for goodwill is performed annually and on a case-by-case basis 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 operating expenses. Impairment losses recognized on goodwill are not reversed.

Financial liabilities and other liabilities

If financial liabilities are held for trading, the related changes in fair value are recognized through profit or loss (FVtPL). Both initial measurement and subsequent measurement are based on fair value.

Financial liabilities not held for trading are measured at amortized cost (AC) (if they do not fall within a special category). The initial measurement is based on fair value less transaction costs, while subsequent measurement is based on amortized cost. This measurement category primarily comprises financial debt and trade payables.

Alternatively, to avoid mismatches in terms of recognition or measurement, the liabilities may also be measured at fair value through profit or loss (FVtPL). The consolidated ZF Group dispenses with applying the fair value option.

Reverse factoring agreements were concluded for part of the trade payables. These agreements did not lead to any substantial modifications to the terms of the contract, which is why they are still disclosed under trade payables.

Contract liabilities

Contract liabilities comprise prepayments from customers received for goods or services that are yet to be delivered or provided by ZF. In addition, outstanding charges or credits not yet granted by ZF to the customer are reported in this item.

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. Changes in actuarial assumptions, diverging estimates as regards the risk profile of pension obligations as well as deviations between the actual and the expected return on plan assets are recognized as actuarial gains or losses under other comprehensive income. 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 mainly relate to semi-retirement obligations, obligations in connection with restructuring measures as well as long-service awards.

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 until the end of the release phase. They are accrued on a pro-rata basis when the obligation arises and according to the respective nature of the commitment, taking into account a minimum period of employment. The major portion of the semi-retirement obligations is 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 of provisions and reported in the statement of profit or loss together with interest expenses.

Provisions for restructuring measures are recorded as soon as a formal plan exists and has been communicated to the parties affected or when the implementation of the plan has started. In addition to the scope of the planned capacity adjustments, country- and location-specific regulations as well as the corresponding remuneration level are also taken into account in the evaluation.

Provisions for employee long-service bonuses are calculated on an actuarial basis.

Current provisions are expected to be utilized in the course of the following fiscal year. Non-current provisions with a residual term of more than one 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 tax

The current income tax receivables and provisions for current and previous periods, which also include tax risks, 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 an asset or 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, unless the transaction gives rise to temporary differences of the same amount.

Furthermore, no deferred tax liabilities are recognized on differences arising from the initial recognition of goodwill.

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 current tax refunds against current 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.

ZF recognizes sales (Note 1) from a transaction with a customer at the date when ZF has satisfied its performance obligation and control over the product or the service is transferred to the customer. For the major part of the transactions, the transfer of control occurs on the basis of the terms of delivery agreed with the customer (Incoterms). The most commonly used Incoterms are “Ex Works” and “Free Carrier” (FCA). After the transfer of control, the payment for the items delivered or services rendered is made based on terms of payment that are common in the industry and dependent on the individual creditworthiness of the customer. To the extent that warranties with service characteristics are provided to customers that extend beyond typical warranty agreements, sales are recognized over the agreed service period.

In the case of sales not related to volume production, ZF partially receives, prior to or concurrently with service provision, advance payments in relation to the services to be provided. The transaction price underlying revenue recognition is measured on the basis of the payment claim contractually agreed at the date of the transaction. Any existing variable price components, such as price reductions linked to meeting specific quantity targets or to the development of material prices or exchange rates, are reviewed periodically as to their feasibility.

Contract assets (Note 12) are amortized depending on the project term and unit prices. They are reviewed regularly as to their feasibility based on orders received and sales expectations. If there are any indications that a contract asset is not recoverable, a loss allowance is recognized in the corresponding amount.

Management estimates as to technical and economic feasibility of development projects influence the decision to capitalize development costs under intangible assets (Note 16). The measurement of the capitalized development costs depends on the assumptions about the 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 (Note 16) and property, plant and equipment (Note 17), the assumptions and estimates essentially relate to the definition of useful lives.

Extension, termination and purchase options have to be taken into account in the recognition of right-of-use assets from leases (Note 18) as well as lease liabilities to the extent that it is reasonably certain that such options are exercised. Reasonably probable extension and purchase options lead to an increase of future payments and thus to higher right-of-use assets and, accordingly, to higher future depreciation. In contrast, reasonably probable termination options result in a decrease of the recognized right-of-use assets and to lower future depreciation. In particular, real estate rental contracts may include such options, and the exercise of such options is reviewed regularly taking into account economic aspects.

Measurement as well as the determination of the useful lives of assets, liabilities and contingent liabilities to be recognized in the context of acquisitions are 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 19), 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 assessment of the recoverability of trade receivables (Note 11) is subject to estimates as regards the expected probability of default.

In accounting the deferred tax assets (Note 8), the assumptions and estimates essentially relate to the likelihood of expected tax reductions actually occurring in the future.

The determination of income tax assets and liabilities (Note 8) is subject to assumptions and estimates relating to the tax assessment of circumstances. Within the scope of current or future audits, tax laws and relevant facts or circumstances could be interpreted and assessed in a different manner by tax authorities than by ZF.

When determining the outstanding customer charges or credits to the customer as part of contract liabilities (Note 21) in the consolidated financial statements in connection with differences in prices or quantities, assumptions and estimates were made based on ongoing customer negotiations or past experience with customers.

The actuarial measurement of provisions for pensions (Note 24) requires several assumptions depending on the nature of the commitment. The assumptions regarding discount rates, future pension and salary increases as well as demographic developments have a major influence on the valuation. In addition to the aforementioned assumptions, the amount of deferred remuneration by the participating employees as well as their future selection with regard to payment options is also an essential estimate for the measurement of the capital-related defined benefit obligations in Germany.

Determination of warranty provisions (Note 23) 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 23) is subject to judgments 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.

The measurement of the restructuring provisions (Note 23) depends to a great extent on the expected corporate development and implementation of the initiated cost reduction and structural adjustment measures.

ZF Friedrichshafen AG and its subsidiaries are exposed to various claims arising from legal disputes (Note 32), in particular in connection with warranty cases as well as antitrust proceedings and investigations by authorities. Against the backdrop of complex legal matters, the assessment of the outcome of the proceedings is subject to discretion. The probability and the amount of utilization is taken into account when recognizing provisions. The assessment is based on internal estimates, supported by external consultants and lawyers in individual cases. These estimates will be adjusted if new insights and changes in circumstances occur, and they may deviate significantly from the actual outcome of the proceedings.

The worldwide consequences of global warming include more severe or frequent weather extremes such as floods, storms and droughts. These climate-related risks as well as the related legislation are continuously monitored as part of the preparation of the consolidated financial statements. Resulting effects (e.g., decisions about company locations, further development of the product portfolio, useful life of non-current assets) are taken into account in strategic planning.
In the current fiscal year, there were no major effects on the accounting and measurement of assets and liabilities.

Regarding contracts to buy or sell non-financial items, it is subject to judgment whether ZF has entered into them and continues to hold them for the purpose of the receipt or delivery of a non-financial item in accordance with the expected purchasing, sale or usage requirements, which would put them outside the scope of IFRS 9. There are multi-year power purchase agreements with various providers. ZF expects to use the supplied electricity itself.

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. This could have an impact on the Group’s future net assets, financial position and results of operations.

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 the following tables, the sales based on contracts with customers are broken down into sales categories and geographical regions:

in € million	2024	2023
Volume production business sales	34,637	39,933
Aftermarket and service sales	4,881	4,641
Other sales	1,859	2,053
	41,377	**46,627**

Other sales include product development and application revenues of €763 million (2023: €733 million).

in € million	2024	2023
EMEA	19,359	20,857
North America	11,179	13,122
South America	1,382	1,386
Asia-Pacific	9,457	11,262
	41,377	**46,627**

2 Cost of sales

in € million	2024	2023
Cost of materials	25,463	29,940
Personnel expenses	5,722	5,452
Depreciation, amortization and impairment	1,697	1,607
Others	1,966	2,116
	34,848	**39,115**

3 Other operating income

in € million	2024	2023
Foreign exchange gains	374	480
Income from hedging	155	138
Income from the disposal of intangible assets and property, plant and equipment	22	20
Income from deconsolidations	211	41
Other income	154	266
	916	**945**

Other income includes compensation and cost reimbursements of €137 million (2023: €139 million).

4 Other operating expenses

in € million	2024	2023
Foreign exchange losses	344	517
Expenses from hedging	80	70
Losses on the disposal of intangible assets and property, plant and equipment	13	14
Changes of allowances for receivables and contract assets	295	32
Changes of goodwill	122	0
Expenses from deconsolidations	3	128
Other expenses	70	69
	927	**830**

5 Net result from participations

in € million	2024	2023
Result from at-equity valuation	3	10
Result from disposal of associates	–5	47
Other income and expenses	169	17
Result from associates	**167**	**74**
Income from participations	3	3
Result from disposal of participations	0	7
Valuation of participations	–1	2
Other net result from participations	**2**	**12**
Net result from participations	**169**	**86**

Other income and expenses increased mainly due to the revaluation of the remaining shares in ZF Foxconn Chassis Modules GmbH.

6 Financial income

in € million	2024	2023
Interest from financial assets	203	74
Other interest	54	32
Income from derivative financial instruments	8	2
Interest income	**265**	**108**
Foreign exchange gains	505	845
Income from derivative financial instruments	187	234
Income from securities	10	14
Other income	1	0
Other financial income	**703**	**1,093**
Financial income	**968**	**1,201**

Interest income under the effective interest method accounts for €233 million for the fiscal year (2023: €107 million).

7 Financial expenses

in € million	2024	2023
Interest from financial liabilities	735	575
Interest from lease liabilities	33	32
Other interest	27	31
Interest cost on pension provisions	103	124
Unwinding the discount on other non-current items	4	4
Expenses from derivative financial instruments	1	4
Interest expenses	**903**	**770**
Foreign exchange losses	634	846
Expenses from derivative financial instruments	129	272
Expenses from securities	5	2
Valuation of financial receivables	46	9
Transaction costs and incidental expenses	57	44
Other financial expenses	**871**	**1,173**
Financial expenses	**1,774**	**1,943**

8 Income taxes

Income taxes are composed as follows:

in € million	2024	2023
Current taxes	580	636
Current taxes - Pillar 2[1)]	1	0
Deferred taxes	−158	1
Income tax expenses	**423**	**637**

1) The current taxes - Pillar 2 have been determined taking into account the Safe Harbor regulations.

Current income tax expenses include adjustments in the amount of −€14 million (2023: −€115 million) for current taxes of prior fiscal years. Deferred tax income includes tax income of approximately €184 million (2023: €71 million) in connection with the development of temporary differences.

The current 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 current taxes of international 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 ZF Group is making use of the temporary exemption included in the amendment of the IAS 12 standard published in May 2023 (and endorsed by the European Union as per November 8, 2023), under which it does not have to recognize deferred taxes arising as a result of applying the GloBe rules.

The (current and deferred) income tax expenses expected on the basis of the German overall tax rate of 30% (2023: 30%) deviate from the reported income tax expenses as set out below:

in € million	2024	2023
Expected income tax income/expenses (+)	–179	229
Increase/decrease of income taxes due to		
Tax effects due to different national tax rates and taxation systems	–49	–55
Effects of changes in tax laws	–4	0
Tax effects due to non-recognition and write-down of deferred tax assets and their reversal	579	293
Tax effects due to permanent differences[1]	89	42
Tax effects from provisions and due to prior-period items	–14	130
Other	1	–2
Reported income tax expenses	**423**	**637**

1) Permanent differences comprise tax-reducing items such as tax credits as well as non-deductible operating expenses and withholding taxes.

A significant effect of the reconciliation of tax expenses results from the item "Non-recognition and write-down of deferred tax assets and their reversal" and is due to the gloomy business outlook of the ZF Group, especially in Germany. This mainly results from the new or rather persistent geopolitical conflicts and the more intense competition as well as the ongoing transformation process in the automotive industry.

No deferred tax assets were recognized for companies with a loss history (2023: €61 million).

In principle, for the impairment, in the event of an excess of deferred tax assets, the company also takes into account the projected gains beyond the reversal of taxable temporary differences when the losses are based on identifiable and special, most likely not recurring circumstances.

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

	2024		2023	
in € million	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Intangible assets	0	576	0	697
Other assets	421	162	332	221
Pensions	186	0	127	0
Other liabilities	453	232	667	225
Tax loss carryforwards and tax credits	250	0	246	0
Total	**1,310**	**970**	**1,372**	**1,143**
Netting	–493	–493	–566	–566
	817	**477**	**806**	**577**

The change in deferred taxes results not only from income taxes recognized in the consolidated statement of profit or loss but also from changes in line items of the consolidated statement of comprehensive income and from foreign currency effects.

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

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

in € million	2024	2023
Deductible temporary differences	2,282	2,004
Tax loss carryforwards and interest carryforwards	2,363	1,296
Tax credits	1,009	1,126
	5,654	**4,426**

The use of unrecognized tax loss and interest carryforwards of €425 million (2023: €288 million) and tax credits of €187 million (2023: €155 million) is limited in time to up to five years. For tax loss and interest carryforwards of €1,938 million (2023: €1,008 million) and tax credits of €822 million (2023: €971 million), the use period extends beyond five years. Other items in the amount of €249 million (2023: €238 million) were not taken into account because the probability of a claim is deemed to be extremely low.

Deferred taxes are to be recognized for temporary differences in relation to subsidiaries if their realization is probable. Deferred tax liabilities of €201 million (2023: €184 million) were recorded for reserves generated by subsidiaries, as far as can be reliably ascertained. Apart from that, no deferred taxes have been recognized for the reserves generated by subsidiaries of €2,857 million (2023: €2,228 million), as the profits are to be reinvested for an indefinite period of time.

9 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	2024	2023
Cost of raw materials, supplies and merchandise	25,414	29,871
Cost of purchased services	365	368
Other cost of materials	27	29
	25,806	**30,268**

The breakdown of personnel expenses is as follows:

in € million	2024	2023
Wages and salaries	8,324	7,807
Social security and benefit expenses	1,523	1,488
Pension expenses	188	212
	10,035	**9,507**

Personnel expenses include expenses for defined contribution plans in the amount of €416 million (2023: €402 million). The expenses contained for the state plans amounting to €353 million (2023: €341 million) primarily comprise the employer's contribution to the state pension scheme, which is included in the social security expenses.

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

	Intangible assets		Property, plant and equipment	
in € million	**2024**	2023	**2024**	2023
Cost of Sales	250	249	1,445	1,354
Research and development costs	32	38	124	123
Selling expenses	376	376	21	22
General administrative expenses	33	31	131	128
	691	**694**	**1,721**	**1,627**

Research and development costs recorded in the fiscal year reached €2,958 million (2023: €2,881 million).

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

10 Financial assets

	Dec. 31, 2024		Dec. 31, 2023	
in € million	Total	Thereof current	Total	Thereof current
Investments in participations	60	0	104	0
Securities	42	12	64	26
Financial receivables	1,462	1,322	193	48
Net assets from defined benefit plans	462	0	273	0
Derivative financial instruments	100	85	158	139
	2,126	**1,419**	**792**	**213**

Investments in participations have developed as follows:

in € million	**2024**	2023
Carrying amount as of Jan. 1	104	111
Changes in the basis of consolidation	−14	−5
Net exchange differences	2	−2
Changes affecting profit and loss	−1	3
Changes not affecting profit and loss	−30	−7
Additions	0	13
Disposals	−1	−8
Depreciation, amortization and impairment	0	−1
Carrying amount as of Dec. 31	**60**	**104**

The financial receivables include granted loans and direct insurance claims against life insurances of €27 million (2023: €29 million). The financial receivables also contain unavailable bank deposits and time deposit investments of €1,293 million (2023: €62 million). The increase in financial receivables is mainly due to investments in time deposit investments.

The specific loss allowances for financial receivables have developed as follows:

in € million	2024	2023
Carrying amount as of Jan. 1	68	65
Net exchange differences	0	1
Additions	44	4
Utilization	–1	–2
Carrying amount as of Dec. 31	**111**	**68**

The credit-based loss allowances for financial receivables are at €4 million (2023: €2 million).

11 Trade receivables

The trade receivables have the following risk structure:

Dec. 31, 2024 Risk category	Net in € million	Risk structure in %	Specific loss allowances in € million	Credit-based loss allowances in € million	Gross in € million
1	447	9	4	1	452
2	3,818	80	38	32	3,888
3	496	11	12	22	530
4	7	0	20	0	27
Total	**4,768**	**100**	**74**	**55**	**4,897**

Dec. 31, 2023 Risk category	Net in € million	Risk structure in %	Specific loss allowances in € million	Credit-based loss allowances in € million	Gross in € million
1	706	12	5	2	713
2	4,487	77	51	35	4,573
3	618	11	9	28	655
4	6	0	7	1	14
Total	**5,817**	**100**	**72**	**66**	**5,955**

The specific loss allowances for trade receivables have developed as follows:

in € million	2024	2023
Carrying amount as of Jan. 1	72	99
Net exchange differences	−14	2
Changes in the basis of consolidation	−1	−1
Additions	41	29
Utilization	−9	−44
Reversals	−15	−13
Carrying amount as of Dec. 31	**74**	**72**

The credit-based loss allowances for trade receivables have developed as follows:

in € million	2024	2023
Carrying amount as of Jan. 1	66	70
Net exchange differences	−4	−3
Net reversals	−7	−1
Carrying amount as of Dec. 31	**55**	**66**

12 Contract assets

	Dec. 31, 2024		Dec. 31, 2023	
in € million	Total	Thereof current	Total	Thereof current
Volume production business	716	423	763	427
Product development and application	272	107	230	104
Others	7	7	7	7
	995	**537**	**1,000**	**538**

Sales recorded in fiscal year 2024 from performance obligations satisfied (or partially satisfied) in previous fiscal years amount to €66 million (2023: €117 million).

Contract assets have developed as follows:

in € million	2024	2023
Carrying amount as of Jan. 1	1,000	852
Changes in the basis of consolidation	−51	−7
Net exchange differences	6	−1
Additions	874	607
Allowances	−284	−11
Utilization	−541	−421
Reversals	−9	−19
Carrying amount as of Dec. 31	**995**	**1,000**

The contract assets have the following risk structure:

Dec. 31, 2024 Risk category	Net in € million	Risk structure in %	Specific loss allowances in € million	Credit-based loss allowances in € million	Gross in € million
1	793	80	293	3	1,089
2	136	14	0	1	137
3	0	0	0	0	0
4	66	6	0	0	66
Total	**995**	**100**	**293**	**4**	**1,292**

Dec. 31, 2023 Risk category	Net in € million	Risk structure in %	Specific loss allowances in € million	Credit-based loss allowances in € million	Gross in € million
1	835	84	10	3	848
2	118	12	0	0	118
3	9	0	0	0	9
4	38	4	0	0	38
Total	**1,000**	**100**	**10**	**3**	**1,013**

13 Other assets

in € million	Dec. 31, 2024		Dec. 31, 2023	
	Total	Thereof current	Total	Thereof current
Other tax receivables	614	601	553	504
Prepaid expenses	151	119	143	112
Others	303	166	289	172
	1,068	**886**	**985**	**788**

Other tax receivables are, for the most part, sales tax refund entitlements. Others comprise, in general, capitalized reimbursement claims against suppliers and payments in advance.

The specific loss allowances for other assets amount to €15 million (2023: €14 million).

The credit-based loss allowances for other assets are at €1 million (2023: €2 million).

14 Inventories

in € million	Dec. 31, 2024	Dec. 31, 2023
Raw materials and supplies	2,032	2,413
Work in progress	2,266	2,071
Finished goods and merchandise	1,222	1,074
Payments in advance	12	8
	5,532	**5,566**

Compared to the previous year, write-downs of inventories increased by €35 million to €325 million.

15 Associates

in € million	Dec. 31, 2024	Dec. 31, 2023
Investments in joint ventures	352	23
Investments in associates	84	99
	436	**122**

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

The total comprehensive income of the associates is as follows:

in € million	Investments in joint ventures 2024	Investments in joint ventures 2023	Investments in associates 2024	Investments in associates 2023
Net profit or loss after tax	171	7	−4	67
Other comprehensive income	1	1	1	0
Total comprehensive income	**172**	**8**	**−3**	**67**

ZF Foxconn Chassis Modules GmbH

Effective April 30, 2024, the carve-out of the ZF Chassis Systems and Modules product line and its continuation as part of a joint venture was completed together with the Hon Hai Technology Group. ZF holds 50% of the newly founded ZF Foxconn Chassis Modules GmbH based in Osnabrück, Germany. The investment is included in the consolidated financial statements as a joint venture using the equity method and has an equity-method carrying amount of €284 million as of December 31, 2024. No dividends were paid in the fiscal year. Further explanations can be found in the notes on the company sales.

ZF Foxconn Chassis Modules supplies global premium and volume manufacturers with chassis systems and modules, which means it is highly integrated into the production processes of the automotive manufacturers.

in € million	Dec. 31, 2024
Notes to the consolidated statement of profit or loss[1]	
Sales	2,415
Depreciation and amortization	−54
Interest expense	−27
Income taxes	−5
Net profit or loss after tax	−14
Other comprehensive income/loss	0
Total comprehensive income/loss	−14
Notes to the consolidated statement of financial position and reconciliation to the equity-method carrying amount [2]	
Non-current assets	1,078
Current assets	1,103
thereof cash and cash equivalents	209
Non-current liabilities	266
thereof non-current financial liabilities	374
Current liabilities	127
thereof current financial liabilities	127
Equity	579
Equity shares allocated to the Group	290
Reconciliation effects including equity-method goodwill	−6
Equity-method carrying amount	284

1) Figures for the statement of profit or loss relate to the period May 1 to December 31 and include investor level adjustements.
2) Figures for the consolidated statement of financial position and reconciliation to the equity-method carrying amount relate to the balance sheet date December 31 and include investor level adjustements.

16 Intangible assets

in € million	Goodwill	Patents, licenses, software and similar rights and assets	Development costs	Payments in advance	Total
Cost as of Jan. 1, 2024	**8,078**	**8,327**	**260**	**15**	**16,680**
Changes in the basis of consolidation	9	−23	0	0	−14
Net exchange differences	235	261	10	0	506
Additions	0	35	6	23	64
Reclassifications	0	8	1	−9	0
Disposals	−200	−28	−14	−1	−243
Cost as of Dec. 31, 2024	**8,122**	**8,580**	**263**	**28**	**16,993**
Accumulated amortization as of Jan. 1, 2024	**73**	**4,889**	**182**	**0**	**5,144**
Changes in the basis of consolidation	0	−23	0	0	−23
Net exchange differences	0	207	10	0	217
Additions (amortization)	0	673	18	0	691
Additions (impairments)	122	0	0	0	122
Disposals	0	−28	−14	0	−42
Accumulated amortization as of Dec. 31, 2024	**195**	**5,718**	**196**	**0**	**6,109**
Carrying amount as of Dec. 31, 2024	**7,927**	**2,862**	**67**	**28**	**10,884**

in € million	Goodwill	Patents, licenses, software and similar rights and assets	Development costs	Payments in advance	Total
Cost as of Jan. 1, 2023	**8,248**	**8,407**	**300**	**80**	**17,035**
Changes in the basis of consolidation	−2	−12	0	0	−14
Net exchange differences	−153	−141	−7	0	−301
Additions	0	56	10	12	78
Reclassifications	0	76	0	−76	0
Disposals	−15	−59	−43	−1	−118
Cost as of Dec. 31, 2023	**8,078**	**8,327**	**260**	**15**	**16,680**
Accumulated amortization as of Jan. 1, 2023	**73**	**4,384**	**182**	**0**	**4,639**
Changes in the basis of consolidation	0	−5	0	0	−5
Net exchange differences	0	−104	−5	0	−109
Additions (amortization)	0	673	21	0	694
Additions (impairments)	0	0	18	0	18
Disposals	0	−59	−34	0	−93
Accumulated amortization as of Dec. 31, 2023	**73**	**4,889**	**182**	**0**	**5,144**
Carrying amount as of Dec. 31, 2023	**8,005**	**3,438**	**78**	**15**	**11,536**

Goodwill

Accordingly, goodwill from the consolidation of investments in subsidiaries and from the individual financial statements is shown below:

in € million	Dec. 31, 2024	Dec. 31, 2023
Chassis Solutions[1]	1,294	1,431
Electrified Powertrain Technology	787	909
Electronics and ADAS	57	57
ZF Lifetec (previously Passive Safety Systems)	1,173	1,098
Commercial Vehicle Solutions	3,832	3,746
Industrial Technology	233	234
Aftermarket	551	530
	7,927	**8,005**

1) Previous year's value: Cumulative value of the two divisions Active Safety Systems and Car Chassis Technology

Goodwill mainly represents synergies in the areas of materials purchasing, technology development and administrative company organization. The change is mainly attributable to currency fluctuations, the impairment of goodwill in the Electrified Powertrain Technology Division (€ 122 million) and the sale of the Chassis Systems and Modules product line (€196 million).

17 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, 2024	**4,705**	**14,934**	**3,116**	**1,662**	**24,417**
Changes in the basis of consolidation	−129	−142	−68	−51	−390
Net exchange differences	32	104	14	−4	146
Additions	214	686	185	1,167	2,252
Reclassifications	192	782	113	−1,087	0
Disposals	−74	−575	−232	−22	−903
Cost as of Dec. 31, 2024	**4,940**	**15,789**	**3,128**	**1,665**	**25,522**
Accumulated depreciation as of Jan. 1, 2024	**2,085**	**11,052**	**2,412**	**0**	**15,549**
Changes in the basis of consolidation	−59	−85	−55	0	−199
Net exchange differences	−15	28	7	0	20
Additions (depreciation)	239	1,256	226	0	1,721
Additions (impairments)	3	1	6	0	10
Reclassifications	40	−64	24	0	0
Disposals	−69	−505	−221	0	−795
Accumulated depreciation as of Dec. 31, 2024	**2,224**	**11,683**	**2,399**	**0**	**16,306**
Carrying amount as of Dec. 31, 2024	**2,716**	**4,106**	**729**	**1,665**	**9,216**

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, 2023	**4,629**	**14,261**	**3,016**	**1,335**	**23,241**
Changes in the basis of consolidation	−25	−84	−10	5	−114
Net exchange differences	−29	−100	−22	−16	−167
Additions	179	665	191	1,200	2,235
Reclassifications	108	651	89	−848	0
Disposals	−157	−459	−148	−14	−778
Cost as of Dec. 31, 2023	**4,705**	**14,934**	**3,116**	**1,662**	**24,417**
Accumulated depreciation as of Jan. 1, 2023	**1,971**	**10,480**	**2,334**	**0**	**14,785**
Changes in the basis of consolidation	−14	−65	−6	0	−85
Net exchange differences	−6	−53	−16	0	−75
Additions (amortization)	235	1,164	228	0	1,627
Additions (impairments)	0	5	10	0	15
Reclassifications	30	−34	4	0	0
Disposals	−131	−445	−142	0	−718
Accumulated depreciation as of Dec. 31, 2023	**2,085**	**11,052**	**2,412**	**0**	**15,549**
Carrying amount as of Dec. 31, 2023	**2,620**	**3,882**	**704**	**1,662**	**8,868**

18 Leases

The leased assets are primarily rented properties, leased motor vehicles and forklift trucks. The rights of use from leases reported in property, plant and equipment have the following additions and depreciations:

in € million Dec. 31, 2024	Land and buildings	Technical equipment and machines	Other equipment, factory and office equipment	Total
Additions	155	1	68	224
Depreciations	119	7	45	171
Carrying amount	**569**	**25**	**100**	**694**
Dec. 31, 2023				
Additions	122	1	51	174
Depreciations	122	12	43	177
Carrying amount	**592**	**25**	**82**	**699**

In fiscal year 2024, expenses for current leases amounted to €42 million (2023: €42 million) and expenses for leases of low-value assets were incurred in the amount of €25 million (2023: €22 million). Interest expenses for leases reported in the net financial result amounted to €33 million (2023: €32 million).

In the fiscal year, payments for lease liabilities in the amount of €172 million (2023: €170 million), including interest, were made.

In some cases, there are purchase options or termination options for long-term leasing contracts, mainly for real estate. To the extent that management considers the exercise of these options to be probable, they are included in the calculation of the lease liabilities. Beyond these, no significant leasing contracts were signed as of December 31, 2024, whose lease terms only begin after the end of the fiscal year.

The maturity structure of lease liabilities, including interest, as of December 31, 2024, is as follows:

in € million	2024	2023
within the upcoming fiscal year	184	186
between 2 and 5 years	452	433
more than 5 years	254	270
	890	**889**

As of December 31, 2024, there are purchase commitments for short-term leases to the customary extent.

19 Impairment tests

In the fourth quarter of 2024, goodwill impairment tests as well as asset impairment tests were performed on the basis of a triggering event analysis to assess the impairment of the assets.

Inter alia, assumptions were made with regard to the development of sales in order to calculate the impairment tests. The partial decline in growth rates in the detailed planning period is mainly attributable to the growing uncertainty in the global economy and the ongoing transformation process in the automotive industry.

The assumptions made for the average sales increase in the planning period are as follows:

in %	2024	2023
Chassis Solutions[1]	2	4
Electrified Powertrain Technology	2	2
Electronics and ADAS	14	17
ZF Lifetec (previously Passive Safety Systems)	6	4
Commercial Vehicle Solutions	8	7
Industrial Technology	10	11
Aftermarket	4	5

1) Previous year's value: weighted average of the two divisions Active Safety Systems and Car Chassis Technology

The annual impairment tests for the Electrified Powertrain Technology Division resulted in an impairment of goodwill of €122 million, which was included in other operating expenses. The impairment is mainly attributable to declining sales in a recessive market environment as well as to an EBIT decline due to volume-related margin losses. The basis for the impairment is a recoverable amount that corresponds to the fair value less any costs to sell. This fair value is to be classified as fair value category 3.

In the previous year, no impairment was recognized on goodwill.

In addition, a sensitivity analysis regarding material measurement parameters was conducted in the context of the 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 0.5% or an increase in the capitalization rate by 10% would affect the recoverability of goodwill.

In the Electrified Powertrain Technology Division, further impairment on goodwill would result for each of the three described scenarios of the sensitivity analysis.

None of the scenarios considered within this sensitivity analysis would have led to an impairment of goodwill in any of the remaining divisions.

In addition, impairments on property, plant and equipment amounting to €10 million were recognized in the Corporate Functions. In the previous year, impairments of €15 million were made on property, plant and equipment, which were recorded in the Car Chassis Technology, Electronics and ADAS, and Aftermarket divisions. Also in the previous year, the Industrial Technology Division had recorded impairments on intangible assets amounting to €18 million.

20 Financial liabilities

in € million	Dec. 31, 2024 Total	Dec. 31, 2024 Thereof current	Dec. 31, 2023 Total	Dec. 31, 2023 Thereof current
Bonds	11,065	1,971	8,611	110
Bonded loans	2,384	574	2,093	531
Liabilities to banks	682	398	2,035	1,551
Other financial liabilities	168	141	158	150
Lease liabilities	766	156	786	161
Derivative financial instruments	101	80	112	50
	15,166	**3,320**	**13,795**	**2,553**

Under current financial liabilities, non-current loans, bonded loans and bonds are recognized with their redemption installments and accrued interest due within one year. Moreover, current liabilities which serve short-term financing purposes are included under this item. The country-specific interest rates on all financial liabilities fluctuate between 1.4% (2023: 1.4%) and 7.1% (2023: 7.1%). Most of the financial liabilities have a fixed interest rate. Most of the loans are due at the end of the contractual term.

The financing strategy in 2024 focused on actively shaping the maturity profile of financial liabilities of the consolidated ZF Group and thus pre-financing the maturities in 2025. In fiscal year 2024, ZF repaid debts of €2.3 billion. On the refinancing side, ZF successfully placed approximately €3.0 billion on the capital market, in the form of bonds and bonded loans.

Apart from other obligations, the bank loans from the EIB and KfW as well as the revolving credit line also include a financial covenant that ZF has to comply with. It is defined as the ratio of net debt to adjusted, consolidated EBITDA. This financial key figure is tested each quarter. Due to the changed market conditions, ZF has concluded agreements with all banks to adjust the upper limit for debt. For a loan of €225 million with a maturity in April 2028, approval for temporary adjustment of the financial covenant with effect from December 31, 2024 was not granted until February 2025, and thus after the balance sheet date, which is why the covenant was complied with retrospectively as of December 31, 2024. Based on the provisions of IAS 1, the liability is recorded under current financial liabilities, as the agreement was not in place by December 31, 2024, and the agreement is considered to be value-creating. For all other loans mentioned above, approval had been granted by the balance sheet date. Accordingly, the upper limit for debt up to and including December 31, 2025 is 4.0. Thereafter, the value will decrease gradually over time and will be back to the original level of 3.25 as of September 30, 2026. ZF met the requirement on all test dates in the past and on the reporting date.

21 Contract liabilities

in € million	Dec. 31, 2024 Total	Dec. 31, 2024 Thereof current	Dec. 31, 2023 Total	Dec. 31, 2023 Thereof current
Volume production business	1,077	1,052	1,227	1,146
Product development and application	1,195	550	1,015	571
Others	65	51	61	25
	2,337	**1,653**	**2,303**	**1,742**

Contract liabilities have developed as follows:

in € million	2024	2023
Carrying amount as of Jan. 1	2,303	2,015
Changes in the basis of consolidation	−47	−8
Net exchange differences	24	−29
Additions	1,503	1,525
Utilization	−1,271	−1,046
Reversals	−175	−154
Carrying amount as of Dec. 31	**2,337**	**2,303**

Contract liabilities include outstanding credits in the amount of €804 million (2023: €857 million). From the consumption of contract liabilities, €635 million (2023: €631 million) was recognized in profit or loss in sales.

The expected future sales from performance obligations not satisfied (or partially not satisfied) are as follows:

in € million	2024	2023
1 to 5 years	822	967
>5 years	14	52
Carrying amount as of Dec. 31	**836**	**1,019**

The performance obligations not satisfied (or partially not satisfied) mainly refer to contracts with customers in connection with development orders as well as tools.

In the current fiscal year, there were changes in the timeframe, which had an effect amounting to €145 million (2023: €55 million) on the fulfillment of future performance obligations.

22 Other liabilities

in € million	Dec. 31, 2024 Total	Dec. 31, 2024 Thereof current	Dec. 31, 2023 Total	Dec. 31, 2023 Thereof current
Liabilities to employees	798	723	965	872
Social contributions	69	68	71	69
Other tax liabilities	312	312	297	297
Prepaid expenses	105	38	50	27
Others	686	616	602	538
	1,970	**1,757**	**1,985**	**1,803**

Other tax liabilities are mainly sales tax liabilities. Others include, among others, deferred liabilities from procurement and sales, for legal costs and costs of litigation, as well as liabilities for licenses and commissions.

23 Other provisions

in € million	Carrying amount Dec. 31, 2024 Total	Expected utilization 2025	2026 to 2030	2031 and beyond
Obligations from sales	925	530	366	29
Obligations from personnel	895	277	545	73
Other obligations	374	284	44	46
	2,194	**1,091**	**955**	**148**

in € million	Carrying amount Dec. 31, 2023 Total	Expected utilization 2024	2025 to 2029	2030 and beyond
Obligations from sales	799	424	365	10
Obligations from personnel	448	134	270	44
Other obligations	452	320	83	49
	1,699	**878**	**718**	**103**

in € million	Obligations from sales	Obligations from personnel	Other obligations	Total
Jan. 1, 2024	799	448	452	1,699
Changes in the basis of consolidation	−2	−1	0	−3
Net exchange differences	10	0	−4	6
Additions	359	646	67	1,072
Unwinding of the discount	5	15	1	21
Utilization	−198	−182	−80	−460
Reversals	−48	−12	−62	−122
Netting of plan assets	0	−19	0	−19
Dec. 31, 2024	**925**	**895**	**374**	**2,194**

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

The obligations from personnel mainly affect provisions for restructuring measures as well as other obligations to employees. Furthermore, the surplus of liabilities due to semi-retirement obligations of €209 million (2023: €61 million) remaining after offsetting with plan assets is included.

The provisions for restructuring measures primarily concern expenses for severance payments that will be incurred as part of a long-term program for structural adjustment.

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

24 Provisions for pensions

The provisions for pensions are broken down as follows:

2024 in € million	Present value of defined benefit plans					Financial assets	Provisions for pensions
	Unfunded	Funded	Total	Plan assets	Net value	Net assets	Net liabilities
Germany	976	5,163	6,139	−3,161	2,978	226	3,204
United Kingdom	0	933	933	−1,141	−208	208	0
Other	114	125	239	−118	121	28	149
	1,090	**6,221**	**7,311**	**−4,420**	**2,891**	**462**	**3,353**
Obligations from medical care benefits	156	0	156	0	156	0	156
Balance sheet disclosure						**462**	**3,509**

2023 in € million	Present value of defined benefit plans					Financial assets	Provisions for pensions
	Unfunded	Funded	Total	Plan assets	Net value	Net assets	Net liabilities
Germany	1,040	5,069	6,109	−2,774	3,335	171	3,506
United Kingdom	1	1,071	1,072	−1,150	−78	79	1
Other	171	140	311	−137	174	23	197
	1,212	**6,280**	**7,492**	**−4,061**	**3,431**	**273**	**3,704**
Obligations from medical care benefits	153	0	153	0	153	0	153
Balance sheet disclosure						**273**	**3,857**

The consolidated ZF Group offers various schemes for retirement and medical care benefits. The structure of those schemes depends on the legal, economic and tax situation in the respective countries. A distinction has to be made 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. There are both unfunded and funded pension systems. Provisions for defined benefit pension commitments are set up for obligations from vested benefits of entitled current and former employees of the consolidated ZF Group and their surviving dependents.

Description of plans

The following paragraphs describe the most significant pension and medical care plans of the consolidated ZF Group. The essential risks for the company lie with the actuarial parameters, particularly interest level and pension trend as well as the demographic developments and the development of the market value of plan assets.

Germany (GER)

In Germany, there is a variety of defined benefit obligations with different characteristics.

Until 1993, commitments were granted depending on length of service and remuneration. From 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 2005, the annually allocated 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.

A Group-internal contractual trust arrangement (CTA) was concluded in 2016 to hedge the above-mentioned direct defined benefit obligations, and assets were contributed to the CTA. While the CTA was initially intended to hedge the grants made to executive managers, the group of beneficiaries was expanded in 2021 so that the obligations from all of the above-mentioned commitments involving different hierarchy levels are hedged. There are no legal or regulatory minimum funding requirements.

In the context of the "ZF Rente" pension scheme, employee-financed pension modules are awarded. 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 a guaranteed interest rate of 3.5% for established employees before December 31, 2005. The second rate does not offer a guaranteed interest rate for new employees as of 2006.

In 2019, employees that had not previously been covered were granted a defined benefit commitment as part of the realignment of company pension schemes. This commitment called "ZF Vorsorge" also requires a monthly employee contribution in the amount of at least 1% of the remuneration. Entitled employees are now able to pay monthly contributions into a funded benefit account from their pensionable remuneration by way of deferred remuneration. With this commitment, the employer also makes contributions depending on the level of the employees' contributions. The commitment includes a retirement benefit as well as risk-based benefits in the case of reduced earning capacity and death. The employees can choose between various payout options. Employees who had already been beneficiaries were offered a change to the "ZF Vorsorge" scheme. Any previously vested benefit obligations were taken into account in the form of starting modules.

Both employer and employee contributions for this new company pension scheme are managed by a trust fund association, specifically founded for this purpose.

The asset ceiling of €147 million (2023: €133 million) is applied for a defined benefit obligation in Germany. The plan assets attributable to ZF from a pension fund are limited to the value of the guaranteed pension benefit.

United Kingdom (UK)

In the United Kingdom, the consolidated ZF Group maintains funded defined pension plans that have been closed except for a small number of employees of ZF CV Distribution UK Ltd. These 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. The technical evaluation may lead to additional contributions from the employer in order to comply with the minimum funding requirements.

In the case of pension commitments for employees of ZF CV Distribution Ltd., both employers and employees must make contributions to the trust assets. The pension amount depends on the pensionable income as well as the period of employment. The employer guarantees a minimum pension.

Defined benefit pension plans

The following actuarial assumptions are used in the calculation of pension provisions:

	2024		2023	
in %	GER	UK	GER	UK
Discount rate	3.4	5.5	3.3	4.5
Pension increases	1.9	2,6 – 3,1	2.1	2.4 – 2.9

As part of the measurement of provisions for other pension plans in Germany, the replacement interest rate is determined on the basis of high-quality corporate bonds with a rating of AA (or equivalent) from at least one of the three big rating agencies and are extrapolated based on the yield curve of zero coupon government bonds.

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

	2024		2023	
in years	GER	UK	GER	UK
Average maturity	14	13	15	13

Pension provisions are calculated using country-specific mortality tables which are updated annually, depending on the country involved. The following mortality tables are used:

	2024	2023
GER	Heubeck 2018 G mortality tables	Heubeck 2018 G mortality tables
UK	2022 VITA tables (averaged) with CMI 2023	2018 VITA tables (averaged) with CMI 2022

A discount as regards the probability of disability according to the Heubeck 2018 G mortality tables to measure pension obligations at Group companies in Germany was applied. The discount is determined on the basis of company-owned historical data.

The development of pension provisions as well as the related plan assets is presented in the following table:

in € million	GER	UK	Other	2024 Total
Present value of the defined benefit obligations as of Jan. 1	**6,109**	**1,072**	**311**	**7,492**
Current service costs	109	0	–8	101
Interest expenses	199	49	1	249
Contributions by plan participants	104	0	1	105
Settlements	0	0	–27	–27
Pension payments	–221	–48	–20	–289
Actuarial gains (–) and losses (+) from the change in demographic assumptions	–12	–22	0	–34
Actuarial gains (–) and losses (+) from the change in financial assumptions	–157	–135	–12	–304
Actuarial gains (–) and losses (+) due to experience adjustments	21	–33	8	–4
Changes in the basis of consolidation	–9	0	0	–9
Other changes	–4	0	2	–2
Net exchange differences from plans abroad	0	50	–17	33
Present value of the defined benefit obligations as of Dec. 31	**6,139**	**933**	**239**	**7,311**
Plan assets at fair value as of Jan. 1	**2,907**	**1,150**	**137**	**4,194**
Expected return on plan assets	95	53	6	154
Actuarial gains (+) and losses (–) from the change in plan assets	165	–82	10	93
Employer contributions to the plan assets	116	12	7	135
Employee contributions	103	0	1	104
Settlements	0	0	–28	–28
Pension benefits paid	–75	–47	–8	–130
Other changes	–3	–6	–4	–13
Net exchange differences from plans abroad	0	61	–3	58
Plan assets at fair value as of Dec. 31	**3,308**	**1,141**	**118**	**4,567**
Asset ceiling as of Jan. 1	**–133**	**0**	**0**	**–133**
Change in asset ceiling	–14	0	0	–14
Asset ceiling as of Dec. 31	**–147**	**0**	**0**	**–147**

in € million	GER	UK	Other	2023 Total
Present value of the defined benefit obligations as of Jan. 1	**5,508**	**970**	**286**	**6,764**
Current service costs	98	1	25	124
Past service costs	0	0	2	2
Interest expenses	202	46	18	266
Contributions by plan participants	106	0	1	107
Settlements	0	0	0	0
Pension payments	−205	−45	−22	−272
Actuarial gains (−) and losses (+) from the change in demographic assumptions	0	−9	0	−9
Actuarial gains (−) and losses (+) from the change in financial assumptions	334	54	−8	380
Actuarial gains (−) and losses (+) due to experience adjustments	47	33	12	92
Other changes	19	2	−6	15
Net exchange differences from plans abroad	0	20	3	23
Present value of the defined benefit obligations as of Dec. 31	**6,109**	**1,072**	**311**	**7,492**
Plan assets at fair value as of Jan. 1	**2,608**	**1,081**	**136**	**3,825**
Expected return on plan assets	93	50	6	149
Actuarial gains (+) and losses (−) from the change in plan assets	24	20	−1	43
Employer contributions to the plan assets	99	29	5	133
Employee contributions	104	0	1	105
Settlements	0	0	0	0
Pension benefits paid	−24	−45	−8	−77
Other changes	3	−7	−1	−5
Net exchange differences from plans abroad	0	22	−1	21
Plan assets at fair value as of Dec. 31	**2,907**	**1,150**	**137**	**4,194**
Asset ceiling as of Jan. 1	**−173**	**0**	**0**	**−173**
Change in asset ceiling	40	0	0	40
Asset ceiling as of Dec. 31	**−133**	**0**	**0**	**−133**

The items recognized in profit or loss in connection with pension obligations are composed of as follows:

in € million	GER	UK	Other	2024 Total
Current service costs	109	0	–8	101
Curtailments and settlements	0	0	1	1
Administration expenses	0	6	1	7
Net interest on the net defined benefit liability	104	–4	–5	95
				204

in € million	GER	UK	Other	2023 Total
Current service costs	98	1	25	124
Past service costs	0	0	2	2
Curtailments and settlements	0	0	0	0
Administration expenses	0	6	1	7
Unwinding the discount on net liabilities	109	–4	12	117
	207	**3**	**40**	**250**

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 of €421 million (2023: losses of €380 million) are recorded in other comprehensive income with no effect on profit or loss. This also includes an actuarial loss from the change in the asset ceiling of €14 million (2023: gain of €40 million).

The plan assets consist of the following items:

in € million	2024	2023
Cash and cash equivalents	105	341
Securities		
Equity instruments	1,629	1,301
Debt instruments	1,873	1,749
Fund shares	444	448
Derivative financial instruments	0	1
Other	516	354
	4,567	**4,194**

Securities are measured at prices quoted on active markets. The “Other” item mainly includes securities covered by receivables (asset-backed securities).

Employer contributions to plan assets are expected to amount to €122 million (2023: €144 million) in the following year.

Pension payments for the next ten years are as follows:

in € million	2024	2023
within the upcoming fiscal year	343	337
between one to five years	1,412	1,349
after five up to ten years	1,865	1,865

The calculation presents the expected 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:

in € million	GER	UK	Other	2024 Total
Discount rate				
−0.25%	+212	+29	+6	+247
+0.25%	−199	−27	−6	−232
Pension increases				
−0.25%	−71	0	−1	−72
+0.25%	+74	0	+1	+75
Life expectancy				
−1 year	−129	−26	−1	−156
+1 year	+144	+25	+1	+170

in € million	GER	UK	Other	2023 Total
Discount rate				
− 0.25%	+222	+39	+7	+268
+ 0.25%	−208	−37	−7	−252
Pension increases				
− 0.25%	−78	0	−1	−79
+ 0.25%	+81	0	+1	+82
Life expectancy				
− 1 year	−135	−32	−2	−169
+ 1 year	+151	+31	+3	+185

For the sensitivity analysis, pension obligations were re-measured. It was assumed that all other presumptions remain unchanged. For calculating the sensitivity of life expectancy, it was assumed that the average life expectancy of a 65-year-old individual will increase or decrease 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 8 years (2023: 9 years).

The development of the present value of the defined benefit obligations is presented as follows:

in € million	2024	2023
Present value of the defined benefit obligations as of Jan. 1	**153**	**147**
Current service cost	1	0
Past service costs	0	−2
Interest expenses	8	7
Payments made	−13	−13
Actuarial gains (–) and losses (+) from the change in demographic assumptions	1	0
Actuarial gains (–) and losses (+) from the change in financial assumptions	20	0
Actuarial gains (–) and losses (+) due to experience adjustments	−24	18
Net exchange differences from plans abroad	10	−4
Present value of the defined benefit obligations as of Dec. 31	**156**	**153**

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, 2024, the valuation factors for discounting were between 4.6% and 9.9% (2023: 4.5% and 9.2%).

The net expenses of the obligations for medical care benefits comprise the following:

in € million	2024	2023
Current service costs	1	0
Past service costs	0	−2
Unwinding the discount on net liabilities	8	7
	9	**5**

The actuarial gains amounting to €3 million (2023: losses of €18 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	2024	2023
Discount rate		
−0.25%	+3	+3
+0.25%	−3	−3
Life expectancy		
−1 year	−7	−7
+1 year	+7	+8

25 Equity

Subscribed capital
At the end of the fiscal year, the subscribed capital still amounts to €500 million. As of December 31, 2024, 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 Sec. 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 after tax amounting to +€428 million (2023: −€445 million) is attributed to non-controlling interests in the amount of +€20 million (2023: −€29 million) as well as €2 million (2023: €1 million) to associates.

Fair value adjustment on 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

in € million 2024	Before income tax	Income tax	After tax
Foreign currency translation differences	397	31	428
Gains/losses on equity instruments	−30	−3	−33
Mark-to-market of cash flow hedges	−137	6	−131
Actuarial gains and losses	424	−11	413
Other comprehensive income	**654**	**23**	**677**

in € million 2023	Before income tax	Income tax	After tax
Foreign currency translation differences	−458	13	−445
Gains/losses on equity instruments	−9	0	−9
Mark-to-market of cash flow hedges	84	−17	67
Actuarial gains and losses	−398	−56	−454
Other comprehensive income	**−781**	**−60**	**−841**

Sale of non-controlling interests

In the fiscal year, 11.8% of the shares held in ZF Commercial Vehicle Control Systems India Limited were sold for a sales price of €358 million. The difference between the sales price and the carrying amount of the acquired non-controlling interests of €253 million was offset against retained earnings.

Dividends

ZF Friedrichshafen AG has proposed a dividend payout of €41 million (€0.08 per share) for fiscal year 2024 – unchanged from the previous year.

26 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. Net debt 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 achieve a stable Group rating at investment grade level.

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

	Dec. 31, 2024	Dec. 31, 2023
Equity in € million	7,532	7,719
Equity ratio in %	19	20

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

NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

27 General

The consolidated statement of cash flows shows how the cash position of the consolidated ZF Group changed in 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 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.

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.

Dividends and interest received are assigned to the cash flow from investing activities. Interest and transaction costs paid for borrowings, including lease liabilities, 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.

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. In addition, the cash position includes highly liquid financial investments that have a maturity of less than three months and that are subject to only small fluctuations in value.

The cash position is comprised as follows:

in € million	Dec. 31, 2024	Dec. 31, 2023
Cash and cash equivalents	3,372	3,637
Total	**3,372**	**3,637**

28 Sale of consolidated companies and business units

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

in € million	2024	2023
Current assets	956	180
thereof cash and cash equivalents	137	38
Non-current assets	529	115
Current liabilities	699	79
Non-current liabilities	320	67

The total sales prices in the amount of €415 million (2023: €59 million) were fully paid in cash.

29 Change in financial liabilities

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

	Financial liabilities			
	2024		2023	
in € million	Current	Non-current	Current	Non-current
Carrying amount as of Jan. 1	2,503	11,180	2,162	10,792
Change in cash	−1,785	3,005	−2,103	2,648
Non-cash changes				
Reclassification	2,505	−2,505	2,382	−2,382
Currency effects	61	106	−1	−40
Other	−44	39	63	162
Carrying amount as of Dec. 31	**3,240**	**11,825**	**2,503**	**11,180**

Changes in cash involve taking on and extinguishing financial liabilities. Other non-cash changes are primarily comprised of changes in deferred interests (partly cash items) as well as the increase in lease liabilities due to new leasing contracts and the adjustment of changes in the basis of consolidation.

The presentation does not consider derivative financial instruments.

OTHER DISCLOSURES

30 Contingent liabilities

The following table shows contingent liabilities recognized at nominal values:

	2024	2023
Guarantees	211	103
thereof for joint ventures and participations	206	97
Other	148	130
	359	**233**

The guarantees are due within one 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. As in the previous year, there were no collaterals for contingent liabilities during the fiscal year.

As of December 31, 2024, there are contingent liabilities with ZF Foxconn Chassis Modules GmbH in the amount of €113 million.

31 Other financial obligations

In addition to liabilities, provisions and contingent liabilities, other financial obligations consist of investment projects launched and procurement agreements initiated.

	2024	2023
Purchase commitments	1,079	1,404
Payment obligations on participations	10	12
	1,089	**1,416**

The purchase commitments can be broken down into intangible assets amounting to €6 million (2023: €7 million) and property, plant and equipment amounting to €1,073 million (2023: €1,397 million).

32 Litigation

The National Highway Traffic Safety Administration (NHTSA) in the USA has completed its investigation regarding certain vehicles that are equipped with ZF airbag control units and of which a few were subject to recalls by Toyota, FCA and HKMC. NHTSA has concluded that all relevant vehicles have been recalled. Based on the currently available facts, ZF does not believe to have culpably caused the recalls and is defending itself against lawsuits pending in the USA and Canada.

In connection with already concluded antitrust proceedings, ZF is dealing with customers with regard to possible claims for damages.

In principle, claims for damages may be asserted even in connection with completed proceedings. Neither ZF nor any of its Group companies are involved in current or foreseeable court or arbitration proceedings which, based on facts known today, have had in the past or could have a significant impact on the economic situation of the consolidated ZF Group.

33 Disclosures on financial instruments

Carrying amounts of the financial instruments by category

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

in € million	Dec. 31, 2024	Dec. 31, 2023
Assets		
At amortized cost	9,101	8,999
At fair value through other comprehensive income		
Debt instruments	501	653
Equity instruments	55	56
At fair value through profit or loss	121	170
Derivative financial instruments (hedge accounting)[1]	44	117
	9,822	**9,995**
Liabilities		
At amortized cost	19,906	19,531
At fair value through profit or loss	24	99
Lease liabilities[1]	766	786
Derivative financial instruments (hedge accounting)[1]	77	13
	20,773	**20,429**

1) No measurement category in accordance with IFRS 9

In the fiscal year under review, there were no reclassifications of financial assets between the 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, 2024 Carrying amount	Dec. 31, 2024 Fair value	Dec. 31, 2023 Carrying amount	Dec. 31, 2023 Fair value
Assets				
At amortized cost				
Cash and cash equivalents	3,372	3,372	3,637	3,637
Financial receivables	1,462	1,462	193	193
Trade receivables	4,267	4,267	5,164	5,164
Other receivables	0	0	5	5
	9,101	**9,101**	**8,999**	**8,999**
Liabilities				
At amortized cost				
Bonds	11,065	10,795	8,611	8,511
Bonded loans	2,384	2,403	2,093	1,990
Liabilities to banks	682	682	2,035	2,035
Other financial liabilities	168	156	158	158
Trade payables	5,607	5,607	6,634	6,634
Lease liabilities[1]	766	-	786	-
	20,672	**19,643**	**20,317**	**19,328**

1) No measurement category in accordance with IFRS 9

In the following, the financial instruments are allocated to the three levels of the fair value hierarchy based on the input parameters used for measurement. 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 used for the measurement of financial instruments that are directly (e.g., prices) or indirectly (e.g., derived from prices) observable on the market. Financial instruments whose valuation is based on information that is not observable on the market are reported in level 3.

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	Level 1	Level 2	Level 3	Dec. 31, 2024 Total
Assets				
Cash and cash equivalents	0	3,372	0	3,372
Financial receivables	0	1,462	0	1,462
Trade receivables	0	4,267	0	4,267
Other receivables	0	0	0	0
	0	**9,101**	**0**	**9,101**
Liabilities				
Bonds	10,795	0	0	10,795
Bonded loans	0	2,403	0	2,403
Liabilities to banks	0	682	0	682
Other financial liabilities	0	156	0	156
Trade payables	0	5,607	0	5,607
	10,795	**8,848**	**0**	**19,643**

in € million	Level 1	Level 2	Level 3	Dec. 31, 2023 Total
Assets				
Cash and cash equivalents	0	3,637	0	3,637
Financial receivables	0	193	0	193
Trade receivables	0	5,164	0	5,164
Other receivables	0	5	0	5
	0	**8,999**	**0**	**8,999**
Liabilities				
Bonds	8,511	0	0	8,511
Bonded loans	0	1,990	0	1,990
Liabilities to banks	0	2,035	0	2,035
Other financial liabilities	0	158	0	158
Trade payables	0	6,634	0	6,634
	8,511	**10,817**	**0**	**19,328**

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.

The following tables show the financial instruments recognized at fair value.

in € million	Dec. 31, 2024	Dec. 31, 2023
Assets		
At fair value through other comprehensive income		
Securities	0	1
Investments in participations	55	55
Trade receivables	501	653
At fair value through profit or loss		
Securities	42	63
Investments in participations	5	49
Derivative financial instruments	56	41
Other receivables	18	17
Derivative financial instruments (hedge accounting)[1]	44	117
	721	**996**
Liabilities		
At fair value through profit or loss		
Derivative financial instruments	24	99
Derivative financial instruments (hedge accounting)[1]	77	13
	101	**112**

1) No measurement category in accordance with IFRS 9

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 used for measurement.

in € million	Level 1	Level 2	Level 3	Dec. 31, 2024 Total
Assets				
Securities	9	12	21	42
Investments in participations	0	23	37	60
Trade receivables	0	501	0	501
Derivative financial instruments	0	100	0	100
Other receivables	0	18	0	18
	9	**654**	**58**	**721**
Liabilities				
Derivative financial instruments	0	98	3	101

in € million	Level 1	Level 2	Level 3	Dec. 31, 2023 Total
Assets				
Securities	19	13	32	64
Investments in participations	0	0	104	104
Trade receivables	0	653	0	653
Derivative financial instruments	0	153	5	158
Other receivables	0	17	0	17
	19	**836**	**141**	**996**
Liabilities				
Derivative financial instruments	0	112	0	112

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

For level 1 securities, the fair value is recognized directly as the quoted price on an always active market. An active market is either the stock exchange of the respective country or a comparable trading platform offering the liquidity and transparency of the underlying asset. Level 2 includes classes whose prices can be derived or modeled from parameters which can be observed on the market. This includes in particular observable interest rates, exchange rates or comparable instruments. The level 3 securities are zero-coupon bonds for which no active market exists. The market values of level 3 securities are determined on the basis of currently available information from the funds' managers. A significant change of the underlying future cash flows and the interest rate, which implies a change of the discount factor, would influence the fair values of these securities.

The level 3 investments in participations concern investments in companies that are not listed on the stock exchange. In case of these investments in participations recognized at fair value through profit or loss, there is either not enough information available or only a vast range of possible values can be determined for the fair value by using a multiplier method. The acquisition costs are therefore used to appropriately estimate the fair value. In case of changes in the environment of the participations or in case of proof due to external transactions, the estimate is adjusted accordingly. A significant change regarding the future results and multipliers used for the multiplier method would affect the fair value of these investments in participations in the amount of –€2 million (2023: –€9 million) to +€18 million (2023: +€69 million).

The trade and other receivables measured at fair value are allocated to level 2 since measurement can be derived from parameters observable on the market.

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 financial instruments assigned to level 3 of the fair value hierarchy:

	Investments in participations		Securities	
in € million	**2024**	2023	**2024**	2023
As of Jan. 1	104	70	32	14
Changes in the basis of consolidation	–14	–5	0	0
Fair value changes – recognized through profit or loss	–1	–1	0	–1
Fair value changes – recognized through other comprehensive income	–36	0	0	0
Net exchange differences – recognized through profit or loss	0	–1	0	0
Purchases	0	7	3	2
Sales	0	–2	–14	–1
Reclassifications from level 3 to level 2	–16	0	0	0
Reclassifications from level 2 to level 3	0	36	0	18
As of Dec. 31	**37**	**104**	**21**	**32**

During the fiscal year, investments in participations and securities from level 3 of the fair value hierarchy in the amount of €16 million were reclassified to level 2 as a result of the improved market availability of the relevant investments in participations and securities in the current fiscal year compared to the prior year.

Net gains and losses by measurement category

	Dec. 31, 2024		Dec. 31, 2023	
in € million	Total net gains and losses	Thereof from interest	Total net gains and losses	Thereof from interest
At amortized cost				
Financial assets	–36	231	172	97
Financial liabilities	–901	–755	–737	–588
At fair value through profit or loss				
Financial assets and liabilities	47	0	–7	11
	–890	**–524**	**–572**	**–480**

Net gains and losses in the “Financial assets at amortized cost” measurement category primarily contain, in addition to interest income, exchange rate gains and losses from foreign currency receivables in the amount of +€73 million, as well as expenses from the change in write-downs in the amount of €340 million.

In the “Financial liabilities at amortized cost” measurement category, apart from interest expenses, net gains and losses primarily comprise exchange rate gains and losses from foreign currency liabilities in the amount of –€150 million.

Net gains and losses in the “Financial assets and liabilities at fair value through profit or loss” measurement category essentially include losses from derivative financial instruments excluding hedge accounting.

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, 2024		
in € million	Gross amount	Offsetting	Net amount
Offset items			
Trade receivables (current)	4,942	174	4,768
Trade payables (current)	5,770	174	5,596
Eligible for offsetting in the event of insolvency			
Derivative financial instruments (assets)	100	16	84
Derivative financial instruments (liabilities)	101	16	85

	Dec. 31, 2023		
in € million	Gross amount	Offsetting	Net amount
Offset items			
Trade receivables (current)	5,943	126	5,817
Trade payables (current)	6,754	126	6,628
Eligible for offsetting in the event of insolvency			
Derivative financial instruments (assets)	158	43	115
Derivative financial instruments (liabilities)	112	43	69

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, 2024, no risk arises from this regulation due to the excellent credit rating of our banks.

34 Risks from financial instruments

Management of financial risks

The risk management system within the finance area comprises 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 Corporate Audit.

The companies of the consolidated ZF Group hedge their foreign currency risks in a standardized manner at prevailing market conditions either internally through the responsible ZF Treasury Hubs or directly externally with banks. Risk items hedged externally are traded with banks with excellent credit rating, taking into account the prescribed risk limits. In general, derivative financial instruments with plain vanilla character are used. These are used exclusively to hedge existing balance sheet items or forecast transactions. Hedge accounting is applied if the IFRS criteria are met. The Commercial Vehicle Solutions Division partially hedges its risk independently while following guidelines comparable to the consolidated ZF Group's hedging strategy. Integration into ZF's hedging strategy was advanced in 2024 and will be completed in the future financial periods. Interest rate and raw material price risks are hedged on a case-by-case basis.

Hedging transactions are concluded in accordance with uniform corporate policies, following various jurisdictions' rules and regulations and in line with bank regulations on the operating of trading business. Such conclusions 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 our contracting parties in the areas of financial investments, financial receivables and trade receivables will not meet their payment obligations. This risk is defined based on calculated probabilities of default or information about the insolvency of contracting parties.

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 quarterly and adjusted, if necessary. Input parameters for taking into account counterparty risk are ratings with a long-term perspective issued by independent rating agencies for the financial institutions participating in the respective transaction.

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.

Outstanding trade receivables mainly comprise receivables from manufacturers of passenger cars and commercial vehicles, off-road machinery and wind turbines worldwide. In order to secure the entire value-added chain, the creditworthiness of our strategic suppliers is constantly monitored on the one hand, in particular by concentrating new contract awarding decisions on creditworthy suppliers. In order to reduce the credit risk in relation to customers on the other hand, the creditworthiness of customers as well as the related 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 commercial credit insurances as of December 31, 2024 is €213 million (2023: €6 million).

Trade receivables are sold as part of factoring programs. Essentially all opportunities and risks, measured on the basis of the variability of incoming payments, are transferred (“true sale”). An asset-backed securitization program (ABS program) is another off-balance sheet measure. As part of the business practices customary for such programs, trade receivables are sold to a special purpose vehicle on a revolving basis. As is also customary, a portion of the purchase price is retained in reserve accounts. These are reported as other receivables under other assets.

The following table illustrates the credit risk existing per risk category for trade receivables and contract assets as of the reporting date:

Dec. 31, 2024 in € million Risk category	Trade receivables	Contract assets
1	452	1,089
2	3,888	137
3	530	0
4	27	66
Receivables (gross)	**4,897**	**1,292**
Specific loss allowances	−74	−293
Credit-based loss allowances	−55	−4
Receivables (net)	**4,768**	**995**

Dec. 31, 2023 in € million Risk category	Trade receivables	Contract assets
1	713	848
2	4,573	118
3	655	9
4	14	38
Receivables (gross)	**5,955**	**1,013**
Specific loss allowances	−72	−10
Credit-based loss allowances	−66	−3
Receivables (net)	**5,817**	**1,000**

A specific loss allowance on receivables is recognized if there is an existing credit risk. The amount of the allowance mainly depends on the risk category and how long the receivable is overdue, and may be up to 100% in individual cases. A distinction is made between credit risk and business risk in assessing the recoverability of receivables.

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:

in € million	Carrying amount Dec. 31, 2024 Total	Cash outflow 2025	Cash outflow 2026 to 2030	Cash outflow 2031 and beyond
Bonds	11,065	2,234	9,851	743
Bonded loans	2,384	655	2,005	42
Liabilities to banks	682	502	324	17
Other financial liabilities	168	162	24	7
Trade payables	5,607	5,596	11	0
	19,906	**9,149**	**12,215**	**809**

in € million	Carrying amount Dec. 31, 2023 Total	Cash outflow 2024	Cash outflow 2025 to 2029	Cash outflow 2030 and beyond
Bonds	8,611	319	9,076	562
Bonded loans	2,093	613	1,726	0
Liabilities to banks	2,035	1,649	588	0
Other financial liabilities	158	150	9	8
Trade payables	6,634	6,634	0	0
	19,531	**9,365**	**11,399**	**570**

The solvency and the liquidity reserves within the consolidated ZF Group are managed on the basis of short-, medium- and long-term liquidity and financing planning. A sufficient amount of cash and cash equivalents as well as securities that can be converted to cash and confirmed credit lines is held so that the solvency of the consolidated ZF Group is ensured at all times. Cash and cash equivalents amounted to €3,372 million as of the reporting date. The carrying amount of short-term securities was €12 million.

The syndicated loan in the form of a revolving credit facility (RCF) was unused as of the reporting date. The credit line was refinanced in July 2022 and, since a contractually agreed extension option was exercised in the year under review, now has a residual term until July 2029.

ZF offers reverse factoring agreements (supplier financing). Within these agreements, suppliers can transfer their trade receivables to the offering bank against a discount and thus receive the discounted invoice amount early. ZF will be charged the original invoice amount by the offering bank on the original due date. If a supplier joins such an agreement, the liabilities to the financing bank exist from the perspective of the consolidated ZF Group, without the liabilities being substantially changed. Therefore, they continue to be recognized under trade payables. As of December 31, 2024, ZF has trade payables from supplier financing business in the amount of €189 million (2023: €258 million). Of this amount, €149 million (2023: €206 million) have already been paid to the suppliers. Liabilities under such an agreement are due after an average of 83 days (2023: 81 days), while comparable trade payables are due after an average of 60 days (2023: 60 days).

Market price risk from securities

The market price risk is the risk that the fair value of securities decreases. Due to the low portfolio of securities, the risk from market price fluctuations is considered immaterial. Therefore, a sensitivity analysis is dispensed with.

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 consolidated ZF Group carries out transactions in different currencies.

The consolidated ZF Group follows a unified approach to managing currency risks. The hedging approach pursues a central and systematic currency risk assessment and strategy that includes regular survey rounds for expected risk items, risk assessment and the implementation of multi-layered hedging for a hedging horizon of up to 24 months.

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 FX forward instruments. The intended hedging relationship between the designated amount of the hedged item and the designated amount of the hedging instrument generally amounts to up to 80%.

Individual hedging is generally carried out for the project business (gross principle). As a rule, the hedged item of project-related individual hedges is hedged in the full amount.

The translation risk from the measurement of line items is not hedged. The resulting risk is monitored on a regular basis.

The economic relationship between the hedging instrument and the hedged item can be determined in terms of quality and quantity, and ZF assesses the effectiveness of this hedging relationship using the hypothetical derivatives method and linear regression. Ineffectiveness is largely expected to occur through changes in credit risk or from timing adjustments regarding the hedged item. In the current fiscal year, no amounts from ineffective hedging relationships (2023: €0 million) were derecognized from the cash flow hedge reserve. When hedging instruments are due or de-designated, accumulated measurements are essentially reclassified from other comprehensive income to other operating income and expenses.

As of December 31, 2024, a liability with a partial amount of €1,315 million (2023: €915 million) and maturity periods until 2028 and 2030 is designated for hedging a net investment in a foreign operation of the same amount. The hedging instrument is reported under financial liabilities. The cumulative change in the value of the hedge of a net investment in a foreign operation amounts to −€66 million (2023: €60 million) and is included in other comprehensive income under foreign currency translation differences.

The expected cash outflow from derivative financial instruments entered into to hedge currency risks is presented below:

			Cash outflow	
in € million	Market value as of Dec. 31, 2024	Nominal value	Within a year	1 to 5 years
Derivatives excl. hedge accounting				
Assets	56	2,997	2,976	21
Liabilities	−24	1,434	1,408	26
Cash flow hedge				
Assets	31	841	666	175
Liabilities	−62	1,193	970	223

in € million	Market value as of Dec. 31, 2023	Nominal value	Cash outflow: Within a year	Cash outflow: 1 to 5 years
Derivatives excl. hedge accounting				
Assets	24	2,059	2,050	9
Liabilities	−99	2,120	1,876	244
Cash flow hedge				
Assets	117	1,893	1,371	522
Liabilities	−11	458	317	141

For the purposes of hedging foreign currency risk, the hedging rates for the material currency pairs are as follows: 4.46 EUR/PLN; 19.86 USD/MXN; 1.08 EUR/USD; 7.65 EUR/CNY. The hedging rates comprise derivatives including and excluding hedge accounting.

in € million	Change in value of hedging instrument 2024	Change in value of hedging instrument 2023	Change in value of hedged item 2024	Change in value of hedged item 2023
Cash flow hedge	−31	110	31	−110
Hedge of a net investment	66	−60	−66	60

Sensitivity analysis

In terms of sensitivity to exchange rate volatility, ZF considers the potential impact of an appreciation or devaluation of the euro on its portfolio of outstanding cash flow hedges as well as on unhedged financing instruments, such as loans or cash and cash equivalents in foreign currencies, to be relevant. For this purpose, the sensitivity of the portfolio of derivatives and financing instruments was determined for a 10% appreciation or devaluation of the euro versus all other currencies represented in the portfolio.

The following table shows the hypothetical effects on equity and profit or loss (in both cases excluding tax effects) within the scope of the aforementioned parameters:

in € million	Effect on equity Dec. 31, 2024	Effect on equity Dec. 31, 2023	Effect on net profit or loss before tax Dec. 31, 2024	Effect on net profit or loss before tax Dec. 31, 2023
Appreciation of the euro by +10%	−51	−44	40	−2
Devaluation of the euro by −10%	52	45	−45	−2

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. ZF is working on setting up a structured raw material hedging program.

ZF has concluded virtual power purchase agreements with terms of seven and nine years. Under these agreements, ZF receives certificates of origin for the electrical energy generated by photovoltaic systems in Spain with an installed capacity of 109 megawatts assigned to ZF. The agreements meet the definition of a derivative financial instrument and are recognized at fair value through profit or loss in accordance with IFRS 9. Changes in fair value are included in the cost of materials in the electricity procurement costs. As of the reporting date, the agreements had a fair value of −€3 million (2023: €5 million).

The following table shows the effect on net profit or loss before income tax of an increase or decrease of the electricity price level in Spain by 10%:

in € million	Effect on net profit or loss before tax Dec. 31, 2024	Effect on net profit or loss before tax Dec. 31, 2023
Increase in electricity price level in Spain by +10%	+3	+2
Decrease in electricity price level in Spain by −10%	−4	−3

Interest rate risk

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

Facing volatile interest rates, interest rate hedges by means of interest rate swaps with maturity periods until 2029 and option instruments were executed in previous financial periods. All option instruments were due in fiscal year 2024 and no longer exist as of the reporting date. The interest rate swaps fix an average secured interest rate of 3.07%. The executed hedges cover 60% of the variable financing exposures over the full financing lifetime. For IFRS purposes, no hedging relationship to the underlying business was documented.

A new cross-currency swap was executed in fiscal year 2024. For IFRS purposes, no hedging relationship to the underlying business was documented.

The assumed cash outflow from derivative financial instruments entered into to hedge interest rate risks is presented below:

in € million	Market value as of Dec. 31, 2024	Nominal value	Cash outflow Within a year	Cash outflow 1 to 5 years
Derivatives excl. hedge accounting				
Assets	2	46	−1	−4
Liabilities	−3	346	−2	−2

in € million	Market value as of Dec. 31, 2023	Nominal value	Cash outflow Within a year	Cash outflow 1 to 5 years
Derivatives excl. hedge accounting				
Assets	12	1,658	0	0
Liabilities	−2	296	0	4

The following tables indicate the effect on net profit or loss before income tax in the event of an increase or decrease in the average interest rate on financial investments as well as on variable-rate financial liabilities in the corresponding currency:

	Change in base points		Effect on net profit or loss before tax (in € million)	
Investment of funds	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024	Dec. 31, 2023
EUR	+100 −100	+100 −100	+7 −7	+4 −4
USD	+100 −100	+100 −100	+5 −5	+3 −3
CNY	+100 −100	+100 −100	+10 −10	+7 −7

	Change in base points		Effect on net profit or loss before tax (in € million)	
Financial liabilities	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024	Dec. 31, 2023
EUR	+100 −100	+100 −100	−36 +22	−16 +19
USD	+100 −100	+100 −100	+2 −2	−9 +9

The effect on net profit or loss before income tax of the variable-rate financial liabilities denominated in euros includes the effect from interest rate hedges.

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.

In the current fiscal year, derivative interest rate instruments do not result in material cash outflows.

35 Government grants

In the fiscal year, €95 million (2023: €85 million) in government grants were received. They were divided as follows:

in € million	2024	2023
Investment grants	50	63
Expense subsidies	45	22

Investment grants were mainly received for investments at locations in China, Serbia and Portugal.

Expense subsidies mainly comprise research subsidies and subsidies for personnel expenses.

36 Related party transactions

Related party transactions have to be disclosed in accordance with IAS 24. The group of related parties includes associates, joint ventures and non-consolidated subsidiaries (other participations) as well as persons who exercise a significant influence over the financial and operating policies of the consolidated ZF Group. The latter comprise all persons in key positions as well as close members of their family. In the consolidated ZF Group, these are the members of the Board of Management and the Supervisory Board. In addition, the Zeppelin Foundation as a special fund of the City of Friedrichshafen, the Dr. Jürgen and Irmgard Ulderup Foundation and their affiliated companies are considered related 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:

2024 in € million	Joint ventures	Associates	Other participations
Supplies and services rendered	457	24	13
Supplies and services received	133	252	93
Receivables	146	18	13
Liabilities	1	24	10

2022 in € million	Joint ventures	Associates	Other participations
Supplies and services rendered	21	10	11
Supplies and services received	19	232	85
Receivables	9	5	10
Liabilities	0	34	3

The increase in joint ventures is due to the fact that ZF Foxconn Chassis Modules GmbH has been a joint venture since May 1, 2024. As of December 31, 2024, there are receivables from ZF Foxconn Chassis Modules in the amount of €146 million and liabilities in the amount of €1 million.

37 Board of Management

Dr. Holger Klein
Chief Executive Officer
Sales, Research and Development,
Region of Asia-Pacific (as of August 1, 2024),
System House of Autonomous Mobility Systems, Aftermarket,
Electronics and ADAS (as of July 1, 2024),
Electrified Powertrain Technology (August 1, 2024 to December 31, 2024)

Dr. Lea Corzilius
Chief Human Resources Officer / Director of Labor Relations
Human Resources, Corporate Governance and Sustainability

Dr. Martin Fischer **(until June 30, 2024)**
Quality (until April 30, 2024),
Regions of North and South America,
Chassis Solutions (until April 30, 2024), ZF Lifetec (formerly Passive Safety Systems),
Electronics and ADAS

Michael Frick
Chief Financial Officer
Finance, IT and M&A,
ZF Lifetec (as of July 1, 2024)

Dr. Peter Holdmann **(as of May 1, 2024)**
Quality,
Regions of North and South America (as of July 1, 2024),
Chassis Solutions

Prof. Dr. Peter Laier
Production,
Materials Management (as of August 1, 2024),
Region of India,
Commercial Vehicle Solutions, Industrial Technology

Mathias Miedreich **(as of January 1, 2025)**
Electrified Powertrain Technology

Stephan von Schuckmann **(until July 31, 2024)**
Materials Management,
Region of Asia-Pacific,
Electrified Powertrain Technology

38 Supervisory Board

Dr. Heinrich Hiesinger
Chairman
Former Chief Executive Officer of thyssenkrupp AG

Barbara Resch* (as of January 31, 2025)
Vice Chairwoman
District Manager of IG Metall Baden-Württemberg

Roman Zitzelsberger* (until December 31, 2024)
Deputy Chairman
District Manager of IG Metall for Baden-Württemberg

Jörg Amon* (until October 2, 2024)
Chairman of the Lemförde location Works Council of ZF Friedrichshafen AG

Simon Blümcke (as of December 13, 2024)
First Mayor of the City of Friedrichshafen

Andreas Brand (until December 13, 2024)
Former First Mayor of the City of Friedrichshafen

Dr. Rolf Breidenbach
Former Chairman of the Board of Management of Hella GmbH & Co. KGaA

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

Rachel Empey
Former Member of the Board of Management (CFO) of Fresenius SE & Co. KGaA

Robert Friedmann
Chairman of the Central Managing Board of the Würth Group

Klaus Helmrich
Former Member of the Board of Management of Siemens AG

Peter Kippes*
Head of Functional Area Business Policy, IG Metall

Mario Kläs*
Chairman of the Saarbrücken location Works Council of ZF Friedrichshafen AG

Prof. Dr.-Ing. Gisela Lanza
Director of Production Systems at the wbk Institute of Production Science, Karlsruhe Institute of Technology (KIT)

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

Jürgen Sammer*
Chairman of the Central Executives' Committee of ZF Friedrichshafen AG

Jens Schäfer* (as of October 3, 2024)
Chairman of the Hanover location Works Council of ZF CV Systems Hannover GmbH

Dr. Thomas Schulze
Chairman of the Dr. Jürgen and Irmgard Ulderup Foundation

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

Helene Sommer*
First Representative of IG Metall, Administration Center Friedrichshafen-Upper Swabia

Axel Strotbek
Former Member of the Board of Management of Audi AG

Erdal Tahta*
Chairman of the Koblenz location Works Council of ZF Active Safety GmbH

Dr. Feiyu Xu
Chief Executive Officer Amber Iris AI Consulting GmbH

* Employee representative

39 Board of Management and Supervisory Board compensation

The compensation of the Board of Management, as determined by the Supervisory Board of the consolidated ZF Group, comprises one fixed basic salary and two variable salary components, consisting of short- and long-term incentives. While the short-term incentive (STI) is based on the achievement of targets in the respective preceding fiscal year, the long-term incentive (LTI) is determined by reference to the business performance over a 3-year period. The remuneration structure is designed to facilitate a long-term positive development of the company.

In line with the savings regarding employees and executive managers, the Board of Management also partially waived a monthly base salary and the Supervisory Board waived part of its annual remuneration in fiscal year 2024.

Inflow in fiscal year 2024

The payment of basic salaries and short-term incentives (STI) to active members of the Board of Management for fiscal year 2024 amounts to €5.8 million (2023: €10.3 million). The difficult business environment has reduced the achievement of targets regarding the STI.

The long-term compensation component LTI 2021-2023 of €2.4 million (2023: €2.6 million) paid out in April 2024 reflects the challenging business development of recent years.

In fiscal year 2024, a total of €1.9 million was spent on the pension benefit for the pension scheme, which is paid out as a gross amount. This further reduced the additions to the company pension scheme to build up future pension rights. The corresponding effect can be seen in a further reduction of expenses for earned pension rights.

In total, payments (basic salaries, short-term variable incentives, long-term variable incentives and the pension provision module) to active members of the Board of Management for fiscal year 2024 amount to €10.1 million (2023: €15.0 million).

Expenses in fiscal year 2024

For long-term incentives (LTI), target figures to be achieved in the next three fiscal years are agreed before the beginning of a given fiscal year. Their payment is not guaranteed, but depends on the achievement of ambitious targets for ZF.

Currently, there are LTI commitments for the years 2022–2024, 2023–2025 and 2024–2026, which will be paid out after the end of the fiscal year in April of the following year. The entitlement to be recognized as an expense for all these future commitments is determined in each annual financial statement based on the latest estimates and plans, and the provisions are adjusted accordingly. With expectations significantly reduced compared to the previous year, the expenses for variable long-term salary components in the amount of €2.3 million have decreased compared to the previous year (2023: €5.4 million).

Due to the aforementioned compensation of the pension scheme, expenses for pension rights earned in the fiscal year by the active members of the Board of Management decreased to €0.5 million (2023: €0.7 million). The total remuneration, consisting of fixed remuneration, short-term and potential, though partly not certain, long-term variable components as well as earned pension entitlements, amounts to €11.3 million (2023: €18.0 million).

The emoluments of former members of the Board of Management and their surviving dependents amount to €4.8 million (2023: €9.0 million). The pension provisions for former members of the Board of Management and their surviving dependents amount to €91.3 million (2023: €96.9 million).

The emoluments of the Supervisory Board for fiscal year 2024 amount to €2.3 million (2023: €2.5 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.

40 Personnel

The annual average number of employees was 165,523 (2023: 166,679), of whom 79,688 were direct employees (2023: 79,526) and 85,835 were indirect employees (2023: 87,153). At the end of the year, the consolidated ZF Group had 161,631 (2023: 168,738) employees. Direct employees are employees whose activities depend on the production volume and can be allocated directly to the products.

41 Appointed auditor fees

Fees of the consolidated ZF Group's auditing firm, EY GmbH & Co. KG Wirtschaftsprüfungsgesellschaft, recorded in the consolidated statement of profit or loss, amount to €6 million for auditing services. The total consolidated Group-wide fees of EY amount to €15 million for auditing services, €5 million for other assurance services as well as €1 million for tax advisory services. Apart from EY, other auditing companies work for the consolidated ZF Group.

42 Listing of the shares held as of December 31, 2024

Consolidated subsidiaries

Germany	Share of capital in %
Brake Force One GmbH, Tübingen, Germany	100.0
FTU Beteiligungsverwaltung GmbH, Espelkamp, Germany	100.0
GAT – Gesellschaft für Antriebstechnik mbH, Alsdorf, Germany	100.0 [1)]
intellic Germany GmbH, Berlin, Germany	100.0
Lemförder Electronic GmbH, Espelkamp, Germany	100.0 [1)]
Lucas Automotive Grundstücksverwaltungs AG & Co. KG, Koblenz, Germany	100.0 [1)]
Lucas Varity Grundstücksverwaltungs AG & Co. KG, Koblenz, Germany	100.0 [1)]
SIMI Reality Motion Systems GmbH, Unterschleißheim, Germany	100.0
Transics Deutschland GmbH, Hanover, Germany	100.0
TRW Deutschland Holding GmbH, Koblenz, Germany	100.0 [1)]
WABCO Fahrzeugsysteme GmbH, Hanover, Germany	100.0 [1)]
WABCO Holding GmbH, Hanover, Germany	100.0 [1)]
WABCO Radbremsen GmbH, Mannheim, Germany	100.0 [1)]
WABCO Systeme GmbH, Hanover, Germany	100.0 [1)]
ZF Active Safety GmbH, Koblenz, Germany	100.0 [1)]
ZF Airbag Germany GmbH, Aschau am Inn, Germany	100.0 [1)]
ZF Airbag Germany Grundstücksverwaltungs AG & Co. KG, Aschau am Inn, Germany	100.0 [1)]
ZF Airbag Tube Forming GmbH, Friedrichshafen, Germany	100.0
ZF Alpha Grundstücksverwaltungs AG & Co. KG, Friedrichshafen, Germany	100.0 [1)]
ZF Asia-Pacific Holding GmbH, Friedrichshafen, Germany	100.0 [1)]
ZF Auslandsverwaltungs GmbH, Friedrichshafen, Germany	100.0
ZF Automotive Germany GmbH, Alfdorf, Germany	100.0 [1)]
ZF Automotive Germany Grundstücksverwaltungs AG & Co. KG, Alfdorf, Germany	100.0 [1)]
ZF Automotive Safety Germany GmbH, Aschaffenburg, Germany	100.0 [1)]

Germany	Share of capital in %
ZF Automotive Safety Germany Grundstücksverwaltungs AG & Co. KG, Aschaffenburg, Germany	100.0 [1]
ZF Beta Grundstücksverwaltungs AG & Co. KG, Friedrichshafen, Germany	100.0 [1]
ZF Car eWallet GmbH, Berlin, Germany	100.0
ZF CV Distribution Germany GmbH & Co. KG, Hanover, Germany	100.0 [1]
ZF CV Logistics Germany GmbH, Hanover, Germany	100.0 [1]
ZF CV Systems Hannover GmbH, Hanover, Germany	100.0 [1]
ZF Delta Grundstücksverwaltungs AG & Co. KG, Friedrichshafen, Germany	100.0 [1]
ZF Epsilon Grundstücksverwaltungs AG & Co. KG, Friedrichshafen, Germany	100.0 [1]
ZF Europa Beteiligungs GmbH, Friedrichshafen, Germany	100.0 [1]
ZF Finance GmbH, Friedrichshafen, Germany	100.0
ZF Gamma Grundstücksverwaltungs AG & Co. KG, Friedrichshafen, Germany	100.0 [1]
ZF Gastronomie Service GmbH, Friedrichshafen, Germany	100.0 [1]
ZF Getriebe Brandenburg GmbH, Brandenburg, Germany	100.0 [1]
ZF Gusstechnologie GmbH, Nuremberg, Germany	100.0 [1]
ZF Industrieantriebe Witten GmbH, Witten, Germany	100.0 [1]
ZF Micro Mobility GmbH, Ravensburg, Germany	100.0 [1]
ZF Mobility Solutions GmbH, Ingolstadt, Germany	100.0 [1]
ZF NewCo II GmbH, Friedrichshafen, Germany	100.0
ZF Nürnberg Trading and Asset GmbH & Co. KG, Nuremberg, Germany	100.0 [1]
ZF Pegasus GmbH, Friedrichshafen, Germany	100.0 [1]
ZF RACE ENGINEERING GmbH, Schweinfurt, Germany	100.0 [1]
ZF Terra GmbH, Friedrichshafen, Germany	100.0
ZF Test Track Germany GmbH, Wietze, Germany	100.0 [1]
ZF Ventures GmbH, Friedrichshafen, Germany	100.0 [1]
ZF Zeta Grundstücksverwaltungs AG & Co. KG, Friedrichshafen, Germany	100.0 [1]

1) The company lays claim to exemption according to Section 264, para. 3, and Section 264b HGB (German Commercial Code).

International	Share of capital in %
2 Getthere B.V., Utrecht, Netherlands	100.0
2 Getthere Holding B.V., Utrecht, Netherlands	100.0
Advanced Cargo Transhipment B.V., Utrecht, Netherlands	100.0
Alfaro Brakes S.L.U., Corella, Spain	100.0
Automotive Holdings (Spain) S.L.U., Vigo, Spain	100.0
Beespeed Technical Engineering Center S.R.L., Timișoara, Romania	100.0
Changchun WABCO Vehicle Control System Co., Ltd., Changchun, China	60.0
Clayton Dewandre Holdings Limited, Hull, United Kingdom	100.0
Compagnie Financière de ZF SAS, Paris La Défense, France	100.0
Dalphi Metal Espana, S.L.U., Vigo, Spain	100.0
Dalphi Metal Portugal, LDA, Vila Nova de Cerveira, Portugal	100.0
Delta Industrie Service SARL, Saint-Hilaire-de-Brethmas, France	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, Livonia, 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
Guangdong WABCO Vehicle Brakes Co., Ltd., Taishan, China	100.0
Kelsey-Hayes Holdings Inc., Livonia, USA	100.0
Kelsey-Hayes Mexico LLC, Reynosa, Mexico	100.0
Liuzhou ZF Machinery Co., Ltd., Liuzhou, China	51.0 [2]
LucasVarity, Solihull, United Kingdom	100.0
LucasVarity Langzhong Brake Company Limited, Langfang, China	70.0
Midwest Lemförder Limited, Darlaston, United Kingdom	100.0
OOO AMT Russia, Saint Petersburg, Russia	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

International	Share of capital in %
Roadster Holdings (Canada) ULC, Toronto, Canada	100.0
Safe-Life – Industria de Componentes de Seguranca Automovel LDA, Ponte de Lima, Portugal	100.0
Shanghai Sachs Huizhong Shock Absorber Co., Ltd., Shanghai, China	60.0
TAVARES B.V., Brussels, Belgium	100.0
Transics Belux B.V., Ypern, Belgium	100.0
Transics France SARL, Alès, France	100.0
TRANSICS International B.V., Ypern, Belgium	100.0
Transics Italia S.r.l., Collegno, Italy	100.0
Transics Nederland B.V., Rotterdam, Netherlands	100.0
Transics Telemática España S.L.U., Madrid, Spain	100.0
TRW Airbag Systems SRL, Roman, Romania	100.0
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 Automotive (LV) Corp., Livonia, USA	100.0
TRW Automotive China Holdings Ltd., Ebene, Mauritius	100.0
TRW Automotive Components Technical Service Shanghai Co. Ltd., Shanghai, China	100.0
TRW Automotive España S.L.U., Pamplona, Spain	100.0
TRW Automotive Holding Mexico LLC, Reynosa, Mexico	100.0
TRW Automotive India Private Limited, Haryana, India	100.0
TRW Automotive Portugal Lda., Santos Domingos de Rana, Portugal	100.0
TRW Automotive Safety Systems SRL, Timișoara, Romania	100.0
TRW China Holdings Ltd., Grand Cayman, Cayman Islands	100.0
TRW Delplas, S. de R.L. de C.V., El Marqués, Mexico	100.0
TRW FAWER Automobile Safety Systems (Changchun) Co., Ltd., Changchun, China	60.0 [2)]
TRW FAWER Commercial Vehicle Steering (Changchun) Co., Ltd., Changchun, China	55.0

International	Share of capital in %
TRW Intellectual Property Corp., Livonia, USA	100.0
TRW International Holdings B.V., Amsterdam, Netherlands	100.0
TRW Occupant Restraints de Chihuahua, S. de R.L. de C.V., Chihuahua, Mexico	100.0
TRW Odyssey Mexico LLC, Reynosa, Mexico	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 Wheel Systems de Chihuahua, S. de R.L. de C.V., Chihuahua, Mexico	100.0
TRW Sun Steering Wheels Private Limited, New Delhi, India	51.0
TRW Vehicle Safety Systems de Mexico, S. de R.L. de C.V., Reynosa, Mexico	100.0
Verona Holding Corp., Wilmington, USA	100.0
WABCO Air Compressor Holdings Inc., Auburn Hills, USA	100.0
WABCO Asia Private Ltd., Singapore, Singapore	100.0
WABCO Australia Pty Ltd., Melbourne, Australia	100.0
WABCO Automotive B.V., Rotterdam, Netherlands	100.0
WABCO Automotive Control Systems Inc., Auburn Hills, USA	100.0
WABCO Automotive Mexico, S. de R.L. de C.V., San Luis Potosi, Mexico	100.0
WABCO Automotive Pension Trustees Limited, Batley, United Kingdom	100.0
WABCO Automotive Products Ltd., Grand Cayman, Cayman Islands	100.0
WABCO Comercial México S. de R.L. de C.V., Santa Fe, Mexico	100.0
WABCO Compressor Manufacturing Company, Charleston, USA	70.0
WABCO Europe Holdings B.V., Rotterdam, Netherlands	100.0
WABCO Europe Holdings LLC, Wilmington, United States	100.0
WABCO Expats Inc., Auburn Hills, USA	100.0
WABCO Group Inc., Auburn Hills, USA	100.0
WABCO Group International Inc., Auburn Hills, USA	100.0
WABCO Holdings B.V., Rotterdam, Netherlands	100.0
WABCO Holdings Inc., Auburn Hills, USA	100.0

International	Share of capital in %
WABCO International LLC, Auburn Hills, USA	100.0
WABCO IP Holdings LLC, Auburn Hills, USA	100.0
WABCO Korea Ltd., Suwon, Korea (Republic)	100.0
WABCO Logistics (Qingdao) Co., Ltd., Qingdao, China	100.0
WABCO USA LLC, Auburn Hills, USA	100.0
WABCO Vehicle Control Systems LLC, Auburn Hills, USA	100.0
WBC B.V., Delfgauw, Netherlands	100.0
WBC C.V., Capelle aan den IJssel, Netherlands	100.0
ZF (China) Investment Co., Ltd., Shanghai, China	100.0
ZF (Guangzhou) Technologies Co., Ltd., Guangzhou, China	100.0
ZF (Shanghai) Management Co., Ltd., Shanghai, China	100.0
ZF (Thailand) Limited, Bangkok, Thailand	100.0
ZF Active Safety and Electronics US LLC, Livonia, USA	100.0
ZF Active Safety France SAS, Bouzonville, France	100.0
ZF Active Safety Slovakia s.r.o., Nove Mesto nad Vahom, Slovakia	100.0
ZF Active Safety Systems Canada Ltd., Midland, Canada	100.0
ZF Active Safety US Holding Company, Livonia, USA	100.0
ZF Active Safety US Inc., Livonia, USA	100.0
ZF Aftermarket Iberica S.L.U., Pamplona, Spain	100.0
ZF Aftermarket Malaysia Sdn. Bhd., Senai, Malaysia	100.0
ZF Aftermarket Ostrov s.r.o., Klášterec, Czech Republic	100.0
ZF ANSA Lemförder S.L. (Sociedad Unipersonal), Sant Cugat del Vallès, Spain	100.0
ZF AP Holdings Inc., Livonia, USA	100.0
ZF Argentina S.A., San Francisco, Argentina	100.0
ZF Asia B.V., Amsterdam, Netherlands	100.0
ZF Asia Pacific Automotive Safety Systems (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Asia Pacific Group Co., Ltd., Shanghai, China	100.0
ZF Asia Pacific Pte. Ltd., Singapore Central, Singapore	100.0

International	Share of capital in %
ZF Auto Holdings US LLC, Livonia, USA	100.0
ZF Autocruise France SAS, Plouzane, France	100.0
ZF Automotive Aftermarket France SAS, Bonneval, France	100.0
ZF Automotive B.V., Amsterdam, Netherlands	100.0
ZF Automotive Brasil Ltda., Limeira, Brazil	100.0
ZF Automotive Canada Limited, Woodstock, Canada	100.0
ZF Automotive Components & Systems (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Automotive Czech s.r.o., Jablonec nad Nisou, Czech Republic	100.0
ZF Automotive Holding Italia S.r.l. Società Unipersonale, Turin, Italy	100.0
ZF Automotive Holdings (UK) Limited, Solihull, United Kingdom	100.0
ZF Automotive Holdings France SAS, Paris La Défense, France	100.0
ZF Automotive Italia S.r.l. Società Unipersonale, Turin, Italy	100.0
ZF Automotive J.V. US LLC, Livonia, USA	100.0
ZF Automotive Korea Co., Ltd., Ansan, Korea (Republic)	71.0
ZF Automotive Malaysia Sdn Bhd., Bukit Beruntung, Malaysia	100.0
ZF Automotive Passive Safety Systems (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Automotive Safety Systems (Rizhao) Co., Ltd., Rizhao, China	100.0
ZF Automotive Safety Systems (Thailand) Co., Ltd., Rayong, Thailand	100.0
ZF Automotive Safety Systems (Weihai) Co., Ltd., Weihai, China	100.0
ZF Automotive Safety Systems (Wuhan) Co., Ltd., Wuhan, China	100.0
ZF Automotive Safety Systems (Zhangjiagang) Co., Ltd., Zhangjiagang, China	100.0
ZF Automotive Systems (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Automotive Systems (Wuhan) Co., Ltd., Wuhan, China	100.0
ZF Automotive Systems (Zhangjiagang) Co., Ltd., Zhangjiagang, China	100.0
ZF Automotive Systems Poland Sp. z o.o., Czestochowa, Poland	100.0
ZF Automotive Technologies (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Automotive Technologies (Zhangjiagang) Co., Ltd., Zhangjiagang, China	100.0
ZF Automotive UK Limited, Solihull, United Kingdom	100.0

International	Share of capital in %
ZF Automotive US Inc., Livonia, USA	100.0
ZF Axle Drives Marysville, LLC, Marysville, USA	100.0
ZF Boge Elastmetall Espana S.A.U., Santa Perpètua de Mogoda, Spain	100.0
ZF Braking Systems Poland Sp. z o.o., Gliwice, Poland	100.0
ZF Brazil US LLC, Livonia, USA	100.0
ZF Chassis Components, LLC, Newton, USA	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 Commercial Vehicle Control Systems India Limited, Chennai, India	63.2
ZF Commercial Vehicle Distribution South Africa (PTY) Ltd., Germiston, South Africa	100.0
ZF Commercial Vehicle Solutions India Private Limited, Chennai, India	100.0
ZF Commercial Vehicle Systems (Jinan) Co., Ltd., Jinan, China	100.0
ZF Commercial Vehicle Systems (Qingdao) Co., Ltd., Qingdao, China	100.0
ZF Commercial Vehicle Technology (Jiaxing) Co., Ltd., Jiaxing, China	100.0
ZF Composites North America Ltd., Hamilton, Canada	100.0
ZF CV Control Systems Manufacturing India Private Limited, Chennai, India	63.2
ZF CV Distribution Austria GmbH, Vienna, Austria	100.0
ZF CV Distribution Belgium B.V., Brussels, Belgium	100.0
ZF CV Distribution Czech Republic s.r.o., Brno, Czech Republic	100.0
ZF CV Distribution France SAS, Jossigny, France	100.0
ZF CV Distribution Italy S.r.l. Società Unipersonale, Turin, Italy	100.0
ZF CV Distribution Poland Sp. z.o.o., Wrocław, Poland	100.0
ZF CV Distribution Spain S.L.U., Madrid, Spain	100.0
ZF CV Distribution Sweden AB, Gothenburg, Sweden	100.0
ZF CV Distribution UK Limited, Leeds, United Kingdom	100.0
ZF CV Middle East and Africa FZCO, Dubai, United Arab Emirates	100.0
ZF CV Solutions (Thailand) Limited, Rayong, Thailand	100.0
ZF CV Solutions Japan, Inc., Tokyo, Japan	90.0

International	Share of capital in %
ZF CV Systems Europe B.V., Brussels, Belgium	100.0
ZF CV Systems Global GmbH, Bern, Switzerland	100.0
ZF CV Systems North America LLC, Auburn Hills, USA	100.0
ZF CV Systems Poland Sp. z.o.o., Wrocław, Poland	100.0
ZF CVS Turkey Fren Sistemleri Sanayi Ticaret Limited Şirketi, Istanbul, Türkiye	100.0
ZF Danmark ApS, Tåstrup, Denmark	100.0
ZF Digital Solutions India Private Limited, Bangalore, India	100.0
ZF Digital Solutions Ireland Limited, Dublin, Ireland	100.0
ZF Dongfang Automotive Safety Technology (Xi’an) Co., Ltd., Xi'an, China	90.0
ZF Dongfeng Shock Absorber Shiyan Co., Ltd., Shiyan, China	51.0
ZF Drivetech (Jiaxing) Co., Ltd., Jiaxing, China	100.0
ZF Drivetech (Suzhou) Co., Ltd., Suzhou, China	100.0
ZF Electric Mobility Systems (Shenyang) Co., Ltd., Shenyang, China	100.0
ZF Electric Mobility Technologies (Shenyang) Co., Ltd., Shenyang, China	100.0
ZF Electrified Powertrain Technologies (Hangzhou) Co., Ltd., Hangzhou, China	100.0
ZF Electronic Systems Juárez, S.A. de C.V., Juárez, Mexico	100.0
ZF Electronic Systems Monterrey S. de R.L. de C.V., Monterrey, 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., Klášterec, Czech Republic	100.0
ZF Engineering Plzeň s.r.o., Plzeň, Czech Republic	100.0
ZF Europe B.V., Amsterdam, Netherlands	100.0
ZF Europe Finance 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 [2)]
ZF FOTON Automated Transmission (Jiaxing) Co. Ltd., Jiaxing, China	51.0
ZF Gainesville, LLC, Gainesville, USA	100.0
ZF Heli Drivetech (Hefei) Co., Ltd., Hefei, China	51.0

International	Share of capital in %
ZF Holding Austria GmbH, Steyr, Austria	100.0
ZF Holdings Australia Pty. Ltd., Dingley Village, Australia	100.0
ZF Holdings B.V., Amsterdam, Netherlands	100.0
ZF Hong Kong Limited, Hong Kong, China	100.0
ZF Hungária Ipari és Kereskedelmi Korlátolt Felelősségű 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 Holdings Inc., Livonia, USA	100.0
ZF International UK Limited, Solihull, United Kingdom	100.0
ZF Italia S.r.l. Società Unipersonale, Assago, Italy	100.0
ZF Japan Co., Ltd., Yokohama, Japan	100.0
ZF Lemförder Achssysteme Ges.m.b.H., Lebring, Austria	100.0
ZF Lemförder Aks Modülleri Sanayi ve Ticaret Anonim Sirket, Izmir, Türkiye	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 Lemforder Shanghai Chassistech Co., Ltd., Shanghai, China	76.0
ZF Lemförder TLM Dış Ticaret Limited Şirketi, Izmir, Türkiye	100.0
ZF Lemförder TVA, S.A.U., Ermua, Spain	100.0
ZF Lemforder UK Limited, Darlaston, United Kingdom	100.0
ZF Lifetec Rane Automotive India Private Limited, Chennai, India	51.0
ZF Light Vehicle Systems India Private Limited, Pune, India	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 Mobility France S.A.S., Paris, France	100.0
ZF North America Capital, Inc., Northville, USA	100.0

International	Share of capital in %
ZF North America, Inc., Northville, USA	100.0
ZF Occupant Safety Systems de la Laguna, S. de R.L. de C.V., Durango, Mexico	100.0
ZF Off-Highway Solutions Minnesota Inc., North Mankato, USA	100.0
ZF OPENMATICS s.r.o., Plzeň, Czech Republic	100.0
ZF Österreich Gesellschaft m.b.H., Vienna, Austria	100.0
ZF Overseas Inc., Livonia, USA	100.0
ZF Padova S.r.l. Società Unipersonale, Selvazzano Dentro, Italy	100.0
ZF Passive Safety Czech s.r.o., Stara Boleslav, Czech Republic	100.0
ZF Passive Safety Korea Co., Ltd., Anyang, Korea (Republic)	100.0
ZF Passive Safety South Africa Inc., Livonia, USA	100.0
ZF Passive Safety Systems (Thailand) Co., Ltd., Rayong, Thailand	100.0
ZF Passive Safety Systems Brazil Ltda., Limeira, Brazil	100.0
ZF Passive Safety Systems El Salvador LTDA de C.V., San Salvador, El Salvador	100.0
ZF Passive Safety Systems Global B.V., Amsterdam, Netherlands	100.0
ZF Passive Safety Systems India Private Limited, Hyderabad, India	100.0
ZF Passive Safety Systems Italia S.R.L., Bricherasio, Italy	100.0
ZF Passive Safety Systems Japan KK, Yokohama, Japan	100.0
ZF Passive Safety Systems Mexico S. de R.L. de C.V., Santa Fe, Mexico	100.0
ZF Passive Safety Systems Morocco SARL, Tangier, Morocco	100.0
ZF Passive Safety Systems Poland Sp. z.o.o., Czestochowa, Poland	100.0
ZF Passive Safety Systems US LLC, Washington, USA	100.0
ZF Passive Safety US Inc., Livonia, USA	100.0
ZF Pension Sponsor UK Limited, Solihull, United Kingdom	100.0
ZF Performance Engineering s.r.o., Plzeň, Czech Republic	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

International	Share of capital in %
ZF Rane Automotive India Private Limited, Chennai, India	51.0
ZF Rane Occupant Safety Systems Private Limited, Kanchipuram, India	51.0
ZF Ravenna US Hold Co. Inc., Northville, United States	100.0
ZF Remanufacture (Shanghai) Co., Ltd., Shanghai, China	100.0
ZF Restraints US Inc., Livonia, USA	100.0
ZF Sachs España S.A.U., Bilbao, Spain	100.0
ZF Sachs Italia S.r.l. Società Unipersonale, Candiolo, Italy	100.0
ZF Sachs Korea Co., Ltd., Changwon, Korea (Republic)	91.5
ZF Sachs Süspansiyon Sistemleri Sanayi ve Ticaret A.Ş., Gebze, Türkiye	100.0
ZF Sales and Service (Malaysia) Sdn. Bhd., Petaling Jaya, Malaysia	100.0
ZF Serbia d.o.o. Pančevo, Pančevo, Serbia	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., Sydney, Australia	100.0
ZF Services Belgium N.V.-SA, Brussels, Belgium	100.0
ZF Services España, S.L.U., Barberá del Vallés, Spain	100.0
ZF Services France S.A.S., Puteaux, 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, Türkiye	100.0
ZF Services UK Limited, Nottingham, United Kingdom	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

International	Share of capital in %
ZF South America Holdings B.V., Amsterdam, Netherlands	100.0
ZF Staňkov s.r.o., Staňkov, Czech Republic	100.0
ZF Steering Active Safety US Inc., Livonia, USA	100.0
ZF Steering Systems Poland Sp. z o.o., Czechowice-Dziedzice, Poland	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 Test Track Sweden AB, Arvidsjaur, Sweden	100.0
ZF Transmissions Gray Court, LLC, Gray Court, USA	100.0
ZF Transmissions Shanghai Co., Ltd., Shanghai, China	51.0 [2]
ZF TRW Automotive Holdings Corp., Livonia, USA	100.0
ZF Wind Power (Tianjin) Co., Ltd., Tianjin, China	100.0
ZF Wind Power Antwerpen NV, Lommel, Belgium	100.0
ZF Wind Power Coimbatore Private Limited, Coimbatore, India	100.0
ZF Wind Power Singapore Pte. Ltd., Singapore Central, Singapore	100.0

2) Control is exercised on the basis of contractual rights and non-contractual framework conditions.
3) 100% voting rights

Consolidated companies accounted for using the equity method

Germany	Share of capital in %
Ahead Automotive GmbH, Berlin, Germany	25.0
Alltrucks GmbH & Co. KG, Munich, Germany	33.3
Alltrucks Verwaltungs GmbH, Munich, Germany	33.3
doubleSlash Net-Business GmbH, Friedrichshafen, Germany	51.0
Ibeo Automotive Systems GmbH, Hamburg, Germany	43.8
Qorix GmbH, Frankfurt, Germany	50.0
WABCOWÜRTH Workshop Services GmbH, Künselsau, Germany	50.0 [4]

Germany	Share of capital in %
ZF Foxconn Chassis Modules GmbH, Osnabrück, Germany	50.0
International	
2Getthere B.V. Mechanical Equipment LLC, Abu Dhabi, United Arab Emirates	49.0
embotech AG, Zurich, Switzerland	15.0 [5)]
Evercast, S.A. de C.V., Saltillo, Mexico	30.0
Ing. Tsetinis Beratungs GmbH, Kuchl, Austria	32.0
S.M. Sistemas Modulares Ltda., Taubate, Brazil	50.0
Shanghai G7 WABCO IOT Technology Co., Ltd., Shanghai, China	50.0 [4)]
SOMIC ZF Components Private Limited, New Delhi, India	50.0
Wolong ZF Automotive Electric Motors Co., Ltd., Shaoxing, China	26.0
ZF FAWER Automotive Chassis Systems (Changchun) Co., Ltd., Changchun, China	60.0
ZF Fonderie Lorraine S.A.S., Grosbliederstroff, France	49.0
ZF PWK Mécacentre S.A.S., Saint-Étienne, France	50.0 [4)]

4) Despite a shareholding of 50%, the company is not jointly controlled and is therefore classified as an associated company.
5) Despite a shareholding of 15%, the company is classified as an associated company on the basis of contractual rights and non-contractual framework conditions.

Friedrichshafen, March 14, 2025

ZF Friedrichshafen AG
The Board of Management

Dr. Holger Klein (CEO)

Dr. Lea Corzilius

Michael Frick

Dr. Peter Holdman

Prof. Dr. Peter Laier

Mathias Miedreich

Further Information

Independent auditor's report

To ZF Friedrichshafen AG

Opinions

We have audited the consolidated financial statements of ZF Friedrichshafen AG, Friedrichshafen and its subsidiaries (the Group), which comprise the consolidated statement of profit or loss and consolidated statement of comprehensive income for the fiscal year January 1 to December 31, 2024, consolidated statement of financial position as at December 31, 2024, the consolidated statement of cash flows and the consolidated statement of changes in equity for the fiscal year from January 1 to December 31, 2024, and notes to the financial statements, including material accounting policy information. In addition, we have audited the group management report of ZF Friedrichshafen AG for the fiscal year from January 1 to December 31, 2024.

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 IFRS Accounting Standards as issued by the International Accounting Standards Board (IASB) (IFRS Accounting Standards) and adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at December 31, 2024 and of its financial performance for the fiscal year from January 1 to December 31, 2024, 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. The executive directors are responsible for the other information. The other information comprises the prescribed parts of the annual report, which were provided to us prior to us issuing this auditor's report, specifically the following:

- Key Figures,
- Company Profile,
- Management (a.o. board of management letter and report of the supervisory board),
- Navigating Challenges – Shaping Opportunities,
- Sustainability,

but not the consolidated financial statements, nor the disclosures in the group management report included in our audit and not our auditor's report thereon.

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 IFRS Accounting Standards 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 (i.e., fraudulent financial reporting and misappropriation of assets) 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 the risk of not detecting a material misstatement 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 the Group's internal control and of such arrangements and measures.
- 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 IFRS Accounting Standards as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.
- Plan and perform the audit of the consolidated financial statements to obtain sufficient appropriate audit evidence regarding the financial information of the entities or business units within the Group as a basis for forming on opinion on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and review of the work performed for 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, March 14, 2025

EY GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft

Renner	Hummel
Wirtschaftsprüferin	Wirtschaftsprüfer

Independent auditor's report on a limited assurance engagement

To ZF Friedrichshafen AG, Friedrichshafen

We have performed a limited assurance engagement on selected sustainability metrics in the sustainability report of ZF Friedrichshafen AG, Friedrichshafen (the "Company"), whose disclosures in the sustainability reporting were identified by a footnote, for the period from 1 January 2024 to 31 December 2024 (the "non-financial reporting").

Our engagement exclusively refers to the disclosures identified in the footnote in the German pdf version of the report. Not subject to our assurance engagement were other references to disclosures made outside the report or other prior-year disclosures.

Responsibilities of the executive directors

The executive directors of the Company are responsible for the preparation of the non-financial reporting in accordance with the definitions of the metrics presented in the non-financial reporting ("applicable criteria").

These responsibilities of the Company's executive directors include the selection and application of appropriate methods for the preparation of the non-financial reporting and making assumptions and estimates about individual non-financial disclosures of the Group that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as the executive directors consider necessary to enable the preparation of non-financial reporting that is free from material misstatement, whether due to fraud (manipulation of the non-financial reporting) or error.

Independence and quality assurance of the auditor's firm

We have complied with the German professional requirements on independence as well as other professional conduct requirements.

Our audit firm applies the national legal requirements and professional pronouncements – in particular the BS WP/vBP ["Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer": Professional Charter for German Public Accountants/German Sworn Auditors] in the exercise of their Profession and the IDW Standard on Quality Management issued by the Institute of Public Auditors in Germany (IDW): Requirements for Quality Management in the Audit Firm (IDW QMS 1 (09.2022)) and accordingly maintains a comprehensive quality management system that includes documented policies and procedures with regard to compliance with professional ethical requirements, professional standards as well as relevant statutory and other legal requirements.

Responsibilities of the auditor

Our responsibility is to express a limited assurance conclusion on the selected metrics identified in the footnote in the non-financial reporting based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the Company's sustainability metrics identified by the footnote are not prepared, in all material respects, in accordance with the applicable criteria. Not subject to our assurance engagement were other references to disclosures made outside the report or other prior-year disclosures.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the auditor.

In the course of our assurance engagement, we have, among other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the sustainability organization and stakeholder engagement
- Evaluation of CO_2 compensation certificates concerning their existence, but not regarding their effectiveness
- Inquiries of relevant employees involved in the preparation of the non-financial reporting about the preparation process, about the internal control system related to this process, and about disclosures in the non-financial reporting
- Inquiries of relevant employees responsible for data capture and consolidation as well as the preparation of the non-financial reporting about the data capture and compilation methods, where relevant for the limited assurance engagement on the selected metrics and disclosures identified in the footnote in the report
- Identification and evaluation of the risk of material misstatement of the selected metrics in the non-financial reporting
- Inspection of the relevant documentation of the systems and processes for collecting, aggregating and validating relevant data in the reporting period for the selected metrics identified in the footnote in the report
- Analytical procedures on selected disclosures in the non-financial reporting that are identified in the footnote
- Inquiries and selective testing as well as obtaining evidence relating to the collection and reporting of selected disclosures in the non-financial reporting
- Evaluation of the presentation of the selected metrics identified in the footnote in the non-financial reporting

Assurance conclusion

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the selected metrics identified in the footnote in the non-financial reporting of the Company for the period from 1 January 2024 to 31 December 2024 are not prepared, in all material respects, in accordance with the applicable criteria.

We do not express an assurance conclusion on the other references to disclosures made outside the report or other prior-year disclosures.

Restriction of use

We draw attention to the fact that the assurance engagement was conducted for the Company's purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. As a result, it may not be suitable for another purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company alone. We do not accept any responsibility to third parties. Our assurance conclusion is not modified in this respect.

General Engagement Terms and Liability

The "General Engagement Terms for Wirtschaftsprüferinnen, Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]" dated 1 January 2024, which are attached to this report, are applicable to this engagement and also govern our relations with third parties in the context of this engagement (ey-idw-aab-en-2024.pdf).

In addition, please refer to the liability provisions contained there in no. 9 and to the exclusion of liability towards third parties. We accept no responsibility, liability or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we will not update the report to reflect events or circumstances arising after it was issued, unless required to do so by law. It is the sole responsibility of anyone taking note of the summarized result of our work contained in this report to decide whether and in what way this result is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

Stuttgart, March 6th, 2025

EY GmbH & Co. KG

Wirtschaftsprüfungsgesellschaft

Hinderer	Zhang-Pospieschalla
Wirtschaftsprüfer	Wirtschaftsprüferin
[German Public Auditor]	[German Public Auditor]

Imprint

This Report is available in English and German;
both versions can also be downloaded from www.zf.com

In cases of doubt, the German version of this Report is binding.

Published by
ZF Friedrichshafen AG
88038 Friedrichshafen
Germany

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Photos
ZF Friedrichshafen AG: pages 3, 9, 18, 21, 22, 23, 24, 25, 26, 27
Kilian Bishop, Munich: pages 5, 8, 20, 28
Shutterstock: page 19

Concept, text and layout
Berichtsmanufaktur GmbH, Hamburg
Oliver Schrott Kommunikation GmbH, Cologne
Stakeholder Reporting GmbH & Co. KG, Hamburg

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